Protection and Control Relay

620 SERIES

IEC 61850 ED1 Model Implementation Conformance Statement (MICS) for 620 SERIES
Table of Contents

1 About this manual .................................................................................................................. 14
  1.1 Read it first! .................................................................................................................... 14
  1.2 Document information .............................................................................................. 14
  1.3 Safety Information ..................................................................................................... 14

2 Abbreviations and Definitions ............................................................................................. 15
  2.1 Abbreviations ............................................................................................................. 15
  2.2 Definitions ................................................................................................................. 15

3 References ......................................................................................................................... 16

4 Introduction ......................................................................................................................... 16

5 Logical Nodes List .............................................................................................................. 17

6 Logical Node Extensions ................................................................................................... 31
  6.1 New Logical Nodes ..................................................................................................... 31
     6.1.1 LN: LIN1 Name: LIN (ED1) ...................................................................................... 31
     6.1.2 LN: LDEV1 Name: LDEV (ED1) ............................................................................. 32
     6.1.3 LN: GSAL1 Name: GSAL (ED1) ............................................................................. 34
     6.1.4 LN: GSELPT1 Name: LPRT (ED1) ......................................................................... 35
     6.1.5 LN: MMSLPRT1 Name: LPRT (ED1) ..................................................................... 36
     6.1.6 LN: GNRLTMM1 Name: LTMM (ED1) ................................................................... 37
     6.1.7 LN: GNRLT1M1 Name: LTIM (ED1) ..................................................................... 38
     6.1.8 LN: DPHLRDIR1 Name: RDIR (ED1) .................................................................... 39
     6.1.9 LN: DPHHRDIR1 Name: RDIR (ED1) ................................................................... 40
     6.1.10 LN: DEFLRDIR1 Name: RDIR (ED1) .................................................................. 40
     6.1.11 LN: DEFFHRDIR1 Name: RDIR (ED1) ................................................................. 41
     6.1.12 LN: CVPSOF1 Name: PSOF (ED1) ..................................................................... 42
     6.1.13 LN: SSCBR1 Name: SCBR (ED1) ......................................................................... 44
     6.1.14 LN: SPH1SCBR1 Name: SCBR (ED1) ................................................................. 47
     6.1.15 LN: SPH2SCBR1 Name: SCBR (ED1) ................................................................. 47
     6.1.16 LN: SPH3SCBR1 Name: SCBR (ED1) ................................................................. 47
     6.1.17 LN: SSOPM1 Name: SOPM (ED1) ....................................................................... 48
     6.1.18 LN: SSCBR2 Name: SCBR (ED1) ....................................................................... 48
     6.1.19 LN: SPH1SCBR2 Name: SCBR (ED1) ................................................................. 51
     6.1.20 LN: SPH2SCBR2 Name: SCBR (ED1) ................................................................. 51
     6.1.21 LN: SPH3SCBR2 Name: SCBR (ED1) ................................................................. 52
     6.1.22 LN: SSOPM2 Name: SOPM (ED1) ..................................................................... 52
     6.1.23 LN: SSCBR3 Name: SCBR (ED1) ....................................................................... 53
     6.1.24 LN: SPH1SCBR3 Name: SCBR (ED1) ................................................................. 56
     6.1.25 LN: SPH2SCBR3 Name: SCBR (ED1) ................................................................. 56
     6.1.26 LN: SPH3SCBR3 Name: SCBR (ED1) ................................................................. 56
     6.1.27 LN: SSOPM3 Name: SOPM (ED1) ..................................................................... 57
     6.1.28 LN: TCRSBCBR1 Name: SCBR (ED1) ................................................................. 57
     6.1.29 LN: TCSSCBR2 Name: SCBR (ED1) ................................................................. 58
     6.1.30 LN: CCSPVC1 Name: SPVC (ED1) ................................................................. 58
<table>
<thead>
<tr>
<th>LN</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1.31</td>
<td>SEQSPVC1 Name: SPVC (ED1)</td>
<td>59</td>
</tr>
<tr>
<td>6.1.32</td>
<td>MDSOPT1 Name: SOPT (ED1)</td>
<td>60</td>
</tr>
<tr>
<td>6.1.33</td>
<td>MDSOPT2 Name: SOPT (ED1)</td>
<td>61</td>
</tr>
<tr>
<td>6.1.34</td>
<td>LDPRRLRC1 Name: RLR (ED1)</td>
<td>62</td>
</tr>
<tr>
<td>6.1.35</td>
<td>PH1QVVR1 Name: QVVR (ED1)</td>
<td>63</td>
</tr>
<tr>
<td>6.1.36</td>
<td>PH2QVVR1 Name: QVVR (ED1)</td>
<td>66</td>
</tr>
<tr>
<td>6.1.37</td>
<td>PH3QVVR1 Name: QVVR (ED1)</td>
<td>66</td>
</tr>
<tr>
<td>6.1.38</td>
<td>QVV1RQRC1 Name: RQRC (ED1)</td>
<td>66</td>
</tr>
<tr>
<td>6.1.39</td>
<td>QVV2RQRC1 Name: RQRC (ED1)</td>
<td>67</td>
</tr>
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<td>6.1.40</td>
<td>QVV3RQRC1 Name: RQRC (ED1)</td>
<td>68</td>
</tr>
<tr>
<td>6.1.41</td>
<td>VSOVUB1 Name: QVUB (ED1)</td>
<td>69</td>
</tr>
<tr>
<td>6.1.42</td>
<td>QVV1RQRC1 Name: RQRC (ED1)</td>
<td>70</td>
</tr>
<tr>
<td>6.1.43</td>
<td>QVVU2RQRC1 Name: RQRC (ED1)</td>
<td>71</td>
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<td>6.1.44</td>
<td>QVVU3RQRC1 Name: RQRC (ED1)</td>
<td>71</td>
</tr>
<tr>
<td>6.1.45</td>
<td>TPGAPC1 Name: GAPC (ED1)</td>
<td>71</td>
</tr>
<tr>
<td>6.1.46</td>
<td>TPGAPC2 Name: GAPC (ED1)</td>
<td>72</td>
</tr>
<tr>
<td>6.1.47</td>
<td>TPGAPC3 Name: GAPC (ED1)</td>
<td>72</td>
</tr>
<tr>
<td>6.1.48</td>
<td>TPGAPC4 Name: GAPC (ED1)</td>
<td>72</td>
</tr>
<tr>
<td>6.1.49</td>
<td>TPSGAPC1 Name: GAPC (ED1)</td>
<td>73</td>
</tr>
<tr>
<td>6.1.50</td>
<td>TPSGAPC2 Name: GAPC (ED1)</td>
<td>73</td>
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<tr>
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<td>TPSGAPC3 Name: GAPC (ED1)</td>
<td>73</td>
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</tr>
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<td>6.1.54</td>
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<td>75</td>
</tr>
<tr>
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<td>76</td>
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<tr>
<td>6.1.56</td>
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<td>77</td>
</tr>
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<td>77</td>
</tr>
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<td>78</td>
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<td>79</td>
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<tr>
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</tr>
<tr>
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<td>TONGAPC4 Name: GAPC (ED1)</td>
<td>82</td>
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<tr>
<td>6.1.63</td>
<td>SRGAPC1 Name: GAPC (ED1)</td>
<td>83</td>
</tr>
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<td>6.1.64</td>
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<td>84</td>
</tr>
<tr>
<td>6.1.65</td>
<td>SRGAPC3 Name: GAPC (ED1)</td>
<td>85</td>
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<tr>
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<td>87</td>
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<td>88</td>
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<td>89</td>
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<tr>
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<td>90</td>
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<td>6.1.72</td>
<td>SPCGAPC2 Name: GAPC (ED1)</td>
<td>91</td>
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<td>93</td>
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<tr>
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<td>94</td>
</tr>
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<td>SPCLGAPC1 Name: GAPC (ED1)</td>
<td>95</td>
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<td>UDFCNT1 Name: FCNT (ED1)</td>
<td>96</td>
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<td>UDFCNT2 Name: FCNT (ED1)</td>
<td>96</td>
</tr>
<tr>
<td>6.1.78</td>
<td>UDFCNT3 Name: FCNT (ED1)</td>
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ABB Oy – Distribution Automation
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<th>Description</th>
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<td>98</td>
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<td>114</td>
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<td>115</td>
<td></td>
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<td>124</td>
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<td>LN: HIAPDIF1 Name: PDIF (ED1)</td>
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<td>130</td>
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<td>LN: HICPDIF1 Name: PDIF (ED1)</td>
<td>131</td>
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<td>LN: SECRSYN1 Name: RSYN (ED1)</td>
<td>131</td>
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<td>LN: HZCCASPVC1 Name: SPVC (ED1)</td>
<td>133</td>
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<td>134</td>
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<td>136</td>
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<tr>
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<td>137</td>
<td></td>
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<td>138</td>
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<td>141</td>
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<td>LN: LREFPDIF1 Name: PDIF (ED1)</td>
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<td>LN: LREFPDIF2 Name: PDIF (ED1)</td>
<td>142</td>
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<tr>
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<td>142</td>
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<td>143</td>
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<td>144</td>
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<td>148</td>
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<td>Page</td>
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</tr>
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<td>149</td>
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<td>LN: SCHLCCCH3</td>
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<td>6.1.152</td>
<td>LN: OLATCC1</td>
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<td>6.1.153</td>
<td>LN: RDRE1</td>
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<td>6.2.1</td>
<td>LN: PHLPTOC1</td>
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<td>LN: PHHPTOC1</td>
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<td>LN: PHHPTOC2</td>
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<td>LN: PHIPTOC1</td>
<td>189</td>
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<td>194</td>
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<tr>
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<td>LN: DEFHPTOC1</td>
<td>195</td>
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<td>6.2.11</td>
<td>LN: ROVPTOV1</td>
<td>196</td>
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<td>LN: ROVPTOV2</td>
<td>197</td>
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<td>198</td>
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<td>LN: PHPPTUV1</td>
<td>198</td>
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</tr>
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<td>LN: PHPPTUV2</td>
<td>199</td>
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<td>LN: PHPPTUV3</td>
<td>201</td>
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<td>202</td>
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<td>203</td>
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<td>204</td>
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<td>LN: NSPTOV1 Name: PTOV (ED1)</td>
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<td>LN: NSPTOV2 Name: PTOV (ED1)</td>
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</tr>
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<td>6.2.24</td>
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<td>LN: CCBRBRF1 Name: RBRF (ED1)</td>
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<td>LN: TRPPTRC1 Name: PTRC (ED1)</td>
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</tr>
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<td>LN: TRPPTRC3 Name: PTRC (ED1)</td>
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<td>LN: CMHAI1 Name: MHAI (ED1)</td>
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<td>LN: TPGAPC1 Name: GAPC (ED1)</td>
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<td>LN: TPGAPC2 Name: GAPC (ED1)</td>
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<td>233</td>
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<td>LN: TPGAPC3 Name: GAPC (ED1)</td>
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<td>LN: PTGAPC2 Name: GAPC (ED1)</td>
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<td>6.2.67</td>
<td>LN: DPHLPTOC2 Name: PTOC (ED1)</td>
<td></td>
<td>235</td>
</tr>
</tbody>
</table>
6.2.68 LN: DPHHPTOC2 Name: PTOC (ED1).............................237
6.2.69 LN: PHPVOC1 Name: PVOC (ED1)..............................238
6.2.70 LN: PHPVOC2 Name: PVOC (ED1)..............................239
6.2.71 LN: EFLPTOC2 Name: PTOC (ED1).............................240
6.2.72 LN: EFIPTOC1 Name: PTOC (ED1)..............................241
6.2.73 LN: DEFLPTOC2 Name: PTOC (ED1).............................242
6.2.74 LN: DEFLPTOC3 Name: PTOC (ED1).............................243
6.2.75 LN: WPSDE1 Name: PSDE (ED1).................................244
6.2.76 LN: WPSDE2 Name: PSDE (ED1).................................245
6.2.77 LN: WPSDE3 Name: PSDE (ED1).................................246
6.2.78 LN: MFADPSDE1 Name: PSDE (ED1).............................247
6.2.79 LN: INTRPTEF1 Name: PTEF (ED1)..............................248
6.2.80 LN: HAEFPTOC1 Name: PTOC (ED1).............................249
6.2.81 LN: NSPTOC1 Name: PTOC (ED1)...............................250
6.2.82 LN: NSPTOC2 Name: PTOC (ED1)...............................251
6.2.83 LN: PDNSPTOC1 Name: PTOC (ED1).............................251
6.2.84 LN: FRPTRC4 Name: PTRC (ED1)...............................252
6.2.85 LN: FRPTRC5 Name: PTRC (ED1)...............................252
6.2.86 LN: FRPTRC6 Name: PTRC (ED1)...............................253
6.2.87 LN: T1PTTR1 Name: PTTR (ED1)...............................253
6.2.88 LN: PHPTUC1 Name: PTUC (ED1)...............................255
6.2.89 LN: INRPHAR1 Name: PHAR (ED1)..............................255
6.2.90 LN: LSHDPTRC1 Name: PTRC (ED1).............................256
6.2.91 LN: LSHDPTRC2 Name: PTRC (ED1).............................256
6.2.92 LN: LSHDPTRC3 Name: PTRC (ED1).............................257
6.2.93 LN: LSHDPTRC4 Name: PTRC (ED1).............................257
6.2.94 LN: LSHDPTRC5 Name: PTRC (ED1).............................258
6.2.95 LN: LSHDPTRC6 Name: PTRC (ED1).............................258
6.2.96 LN: UPCALH1 Name: CALH (ED1)...............................259
6.2.97 LN: UPCALH2 Name: CALH (ED1)...............................259
6.2.98 LN: UPCALH3 Name: CALH (ED1)...............................260
6.2.99 LN: PH3HPTOC1 Name: PTOC (ED1).............................260
6.2.100 LN: PH3HPTOC2 Name: PTOC (ED1).........................261
6.2.101 LN: PH3LPTOC1 Name: PTOC (ED1).........................262
6.2.102 LN: PH3LPTOC2 Name: PTOC (ED1).........................263
6.2.103 LN: PH3IPTOC1 Name: PTOC (ED1).........................264
6.2.104 LN: DPH3HPTOC1 Name: PTOC (ED1).........................265
6.2.105 LN: DPH3HPTOC2 Name: PTOC (ED1).........................266
6.2.106 LN: DPH3LPTOC1 Name: PTOC (ED1).........................267
6.2.107 LN: DPH3LPTOC2 Name: PTOC (ED1).........................268
6.2.108 LN: DARREC1 Name: RREC (ED1).............................269
6.2.109 LN: DARREC2 Name: RREC (ED1).............................275
6.2.110 LN: RESCMMXU1 Name: MMXU (ED1).........................281
6.2.111 LN: RCAVMMXU1 Name: MMXU (ED1).........................281
6.2.112 LN: RCMAMMXU1 Name: MMXU (ED1).........................281
6.2.113 LN: RCMIMMXU1 Name: MMXU (ED1).........................282
6.2.114 LN: PHAPTUV1 Name: PTUV (ED1)............................282
6.2.115 LN: PHAPTOV1 Name: PTOV (ED1)............................283
| 6.2.116 | LN: SECRSYN1 Name: RSYN (ED1) | 284 |
| 6.2.117 | LN: VAMMMXU2 Name: MMXU (ED1) | 286 |
| 6.2.118 | LN: VAAVMMXU2 Name: MMXU (ED1) | 287 |
| 6.2.119 | LN: RESVMMXU1 Name: MMXU (ED1) | 287 |
| 6.2.120 | LN: RAVAVMMXU1 Name: MMXU (ED1) | 288 |
| 6.2.121 | LN: RVMMAMMXU1 Name: MMXU (ED1) | 288 |
| 6.2.122 | LN: RVVIMMMXU1 Name: MMXU (ED1) | 288 |
| 6.2.123 | LN: MNSPPTOC1 Name: PTOC (ED1) | 289 |
| 6.2.124 | LN: MNSPPTOC2 Name: PTOC (ED1) | 290 |
| 6.2.125 | LN: LOFLPTUC1 Name: PTUC (ED1) | 291 |
| 6.2.126 | LN: LOFLPTUC2 Name: PTUC (ED1) | 291 |
| 6.2.127 | LN: JAMPTOC1 Name: PTOC (ED1) | 292 |
| 6.2.128 | LN: STTPMSS1 Name: PMSS (ED1) | 292 |
| 6.2.129 | LN: PREVPTOC1 Name: PTOC (ED1) | 293 |
| 6.2.130 | LN: MPTTR1 Name: PTTR (ED1) | 294 |
| 6.2.131 | LN: MRE1PTOC1 Name: PTOC (ED1) | 295 |
| 6.2.132 | LN: ESMGAPC1 Name: GAPC (ED1) | 296 |
| 6.2.133 | LN: MPTRC1 Name: PTRC (ED1) | 296 |
| 6.2.134 | LN: CMMXU2 Name: MMXU (ED1) | 297 |
| 6.2.135 | LN: CAVMMXU2 Name: MMXU (ED1) | 297 |
| 6.2.136 | LN: CMAMMXU2 Name: MMXU (ED1) | 298 |
| 6.2.137 | LN: CMIMMXU2 Name: MMXU (ED1) | 298 |
| 6.2.138 | LN: PHLPTOC2 Name: PTOC (ED1) | 298 |
| 6.2.139 | LN: PHIPTOC2 Name: PTOC (ED1) | 299 |
| 6.2.140 | LN: EFHPTOC2 Name: PTOC (ED1) | 300 |
| 6.2.141 | LN: OEPVPH1 Name: PVPH (ED1) | 301 |
| 6.2.142 | LN: OEPVPH2 Name: PVPH (ED1) | 302 |
| 6.2.143 | LN: T2PTTR1 Name: PTTR (ED1) | 303 |
| 6.2.144 | LN: PHPUTC2 Name: PTUC (ED1) | 304 |
| 6.2.145 | LN: TR2PTRC1 Name: PTRC (ED1) | 305 |
| 6.2.146 | LN: DPPDUP1 Name: PDUP (ED1) | 305 |
| 6.2.147 | LN: DPPDUP2 Name: PDUP (ED1) | 306 |
| 6.2.148 | LN: DPPDOP1 Name: PDOP (ED1) | 307 |
| 6.2.149 | LN: DPPDOP2 Name: PDOP (ED1) | 308 |
| 6.2.150 | LN: DPPDOP3 Name: PDOP (ED1) | 308 |
| 6.2.151 | LN: RESCMMXU2 Name: MMXU (ED1) | 309 |
| 6.2.152 | LN: RCAVMMXU2 Name: MMXU (ED1) | 309 |
| 6.2.153 | LN: RCMAMMXU2 Name: MMXU (ED1) | 310 |
| 6.2.154 | LN: RCMIMMXU2 Name: MMXU (ED1) | 310 |
| 6.2.155 | LN: VAMMMXU3 Name: MMXU (ED1) | 311 |
| 6.2.156 | LN: VAAVMMXU3 Name: MMXU (ED1) | 311 |
| 6.2.157 | LN: IL1TCTR1 Name: TCTR (ED1) | 311 |
| 6.2.158 | LN: RESTCTR1 Name: TCTR (ED1) | 312 |
| 6.2.159 | LN: UL1TVTR1 Name: TVTR (ED1) | 313 |
| 6.2.160 | LN: RESTVTR1 Name: TVTR (ED1) | 313 |
| 6.2.161 | LN: VMXU1 Name: MMXU (ED1) | 314 |
| 6.2.162 | LN: VAVMMXU1 Name: MMXU (ED1) | 314 |
| 6.2.163 | LN: UL1TVTR2 Name: TVTR (ED1) | 315 |
6.2.164 LN: IL1TCTR2 Name: TCTR (ED1) ................................ 316
6.2.165 LN: RESTCTR2 Name: TCTR (ED1) ................................ 316
6.2.166 LN: UL1TVTR3 Name: TVTR (ED1) ................................ 317
6.2.167 LN: XRGGIO110 Name: GGIO (ED1) ................................. 318
6.2.168 LN: XRGGIO105 Name: GGIO (ED1) ................................. 319
6.2.169 LN: XRGGIO130 Name: GGIO (ED1) ................................. 321
6.2.170 LN: PHIZ1 Name: PHIZ (ED1) ........................................... 322
6.2.171 LN: ARCSARC11 Name: SARC (ED1) ................................ 322
6.2.172 LN: ARCSARC21 Name: SARC (ED1) ................................ 323
6.2.173 LN: ARCSARC31 Name: SARC (ED1) ................................ 323
6.2.174 LN: SCEFRFLO1 Name: RFLO (ED1) ................................. 324
6.2.175 LN: COL1PTOC1 Name: PTOC (ED1) ................................. 325
6.2.176 LN: CUB1PTOC1 Name: PTOC (ED1) ................................. 326
6.2.177 LN: SRC1PTOC1 Name: PTOC (ED1) ................................. 328
6.2.178 LN: DQPTUV1 Name: PTUV (ED1) ..................................... 328
6.2.179 LN: DQPTUV2 Name: PTUV (ED1) ..................................... 329
6.2.180 LN: LVRTPTUV1 Name: PTUV (ED1) .................................. 329
6.2.181 LN: LVRTPTUV2 Name: PTUV (ED1) .................................. 331
6.2.182 LN: LVRTPTUV3 Name: PTUV (ED1) .................................. 333
6.2.183 LN: VVSPPAM1 Name: PPAM (ED1) ................................. 335
6.2.184 LN: UEXPDIS1 Name: PDIS (ED1) ..................................... 336
6.2.185 LN: UEXPDIS2 Name: PDIS (ED1) ..................................... 337
6.2.186 LN: LLN0 Name: LLN0 (ED1) ........................................... 338
6.2.187 LN: CBCSWI1 Name: CSWI (ED1) ..................................... 339
6.2.188 LN: CBCSWI2 Name: CSWI (ED1) ..................................... 340
6.2.189 LN: CBCSWI3 Name: CSWI (ED1) ..................................... 341

7 Common Data Class Extensions............................................................. 342
7.1 New common data classes ................................................................. 342
7.2 Extented data classes ED1 ................................................................. 342
7.2.1 ABBIED600_Rev5_ENG_SP_DNPPort_ED1 .............................. 342
7.2.2 ABBIED600_Rev3_SPG_SP_authority_ED1 ................................ 342
7.2.3 ABBIED600_Rev4_SPS_LocClk_ED1 ......................................... 342
7.2.4 ABBIED600_Rev4_ING_SG_Unit_ED1 ........................................ 342
7.2.5 ABBIED600_Rev4_ING_SP_Unit ................................................. 343
7.2.6 ABBIED600_Rev3_ENG_SP_CommPort_ED1 .............................. 343
7.2.7 ABBIED600_Rev5_ENG_SP_I5CPort_ED1 ................................ 343
7.2.8 ABBIED600_Rev5_INC_mod_control_ED1_ED1 ......................... 343
7.2.9 ABBIED600_Rev5_INC_Mod_OnTestblockedOff_FD_ED1_ED1 ....... 344
7.2.10 ABBIED600_Rev5_INC_Mod_OnTestOff_ED1_ED1 ..................... 344
7.2.11 ABBIED600_Rev5_INC_Mod_OnTest_ED1_ED1 ........................ 344
7.2.12 ABBIED600_Rev5_INC_Mod_OnOff_FD_ED1_ED1 ..................... 345
7.2.13 ABBIED600_Rev5_INC_Mod_OnOff_ED1_ED1 ........................ 345
7.2.14 ABBIED600_Rev4_INC_Mod_On_Blk_ED1_ED1 ........................ 345
7.2.15 ABBIED600_Rev11_INS_error_ED1 ........................................ 345
7.2.16 ABBIED600_Rev11_INS_error_ED1 ........................................ 346
8 Enum type extensions .............................................................................352
8.1 New Enum types...................................................................................352
8.1.1 ABBIED600_Rev1_CtlModelKind_StatusDirect ............................352
8.1.2 ABBIED600_Rev1_OpModSG ..................................................352
8.1.3 ABBIED600_Rev1_CpySG .......................................................353
8.1.4 ABBIED600_Rev1_CtlModelKind_Status ..................................353
8.1.5 ABBIED600_Rev1_SetSvMaxDl ..............................................353
8.1.6 ABBIED600_Rev1_BlkMod ....................................................353
8.1.7 ABBIED600_Rev1_HzSet ........................................................353
8.1.8 ABBIED600_Rev1_PhRotSet ..................................................353
8.1.9 ABBIED600_Rev1_PhOrdSet ..................................................353
8.1.10 ABBIED600_Rev1_DmdAvMod ..............................................354
8.1.11 ABBIED600_Rev1_dmdItrv ...................................................354
8.1.12 ABBIED600_Rev1_ModRemCtl .............................................354
8.1.13 ABBIED600_Rev4_Languages ...............................................354
8.1.14 ABBIED600_Rev4_LanguageFiles ..........................................355
8.1.15 ABBIED600_Rev1_FormatTime .............................................355
8.1.16 ABBIED600_Rev1_FormatDate .............................................356
8.1.17 ABBIED600_Rev1_NamingConvention ...................................356
8.1.18 ABBIED600_Rev3_DefaultView ...........................................357
8.1.19 ABBIED600_Rev1_WhmiMod ...............................................357
8.1.20 ABBIED600_Rev1_SLDSymbolFormat ...................................357
8.1.21 ABBIED600_Rev1_InUseMod .............................................357
8.1.22 ABBIED600_Rev1_SetVsb ..................................................357
8.1.23 ABBIED600_Rev8_AuthAcs ...............................................357
8.1.24 ABBIED600_Rev1_AuthAcsLev ...........................................358
8.1.25 ABBIED600_Rev1_AlmLedSt ...............................................358
8.1.26 ABBIED600_Rev2_LedMode .................................................358
8.1.27 ABBIED600_Rev2_LedColor ...............................................358
8.1.28 ABBIED600_Rev5_SyncSrc ..................................................359
8.1.29 ABBIED600_Rev3_TmSrc ..................................................359
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1.30</td>
<td>ABBIED600_Rev1_PTPTmSrc</td>
<td>359</td>
</tr>
<tr>
<td>8.1.31</td>
<td>ABBIED600_Rev1_PTPClkAcc</td>
<td>360</td>
</tr>
<tr>
<td>8.1.32</td>
<td>ABBIED600_Rev1_PTPAnncMod</td>
<td>360</td>
</tr>
<tr>
<td>8.1.33</td>
<td>ABBIED600_Rev2_StrPhSel</td>
<td>360</td>
</tr>
<tr>
<td>8.1.34</td>
<td>ABBIED600_Rev2_MeasMod</td>
<td>361</td>
</tr>
<tr>
<td>8.1.35</td>
<td>ABBIED600_Rev2_TestProKind</td>
<td>361</td>
</tr>
<tr>
<td>8.1.36</td>
<td>ABBIED600_Rev1_AResSigSel</td>
<td>364</td>
</tr>
<tr>
<td>8.1.37</td>
<td>ABBIED600_Rev1_VResSigSel</td>
<td>364</td>
</tr>
<tr>
<td>8.1.38</td>
<td>ABBIED600_Rev1_VSel</td>
<td>364</td>
</tr>
<tr>
<td>8.1.39</td>
<td>ABBIED600_Rev2_VSel</td>
<td>364</td>
</tr>
<tr>
<td>8.1.40</td>
<td>ABBIED600_Rev1_TypTmRs</td>
<td>364</td>
</tr>
<tr>
<td>8.1.41</td>
<td>ABBIED600_Rev1_OpModEF</td>
<td>364</td>
</tr>
<tr>
<td>8.1.42</td>
<td>ABBIED600_Rev1_buTripMode</td>
<td>365</td>
</tr>
<tr>
<td>8.1.43</td>
<td>ABBIED600_Rev1_StrLtcMod</td>
<td>365</td>
</tr>
<tr>
<td>8.1.44</td>
<td>ABBIED600_Rev1_TrOutMod</td>
<td>365</td>
</tr>
<tr>
<td>8.1.45</td>
<td>ABBIED600_Rev1_OpModComp</td>
<td>365</td>
</tr>
<tr>
<td>8.1.46</td>
<td>ABBIED600_Rev3_TestSpvnKind</td>
<td>365</td>
</tr>
<tr>
<td>8.1.47</td>
<td>ABBIED600_Rev1_TrvClcMod</td>
<td>367</td>
</tr>
<tr>
<td>8.1.48</td>
<td>ABBIED600_Rev1_DirMod2</td>
<td>367</td>
</tr>
<tr>
<td>8.1.49</td>
<td>ABBIED600_Rev1_DefHzSel</td>
<td>367</td>
</tr>
<tr>
<td>8.1.50</td>
<td>ABBIED600_Rev1_DmdWinMod</td>
<td>367</td>
</tr>
<tr>
<td>8.1.51</td>
<td>ABBIED600_Rev2_Phsv</td>
<td>367</td>
</tr>
<tr>
<td>8.1.52</td>
<td>ABBIED600_Rev1_OpModPh</td>
<td>368</td>
</tr>
<tr>
<td>8.1.53</td>
<td>ABBIED600_Rev2_VVaTyp</td>
<td>368</td>
</tr>
<tr>
<td>8.1.54</td>
<td>ABBIED600_Rev1_TrgModPQ</td>
<td>368</td>
</tr>
<tr>
<td>8.1.55</td>
<td>ABBIED600_Rev1_ObsPerSel</td>
<td>368</td>
</tr>
<tr>
<td>8.1.56</td>
<td>ABBIED600_Rev1_TestOthKind</td>
<td>368</td>
</tr>
<tr>
<td>8.1.57</td>
<td>ABBIED600_Rev2_CTLMod</td>
<td>369</td>
</tr>
<tr>
<td>8.1.58</td>
<td>ABBIED600_Rev2_OpModTEF</td>
<td>369</td>
</tr>
<tr>
<td>8.1.59</td>
<td>ABBIED600_Rev1_OpQtySel</td>
<td>369</td>
</tr>
<tr>
<td>8.1.60</td>
<td>ABBIED600_Rev1_AutoManMod</td>
<td>369</td>
</tr>
<tr>
<td>8.1.61</td>
<td>ABBIED600_Rev1_RecOp</td>
<td>369</td>
</tr>
<tr>
<td>8.1.62</td>
<td>ABBIED600_Rev1_TermPrio</td>
<td>370</td>
</tr>
<tr>
<td>8.1.63</td>
<td>ABBIED600_Rev1_ProCrdMod</td>
<td>370</td>
</tr>
<tr>
<td>8.1.64</td>
<td>ABBIED600_Rev1_AutoIniCnd</td>
<td>370</td>
</tr>
<tr>
<td>8.1.65</td>
<td>ABBIED600_Rev3_TestCtlKind</td>
<td>370</td>
</tr>
<tr>
<td>8.1.66</td>
<td>ABBIED600_Rev1_OpModSC</td>
<td>372</td>
</tr>
<tr>
<td>8.1.67</td>
<td>ABBIED600_Rev1_OpModCtrl</td>
<td>372</td>
</tr>
<tr>
<td>8.1.68</td>
<td>ABBIED600_Rev1_EnergSt</td>
<td>372</td>
</tr>
<tr>
<td>8.1.69</td>
<td>ABBIED600_Rev1_OpModStUp</td>
<td>372</td>
</tr>
<tr>
<td>8.1.70</td>
<td>ABBIED600_Rev1_EnvTmpMod</td>
<td>372</td>
</tr>
<tr>
<td>8.1.71</td>
<td>ABBIED600_Rev1_CTConnTyp</td>
<td>372</td>
</tr>
<tr>
<td>8.1.72</td>
<td>ABBIED600_Rev1_VPhSel</td>
<td>372</td>
</tr>
<tr>
<td>8.1.73</td>
<td>ABBIED600_Rev2_Wnd1Typ</td>
<td>373</td>
</tr>
<tr>
<td>8.1.74</td>
<td>ABBIED600_Rev2_Wnd2Typ</td>
<td>373</td>
</tr>
<tr>
<td>8.1.75</td>
<td>ABBIED600_Rev1_ClkNum</td>
<td>373</td>
</tr>
<tr>
<td>8.1.76</td>
<td>ABBIED600_Rev3_ZroAElm</td>
<td>373</td>
</tr>
<tr>
<td>8.1.77</td>
<td>ABBIED600_Rev1_WndSel</td>
<td>374</td>
</tr>
</tbody>
</table>
8.1.78 ABBIED600_Rev1_PwrMeasMod ...........................................374
8.1.79 ABBIED600_Rev1_BCMod ....................................................374
8.1.80 ABBIED600_Rev1_ARtgSec ................................................374
8.1.81 ABBIED600_Rev2_ConnType .................................................374
8.1.82 ABBIED600_Rev1_AnlnpType ................................................375
8.1.83 ABBIED600_Rev1_SenInMod ................................................375
8.1.84 ABBIED600_Rev1_FibMod ....................................................375
8.1.85 ABBIED600_Rev1_SerMod ....................................................375
8.1.86 ABBIED600_Rev1_BaudRate ................................................375
8.1.87 ABBIED600_Rev2_EthPortMod .............................................376
8.1.88 ABBIED600_Rev1_PHIZMod ................................................376
8.1.89 ABBIED600_Rev1_OpModArc ..............................................376
8.1.90 ABBIED600_Rev1_EFAlg ....................................................376
8.1.91 ABBIED600_Rev1_EFAlgASel ..............................................376
8.1.92 ABBIED600_Rev1_TestProRlKind .......................................376
8.1.93 ABBIED600_Rev1_PhiVMeas ..............................................377
8.1.94 ABBIED600_Rev1_CubAlmMod .............................................377
8.1.95 ABBIED600_Rev1_FuLoct ....................................................378
8.1.96 ABBIED600_Rev1_VCrtSel ...................................................378
8.1.97 ABBIED600_Rev1_ZMeasMod ..............................................378
8.1.98 ABBIED600_Rev1_OpModSetATCC .....................................378
8.1.99 ABBIED600_Rev1_ManBlkType ............................................378
8.1.100 ABBIED600_Rev1_TimerOn ..............................................378
8.1.101 ABBIED600_Rev1_OpModATCC ..........................................379
8.1.102 ABBIED600_Rev1_AlarmReas .............................................379
8.1.103 ABBIED600_Rev1_FllwFlt ...............................................379
8.1.104 ABBIED600_Rev1_ParUnits ..............................................379
8.1.105 ABBIED600_Rev3_CmdRsp ...............................................380
8.1.106 ABBIED600_Rev3_LocKeyHMI ..........................................380
8.1.107 ABBIED600_Rev1_LocRemMod ...........................................381
8.1.108 ABBIED600_Rev1_StaLevSet ............................................381
8.1.109 ABBIED600_Rev1_EStoRte ...............................................381
8.1.110 ABBIED600_Rev1_EStoMod ..............................................381
8.1.111 ABBIED600_Rev4_RadrChNum ..........................................381

8.2 Extented Enum types ..........................................................383
8.2.1 ABBIED600_Rev1_HealthKind ..............................................383
8.2.2 ABBIED600_Rev1_PhaseFaultDirectionKind .........................383
8.2.3 ABBIED600_Rev1_CurveCharKind .........................................383
8.2.4 ABBIED600_Rev20_TstOutKind ...........................................385
8.2.5 ABBIED600_Rev1_PolarizingQuantityKind ............................391
8.2.6 ABBIED600_Rev2_cmdQual ..................................................392
8.2.7 ABBIED600_Rev32_ProFcn ................................................392
8.2.8 ABBIED600_Rev2_AutoReclosingKind ..................................397
8.2.9 ABBIED600_Rev1_LiveDeadModeKind ..................................397
8.2.10 ABBIED600_Rev1_I3CCls2Frame ........................................398
8.2.11 ABBIED600_Rev2_FaultLoopKind ......................................398

9 Control Block Extensions ......................................................398
1 About this manual

1.1 Read it first!

Before attempting any operation with IED from 620 series, read carefully the IED documentation first.

This document is addressed to anyone who needs to interact with 620 series and its IEC 61850 features in more detail.

1.2 Document information

Revision History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Note</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>01 Feb. 2013</td>
<td>620 series v2.0</td>
</tr>
<tr>
<td>B</td>
<td>28 Aug 2015</td>
<td>620 series v2.1</td>
</tr>
</tbody>
</table>

Applicability

This manual is applicable to all 620 series Protection and Control IED versions mentioned in document Revision History above or newer versions if document update is not required.

1.3 Safety Information

There are safety warnings and notes in the following text. They are in a different format to distinguish them from normal text.

Safety warning

The safety warnings should always be observed. Non-observance can result in death, personal injury or substantial damages to property. Guarantee claims might not be accepted when safety warnings are not respected. They look like below:

Do not make any changes to the 620 SERIES configurations unless you are familiar with the 620 SERIES and its configuration tool. This might result in disoperation and loss of warranty.

Note

A note contains additional information worth noting in the specific context, and looks like below:

The selection of this control mode requires caution, because operations are allowed both from the HMI and remotely.
2 Abbreviations and Definitions

2.1 Abbreviations

- **FTP**: File Transfer Protocol
- **GOOSE**: Generic Object Oriented Substation Event
- **GPS**: Global Positioning System
- **GSE**: Generic Substation Event
- **GSSE**: Generic Substation Status Event
- **HMI**: Human Machine Interface
- **IED**: Intelligent Electronic Device
- **LED**: Light Emitting Diode
- **MAC**: Media Access Control
- **MICS**: Model Implementation Conformance Statement
- **MMS**: Manufacturing Message Specification
- **M/O**: Mandatory/Optional
- **N**: No
- **PICS**: Protocol Implementation Conformance Statement
- **PIXIT**: Protocol Implementation eXtra Information for Testing
- **SCADA**: Supervision, Control and Data Acquisition
- **SLD**: Single Line Diagram
- **XML**: eXtensible Markup Language
- **Y**: Yes

2.2 Definitions

- **Operational State**: the unit is active and it is protecting and controlling the switchgear.
- **Stand-alone**: the unit is not connected to a SCADA system.
3 References

<table>
<thead>
<tr>
<th>Ref</th>
<th>Document id</th>
<th>Rev</th>
<th>Document title</th>
</tr>
</thead>
</table>

4 Introduction

This document specifies the model implementation conformance statement (MICS) of the IEC 61850 communication for 620 SERIES.

Together with the PICS and the PIXIT the MICS forms the basis for a conformance test according to IEC 61850-10.

In this document all Logical Nodes with additional Data Objects are listed with intended use for extensions. In these cases dataNs refers to this document. Also Data Objects with different namespace as standard CDC describes are listed. In these cases cdcNs data attribute refers to this document. Extended data classes’ new Data Attributes are introduced.
## 5 Logical Nodes List

### L: System logical nodes

<table>
<thead>
<tr>
<th>Logical Node</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>LLN0</td>
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<td>Serial Port 1</td>
</tr>
<tr>
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<td>Serial Port 2</td>
</tr>
<tr>
<td>LD0.RCHL1</td>
<td>Redundant Ethernet</td>
</tr>
<tr>
<td>LD0.SCHL1</td>
<td>X1/X16 port</td>
</tr>
<tr>
<td>LD0.SCHL2</td>
<td>X2 port</td>
</tr>
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</tr>
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</tbody>
</table>

### A: Logical nodes for automatic control

<table>
<thead>
<tr>
<th>Logical Node</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATCC</td>
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### C: Logical nodes for control

<table>
<thead>
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<th>Logical Node</th>
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<tbody>
<tr>
<td>CALH</td>
<td>UPCALH1</td>
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<tr>
<td>F:Logical nodes for functional blocks</td>
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<tr>
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</tr>
<tr>
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</tr>
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</tr>
<tr>
<td></td>
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</tr>
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</tr>
<tr>
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</tbody>
</table>

**ABB Oy – Distribution Automation**
<table>
<thead>
<tr>
<th>GSAL</th>
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<tbody>
<tr>
<td>GGI0</td>
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**I: Logical Nodes for archiving**

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**M: Logical Nodes for metering and measurement**

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### P: Logical Nodes for protection functions

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</tr>
<tr>
<td>LD0.PREVPTOC1</td>
<td>PREVPTOC1,46R(1),I2&gt;&gt;&gt;(1)</td>
</tr>
<tr>
<td>LD0.MRE1PTOC1</td>
<td>MREPTOC1,64R(1),lo&gt;R(1)</td>
</tr>
<tr>
<td>LD0.MRE2PTOC1</td>
<td>MREPTOC1,64R(1),lo&gt;R(1)</td>
</tr>
<tr>
<td>LD0.PHLPTOC2</td>
<td>PHLPTOC2,51P-1(2),3l&gt;(2)</td>
</tr>
<tr>
<td>LD0.PHPTOC2</td>
<td>PHPTOC2,51P-2(2),3l&gt;&gt;&gt;(2)</td>
</tr>
<tr>
<td>LD0.EFHPTOC2</td>
<td>EFHPTOC2,51N-2(2),lo&gt;&gt;&gt;(2)</td>
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<tr>
<td>LD0.COL1PTOC1</td>
<td>COLPTOC1,51C/37(1),3l&gt;3l&lt;(1)</td>
</tr>
<tr>
<td>LD0.COL2PTOC1</td>
<td>COLPTOC1.51C/37(1),3I&gt;3I&lt;(1)</td>
</tr>
<tr>
<td>LD0.CUB1PTOC1</td>
<td>CUBPTOC1.51NC-1(1),dl&gt;C(1)</td>
</tr>
<tr>
<td>LD0.CUB2PTOC1</td>
<td>CUBPTOC1.51NC-1(1),dl&gt;C(1)</td>
</tr>
<tr>
<td>LD0.SRC1PTOC1</td>
<td>SRCPTOC1.55TD(1),TD&gt;(1)</td>
</tr>
<tr>
<td>LD0.SRC2PTOC1</td>
<td>SRCPTOC1.55TD(1),TD&gt;(1)</td>
</tr>
</tbody>
</table>

**PTOV**

| LD0.ROVPTOV1 | ROVPTOV1.59G(1),Uo>(1) |
| LD0.ROVPTOV2 | ROVPTOV2.59G(2),Uo>(2) |
| LD0.ROVPTOV3 | ROVPTOV3.59G(3),Uo>(3) |
| LD0.PHPTOV1 | PHPTOV1.59(1),3U>(1) |
| LD0.PHPTOV2 | PHPTOV2.59(2),3U>(2) |
| LD0.PHPTOV3 | PHPTOV3.59(3),3U>(3) |

**PTUV**

| LD0.PHPTUV1 | PHPTUV1.27(1),3U<(1) |
| LD0.PHPTUV2 | PHPTUV2.27(2),3U<(2) |
| LD0.PHPTUV3 | PHPTUV3.27(3),3U<(3) |
| LD0.PSPTUV1 | PSPTUV1.47U+(1),U1<(1) |
| LD0.PSPTUV2 | PSPTUV2.47U+(2),U1<(2) |
| LD0.PHAPTUV1 | PHAPTUV1.27_A(1),U_A<(1) |
| LD0.DQPTUV1 | DQPTUV1.32Q,27(1),Q>->3U<(1) |
| LD0.DQPTUV2 | DQPTUV2.32Q,27(2),Q>->3U<(2) |

**PTRC**

| LD0.FRPRC1 | FRPRQ1.81(1),f,f<,df/dt(1) |
| LD0.FRPRC2 | FRPRQ2.81(2),f,f<,df/dt(2) |
| LD0.FRPRC3 | FRPRQ3.81(3),f,f<,df/dt(3) |
| LD0.TRPPRC1 | TRPPRC1.94/86(1),Master Trip(1) |
| LD0.TRPPRC2 | TRPPRC2.94/86(2),Master Trip(2) |
| LD0.TRPPRC3 | TRPPRC3.94/86(3),Master Trip(3) |
| LD0.TRPPRC4 | TRPPRC4.94/86(4),Master Trip(4) |
| LD0.LEDPRC1 | Global conditioning |

<p>| LD0.FRPRC4 | FRPRQ4.81(4),f,f&lt;,df/dt(4) |
| LD0.FRPRC5 | FRPRQ5.81(5),f,f&lt;,df/dt(5) |
| LD0.FRPRC6 | FRPRQ6.81(6),f,f&lt;,df/dt(6) |
| LD0.LSHDPRC1 | LSHDPQR1.81LSH(1),UFLS/R(1) |
| LD0.LSHDPRC2 | LSHDPQR2.81LSH(2),UFLS/R(2) |
| LD0.LSHDPRC3 | LSHDPQR3.81LSH(3),UFLS/R(3) |
| LD0.LSHDPRC4 | LSHDPQR4.81LSH(4),UFLS/R(4) |
| LD0.LSHDPRC5 | LSHDPQR5.81LSH(5),UFLS/R(5) |
| LD0.LSHDPRC6 | LSHDPQR6,(LSHDPQR6),UFLS/R(6) |</p>
<table>
<thead>
<tr>
<th>LD0.MPTRC1</th>
<th>MPDIF1.87M/G(1),3di&gt;M/G(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD0.TR2PTRC1</td>
<td>TR2PTDF1.87T(1),3di&gt;T(1)</td>
</tr>
<tr>
<td>LD0.ARCPTRC11</td>
<td>ARCSARC1.50L/50NL(1),ARC(1)</td>
</tr>
<tr>
<td>LD0.ARCPTRC21</td>
<td>ARCSARC2.50L/50NL(2),ARC(2)</td>
</tr>
<tr>
<td>LD0.ARCPRCTR31</td>
<td>ARCSARC3.50L/50NL(3),ARC(3)</td>
</tr>
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</table>

**PTOF**
| LD0.FRPTOF1 | FRPFRQ1.81(1),f>/f<,df/dt(1) |
| LD0.FRPTOF2 | FRPFRQ2.81(2),f>/f<,df/dt(2) |
| LD0.FRPTOF3 | FRPFRQ3.81(3),f>/f<,df/dt(3) |
| LD0.FRPTOF4 | FRPFRQ4.81(4),f>/f<,df/dt(4) |
| LD0.FRPTOF5 | FRPFRQ5.81(5),f>/f<,df/dt(5) |
| LD0.FRPTOF6 | FRPFRQ6.81(6),f>/f<,df/dt(6) |
| LD0.LSHDPTOF1 | LSHDPFRQ1.81LSH(1),UFLS/R(1) |
| LD0.LSHDPTOF2 | LSHDPFRQ2.81LSH(2),UFLS/R(2) |
| LD0.LSHDPTOF3 | LSHDPFRQ3.81LSH(3),UFLS/R(3) |
| LD0.LSHDPTOF4 | LSHDPFRQ4.81LSH(4),UFLS/R(4) |
| LD0.LSHDPTOF5 | LSHDPFRQ5.81LSH(5),UFLS/R(5) |
| LD0.LSHDPTOF6 | LSHDPFRQ6.81LSH(6),UFLS/R(6) |

**PTUF**
| LD0.FRPTUF1 | FRPFRQ1.81(1),f>/f<,df/dt(1) |
| LD0.FRPTUF2 | FRPFRQ2.81(2),f>/f<,df/dt(2) |
| LD0.FRPTUF3 | FRPFRQ3.81(3),f>/f<,df/dt(3) |
| LD0.FRPTUF4 | FRPFRQ4.81(4),f>/f<,df/dt(4) |
| LD0.FRPTUF5 | FRPFRQ5.81(5),f>/f<,df/dt(5) |
| LD0.FRPTUF6 | FRPFRQ6.81(6),f>/f<,df/dt(6) |
| LD0.LSHDPTUF1 | LSHDPFRQ1.81LSH(1),UFLS/R(1) |
| LD0.LSHDPTUF2 | LSHDPFRQ2.81LSH(2),UFLS/R(2) |
| LD0.LSHDPTUF3 | LSHDPFRQ3.81LSH(3),UFLS/R(3) |
| LD0.LSHDPTUF4 | LSHDPFRQ4.81LSH(4),UFLS/R(4) |
| LD0.LSHDPTUF5 | LSHDPFRQ5.81LSH(5),UFLS/R(5) |
| LD0.LSHDPTUF6 | LSHDPFRQ6.81LSH(6),UFLS/R(6) |

**PFRC**
| LD0.FRPFRC1 | FRPFRQ1.81(1),f>/f<,df/dt(1) |
| LD0.FRPFRC2 | FRPFRQ2.81(2),f>/f<,df/dt(2) |
| LD0.FRPFRC3 | FRPFRQ3.81(3),f>/f<,df/dt(3) |
| LD0.FRPFRC4 | FRPFRQ4.81(4),f>/f<,df/dt(4) |
| LD0.FRPFRC5 | FRPFRQ5.81(5),f>/f<,df/dt(5) |
| LD0.FRPFRC6 | FRPFRQ6.81(6),f>/f<,df/dt(6) |
| LD0.LSHDPFRC1 | LSHDPFRQ1.81LSH(1),UFLS/R(1) |
| LD0.LSHDPFRC2 | LSHDPFRQ2.81LSH(2),UFLS/R(2) |
| LD0.LSHDPFRC3 | LSHDPFRQ3.81LSH(3),UFLS/R(3) |
| LD0.LSHDPFRC4 | LSHDPFRQ4.81LSH(4),UFLS/R(4) |
| LD0.LSHDPFRC5 | LSHDPFRQ5.81LSH(5),UFLS/R(5) |
| LD0.LSHDPFRC6 | LSHDPFRQ6.81LSH(6),UFLS/R(6) |

**PSOF**
<p>| LD0.CVPSOF1 | CVPSOF1,SOTF/21/50(1),CVPSOF(1) |</p>
<table>
<thead>
<tr>
<th>Protection and Control IED</th>
<th>Model Implementation Conformance Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>620 SERIES</td>
</tr>
</tbody>
</table>

<p>| PVOC | LD0.PHPVOC1 | PHPVOC1,51V(1),3I(U)&gt;&gt;(1) |
|      | LD0.PHPVOC2 | PHPVOC2,51V(2),3I(U)&gt;&gt;(2) |
| PADM | LD0.EFPADM1 | EFPADM1,21YN(1),Yo&gt;-&gt;(1)  |
|      | LD0.EFPADM2 | EFPADM2,21YN(2),Yo&gt;-&gt;(2)  |
|      | LD0.EFPADM3 | EFPADM3,21YN(3),Yo&gt;-&gt;(3)  |
| PSDE | LD0.WPSDE1  | WPWDE1,32N(1),Po&gt;-&gt;(1)    |
|      | LD0.WPSDE2  | WPWDE2,32N(2),Po&gt;-&gt;(2)    |
|      | LD0.WPSDE3  | WPWDE3,32N(3),Po&gt;-&gt;(3)    |
|      | LD0.MFADPSDE1 | MFADPSDE1,67YN(1),Io&gt;-&gt;Y(1) |
| PTEF | LD0.INTRPTEF1 | INTRPTEF1,67NIEF(1),Io&gt;-&gt;IEF(1) |
| PTTR | LD0.T1PTTR1  | T1PTTR1,49F(1),3Ith&gt;F(1)  |
|      | LD0.MPTTR1   | MPTTR1,49M(1),3Ith&gt;M(1)   |
|      | LD0.T2PTTR1  | T2PTTR1,49T/G/C(1),3Ith&gt;T/G/C(1) |
| PTUC | LD0.PHPTUC1  | PHPTUC1,37(1),3I&lt;(1)      |
|      | LD0.LOFLPTUC1 | LOFLPTUC1,37(1),3I&lt;(1)    |
|      | LD0.LOFLPTUC2 | LOFLPTUC2,37(2),3I&lt;(2)    |
|      | LD0.PHPTUC2  | PHPTUC2,37(2),3I&lt;(2)      |
|      | LD0.COLPTUC1  | COLPTUC1,51C(1),3I&gt;3I&lt;(1) |
| PHAR | LD0.INRPHAR1 | INRPHAR1,68(1),3I2f&gt;(1)   |
|      | LD0.TR2H2PHAR1 | TR2PTDF1,87T(1),3dlT(1)   |
|      | LD0.TR2H5PHAR1 | TR2PTDF1,87T(1),3dlT(1)   |
|      | LD0.LREFPHAR1 | LREFPND1,87NL(1),dloLo&gt;(1) |
|      | LD0.LREFPHAR2 | LREFPND1,87NL(2),dloLo&gt;(2) |
| PDIF | LD0.HIAPDIF1 | HIAPDIF1,87A(1),dHi_A&gt;(1) |
|      | LD0.HIBPDIF1 | HIBPDIF1,87B(1),dHi_B&gt;(1) |
|      | LD0.HICPDIF1 | HICPDIF1,87C(1),dHi_C&gt;(1) |
|      | LD0.MHPDIF1  | MHPDIF1,87M/G(1),3dlM/G(1) |
|      | LD0.MLPDIF1  | MLPDIF1,87M/G(1),3dlM/G(1) |
|      | LD0.MHZPDIF1 | MHZPDIF1,87MH(1),3dlHi&gt;M(1) |
|      | LD0.HREFPDIF1 | HREFPDIF1,87NH(1),dloHi&gt;(1) |
|      | LD0.TR2LPDIF1 | TR2PTDF1,87T(1),3dlT(1)   |
|      | LD0.TR2HPDIF1 | TR2PTDF1,87T(1),3dlT(1)   |
|      | LD0.LREFPDIF1 | LREFPND1,87NL(1),dloLo&gt;(1) |
|      | LD0.LREFPDIF2 | LREFPND2,87NL(2),dloLo&gt;(2) |
|      | LD0.HREFPDIF2 | HREFPDIF2,87NH(2),dloHi&gt;(2) |
| PMSS | LD0.STTPMSS1 | STTPMSU1,49,66,48,51LR(1),Is2t n&lt;(1) |
| PMRI | LD0.STTPMRI1 | STTPMSU1,49,66,48,51LR(1),Is2t n&lt;(1) |
| PVPH | LD0.OEPVPH1  | OEPVPH1,24(1),U/&gt;&gt;(1)     |
|      | LD0.OEPVPH2  | OEPVPH2,24(2),U/&gt;&gt;(2)     |
| PDUP | LD0.DPPDUP1  | DUPPDP1,32U(1),P&lt;&lt;(1)     |
|      | LD0.DPPDUP2  | DPPPDP2,32U(2),P&lt;&lt;(2)     |
| PDOP | LD0.DPPDOP1  | DOPPDP1,32R/32O(1),P/&gt;Q&gt;(1) |</p>
<table>
<thead>
<tr>
<th>Node</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD0.DPPDOP2</td>
<td>DOPPDPR2,32R/32O(2),P&gt;/Q&gt;(2)</td>
</tr>
<tr>
<td>LD0.DPPDOP3</td>
<td>DOPPDPR3,32R/32O(3),P&gt;/Q&gt;(3)</td>
</tr>
<tr>
<td>LD0.DQPDOP1</td>
<td>DQPTUV1,32Q,27(1),Q--&gt;3U&lt;(1)</td>
</tr>
<tr>
<td>LD0.DQPDOP2</td>
<td>DQPTUV2,32Q,27(2),Q--&gt;3U&lt;(2)</td>
</tr>
<tr>
<td>LD0.PHIZ1</td>
<td>PHIZ1,HIZ(1),HIF(1)</td>
</tr>
<tr>
<td>LD0.ARCCI1</td>
<td>ARCSARC1,50L/50NL(1),ARC(1)</td>
</tr>
<tr>
<td>LD0.ARCCI2</td>
<td>ARCSARC1,50L/50NL(1),ARC(1)</td>
</tr>
<tr>
<td>LD0.ARCCI3</td>
<td>ARCSARC2,50L/50NL(2),ARC(2)</td>
</tr>
<tr>
<td>LD0.ARCCI4</td>
<td>ARCSARC2,50L/50NL(2),ARC(2)</td>
</tr>
<tr>
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<td>ARCSARC3,50L/50NL(3),ARC(3)</td>
</tr>
<tr>
<td>LD0.ARCCI6</td>
<td>ARCSARC3,50L/50NL(3),ARC(3)</td>
</tr>
<tr>
<td>LD0.VSPPAM1</td>
<td>VSPPAM1,78V(1),VS(1)</td>
</tr>
<tr>
<td>LD0.UEXPDIS1</td>
<td>UEXPDIS1,40(1),X&lt;(1)</td>
</tr>
<tr>
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<td>UEXPDIS2,40(2),X&lt;(2)</td>
</tr>
<tr>
<td>LD0.PH1QVR1</td>
<td>PHQVVR1,PQM(1),PQM(1)</td>
</tr>
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<td>LD0.PH2QVR1</td>
<td>PHQVVR1,PQM(1),PQM(1)</td>
</tr>
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<td>PHQVVR1,PQM(1),PQM(1)</td>
</tr>
<tr>
<td>LD0.VSQVUB1</td>
<td>VSVQUB1,PQVUB(1),PQUB(1)</td>
</tr>
<tr>
<td>LD0.DPHLRD1</td>
<td>DPHLPDOC1,67-1,(3)I--&gt;1(1)</td>
</tr>
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<td>LD0.DPHHRD1</td>
<td>DPHHPDOC1,67-2,(3)I--&gt;1(1)</td>
</tr>
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<td>LD0.DEFLRD1</td>
<td>DEFLPDEF1,67N-1,(1)Io--&gt;1(1)</td>
</tr>
<tr>
<td>LD0.DEFLRD2</td>
<td>DEFLPDEF2,67N-2,(1)Io--&gt;1(1)</td>
</tr>
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<td>DEFLPDEF3,67N-3,(1)Io--&gt;1(1)</td>
</tr>
<tr>
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<td>WPWDE1,32N(1),Po--&gt;1(1)</td>
</tr>
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<td>WPWDE2,32N(2),Po--&gt;1(2)</td>
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</tr>
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<td>DPH3LPDOC1,67-1_3,(3)I--&gt;1(1)</td>
</tr>
<tr>
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<td>LD0.CCBRBF1</td>
<td>CCBRBF1,51BF/51NBF(1),3I--&gt;I0&gt;BF(1)</td>
</tr>
<tr>
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</tr>
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<tr>
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<td>PHQVVR1,PQM(1),PQM(1)</td>
</tr>
<tr>
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</tr>
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<td>--------------------------</td>
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</tr>
<tr>
<td>RFRC</td>
<td>FLTRFRC1,FaultRec1</td>
</tr>
<tr>
<td>LD0.FLO1RFRC1</td>
<td>SCEFRFLO1,21FL(1),FLOC(1)</td>
</tr>
<tr>
<td>RREC</td>
<td>DARREC1,79(1),O-&gt;I(1)</td>
</tr>
<tr>
<td>LD0.DARREC2</td>
<td>DARREC2,79(2),O-&gt;I(2)</td>
</tr>
<tr>
<td>RSYN</td>
<td>SECRSYN1,25(1),SYNC(1)</td>
</tr>
<tr>
<td>RCTF</td>
<td>CTSRCTF1,CS31,I2(1)</td>
</tr>
<tr>
<td>RFLO</td>
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</tr>
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<td>Binary ch 7</td>
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</tr>
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</tr>
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<td>Binary ch 12</td>
</tr>
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<td>Binary ch 13</td>
</tr>
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<td>Binary ch 14</td>
</tr>
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<td>Binary ch 15</td>
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<td>Binary ch 16</td>
</tr>
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<td>Binary ch 17</td>
</tr>
<tr>
<td>DR.RBDR18</td>
<td>Binary ch 18</td>
</tr>
<tr>
<td>DR.RBDR19</td>
<td>Binary ch 19</td>
</tr>
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<td><strong>SCBR</strong></td>
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<td>LD0.SPH2SCBR1, SPH2SCBR1</td>
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<td>LD0.SPH3SCBR1, SPH3SCBR1</td>
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<td>LD0.SPH2SCBR2, SPH2SCBR2</td>
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<td>LD0.SPH3SCBR2, SPH3SCBR2</td>
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<td>LD0.SSCBR3, SSCBR3,CBCM(3)</td>
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<td>LD0.SPH1SCBR3, SPH1SCBR3</td>
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<td>LD0.SPH2SCBR3, SPH2SCBR3</td>
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<td>LD0.SSIMG2, SSIMG2</td>
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<td>LD0.CCSPVC1, CCSPVC1,MCS 3I(1)</td>
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<td>LD0.SEQSPVC1, SEQSPVC1,60(1),FUSEF(1)</td>
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<td>LD0.HZCCBSPVC1, HZCCBSPVC1,MCS I_B(1)</td>
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<td>LD0.HZCCCSPVC1, HZCCCSPVC1,MCS I_C(1)</td>
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<td>LD0.CCSPVC2, CCSPVC2,MCS 3I(2)</td>
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<td><strong>SOPT</strong></td>
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<td>LD0.ARC SARC3, ARC SARC3,50L/50NL(3),ARC(3)</td>
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<td>LD0.IL1TCTR1, Current (3I,CT)</td>
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<td>LD0.IL2TCTR1, Current (3I,CT)</td>
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<td>LD0.IL3TCTR1, Current (3I,CT)</td>
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<td>LD0.RESTCTR1, Current (Io,CT)</td>
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<td>MU01.I01BTCTR2</td>
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TVTR

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<td>LD0.UL2TVTR1</td>
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<td>LD0.UL3TVTR1</td>
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<td>LD0.UL2TVTR3</td>
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<td>MU01.U01BTVTR2</td>
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X: Logical Nodes for switchgear

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<td>CTRL.CBXCBR2</td>
<td>CBXCBR2,I&lt;-&gt;O CB(2)</td>
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<td>CTRL.CBXCBR3</td>
<td>CBXCBR3,I&lt;-&gt;O CB(3)</td>
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<td>CTRL.DCXSWI1</td>
<td>DCXSWI1,I&lt;-&gt;O DCC(1)</td>
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<td>CTRL.DCXSWI2</td>
<td>DCXSWI2,I&lt;-&gt;O DCC(2)</td>
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<td>DCXSWI3,I&lt;-&gt;O DCC(3)</td>
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<td>CTRL.DCXSWI4</td>
<td>DCXSWI4,I&lt;-&gt;O DCC(4)</td>
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<td>CTRL.DCSXSWI1</td>
<td>DCSXSWI1,I&lt;-&gt;O DC(1)</td>
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<tr>
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<td>DCSXSWI3,I&lt;-&gt;O DC(3)</td>
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<td>ESSXSWI1,I&lt;-&gt;O ESC(1)</td>
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<td>ESSXSWI2,I&lt;-&gt;O ES(2)</td>
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Y: Logical nodes for power transformers

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### Z: Logical nodes for further power system equipment

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<th>SCEFRFLO1.21FL(1),FLOC(1)</th>
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## 6 Logical Node Extensions

### 6.1 New Logical Nodes

#### 6.1.1 LN: LINF1 Name: LINF (ED1)

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<th>Attribute type</th>
<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<tr>
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<td>Mode</td>
<td>E</td>
<td>status-only, ED1 only</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1_e</td>
<td>Behaviour</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>E</td>
<td>ED1 only</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev5_LPL_LDO_LINF_ED1_e</td>
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<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>ABBIED600_Rev3_VSG_2_20_e</td>
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<td>CfgNam</td>
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<td>IED configuration name</td>
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<td>CstZip</td>
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<td>ZIP/Postal code</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>City/Province</td>
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### 6.1.2 LN: LDEV1 Name: LDEV (ED1)

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<th>Remarks</th>
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<tr>
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<td>Mode</td>
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<td>status-only, ED1 only</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1_e</td>
<td>Behaviour</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>ED1 only</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_LD0_LDEV_ED1_e</td>
<td>Name plate</td>
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### 6.1.3 LN: GSAL1 Name: GSAL (ED1)

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<td></td>
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<tr>
<td>CliIP2</td>
<td>ABBIED600_Rev1_LPL_VSS_1_20</td>
<td>Client 2 IP address</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client IP</td>
<td>Device Address</td>
<td>Client IP</td>
<td>Device Address</td>
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<tr>
<td>-----------</td>
<td>---------------------------------</td>
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</tr>
<tr>
<td>CliIP3</td>
<td>ABBIED600_Rev1_LPL_VSS_1_20</td>
<td>CliIP4</td>
<td>ABBIED600_Rev1_LPL_VSS_1_20</td>
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<tr>
<td></td>
<td>Client 3 IP address</td>
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<td>Client 4 IP address</td>
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### 6.1.6 LN: GNRLLTMM1 Name: LTMM (ED1)

<table>
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<tr>
<th>Attribute name</th>
<th>Attribute type</th>
<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
<td>Mode status-only, ED1 only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev5_LPL_tms_ED1</td>
<td>Name plate</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>TmAcc</td>
<td>ABBIED600_Rev1_INS</td>
<td>Number of significant bits in the Fraction Of Second in the time accuracy part of the time stamp.</td>
<td></td>
<td></td>
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<tr>
<td>TmSrc</td>
<td>ABBIED600_Rev1_LPL_VSS_1_64</td>
<td>Current time source</td>
<td></td>
<td></td>
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<tr>
<td>TmSyn</td>
<td>ABBIED600_Rev1_INS_TmSyn_ED1</td>
<td>Time synchronized according to IEC 61850-9-2</td>
<td>order code dependent</td>
<td></td>
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<tr>
<td>TmChSt1</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Time channel status (up/down)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TmSrcSel1</td>
<td>ABBIED600_Rev6_ENG_SP_SyncSrc_e</td>
<td>Time source setting (“1588” in case the time source is a IEEE 1588 source or dotted IP-address)</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>TmSrcSt</td>
<td>ABBIED600_Rev4_INS_TmSrc_ED1_e</td>
<td>Current time source</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>DomId</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>The domain is identified by an integer, the domainNumber, in the range of 0 to 255.</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, order code dependent</td>
</tr>
<tr>
<td>Alm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Alarm</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Wrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Warning</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>PTPTmSrc</td>
<td>ABBIED600_Rev2_INS_PTPTmSrc_ED1_e</td>
<td>GrandMaster timeSource enum according to PTPv2</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, order code dependent</td>
</tr>
<tr>
<td>PTPClkAcc</td>
<td>ABBIED600_Rev2_INS_PTPClkAcc_ED1_e</td>
<td>Grandmaster clockAccuracy enum according to PTPv2</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, order code dependent</td>
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### Local Clock Accuracy

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<th>Status</th>
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<tr>
<td>LocClkAcc</td>
<td>Local clock accuracy (master + IED synch accuracy)</td>
<td>E</td>
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### Maximum Deviation of Local Synch Accuracy

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<th>Attribute</th>
<th>Description</th>
<th>Status</th>
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<td>MaxDevAcc</td>
<td>Maximum deviation of the Local synch accuracy</td>
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### PTP Priority

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<td>PTPPrio1</td>
<td>PTP priority 1, in the range of 0 to 255.</td>
<td>E</td>
</tr>
<tr>
<td>PTPPrio2</td>
<td>PTP priority 2, in the range of 0 to 255.</td>
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### Grandmaster Identity

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<tr>
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<th>Description</th>
<th>Status</th>
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</thead>
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<tr>
<td>MstrId</td>
<td>Grandmaster Identity octet string according to PTPv2</td>
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### IP Address for SNTP

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<th>Attribute</th>
<th>Description</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>IPAdSrSNTP1</td>
<td>IP address for SNTP primary server</td>
<td>E</td>
</tr>
<tr>
<td>IPAdSrSNTP2</td>
<td>IP address for SNTP secondary server</td>
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### PTP Announcement Mode

<table>
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<td>PTPAnnMod</td>
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### 6.1.7 LN: GNRLLTIM1 Name: LTIM (ED1)

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<td>Mod</td>
<td>Mode</td>
<td>status-only, ED1 only</td>
</tr>
<tr>
<td>Beh</td>
<td>Behaviour</td>
<td>E</td>
</tr>
<tr>
<td>Health</td>
<td>Health</td>
<td>ED1 only</td>
</tr>
<tr>
<td>NamPlt</td>
<td>Name plate</td>
<td>E</td>
</tr>
<tr>
<td>TmDT</td>
<td>Indicating if DST is in effect</td>
<td>E</td>
</tr>
<tr>
<td>TmOfsTmm</td>
<td>Offset of local time from UTC in minutes</td>
<td>E</td>
</tr>
<tr>
<td>TmUseDT</td>
<td>DST in use setting</td>
<td>E</td>
</tr>
<tr>
<td>TmChgDT</td>
<td>Local time of next change to daylight saving time</td>
<td>E</td>
</tr>
<tr>
<td>TmChgST</td>
<td>Local time of next change to standard time</td>
<td>E</td>
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### 6.1.8 LN: DPHLRDIR1 Name: RDIR (ED1)

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<th>M/O/E</th>
<th>Remarks</th>
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<tr>
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<td>Mode status-only</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>ED1 only</td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
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<td>ED1 only</td>
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<tr>
<td>Dir</td>
<td>ABBIED600_Rev1_ACD_threephase</td>
<td>Direction</td>
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<td></td>
</tr>
<tr>
<td>ChrAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Characteristic angle</td>
<td></td>
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</tr>
<tr>
<td>MinFwdAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Minimum phase angle in forward direction</td>
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</tr>
<tr>
<td>MinRvAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Minimum phase angle in reverse direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MaxFwdAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Maximum phase angle in forward direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MaxRvAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Maximum phase angle in reverse direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BlkValA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Min operate current</td>
<td></td>
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</tr>
<tr>
<td>BlkValV</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Min operate voltage</td>
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<tr>
<td>PolQty</td>
<td>ABBIED600_Rev3_ENG_SG_PolQty_ED1</td>
<td>Polarising Quantity</td>
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<tr>
<td>VMemTmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1_e</td>
<td>Voltage memory time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Op-ChrAngPhsA</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Calc angle difference phase A</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Op-ChrAngPhsB</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Calc angle difference phase B</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Op-ChrAngPhsC</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Calc angle difference phase C</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>VMemUsedSt</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Voltage memory in use status</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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## 6.1.9 LN: DPHHRDIR1 Name: RDIR (ED1)

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<th>M/O/E</th>
<th>Remarks</th>
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<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
<td>Mode</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
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</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
<td>ED1 only</td>
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</tr>
<tr>
<td>Dir</td>
<td>ABBIED600_Rev1_ACD_threephase</td>
<td>DIR</td>
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</tr>
<tr>
<td>ChrAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Characteristic angle</td>
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</tr>
<tr>
<td>MinFwdAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Minimum phase angle in forward direction</td>
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<td></td>
</tr>
<tr>
<td>MinRvAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Minimum phase angle in reverse direction</td>
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</tr>
<tr>
<td>MaxFwdAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Maximum phase angle in forward direction</td>
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<td></td>
</tr>
<tr>
<td>MaxRvAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Maximum phase angle in reverse direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BlkValA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Min operate current</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BlkValV</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Min operate voltage</td>
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<tr>
<td>PolQty</td>
<td>ABBIED600_Rev3_ENG_SG_PolQty_ED1</td>
<td>Polarizing quantity</td>
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</tr>
<tr>
<td>VMemTmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1_e</td>
<td>Voltage memory time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>OpChrAngPhsA</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Calc angle difference phase A</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>OpChrAngPhsB</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Calc angle difference phase B</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>OpChrAngPhsC</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Calc angle difference phase C</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>VMemUsedSt</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Voltage memory in use status</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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## 6.1.10 LN: DEFLRDIR1 Name: RDIR (ED1)

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<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<td>Mode</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
<td>ED1 only</td>
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<td>Attribute name</td>
<td>Attribute type</td>
<td>Explanation</td>
<td>M/O/E</td>
<td>Remarks</td>
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<tr>
<td>Dir</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Direction</td>
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</tr>
<tr>
<td>ChrAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Characteristic angle</td>
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<tr>
<td>MinFwdAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Minimum phase angle in forward direction</td>
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<tr>
<td>MinRvAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Minimum phase angle in reverse direction</td>
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<tr>
<td>MaxFwdAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Maximum phase angle in forward direction</td>
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<tr>
<td>MaxRvAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Maximum phase angle in reverse direction</td>
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<td></td>
</tr>
<tr>
<td>BlkValA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Minimum operating current</td>
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<td>BlkValV</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Minimum operating voltage</td>
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<td>PolQty</td>
<td>ABBIED600_Rev1_ENG_SP_PolQty</td>
<td>Polarizing quantity</td>
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<td>InRcaCtl</td>
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<td>OpModEF</td>
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<td>RevPol</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
<td>Rotate polarizing quantity</td>
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<td>OpAEF</td>
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<td>Operating current for EF protection</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>OpPolAng</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Angle between operating and polarizing quantity</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>OpChrAng</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Angle between operating angle and characteristic angle</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>VResSigSel</td>
<td>ABBIED600_Rev2_ENG_SP_VResSigSel_e</td>
<td>Selection for used Uo signal</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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**6.1.11 LN: DEFHRDIR1 Name: RDIR (ED1)**
### 6.1.12 LN: CVPSOF1 Name: PSOF (ED1)

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<td>ABBIED600_Rev2_INC_Mod_On_FD_ED1_e</td>
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<td>Parameter</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beth_ED1_e</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>ABBIED600_Rev1_SPS_simple_e</td>
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<td>InCBCIsCmd</td>
<td>ABBIED600_Rev1_SPS_simple</td>
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<td>Start from</td>
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<td>TrFltSt</td>
<td>ABBIED600_Rev1_SPS_simple</td>
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<td>DeaLinValA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Dead line value,</td>
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<td>DeaLinVal</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
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<td>AVDetTmms</td>
<td>ABBIED600_Rev1_ING_SP</td>
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<td>ABBIED600_Rev3_ENG_SP_AutoIniMod</td>
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<td>OpDiTmms</td>
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**ABB Oy – Distribution Automation**
### 6.1.13 LN: SSCBR1 Name: SCBR (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<td>ABBIED600_Rev1_SPS_simple</td>
<td>Open command of trip coil</td>
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<td>OpCntAlm</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Number of CB operations exceeds alarm limit</td>
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<td>Travel time of the CB during opening operation</td>
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<td>OpTmCls</td>
<td>ABBIED600_Rev3_MV_simple_i</td>
<td>Travel time of the CB during closing operation</td>
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<td>OpCntRs</td>
<td>ABBIED600_Rev1_INC_simple_int</td>
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<td>InPosOpn</td>
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<td>CB position is open</td>
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<td>OpCntLO</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Number of CB operations exceeds lockout limit</td>
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<td>Parameter</td>
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<td>LonTmAlm</td>
<td>CB 'not operated for long time' alarm</td>
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<td>APwrAlm</td>
<td>Accumulated currents power (Iyt), exceeded alarm limit</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>OpnAlmTmms</td>
<td>Setting of alarm level for open travel time in ms</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>CorOpnTmms</td>
<td>Correction factor for open travel time in ms</td>
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<td>ClsAlmTmms</td>
<td>Setting of alarm level for close travel time in ms</td>
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<td>CorClsTmms</td>
<td>Correction factor for CB close travel time in ms</td>
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<td>CorDifTmms</td>
<td>Corr. factor for time dif in aux. and main contacts open time</td>
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<td>OpLONum</td>
<td>Setting to block operation when number of operation is more.</td>
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<td>OpNumRtg</td>
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<td>Alarm limit value of the inactive days counter</td>
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<td>Alarm time of the inactive days counter in hours</td>
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<td>InaTmdCnt</td>
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<td>RsAccmAPwr</td>
<td>Reset accumulation energy</td>
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<td>RsCBWear</td>
<td>Reset input for CB remaining life and operation counter</td>
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<td>RsTrvTm</td>
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<td>TestSpvn</td>
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<td>DirCff</td>
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<td>AFitRtg</td>
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### 6.1.14 LN: SPH1SCBR1 Name: SCBR (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<tr>
<td>ColOpn</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Open command of trip coil</td>
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<tr>
<td>AccmAPwr</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Accumulated currents power (Iyt), phase A</td>
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### 6.1.15 LN: SPH2SCBR1 Name: SCBR (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<td>Health</td>
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<td>Open command of trip coil</td>
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<tr>
<td>AccmAPwr</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
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### 6.1.16 LN: SPH3SCBR1 Name: SCBR (ED1)

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<td>ColOpn</td>
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<td>Open command of trip coil</td>
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</tr>
<tr>
<td>AccmAPwr</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Accumulated currents power (Iyt), phase C</td>
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### 6.1.17 LN: SSOPM1 Name: SOPM (ED1)

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<tr>
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<td>SprChaAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Spring charging time has crossed the set value</td>
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<td>CB spring charging started input</td>
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<td>SprChaStop</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB spring charged input</td>
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<td>ABBIED600_Rev1_ING_SP_e</td>
<td>Setting of alarm for spring charging time of CB in ms.</td>
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### 6.1.18 LN: SSCBR2 Name: SCBR (ED1)

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<td>Travel time of the CB during closing operation</td>
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<td>OpnAlm</td>
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<td>CIsAlm</td>
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<td>Remaining life of CB exceeded alarm limit</td>
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<td>OpnAlmTmms</td>
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<td>CorCIsTmms</td>
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<td>OpLONum</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Number of operations possible at rated fault current</td>
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<td>InaAlmTmd</td>
<td>Alarm limit value of the inactive days counter</td>
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<td>IniInaTmd</td>
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<td>InaAlmTmh</td>
<td>Alarm time of the inactive days counter in hours</td>
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<td>RsAccmAPwr</td>
<td>Reset accumulation energy</td>
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<td>RsCBWear</td>
<td>Reset input for CB remaining life and operation counter</td>
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<td>RsTrvTm</td>
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<td>TestSpvn</td>
<td>Test control for outputs</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only,direct-with-normal-security</td>
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<td>DirCff</td>
<td>Directional coefficient for CB life calculation</td>
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<td>ABBIED600_Rev1_ASG_SP_f_e</td>
<td>Initial value for the CB remaining life estimates</td>
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<td>AlmAccmAPwr</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Setting of alarm level for accumulated currents power, Iyt</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>AccmStopA</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Setting of the RMS current below which engr acm stops</td>
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<td>LOAccmAPwr</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Setting of lockout level for accumulated currents power, Iyt</td>
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<td>AExpn</td>
<td>ABBIED600_Rev1_ASG_SP_f_e</td>
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<td>AOpRtg</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Rated operating current of the breaker</td>
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<td>Rated fault current of the breaker</td>
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<td>Initial value for accumulation energy (Iyt)</td>
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### 6.1.19 LN: SPH1SCBR2 Name: SCBR (ED1)

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<td>AccmAPwr</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
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### 6.1.20 LN: SPH2SCBR2 Name: SCBR (ED1)

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### 6.1.21 LN: SPH3SCBR2 Name: SCBR (ED1)

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<td>ColOpn</td>
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<td>AccmAPwr</td>
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### 6.1.22 LN: SSOPM2 Name: SOPM (ED1)

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<td>Mode</td>
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<td>SprChaAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Spring charging time has crossed the set value</td>
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<td>RE620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>CB spring charged input</td>
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<td>ABBIED600_Rev1_ING_SP_e</td>
<td>Setting of alarm for spring charging time of CB in ms.</td>
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<td>RE620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>TmsSprCha</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>The charging time of the CB spring</td>
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<td>RE620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>RsSprChaTm</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>SSCBR2 spr.charge t</td>
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<td>RE620 MICS:2015&gt;IEC 61850-7-4:2003, status-only, direct-with-normal-security</td>
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## 6.1.23 LN: SSCBR3 Name: SCBR (ED1)

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<td>Beh</td>
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<td>Behaviour</td>
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<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
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<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
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<tr>
<td>ColOpn</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Open command of trip coil</td>
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<tr>
<td>OpCntAlm</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Number of CB operations exceeds alarm limit</td>
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<td>OpTmOpn</td>
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<td>Travel time of the CB during opening operation</td>
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<td>OpTmCls</td>
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<td>Travel time of the CB during closing operation</td>
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<td>Close command status</td>
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<td>ABBIED600_Rev1_SPS_e</td>
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<tr>
<td>PosCls</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB position is closed</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>OpnAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB open travel time exceeded set value</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>ClsAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB close travel time exceeded set value</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>OpCntLO</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Number of CB operations exceeds lockout limit</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Field</td>
<td>Description</td>
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<tr>
<td>LonTmAlm</td>
<td>CB 'not operated for long time' alarm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>APwrAlm</td>
<td>Accumulated currents power (lyt), exceeded alarm limit</td>
<td>ABBIED600_Rev1_SPS_e</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>APwrLO</td>
<td>Accumulated currents power (lyt), exceeded lockout limit</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>OpnAlmTmms</td>
<td>Setting of alarm level for open travel time in ms</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>CorOpnTmms</td>
<td>Correction factor for open travel time in ms</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>ClsAlmTmms</td>
<td>Setting of alarm level for close travel time in ms</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
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<td>CorClsTmms</td>
<td>Correction factor for CB close travel time in ms</td>
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<td>CorDifTmms</td>
<td>Corr. factor for time dif in aux. and main contacts open time</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
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<td>OpLONum</td>
<td>Setting to block operation when number of operation is more.</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
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<td>Number of operations possible at rated current</td>
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<td>NumOpAlmLev</td>
<td>Alarm level for CB remaining life</td>
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<td>Number of operations possible at rated fault current</td>
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<td>CntIniVal</td>
<td>The operation numbers counter initialization value</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
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<td>InaAlmTmd</td>
<td>Alarm limit value of the inactive days counter</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
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<td>InaAlmTmh</td>
<td>Alarm time of the inactive days counter in hours</td>
<td>E</td>
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<td>InaTmdCnt</td>
<td>The number of days CB has been inactive</td>
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<td>RsAccmAPwr</td>
<td>Reset accumulation energy</td>
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<td>RsCBWear</td>
<td>Reset input for CB remaining life and operation counter</td>
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<td>RsTrvTm</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only, direct-with-normal-security</td>
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<td>TestSpvn</td>
<td>Test control for outputs</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only, direct-with-normal-security</td>
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<td>DirCff</td>
<td>Directional coefficient for CB life calculation</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>IniRmNNumOp</td>
<td>Initial value for the CB remaining life estimates</td>
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<tr>
<td>AlmAccmAPwr</td>
<td>Setting of alarm level for accumulated currents power, Iyt</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>AccmStopA</td>
<td>Setting of the RMS current below which energy acm stops</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>LOAccmAPwr</td>
<td>Setting of lockout level for accumulated currents power, Iyt</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>AExpn</td>
<td>Current exponent setting for energy calculation</td>
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<td>AOpRtg</td>
<td>Rated operating current of the breaker</td>
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<td>AFitRtg</td>
<td>Rated fault current of the breaker</td>
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### 6.1.24 LN: SPH1SCBR3 Name: SCBR (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>ColOpn</td>
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<td>Open command of trip coil</td>
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<tr>
<td>AccmAPwr</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Accumulated currents power (lyt), phase A</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.1.25 LN: SPH2SCBR3 Name: SCBR (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
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</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_inNs_Ed2</td>
<td>Name plate</td>
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<tr>
<td>ColOpn</td>
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<td>Open command of trip coil</td>
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<tr>
<td>AccmAPwr</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Accumulated currents power (lyt), phase B</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.1.26 LN: SPH3SCBR3 Name: SCBR (ED1)

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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>NamPlt</td>
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<td>ColOpn</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Open command of trip coil</td>
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<tr>
<td>AccmAPwr</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Accumulated currents power (lyt), phase C</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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Initial value for accumulated energy (lyt): 

- **IniAccmAPwr** (ABBIED600_Rev3_ASG_SP_i_e)

6.1.24 LN: SPH1SCBR3 Name: SCBR (ED1)

6.1.25 LN: SPH2SCBR3 Name: SCBR (ED1)

6.1.26 LN: SPH3SCBR3 Name: SCBR (ED1)
### 6.1.27 LN: SSOPM3 Name: SOPM (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<tr>
<td>Health</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
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<td>SprChaAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Spring charging time has crossed the set value</td>
<td>E</td>
<td>REX620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>SprChaStr</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB spring charging started input</td>
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<td>SprChaStop</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB spring charged input</td>
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<td>REX620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>SprChaT-mms</td>
<td>ABBIED600_Rev1_ING_SP_e</td>
<td>Setting of alarm for spring charging time of CB in ms.</td>
<td>E</td>
<td>REX620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>TmsSprCha</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>The charging time of the CB spring</td>
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<td>REX620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>RsSprChaTm</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>SSCBR3 spr.charge t</td>
<td>E</td>
<td>REX620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
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### 6.1.28 LN: TCSSCBR1 Name: SCBR (ED1)

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<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
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<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
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<tr>
<td>OpDiTmms</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>Operate Delay Time</td>
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<td>RsDiTmms</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
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### 6.1.29 LN: TCSSCBR2 Name: SCBR (ED1)

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<td>Block signal for all binary outputs</td>
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<tr>
<td>OpDiTrmms</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>Operate Delay Time</td>
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<td>RsDiTrmms</td>
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<td>Alarm</td>
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### 6.1.30 LN: CCSPVC1 Name: SPVC (ED1)

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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_InNs_1_e</td>
<td>Name plate</td>
<td>E</td>
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<td>Block signal for all binary outputs</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>StrVal</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Minimum operate current differential level</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>MaxOpA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Block of the function at high phase current</td>
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<td>FailACirc</td>
<td>ABBIED600_Rev1.ACT_simple</td>
<td>Detection of current circuit failure</td>
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<td>SigFailAlm</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Alarm</td>
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### Test control for outputs

- **status-only, direct-with-normal-security**

### 6.1.31 LN: SEQSPVC1 Name: SPVC (ED1)

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<th>Remarks</th>
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<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1_e</td>
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<td>ABBIED600_Rev2_INS_beh_ED1_e</td>
<td>Behaviour</td>
<td>E</td>
<td>RE(\times)620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_InNs_1_e</td>
<td>Name plate</td>
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<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple_e</td>
<td>General start of function</td>
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<td>RE(\times)620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Str3Ph</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Three-phase start of function</td>
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<tr>
<td>InPosCls</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Active when circuit breaker is closed</td>
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<tr>
<td>InDCPosOpn</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Active when line disconnector is open</td>
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<td>InMCBPsOpn</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Active when external MCB opens protected volt. circuit</td>
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<td>BlkValA</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Minimum operate level of phase current for delta calculation</td>
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<td>RE(\times)620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>NgSeqLevA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Operate level of neg seq undercurrent element</td>
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<td>ChgRteA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Operate level of change in phase current</td>
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<td>ChgRteEna</td>
<td>ABBIED600_Rev1_SPG_SP</td>
<td>Enabling operation of change based function</td>
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<td>ChgRteV</td>
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<td>Operate level of change in phase voltage</td>
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<td>Attribute type</td>
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<td>M/O/E</td>
<td>Remarks</td>
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<td>BlkValV</td>
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<td>Minimum operate level of phase voltage for delta calculation</td>
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<td>SealInV</td>
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<td>Operate level of seal-in phase voltage</td>
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<td>NgSeqLevV</td>
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<td>SEQSPVC1</td>
<td>status-only,direct-with-normal-security</td>
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<td>DeaLinValA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Operate level for open phase current detection</td>
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6.1.32 LN: MDSOPT1 Name: SOPT (ED1)

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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1_e</td>
<td>Behaviour</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_InNs_1_e</td>
<td>Name plate</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
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<td>ABBIED600_Rev1_SPS_simple_e</td>
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<tr>
<td>OpTmh</td>
<td>ABBIED600_Rev1_INS_e</td>
<td>OPR_TIME</td>
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<td>OpTmRs</td>
<td>ABBIED600_Rev2_SPC_control</td>
<td>MDSOPT1 operation status-only,direct-with-normal-security</td>
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<td>OpTmWrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Operation time warning</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>OpTmAIm</td>
<td>ABBIED600_Rev1_SPS_e</td>
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<td>TmOp</td>
<td>ABBIED600_Rev1_SPS</td>
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<td>OpWrmTmh</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>Warning value for operation time supervision</td>
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<td>OpAImTmh</td>
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<td>OpTmRs</td>
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<td>MDSOPT2 operation t</td>
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<td>OpTmWrn</td>
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<td>OpTmAlm</td>
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<td>OpWrnTmh</td>
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<td>ABBIED600_Rev20_INC_TstOut_ED1</td>
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### 6.1.34 LN: LDPRLRC1 Name: RLRC (ED1)

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<td>ABBIED600_Rev2_SPC_control</td>
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### 6.1.35 LN: PH1QVVR1 Name: QVVR (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<td>Health</td>
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<td>Start (Voltage Swell Event in progress)</td>
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### 6.1.36 LN: PH2QVVR1 Name: QVVR (ED1)

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### 6.1.37 LN: PH3QVVR1 Name: QVVR (ED1)

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### 6.1.38 LN: QVV1RQRC1 Name: RQRC (ED1)

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### 6.1.39 LN: QVV2RQRC1 Name: RQRC (ED1)

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### 6.1.40 LN: QVV3RQRC1 Name: RQRC (ED1)

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### 6.1.41 LN: VSQVUB1 Name: QVUB (ED1)

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### 6.1.43 LN: QVU2RQRC1 Name: RQRC (ED1)

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### 6.1.44 LN: QVU3RQRC1 Name: RQRC (ED1)

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### 6.1.45 LN: TPGAPC1 Name: GAPC (ED1)

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## 6.1.47 LN: TPGAPC3 Name: GAPC (ED1)

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## 6.1.57 LN: TOFGAPC3 Name: GAPC (ED1)

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ABB Oy – Distribution Automation
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6.1.58 LN: TOFGAPC4 Name: GAPC (ED1)

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| Ind2           | ABBIED600_Rev1_SPS         | IN2   |          |
| Ind3           | ABBIED600_Rev1_SPS         | IN3   |          |
| Ind4           | ABBIED600_Rev1_SPS         | IN4   |          |
| Ind5           | ABBIED600_Rev1_SPS         | IN5   |          |
| Ind6           | ABBIED600_Rev1_SPS         | IN6   |          |
| Ind7           | ABBIED600_Rev1_SPS         | IN7   |          |
| Ind8           | ABBIED600_Rev1_SPS         | IN8   |          |
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| SPCSO2         | ABBIED600_Rev1_SPC_simple  | Q2    | status-only |
| SPCSO3         | ABBIED600_Rev1_SPC_simple  | Q3    | status-only |
| SPCSO4         | ABBIED600_Rev1_SPC_simple  | Q4    | status-only |
| SPCSO5         | ABBIED600_Rev1_SPC_simple  | Q5    | status-only |
| SPCSO6         | ABBIED600_Rev1_SPC_simple  | Q6    | status-only |
| SPCSO7         | ABBIED600_Rev1_SPC_simple  | Q7    | status-only |
| SPCSO8         | ABBIED600_Rev1_SPC_simple  | Q8    | status-only |
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| OnDiTmms2      | ABBIED600_Rev1_ING_SP_e    | On delay time 2 | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| OnDiTmms3      | ABBIED600_Rev1_ING_SP_e    | On delay time 3 | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| OnDiTmms4      | ABBIED600_Rev1_ING_SP_e    | On delay time 4 | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| OnDiTmms5      | ABBIED600_Rev1_ING_SP_e    | On delay time 5 | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| OnDiTmms6      | ABBIED600_Rev1_ING_SP_e    | On delay time 6 | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| OnDiTmms7      | ABBIED600_Rev1_ING_SP_e    | On delay time 7 | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| OnDiTmms8      | ABBIED600_Rev1_ING_SP_e    | On delay time 8 | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
### 6.1.61 LN: TONGAPC3 Name: GAPC (ED1)

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Op | ABBIED600_Rev1_ACT_simple | Operate | ED1 only | |
### 6.1.65 LN: SRGAPC3 Name: GAPC (ED1)

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### 6.1.67 LN: MVGAPC1 Name: GAPC (ED1)

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### 6.1.68 LN: MVGAPC2 Name: GAPC (ED1)

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### 6.1.73 LN: SPCGAPC3 Name: GAPC (ED1)

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### 6.1.76 LN: UDFCNT1 Name: FCNT (ED1)

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### 6.1.80 LN: UDFCNT5 Name: FCNT (ED1)

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### 6.1.83 LN: UDFCNT8 Name: FCNT (ED1)

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### 6.1.84 LN: UDFCNT9 Name: FCNT (ED1)

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<td>ABBIED600_Rev1_SPS_e</td>
<td>Status output of down counting</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.1.86 LN: UDFCNT11 Name: FCNT (ED1)

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### 6.1.87 LN: UDFCNT12 Name: FCNT (ED1)

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6.1.88 LN: FLTRFRC1 Name: RFRC (ED1)
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### 6.1.89 LN: DPHLRDIR2 Name: RDIR (ED1)

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### 6.1.90 LN: DPHHRDIR2 Name: RDIR (ED1)

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### 6.1.91 LN: DEFLRDIR2 Name: RDIR (ED1)

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6.1.93 LN: EFPADM1 Name: PADM (ED1)
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## 6.1.95 LN: EFPADM3 Name: PADM (ED1)

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ABBIED600_Rev3_ASG_SG_i_ED1  |  Maximum phase angle in reverse direction

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ABBIED600_Rev3_ASG_SP_i  |  Min operate current

### BlkValV
ABBIED600_Rev3_ASG_SP_i  |  Min operate voltage

### PolQty
ABBIED600_Rev3_ENG_SG_PolQty_ED1  |  Polarizing quantity

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### 6.1.98 LN: DPH3LRDIR1 Name: RDIR (ED1)

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### 6.1.99 LN: DPH3LRDIR2 Name: RDIR (ED1)
### Minimum phase angle in forward direction
- **MinFwdAng**
  - **ABBIED600_Rev3_ASG_SG_i_ED1**
  - Minimum phase angle in forward direction

### Minimum phase angle in reverse direction
- **MinRvAng**
  - **ABBIED600_Rev3_ASG_SG_i_ED1**
  - Minimum phase angle in reverse direction

### Maximum phase angle in forward direction
- **MaxFwdAng**
  - **ABBIED600_Rev3_ASG_SG_i_ED1**
  - Maximum phase angle in forward direction

### Maximum phase angle in reverse direction
- **MaxRvAng**
  - **ABBIED600_Rev3_ASG_SG_i_ED1**
  - Maximum phase angle in reverse direction

### Minimum operate current
- **BlkValA**
  - **ABBIED600_Rev3_ASG_SP_i**
  - Minimum phase angle in forward direction

### Minimum operate voltage
- **BlkValV**
  - **ABBIED600_Rev3_ASG_SP_i**
  - Minimum phase angle in reverse direction

### Polarising Quantity
- **PolQty**
  - **ABBIED600_Rev3_ENG_SG_PolQty_ED1**
  - Polarising Quantity

### Calculation angle difference phase A
- **OpChrAngPhsA**
  - **ABBIED600_Rev3_MV_simple_i_e**
  - Calculation angle difference phase A

### Calculation angle difference phase B
- **OpChrAngPhsB**
  - **ABBIED600_Rev3_MV_simple_i_e**
  - Calculation angle difference phase B

### Calculation angle difference phase C
- **OpChrAngPhsC**
  - **ABBIED600_Rev3_MV_simple_i_e**
  - Calculation angle difference phase C

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ABB Oy – Distribution Automation
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<td>Str4Tmms3</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>Str 4 delay shot 3</td>
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<td>Str4Tmms4</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>Str 4 delay shot 4</td>
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<td>Feature</td>
<td>Description</td>
<td>Standard</td>
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<td>FrqCntLim</td>
<td>Frq Op counter limit</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>FrqCntTmm</td>
<td>Frq Op counter time</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>FrqRcvTmm</td>
<td>Frq Op recovery time</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>PlsTmms</td>
<td>Close pulse time</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>MaxTrTmms</td>
<td>Max trip time</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>InInhRec</td>
<td>Inhibit reclose (status)</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>InBlkThm</td>
<td>Thermal block (status)</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>LO</td>
<td>Lockout status</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>RdyRec</td>
<td>Ready reclose status</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>ActRec</td>
<td>Active reclose status</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>SucRec</td>
<td>Successful reclose status</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>UnsRec</td>
<td>Unsuccessful reclose status</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>PrgRec</td>
<td>In progress status</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>UnsCBCls</td>
<td>Unsuccessful CB closing status</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>WtMstr</td>
<td>Master signal to follower</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>PrgRec1</td>
<td>In progress 1st reclose</td>
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<td>PrgRec2</td>
<td>In progress 2nd reclose</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>In progress 3rd reclose</td>
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<td>PrgRec4</td>
<td>In progress 4th reclose</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>PrgRec5</td>
<td>In progress 5th reclose</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>PrgDsr</td>
<td>Discrimination time in progress</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>PrgCutOut</td>
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<td>FrqOpCnt</td>
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<td>RecRs</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>DARREC1 reset</td>
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<td>CntRs</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>DARREC1 counters</td>
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<td>DsaCnt</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>Signal for counter disabling</td>
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<td>RclTmStr</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Reclalm time started</td>
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<td>ProCrd</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Protection coordination</td>
</tr>
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<td>CBManCls</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB manually closed</td>
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<tr>
<td>AutoRecOn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>AR switched On</td>
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<tr>
<td>ShotPntr</td>
<td>ABBIED600_Rev1_INS_e</td>
<td>Shot pointer value</td>
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<td>InRecOn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>AR on/off control signal status</td>
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<td>ABBIED600_Rev1_SPS_e</td>
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<td>InCBPos</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB position input</td>
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<td>ABBIED600_Rev1_SPS_e</td>
<td>CB ready for reclosing</td>
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<td>InSynChk</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Synchro check fulfilled</td>
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<td>InIncrPntr</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Shot pointer increment by one</td>
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<td>No 4 operate signal</td>
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<td>ABBIED600_Rev1_SPS_e</td>
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<td>InIni6</td>
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<td>InDlIni2</td>
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<td>Reclaim time elapsed</td>
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<td>InBlkRecTm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Blocks and resets dead time</td>
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<td>SOF</td>
<td>ABBIED600_Rev1_SPS_e</td>
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<td>TestCtl</td>
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### 6.1.101 LN: DARREC2 Name: RREC (ED1)

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<td>ABBIED600_Rev2_INC_Mod_Of_fOn_FD_ED1</td>
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<td>Auto Reclosing Status</td>
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<td>ABBIED600_Rev1_ING_SP</td>
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<td>Operate (open command to XCBR)</td>
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<td>status-only, direct-with-normal-security</td>
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<td>Block reclose</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Operation counter (1st shot)</td>
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<td>Reclosing operation</td>
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<td>Wait close time</td>
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<td>Cut-out time</td>
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<td>Terminal priority</td>
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<td>Auto wait time</td>
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<td>Protection crd limit</td>
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<td>Auto initiation cond</td>
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<td>Control line</td>
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<td>ABBIE600_Rev1_SPG_SP_e</td>
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<td>CB closed Pos status</td>
<td>ABBIE600_Rev1_SPG_SP_e</td>
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<td>Init signals CBB1</td>
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### 6.1.103 LN: HIBPDIF1 Name: PDIF (ED1)

<table>
<thead>
<tr>
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<th>Attribute type</th>
<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_On_ED1</td>
<td>Mode</td>
<td>status-only,direct-with-normal-security</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
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<tr>
<td>Blk</td>
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<td>Block signal for all binary outputs</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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<tr>
<td>LoSet</td>
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<tr>
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<td>RsDlT-mms</td>
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<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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### 6.1.104 LN: HICPDIFF Name: PDIF (ED1)

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<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>Mode</td>
<td>status-only, direct-with-normal-security</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
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<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
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<tr>
<td>LoSet</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Low operate value, percentage of the nominal current</td>
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<tr>
<td>MinOp-Tmms</td>
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<tr>
<td>RsDIT-mms</td>
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<td>Reset Delay Time</td>
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<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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### 6.1.105 LN: SECRSYN1 Name: RSYN (ED1)

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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>ABBIED600_Rev1_SPS</td>
<td>Release</td>
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<td>Angle Difference Indicator</td>
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<td>Frequency Difference Indicator</td>
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<td>Property</td>
<td>Description</td>
<td>Standard Reference</td>
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<td>SynPrg</td>
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<td>Synchronising in progress</td>
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<td>DiffVClc</td>
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<tr>
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<td>ABBIED600_Rev3_MV_simple_i</td>
<td>Calculated Difference in Frequency</td>
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<td>DiffAngClc</td>
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<td>Calculated Difference of Phase Angle</td>
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<td>DiffV</td>
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<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Difference Phase Angle</td>
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<td>LivDeaMod</td>
<td>ABBIED600_Rev3_ENG_SG_LivDeaMod_ED1</td>
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<td>DeaLinVal</td>
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<td>Dead Line Value</td>
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<td>LivLinVal</td>
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<td>Live Line Value</td>
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<td>DeaBusVal</td>
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<td>Dead Bus Value</td>
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<td>LivBusVal</td>
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<td>Live Bus Value</td>
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<td>PlsTmms</td>
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<td>Closing time of the breaker</td>
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<td>FailSyn</td>
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<td>External closing request</td>
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<td>Byps</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Request to bypass synchronism check and voltage check</td>
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<td>LLDBInd</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Live Line, Dead Bus</td>
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<tr>
<td>LLLBInd</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Live Line, Live Bus</td>
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<td>Dead Line, Live Bus</td>
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ABB Oy – Distribution Automation 132
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<th>Attribute name</th>
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<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_Of fOn_FD_ED1_e</td>
<td>Mode</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only, direct-with-normal-security</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1_e</td>
<td>Behaviour</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>E</td>
<td>ED1 only</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_InNs_1_e</td>
<td>Name plate</td>
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### 6.1.107 LN: HZCCBSPVC1 Name: SPVC (ED1)

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<td>Mod</td>
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<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>E</td>
<td>ED1 only</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_InNs_1_e</td>
<td>Name plate</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Blk</td>
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<td>Block signal for all binary outputs</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Alm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Alarm output</td>
<td>E</td>
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<tr>
<td>AlmTmms</td>
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<td>Alarm delay time</td>
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<tr>
<td>RsDITmms</td>
<td>ABBIED600_Rev1_ING_SP_e</td>
<td>Reset Delay Time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>TstOutCmd</td>
<td>ABBIED600_Rev20_INC_TstOut_ED1</td>
<td>Test control for outputs</td>
<td>status-only,direct-with-normal-security</td>
<td></td>
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<tr>
<td>AMeasMod</td>
<td>ABBIED600_Rev3_ENG_SP_MeasMod</td>
<td>Selects used measurement mode</td>
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<td>AlmOutMod</td>
<td>ABBIED600_Rev2_ENG_SP_TrOutMod</td>
<td>Select the operation mode for alarm output</td>
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<tr>
<td>LORs</td>
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<td>Reset lockout alarm</td>
<td>status-only,direct-with-normal-security</td>
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## 6.1.108 LN: HZCCSPVC1 Name: SPVC (ED1)

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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>ED1 only</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_InNs_1_e</td>
<td>Name plate</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Alm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Alarm output</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>ABBIED600_Rev3_ASG_SG_i_ED1_e</td>
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<tr>
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<td>Alarm delay time</td>
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<tr>
<td>RsDlTmms</td>
<td>ABBIED600_Rev1_ING_SP_e</td>
<td>Reset Delay Time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>TstOutCmd</td>
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<td>Test control for outputs</td>
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<td>status-only, direct-with-normal-security</td>
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## 6.1.109 LN: MHPDIF1 Name: PDIF (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>Name plate</td>
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The table below lists the attributes for the model implementation conformance statement (MICs) for the ABB 620 SERIES Protection and Control IED.

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<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
</tr>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<td></td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health ED1 only</td>
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</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate ED1 only</td>
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<td>ABBIED600_Rev1.ACT_simple</td>
<td>Operate signal from low (stabilized) stage</td>
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<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Blocks operate outputs from biased stage</td>
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<td>DifAClc</td>
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<td>ABBIED600_Rev3.ASG.SG_i_ED1</td>
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### 6.1.111 LN: MHZPDIF1 Name: PDIF (ED1)

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<td>Health</td>
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<td>Str</td>
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<td>Op</td>
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| AngNeutBC      | ABBIED600_Rev3_MV_simple_i_e | Current phase angle phase B to C, neutral side | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| AngNeutCA      | ABBIED600_Rev3_MV_simple_i_e | Current phase angle phase C to A, neutral side | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| AngLinNeutA    | ABBIED600_Rev3_MV_simple_i_e | Current phase angle diff between line and neutral, phase A | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| AngLinNeutB    | ABBIED600_Rev3_MV_simple_i_e | Current phase angle diff between line and neutral, phase B | E | REx620 MICS:2015>IEC 61850-7-4:2003 |
| AngLinNeutC    | ABBIED600_Rev3_MV_simple_i_e | Current phase angle diff between line and neutral, phase C | E | REx620 MICS:2015>IEC 61850-7-4:2003 |

### 6.1.111 LN: MHZPDIF1 Name: PDIF (ED1) Metaschema Entries

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<td>ABBIED600_Rev3_ASG_SG_i_ED1_e</td>
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<td>EndScn2</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1_e</td>
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<td>ABBIED600_Rev2_ENG_SP_CTConnTyp_e</td>
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<td>EnaDCBias</td>
<td>ABBIED600_Rev1_SPG_SG_ED1_e</td>
<td>Setting for enabling DC bias</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>CTRatCor1</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>CT ratio correction, line side</td>
<td>E</td>
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<td>CTRatCor2</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>CT ratio correction, neutral side</td>
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### 6.1.111 LN: MHZPDIF1 Name: PDIF (ED1) Attribute List

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>Str</td>
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<td>Start</td>
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<td>Op</td>
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### 6.1.111 LN: MHZPDIF1 Name: PDIF (ED1) Attribute Name

- **Mod**: Mode status-only,direct-with-normal-security
- **Beh**: Behaviour
- **Health**: Health
- **NamPlt**: Name plate
- **Blk**: Block signal for all binary outputs
- **Str**: Start
- **Op**: Operate
### 6.1.112 LN: HREFPDIF1 Name: PDIF (ED1)

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### 6.1.113 LN: TR2LPDIF1 Name: PDIF (ED1)

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ABB Oy – Distribution Automation 138
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### 6.1.114 LN: TR2HPDIF1 Name: PDIF (ED1)

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<th>Remarks</th>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>ABBIED600_Rev1_SPS_simple</td>
<td>Blocks operate outputs from instantaneous stage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EnaHiSet</td>
<td>ABBIED600_Rev1_SPG_SG_ED1_e</td>
<td>Enable high set</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.1.115 LN: LREFPDIF1 Name: PDIF (ED1)

<table>
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<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_Off_FOn_FD_ED1</td>
<td>Mode</td>
<td></td>
<td>status-only,direct-with-normal-security</td>
</tr>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>LREFPNDF1</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>ED1 only</td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
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<td>ED1 only</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
<td></td>
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</tr>
<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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</tr>
<tr>
<td>DifAClc</td>
<td>ABBIED600_Rev3_WYE_res_simple_i</td>
<td>ID_COSPHI</td>
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<tr>
<td>RstA</td>
<td>ABBIED600_Rev3_WYE_res_simple_i</td>
<td>IB</td>
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<tr>
<td>LoSet</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Operate value</td>
<td></td>
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</tr>
<tr>
<td>MinOp-Tmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1</td>
<td>Minimum Operate Time</td>
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<tr>
<td>RstMod</td>
<td>ABBIED600_Rev3_ENG_SG_Rst-Mod_ED1</td>
<td>Restraint mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RsDITmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>TstOutCmd</td>
<td>ABBIED600_Rev20_INC_TstOut_ED1_e</td>
<td>LREFPNDF1</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
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<tr>
<td>CTConnTyp</td>
<td>AB-BIEd600_Rev2_ENG_SP_CTConnTyp_e</td>
<td>CT connection type</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.1.116 LN: LREFPDIF2 Name: PDIF (ED1)

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<th>Remarks</th>
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<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>Mode</td>
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<td>status-only,direct-with-normal-security</td>
</tr>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>LREFPNDF1</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>ED1 only</td>
</tr>
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<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
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<td>ED1 only</td>
</tr>
<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
<td></td>
<td></td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DifAClc</td>
<td>ABBIED600_Rev3_WYE_res_simple_i</td>
<td>ID_COSPHI</td>
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<td></td>
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<tr>
<td>RstA</td>
<td>ABBIED600_Rev3_WYE_res_simple_i</td>
<td>IB</td>
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<tr>
<td>LoSet</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Operate value</td>
<td></td>
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<tr>
<td>MinOp-Tmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1</td>
<td>Minimum Operate Time</td>
<td></td>
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<tr>
<td>RstMod</td>
<td>ABBIED600_Rev3_ENG_SG_RstMod_ED1</td>
<td>Restraint mode</td>
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<tr>
<td>RsDiTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
<td></td>
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</tr>
<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>TstOutCmd</td>
<td>ABBIED600_Rev20_INC_TstOut_ED1_e</td>
<td>LREFPNDF1</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only,direct-with-normal-security</td>
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<tr>
<td>CTConnTyp</td>
<td>ABBIED600_Rev2_ENG_SP_CTConnTyp_e</td>
<td>CT connection type</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Blk2HSt</td>
<td>ABBIED600_Rev1_ACT_simple_e</td>
<td>2nd harmonic restraint</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.1.117 LN: HREFPDIF2 Name: PDIF (ED1)

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<th>Explanation</th>
<th>M/O/E</th>
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<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>Mode</td>
<td></td>
<td>status-only,direct-with-normal-security</td>
</tr>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>ED1 only</td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
<td></td>
<td>ED1 only</td>
</tr>
<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td></td>
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<tr>
<td>Attribute name</td>
<td>Attribute type</td>
<td>Explanation</td>
<td>M/O/E</td>
<td>Remarks</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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<tr>
<td>LoSet</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Low operate value, percentage of the nominal current</td>
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<td></td>
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<tr>
<td>MinOp-Tmms</td>
<td>ABBIED600_Rev1_ING_SP_ED1</td>
<td>Minimum Operate Time</td>
<td></td>
<td></td>
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<tr>
<td>RsDlTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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**6.1.118 LN: CCSPVC2 Name: SPVC (ED1)**

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<tr>
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<th>M/O/E</th>
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<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1_e</td>
<td>Mode</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
</tr>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1_e</td>
<td>Behaviour</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_inNs_1_e</td>
<td>Name plate</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple_e</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>StrVal</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Minimum operate current differential level</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>MaxOpA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Block of the function at high phase current</td>
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<tr>
<td>FailACirc</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Detection of current circuit failure</td>
<td></td>
<td></td>
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<tr>
<td>SigFailAlm</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Alarm</td>
<td></td>
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<tr>
<td>TestSpvn</td>
<td>ABBIED600_Rev3_INC_TestSpvn_ED1_e</td>
<td>Test control for outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
</tr>
<tr>
<td>DifAClc</td>
<td>ABBIED600_Rev3_WYE_res_simple_i_e</td>
<td>IDIFF</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.1.119 LN: CTSRCTF1 Name: RCTF (ED1)

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<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OfFOn_FD_ED1_e</td>
<td>Mode</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
</tr>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS.beh_ED1_e</td>
<td>Behaviour</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_lnNs_1_e</td>
<td>Name plate</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple_e</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Alm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Alarm output</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple_e</td>
<td>CT secondary failure</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>OpGrp1</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>CT secondary failure in group 1</td>
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<td>OpGrp2</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>CT secondary failure in group 2</td>
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<td>OpGrp3</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>CT secondary failure in group 3</td>
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<tr>
<td>BlkInSt</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Function blocked internally</td>
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<tr>
<td>TstOutCmd</td>
<td>ABBIED600_Rev20_INC_TstOut_ED1</td>
<td>Test control for outputs</td>
<td>status-only,direct-with-normal-security</td>
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<tr>
<td>BlkValA</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Minimum operate current</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>MaxOpA</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Maximum phase current</td>
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<tr>
<td>MaxNgS-eqA</td>
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<td>Maximum I2 current in healthy sets</td>
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### 6.1.120 LN: IL1TCTR1 Name: TCTR (ED1)

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<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS.beh_ED1</td>
<td>Mode</td>
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<td></td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Mode</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_lnNs_Ed2</td>
<td>Name plate</td>
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### 6.1.121 LN: RESTCTR1 Name: TCTR (ED1)

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<td>Mod</td>
<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
<td>Mode status-only</td>
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</tr>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS.beh_ED1</td>
<td>Mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Mode</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
<td>ED1 only</td>
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<tr>
<td>AmpSv</td>
<td>ABBIED600_Rev1_SAV_92_lite</td>
<td>Current (Sampled value)</td>
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<tr>
<td>ARtg</td>
<td>ABBIED600_Rev3_ASM_SP_ARtg_VRtg</td>
<td>Primary rated current</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Cor</td>
<td>ABBIED600_Rev1_ASM_SP_f</td>
<td>Current phasor magnitude correction of an external current transformer</td>
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<tr>
<td>AngCor</td>
<td>ABBIED600_Rev3_ASM_SP_i</td>
<td>Residual Current phasor angle correction of an external current transformer</td>
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<td>Alm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Alarm</td>
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<td>Wrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Warning</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### Model Implementation Conformance Statement

**Protection and Control IED**

#### 620 SERIES

**ABB Oy – Distribution Automation**

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**ARtgScy**

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<tr>
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<td>ABBIED600_Rev2_ENG_SP_ARtg_gSec_e</td>
<td>Secondary rated current</td>
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**RevPol**

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<td>Mod</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
<td>Reverse polarity</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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#### 6.1.122 LN: UL1TVTR1 Name: TVTR (ED1)

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<td>Mod</td>
<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
<td>Mode</td>
<td>status-only</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Mode</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Mode</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
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<tr>
<td>VolSv</td>
<td>ABBIED600_Rev1_SAV_92_lite</td>
<td>Voltage (sampled value)</td>
<td>phase A</td>
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<td>FuFail</td>
<td>ABBIED600_Rev1_SPS_TVTR fuse failure</td>
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<tr>
<td>VRtg</td>
<td>ABBIED600_Rev3_ASG_SP_ARtg_VRtg</td>
<td>Primary rated voltage</td>
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<tr>
<td>Rat</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Division ratio</td>
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<tr>
<td>Cor</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Amplitude corr. A</td>
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<tr>
<td>AngCor</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Angle corr. A</td>
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<td>Alm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Alarm</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Wrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Warning</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>VRtgScy</td>
<td>ABBIED600_Rev1_ASG_SP_f_e</td>
<td>Secondary rated voltage</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>VConnTyp</td>
<td>ABBIED600_Rev3_ENG_SP_ConnType_e</td>
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<td>VInTyp</td>
<td>ABBIED600_Rev2_ENG_SP_AIn Type_e</td>
<td>Type of the voltage input</td>
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#### 6.1.123 LN: RESTVTR1 Name: TVTR (ED1)

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<th>Explanation</th>
<th>M/O/E</th>
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<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
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<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>VolSv</td>
<td>ABBIED600_Rev1_SAV_92_lite</td>
<td>Voltage (sampled value)</td>
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<td>Rated primary voltage</td>
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<td>Cor</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Voltage phasor magnitude correction of external voltage transformer</td>
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<td>Attribute name</td>
<td>Attribute type</td>
<td>Explanation</td>
<td>M/O/E</td>
<td>Remarks</td>
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<td>AngCor</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Residual Voltage phasor angle correction of an external voltage transformer</td>
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<td>Wrn</td>
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<td>Warning</td>
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<td>VRtgScy</td>
<td>ABBIED600_Rev1_ASG_SP_f_e</td>
<td>Rated secondary voltage</td>
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### 6.1.124 LN: UL1TVTR2 Name: TVTR (ED1)

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<th>Explanation</th>
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<td>Mod</td>
<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
<td>Mode</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Mode</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Mode</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
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<td>VolSv</td>
<td>ABBIED600_Rev1_SAV_92_lite</td>
<td>Voltage (sampled value) phase A</td>
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<tr>
<td>FuFail</td>
<td>ABBIED600_Rev1_SPS</td>
<td>TVTR fuse failure</td>
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<td>VRtg</td>
<td>ABBIED600_Rev3_ASG_SP_ARtg_VRtg</td>
<td>Primary rated voltage</td>
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<tr>
<td>Rat</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Division ratio</td>
<td>order code dependent</td>
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<td>Cor</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Phase A Voltage phasor magnitude correction of an external voltage transformer</td>
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<td>AngCor</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Angle corr. A</td>
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<td>Alm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Alarm</td>
<td>E</td>
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<td>Wrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Warning</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VRtgScy</td>
<td>ABBIED600_Rev1_ASG_SP_f_e</td>
<td>Secondary rated voltage</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VConnTyp</td>
<td>ABBIED600_Rev3_ENG_SP_ConnType_e</td>
<td>VT connection</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VInTyp</td>
<td>ABBIED600_Rev2_ENG_SP_AlnIn_Type_e</td>
<td>Type of the voltage input</td>
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### 6.1.125 LN: IL1TCTR2 Name: TCTR (ED1)

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<td>NamPlt</td>
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<td>Name plate</td>
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<tr>
<td>VolSv</td>
<td>ABBIED600_Rev1_SAV_92_lite</td>
<td>Voltage (sampled value) phase A</td>
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<tr>
<td>FuFail</td>
<td>ABBIED600_Rev1_SPS</td>
<td>TVTR fuse failure</td>
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<tr>
<td>VRtg</td>
<td>ABBIED600_Rev3_ASG_SP_ARtg_VRtg</td>
<td>Primary rated voltage</td>
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<tr>
<td>Rat</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Division ratio</td>
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<tr>
<td>Cor</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Phase A Voltage phasor magnitude correction of an external voltage transformer</td>
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<tr>
<td>AngCor</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Angle corr. A</td>
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<tr>
<td>Alm</td>
<td>ABBIED600_Rev1_SPS_e</td>
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<td>E</td>
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<td>Wrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Warning</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>VRtgScy</td>
<td>ABBIED600_Rev1_ASG_SP_f_e</td>
<td>Secondary rated voltage</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>VConnTyp</td>
<td>ABBIED600_Rev3_ENG_SP_ConnType_e</td>
<td>VT connection</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VInTyp</td>
<td>ABBIED600_Rev2_ENG_SP_AlnIn_Type_e</td>
<td>Type of the voltage input</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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## 6.1.126 LN: RESTCTR2 Name: TCTR (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Mode</td>
<td>ED1 only</td>
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</tr>
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<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
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<tr>
<td>AmpSv</td>
<td>ABBIED600_Rev1_SAV_92_lite</td>
<td>Current (Sampled value) phase A</td>
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<td>ARtg</td>
<td>ABBIED600_Rev3_ASG_SP_ARtg_VRtg</td>
<td>Primary rated current</td>
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<td>Cor</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Phase A Current phasor magnitude correction of an external current transformer</td>
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<td>AngCor</td>
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<td>Phase A Current phasor angle correction of an external current transformer</td>
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<td>Wrn</td>
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<td>Network Nominal Current</td>
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### 6.1.127 LN: UL1TVTR3 Name: TVTR (ED1)

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<td>Mode</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Mode</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
<td>Name plate</td>
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<tr>
<td>VolSv</td>
<td>ABBIED600_Rev1_SAV_92_lite</td>
<td>Voltage (sampled value) phase A</td>
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<td>FuFail</td>
<td>ABBIED600_Rev1_SPS</td>
<td>TVTR fuse failure</td>
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<td>ABBIED600_Rev3_ASG_SP_ARtg_VRtg</td>
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<td>Division ratio</td>
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<td>Phase A Voltage phasor magnitude correction of an external voltage transformer</td>
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<td>AngCor</td>
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### 6.1.128 LN: SERLCCH1 Name: LCCH (ED1)

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<td>Wrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Warning</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VRtgScy</td>
<td>ABBIED600_Rev1_ASG_SP_f_e</td>
<td>Secondary rated voltage</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VConnTyp</td>
<td>ABBIED600_Rev3_ENG_SP_ConnType_e</td>
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<tr>
<td>ABBIED600_Rev1_INC_Mod_On-Off_NoBlk_ED1</td>
<td>SERLCCH1 on/off</td>
<td>status-only,direct-with-normal-security,ED1 only</td>
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<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>SERLCCH1 on/off</td>
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<tr>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>SERLCCH1 Health</td>
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<td>ABBIED600_Rev1_LPL_InNs_1</td>
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<td>ABBIED600_Rev1_INS_e</td>
<td>Number of successfully received link frames</td>
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<td>ABBIED600_Rev1_INS_e</td>
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<td>ABBIED600_Rev1_INS_e</td>
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<td>Number of parity errors</td>
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<td>ABBIED600_Rev1_INS_e</td>
<td>Number of overrun errors</td>
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<td>Framing errors</td>
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<td>ABBIED600_Rev1_SPS_simple</td>
<td>Channel Live</td>
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<tr>
<td>ABBIED600_Rev1_SPS_simple_e</td>
<td>Link Live</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>Reset Counters</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
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## 6.1.129 LN: SERLCCH2 Name: LCCH (ED1)

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<th>Explanation</th>
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<th>Remarks</th>
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<td>Mod</td>
<td>ABBIED600_Rev1_INC_Mod_On-Off_NoBlk_ED1</td>
<td>SERLCCH2 on/off</td>
<td>E</td>
<td>status-only,direct-with-normal-security,ED1 only</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>SERLCCH2 on/off</td>
<td>E</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>SERLCCH2 Health</td>
<td>E</td>
<td>ED1 only</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_InNs_1</td>
<td>SERLCCH2</td>
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<td>ED1 only</td>
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<td>FibMod</td>
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<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>CTS delay for COM2</td>
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<td>RTSITmms</td>
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<td>RTS delay for COM2</td>
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<td>SerBaudRte</td>
<td>ABBIED600_Rev1_ENG_SP_BaudRate_e</td>
<td>Baudrate for COM2</td>
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<td>FrRxCnt</td>
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<td>Number of successfully received link frames</td>
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<td>RxErrCnt</td>
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<td>Number of discarded link frames</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>FrTxCnt</td>
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<td>Number of transmitted link frames</td>
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<tr>
<td>CDLosCnt</td>
<td>ABBIED600_Rev1_INS_e</td>
<td>CD lost</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>CollCnt</td>
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<td>Collision</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>CTSTmOut</td>
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<td>CTS timeout</td>
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<td>TxFmOutCnt</td>
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<td>PtyErrCnt</td>
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<td>OvRunErr</td>
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<td>FrErrCnt</td>
<td>ABBIED600_Rev1_INS_e</td>
<td>Framing errors</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>ChLiv</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Channel Live</td>
<td>E</td>
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<tr>
<td>CntRs</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>Reset Counters</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-</td>
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### 6.1.130 LN: RCHLCCH1 Name: LCCH (ED1)

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<td>status-only, ED1 only</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Physical Channel behavior</td>
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<td>RCHLCCH1</td>
<td>ED1 only</td>
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<td>ChLiv</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Physical channel status of port A</td>
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<td>RedChLiv</td>
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<td>Physical channel status of port B</td>
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<td>RedCfg</td>
<td>ABBIED600_Rev1_ENG_SP_ChRed-Kind_e</td>
<td>Redundant mode</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.1.131 LN: SCHLCCH1 Name: LCCH (ED1)

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<td>ChLiv</td>
<td>ABBIED600_Rev1_SPS</td>
<td>Physical channel status</td>
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<tr>
<td>LnkLiv</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Link status</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>PortMod</td>
<td>ABBIED600_Rev4_ENG_SP_Eth-PortMod_e</td>
<td>Ethernet port mode</td>
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### 6.1.132 LN: SCHLCCH2 Name: LCCH (ED1)

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<td>status-only, ED1 only</td>
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<td>Beh</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_InNs_1</td>
<td>SCHLCCH2</td>
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<td>ChLiv</td>
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<td>LnkLiv</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Link status</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>PortMod</td>
<td>ABBIED600_Rev4_ENG_SP_Eth-PortMod_e</td>
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### 6.1.133 LN: SCHLCCH3 Name: LCCH (ED1)

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<td>LnkLiv</td>
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### 6.1.134 LN: SMVLSVM1 Name: LSVM (ED1)

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<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1_e</td>
<td>Mode</td>
<td>E</td>
<td>status-only,direct-with-normal-security</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>ABBIED600_Rev1_SPS_simple</td>
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### 6.1.135 LN: MBSLPRT1 Name: LPRT (ED1)

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<td>EndFrDl</td>
<td>Message end delay for serial client</td>
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<td>FrRxCnt</td>
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<td>TxExcpCnt2</td>
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<td>ConnRejRg</td>
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<td>CtlPwd1</td>
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## CommPort

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<tr>
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**6.1.138 LN: MBSLPRT4 Name: LPRT (ED1)**

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### 6.1.140 LN: I3CLPRT1 Name: LPRT (ED1)

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REx620 MICS:2015-IEC 61850-7-4:2003
### 6.1.141 LN: I3CLPRT2 Name: LPRT (ED1)

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**TypeDef: AB-BIED600_Rev1_ENG_SP**

**Version:** 2015-04-03

**IEC 61850-7-4:**

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### 6.1.143 LN: DNPLPRT2 Name: LPRT (ED1)

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### 6.1.144 LN: DNPLPRT3 Name: LPRT (ED1)

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### 6.1.146 LN: DNPLRT5 Name: LPRT (ED1)

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### 6.1.147 LN: SCEFRFLO1 Name: RFLO (ED1)

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### 6.1.148 LN: FLO1RFRC1 Name: RFRC (ED1)

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6.1.149 LN: SCEF1ZLIN1 Name: ZLIN (ED1)

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<td>RPs</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
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<td>XPs</td>
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<td>RZer</td>
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<td>Line section C ZS resistance</td>
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### 6.1.152 LN: OLATCC1 Name: ATCC (ED1)

<table>
<thead>
<tr>
<th>Attribute name</th>
<th>Attribute type</th>
<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_Off_on_ED1</td>
<td>Operation</td>
<td>status-only, direct-with-normal-security</td>
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<td>Behaviour</td>
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<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>ABBIED600_Rev2_LPL_InNs_Ed2</td>
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<td>ABBIED600_Rev1_SPS</td>
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<td>OpCntRs</td>
<td>ABBIED600_Rev1_INC_simple_int</td>
<td>Repeatable operation counter</td>
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<td>TapChg</td>
<td>ABBIED600_Rev4_BSC_control</td>
<td>Change Tap Position (stop, lower, higher)</td>
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<td>ParOp</td>
<td>ABBIED600_Rev2_SPC_control</td>
<td>Parallel/Independent operation</td>
<td>status-only, direct-with-normal-security</td>
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<td>LTCBlk</td>
<td>ABBIED600_Rev1_SPC_simple</td>
<td>Block (Inhibit) control output of LTC</td>
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<td>VRed</td>
<td>ABBIED600_Rev1_SPC_simple</td>
<td>Voltage reduction step 1</td>
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<td>ABBIED600_Rev3_MV_simple_i</td>
<td>Control voltage</td>
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<td>ABBIED600_Rev3_MV_simple_i</td>
<td>Load current (total transformer secondary current)</td>
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<td>ABBIED600_Rev3_MV_simple_i</td>
<td>Circulating current</td>
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<td>BndCtr</td>
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<td>BndWid</td>
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<td>CtlDi1Tmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1</td>
<td>Control intentional time delay 1</td>
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<td>CtlDi2Tmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1_e</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>RnbkRV</td>
<td>Runback raise voltage</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
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<td>LimLodA</td>
<td>Limit load current (LTC Block Load current)</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
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<td>TmDiChr</td>
<td>Time delay linear or inverse characteristics</td>
<td>ABBIED600_Rev1_SPG_SP</td>
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<td></td>
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<td>VRedVal</td>
<td>Reduction of band centre (percent) when voltage step is active</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
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<td>TapBlkR</td>
<td>Tap position of Load tap changer where automatic Raise commands are blocked</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
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<td>TapBlkL</td>
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<td>Block raise</td>
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<td>EndPosL</td>
<td>Block lower</td>
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<td>ABBIED600_Rev2_ENG_SP_Par-TrfMod_ED1_e</td>
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<td>Alarm</td>
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<td>Block under voltage</td>
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<td>External block status</td>
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<td>Parallel failure</td>
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<td>Voltage setpoint</td>
<td>ABBIED600_Rev4_APC_control_e</td>
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<td>Function</td>
<td>Model Name</td>
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<td>Status</td>
<td>Security</td>
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<td>ABBIED600_Rev4_ENG_SP_OpMod-SetATCC_e</td>
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<td>Output pulse</td>
<td>ABBIED600_Rev1_ING_SP_e</td>
<td>Output pulse</td>
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<td>Circulating current limit</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Circulating current limit</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Line Drop Compensation limit</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Line Drop Compensation limit</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Line Drop Compensation enable</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
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<td>Reverse power flow allwd</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Max operations in 1h</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>Max operations in 1h</td>
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<td>Command error delay</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>Command error delay</td>
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<td>Follower delay</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
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<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Alarms enabled</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Counter reset</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
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<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only, direct-with-normal-security</td>
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<td>Change follower 1 tap position command from master (stop, lower, higher)</td>
<td>ABBIED600_Rev1_INS_e</td>
<td>Change follower 1 tap position command from master (stop, lower, higher)</td>
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<td>TapOpFlw2</td>
<td>ABBIED600_Rev1_INS_e</td>
<td>Change follower 2 tap position command from master (stop, lower, higher)</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>ABBIED600_Rev1_INS_e</td>
<td>Change follower 3 tap position command from master (stop, lower, higher)</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>LodAVec</td>
<td>ABBIED600_Rev3_CMV_S_1_e</td>
<td>Transmitted current phasor</td>
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<td>VMeas</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Voltage, average filtered</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>AngVAPhA</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Angle U_A-I_A</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>CtlDIOn</td>
<td>ABBIED600_Rev2_INS_TimerOn_ED1_e</td>
<td>Timer status</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>CtlOpModSt</td>
<td>ABBIED600_Rev2_INS_OpModA-TCC_ED1_e</td>
<td>Acting oper mode</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
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<td>CtlVDif</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Voltage difference</td>
<td>E</td>
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</tr>
<tr>
<td>ClcLDC</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Calculated Line Drop Compensation</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>BlkSt</td>
<td>ABBIED600_Rev1_INS_e</td>
<td>Block status</td>
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<td>ABBIED600_Rev1_SPS_e</td>
<td>Block runback raise voltage</td>
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<td>ABBIED600_Rev1_SPS_e</td>
<td>Block circulating current</td>
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<td>AlmReas</td>
<td>ABBIED600_Rev2_INS_AlmReas_ED1_e</td>
<td>Alarm reason</td>
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<tr>
<td>FllwFlt</td>
<td>ABBIED600_Rev2_INS_FllwFlt_ED1_e</td>
<td>Failed followers</td>
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<td>NumParUnit</td>
<td>ABBIED600_Rev2_INS_ParUnits_ED1_e</td>
<td>Parallel units in MCC</td>
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<td>Trf1TapPos</td>
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<td>Trafo 2 tap position</td>
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<td>Trf3TapPos</td>
<td>Trafo 3 tap position</td>
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<td>TapChgFllw</td>
<td>Change follower tap position (stop, lower, higher)</td>
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<td>Connection status</td>
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<td>Tap Changer Operating</td>
<td>ABBIED600_Rev1_SPS_e</td>
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<td>Trf1A</td>
<td>Received current from transformer 1</td>
<td>ABBIED600_Rev3_CMV_S_1_e</td>
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<tr>
<td>Trf2A</td>
<td>Received current from transformer 2</td>
<td>ABBIED600_Rev3_CMV_S_1_e</td>
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<td>Trf3A</td>
<td>Received current from transformer 3</td>
<td>ABBIED600_Rev3_CMV_S_1_e</td>
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<td>ParTrfNum</td>
<td>Parallel trafos</td>
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<td>TestCtl</td>
<td>Test control for outputs</td>
<td>ABBIED600_Rev3_INC_TestCtl_ED1_e</td>
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<td>CtlDISt</td>
<td>Timer on</td>
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## 6.2 Extented Logical Nodes

### 6.2.1 LN: PHLPTOC1 Name: PTOC (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
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<td>Health</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<tr>
<td>Blk</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_threephase</td>
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<td>Op</td>
<td>ABBIED600_Rev1_ACT_threephase</td>
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<tr>
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<td>TypRsCrv</td>
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<td>Type of Reset Curve</td>
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<td>ABBIED600_Rev1_ING_SP_1</td>
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<td>Ratio of start time / operate time</td>
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### 6.2.2 LN: PHHPTOC1 Name: PTOC (ED1)

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<tr>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_threephase</td>
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### 6.2.4 LN: PHIPTOC1 Name: PTOC (ED1)

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<tr>
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### Protection and Control IED

#### Model Implementation Conformance Statement

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<td>Selection of reset curve type</td>
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#### 6.2.7 LN: EFLPTOC1 Name: PTOC (ED1)

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### StrValMult

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#### 6.2.8 LN: EFHPTOC1 Name: PTOC (ED1)

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<td>RsDITmms</td>
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<td>DirMod</td>
<td>Directional Mode</td>
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<td>VStr</td>
<td>Voltage start value</td>
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<td>StrValMult</td>
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<tr>
<td>AllwNonDir</td>
<td>Allows prot activation as non-dir when dir info is invalid</td>
<td>E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>AMeasMod</td>
<td>Selects used measurement mode</td>
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<td>InEnaMult</td>
<td>Enables current multiplier</td>
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<tr>
<td>StrDur</td>
<td>Ratio of start time / operate time</td>
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<td>EnaVLim</td>
<td>Enable voltage limit</td>
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<tr>
<td>TestPro</td>
<td>Test control for outputs</td>
<td>E REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only,direct-with-normal-security</td>
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<tr>
<td>AResSigSel</td>
<td>Selection for used lo signal</td>
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### 6.2.10 LN: DEFHPTOC1 Name: PTOC (ED1)

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<th>M/O/E</th>
<th>Remarks</th>
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<td>ABBIED600_Rev2_INC_Mod_Of Fon_FD_ED1</td>
<td>Mode</td>
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<td>status-only,direct-with-normal-security</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1</td>
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</tr>
<tr>
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<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
<td>ED1</td>
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<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
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### 6.2.11 LN: ROVPTOV1 Name: PTOV (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
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<td>ABBIED600_Rev4_INS_health_ED1</td>
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### Attribute name | Attribute type | Explanation | M/O/E | Remarks  
---|---|---|---|---
Mod | ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1 | Mode | status-only,direct-with-normal-security  
Beh | ABBIED600_Rev2_INS_beh_ED1 | Behaviour  
Health | ABBIED600_Rev4_INS_health_ED1 | Health | ED1 only  
NamPlt | ABBIED600_Rev1_LPL_1 | Name plate | ED1 only  
Str | ABBIED600_Rev1_ACD_simple | Start  
Op | ABBIED600_Rev1_ACT_simple | Operate  
StrVal | ABBIED600_Rev3_ASG_SG_i_ED1 | Residual Over Voltage start value  
OpDiTmms | ABBIED600_Rev1_ING_SG_ED1 | Operate Delay Time  
RsDiTmms | ABBIED600_Rev1_ING_SP_1 | Reset Delay Time  
Blk | ABBIED600_Rev1_SPS_simple | Block signal for all binary outputs | E | REx620 MICS:2015>IEC 61850-7-4:2003  
StrDur | ABBIED600_Rev3_MV_2_e | Ratio of start time / operate time | E | REx620 MICS:2015>IEC 61850-7-4:2003  
VResSigSel | ABBIED600_Rev2_ENG_SP_VResSigSel_e | Selection for used Uo signal | E | REx620 MICS:2015>IEC 61850-7-4:2003  

#### 6.2.12 LN: ROVPTOV2 Name: PTOV (ED1)
### 6.2.13 LN: ROVPTOV3 Name: PTOV (ED1)

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<td>Start</td>
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<tr>
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<tr>
<td>StrVal</td>
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<td>Residual Over Voltage start value</td>
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<tr>
<td>OpDTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
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<tr>
<td>RsDTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
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<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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<td>VResSigSel</td>
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### 6.2.14 LN: PHPTUV1 Name: PTUV (ED1)

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<tr>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<td>Blk</td>
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<td>Block signal for all binary outputs</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Name plate</td>
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<tr>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Str</td>
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<td>Start</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_threephase</td>
<td>Operate</td>
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<td>TmVCrv</td>
<td>ABBIED600_Rev2_CURVE_SG_ED1</td>
<td>Operating Curve Type</td>
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<td>Time Dial Multiplier</td>
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<td>MinOp-Tmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Minimum Operate Time</td>
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<td>ABBIED600_Rev1_ING_SG_ED1</td>
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<td>RsDlTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
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<td>TypRsCrv</td>
<td>ABBIED600_Rev3_ENG_SG_TypRsCrv_ED1_e</td>
<td>Type of Reset Curve</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>BlkVal</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Voltage block value</td>
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<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>TestPro</td>
<td>ABBIED600_Rev2_INC_TestPro_ED1_e</td>
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<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only,direct-with-normal-security</td>
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<tr>
<td>CrvSatRl</td>
<td>ABBIED600_Rev1_ASG_SP_f_e</td>
<td>Tuning parameter to avoid curve discontinuities</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>ABBIED600_Rev3_ENG_SP_VSel_e</td>
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### 6.2.16 LN: PHPTUV3 Name: PTUV (ED1)

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<td>Blk</td>
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<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Str</td>
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<td>Op</td>
<td>ABBIED600_Rev1_ACT_threephase</td>
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<tr>
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<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
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<td>TypRsCrv</td>
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<td>Ratio of start time / operate time</td>
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<td>TestPro</td>
<td>ABBIED600_Rev2_INC_TestPro_ED1_e</td>
<td>Test control for outputs</td>
<td>E</td>
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<td>CrvSatRl</td>
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<td>Tuning parameter to avoid curve discontinuities</td>
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### Model Implementation Conformance Statement

**Protection and Control IED**

**620 SERIES**

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<td><code>ABBIED600_Rev2_INS_beh_ED1</code></td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td><code>ABBIED600_Rev4_INS_health_ED1</code></td>
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<tr>
<td>TmVCrv</td>
<td><code>ABBIED600_Rev2_CURVE_SG_ED1</code></td>
<td>Operating Curve Type</td>
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<tr>
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<td><code>ABBIED600_Rev3_ASG_SG_i_ED1</code></td>
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<td><code>ABBIED600_Rev1_ING_SG_ED1</code></td>
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<td>RsDIT-Tmms</td>
<td><code>ABBIED600_Rev1_ING_SP_1</code></td>
<td>Reset Delay Time</td>
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<tr>
<td>TypRsCrv</td>
<td><code>ABBIED600_Rev3_ENG_SG_TypRsCrv_ED1_e</code></td>
<td>Type of Reset Curve</td>
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<td>StrDur</td>
<td><code>ABBIED600_Rev3_MV_2_e</code></td>
<td>Ratio of start time / operate time</td>
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<td>TestPro</td>
<td><code>ABBIED600_Rev2_INC_TestPro_ED1_e</code></td>
<td>Test control for outputs</td>
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<tr>
<td>CrvSatRl</td>
<td><code>ABBIED600_Rev1_ASG_SP_f_e</code></td>
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**6.2.17 LN: PHPTOV1 Name: PTOV (ED1)**

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<td><code>ABBIED600_Rev3_ASG_SP_i_e</code></td>
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<td>TypTmRs</td>
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### Protection and Control IED

**Model Implementation Conformance Statement**

**620 SERIES**

**HysRl**
- **ABBIED600_Rev3_ASG_SP_i_e**
- Relative hysteresis for operation
- **REx620 MICS:2015>IEC 61850-7-4:2003**

**TypTmRs**
- **ABBIE600_Rev2_ENG_SG_TypTmRs_ED1_e**
- Type of time reset
- **REx620 MICS:2015>IEC 61850-7-4:2003**

#### 6.2.18 LN: PHPTOV2 Name: PTOV (ED1)

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<td>Beh</td>
<td>ABBIE600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<td>Health</td>
<td>ABBIE600_Rev4_INS_health_ED1</td>
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<td>Blk</td>
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<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Str</td>
<td>ABBIE600_Rev1_ACD_threephase</td>
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<td>Op</td>
<td>ABBIE600_Rev1_ACT_threephase</td>
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<td>TmVCrv</td>
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<tr>
<td>RsDIT-Tmms</td>
<td>ABBIE600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
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<tr>
<td>TypRsCrv</td>
<td>ABBIE600_Rev3_ENG_SG_TypRsCrv_ED1_e</td>
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<td>Test control for outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
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<tr>
<td>CrvSatRl</td>
<td>ABBIE600_Rev1_ASG_SP_f_e</td>
<td>Tuning parameter to avoid curve discontinuities</td>
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### Protection and Control IED

#### Model Implementation Conformance Statement

**620 SERIES**

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<th>Parameter to select phase or phase-to-phase voltages</th>
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<td>Relative hysteresis for operation</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>TypTmRs</td>
<td>ABBIED600_Rev2_ENG_SG_TypTmRs_ED1_e</td>
<td>Type of time reset</td>
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#### 6.2.19 LN: PHPTOV3 Name: PTOV (ED1)

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<td>Health</td>
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<td>NamPlt</td>
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<td>Name plate</td>
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<tr>
<td>Blk</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_three-phase</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_three-phase</td>
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<td>Minimum Operate Time</td>
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<tr>
<td>OpDIITmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1</td>
<td>Operate Delay Time</td>
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<tr>
<td>RsDIITmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
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## 6.2.20 LN: PSPTUV1 Name: PTUV (ED1)

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## 6.2.21 LN: PSPTUV2 Name: PTUV (ED1)

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<td>Beh</td>
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### 6.2.22 LN: NSPTOV1 Name: PTOV (ED1)
### 6.2.23 LN: NSPTOV2 Name: PTOV (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>Name plate</td>
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<td>Blk</td>
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<td>Block signal for all binary outputs</td>
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### 6.2.24 LN: FRPTRC1 Name: PTRC (ED1)

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**ABB Oy – Distribution Automation**

208
### 6.2.27 LN: CCBRBRF1 Name: RBRF (ED1)

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<td>Trip pulse time</td>
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### 6.2.28 LN: CCBRBFRF2 Name: RBRF (ED1)

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<td>InCBFlt</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB faulty and unable to trip</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>StrLtcMod</td>
<td>ABBIED600_Rev2_ENG_SP_StrLtcMod_e</td>
<td>Start reset delayed or immediately</td>
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### 6.2.30 LN: TRPPTRC1 Name: PTRC (ED1)

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<th>Remarks</th>
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<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
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<td>status-only, direct-with-normal-security</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>Name plate</td>
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<tr>
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<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>ABBIED600_Rev1_ACT_simple_dU</td>
<td>General trip output signal</td>
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<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple_dU</td>
<td>Operate input signal</td>
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<td>TrPlsTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>LORs</td>
<td>ABBIED600_Rev2_SPC_indications_e</td>
<td>RST_LKOUT</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only, direct-with-normal-security</td>
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<tr>
<td>TrRs</td>
<td>ABBIED600_Rev2_SPC_indications_e</td>
<td>Reset latched trip</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only, direct-with-normal-security</td>
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<tr>
<td>ClsLO</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Circuit breaker lockout output (set until reset)</td>
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### 6.2.31 LN: TRPPTRC2 Name: PTRC (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>Name plate</td>
<td>ED1 only</td>
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<td>Attribute type</td>
<td>Explanation</td>
<td>M/O/E</td>
<td>Remarks</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple_dU</td>
<td>Operate input signal</td>
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<tr>
<td>TrPlsTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Minimum duration of trip output signal</td>
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<tr>
<td>TrOutMod</td>
<td>ABBIED600_Rev2_ENG_SP_TrOut-Mod_e</td>
<td>Trip output mode</td>
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<tr>
<td>LORs</td>
<td>ABBIED600_Rev2_SPC_indications_e</td>
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<tr>
<td>TrRs</td>
<td>ABBIED600_Rev2_SPC_indications_e</td>
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<tr>
<td>CIsLO</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Circuit breaker lock-out output (set until reset)</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.2.32 LN: TRPPTRC3 Name: PTRC (ED1)

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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
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<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Tr</td>
<td>ABBIED600_Rev1_ACT_simple_dU</td>
<td>General trip output signal</td>
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<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple_dU</td>
<td>Operate input signal</td>
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<td>TrPlsTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Minimum duration of trip output signal</td>
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<td>TrOutMod</td>
<td>ABBIED600_Rev2_ENG_SP_TrOut-Mod_e</td>
<td>Trip output mode</td>
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<td>LORs</td>
<td>ABBIED600_Rev2_SPC_indications_e</td>
<td>RST_LKOUT</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,di rect-with-normal-security</td>
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<tr>
<td>TrRs</td>
<td>ABBIED600_Rev2_SPC_indications_e</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,di rect-with-normal-security</td>
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<tr>
<td>CIsLO</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Circuit breaker lock-out output (set until reset)</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.2.33 LN: TRPPTRC4 Name: PTRC (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<td>Tr</td>
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<td>TrPlsTmms</td>
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<td>Minimum duration of trip output signal</td>
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<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
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<tr>
<td>ClsLO</td>
<td>ABBIED600_Rev1_SPS_e</td>
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### 6.2.34 LN: MAPGAPC1 Name: GAPC (ED1)

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<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
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### 6.2.36 LN: MAPGAPC3 Name: GAPC (ED1)

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<td>Enable start with added start value</td>
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### 6.2.37 LN: MAPGAPC4 Name: GAPC (ED1)

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<td>Beh</td>
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<td>Behaviour</td>
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<td>ABBIED600_Rev3_MV_2_e</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
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<td>Name plate</td>
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6.2.38 LN: MAPGAPC5 Name: GAPC (ED1)
### RsDlTmms
- **Attribute**: `RsDlTmms`
- **Attribute Type**: `ABBIED600_Rev1_ING_SP_e`
- **Reset delay time**

### AnIn
- **Attribute**: `AnIn`
- **Attribute Type**: `ABBIED600_Rev3_MV_2_e`
- **Analogue input**

### OpModCom
- **Attribute**: `OpModCom`
- **Attribute Type**: `ABBIED600_Rev2_ENG_SP_OpMod-Comp_e`
- **Operation mode**

### TstOutCmd
- **Attribute**: `TstOutCmd`
- **Attribute Type**: `ABBIED600_Rev20_INC_TstOut_ED1_e`
- **Test control for outputs**

### StrDur
- **Attribute**: `StrDur`
- **Attribute Type**: `ABBIED600_Rev3_MV_2_e`
- **Ratio of start time / operate time**

### HysAbs
- **Attribute**: `HysAbs`
- **Attribute Type**: `ABBIED600_Rev3_ASG_SP_i_e`
- **Absolute hysteresis for operation**

### StrValAdd
- **Attribute**: `StrValAdd`
- **Attribute Type**: `ABBIED600_Rev3_ASG_SG_i_ED1_e`
- **Start value Add**

### InEnaAdd
- **Attribute**: `InEnaAdd`
- **Attribute Type**: `ABBIED600_Rev1_SPS_e`
- **Enable start with added start value**

### 6.2.39 LN: MAPGAPC6 Name: GAPC (ED1)

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<tr>
<td>AnIn</td>
<td><code>ABBIED600_Rev3_MV_2_e</code></td>
<td>Analogue input</td>
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<tr>
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### Protection and Control IED

**Model Implementation Conformance Statement**

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**ABB Oy – Distribution Automation**

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**620 SERIES**

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### 6.2.40 LN: MAPGAPC7 Name: GAPC (ED1)

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### 6.2.41 LN: MAPGAPC8 Name: GAPC (ED1)

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ABB Oy – Distribution Automation

219
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6.2.42 LN: MAPGAPC9 Name: GAPC (ED1)
### 6.2.43 LN: MAPGAPC10 Name: GAPC (ED1)

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### 6.2.44 LN: MAPGAPC11 Name: GAPC (ED1)

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<tr>
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### 6.2.45 LN: MAPGAPC12 Name: GAPC (ED1)

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### 6.2.46 LN: MAPGAPC13 Name: GAPC (ED1)

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### 6.2.48 LN: MAPGAPC15 Name: GAPC (ED1)

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<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>HysAbs</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Absolute hysteresis for operation</td>
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<td>StrValAdd</td>
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### 6.2.52 LN: CMMXU1 Name: MMXU (ED1)

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<td>Behaviour</td>
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<td>Health</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
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<td>RE\text{x}_620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>A</td>
<td>ABBIED600_Rev3_WYE_threephase_full_i</td>
<td>Phase currents</td>
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<td>AMeas-Mod</td>
<td>ABBIED600_Rev3_ENG_SP_Meas-Mod_e</td>
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<td>Number of phases required by limit supervision</td>
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<td>RE\text{x}_620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>HiAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
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<td>ABBIED600_Rev1_SPS_e</td>
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<td>RE\text{x}_620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>LoWrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Low warning</td>
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<td>RE\text{x}_620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>LoAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Low alarm</td>
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<td>RE\text{x}_620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>RcdRs</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>CMMXU1 demands</td>
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<td>RE\text{x}_620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
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## 6.2.53 LN: CAVMMXU1 Name: MMXU (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>ABBIED600_Rev3_WYE_threephase_simpler_i</td>
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## 6.2.54 LN: CMAMMXU1 Name: MMXU (ED1)

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## 6.2.55 LN: CMIMMXU1 Name: MMXU (ED1)

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### 6.2.56 LN: PEA/MMXU1 Name: MMXU (ED1)

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<td>TotVAr</td>
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<td>Average reactive power</td>
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### 6.2.57 LN: PEMAM/MMXU1 Name: MMXU (ED1)

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### 6.2.58 LN: PEMIMMXU1 Name: MMXU (ED1)

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### 6.2.59 LN: CMHAI1 Name: MHAI (ED1)

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<tr>
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<td>Name plate</td>
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<td>Blk</td>
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<td>RcdRs</td>
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### 6.2.60 LN: VMHAI1 Name: Mhai (ED1)

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<td>Beh</td>
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<td>Behaviour</td>
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<td>Block signal for all binary outputs</td>
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### 6.2.61 LN: TPGAPC1 Name: GAPC (ED1)

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### 6.2.62 LN: TPGAPC2 Name: GAPC (ED1)

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### 6.2.65 LN: PTGAPC1 Name: GAPC (ED1)

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ABB Oy – Distribution Automation 235
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<td>Enable signal for current multiplier E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Num Ph</td>
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<td>Number of phases required for operate activation E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Multiplier for scaling the start value E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Measuring mode E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Test Pro</td>
<td>ABBIED600_Rev2_INC_TestPro_ED1_e</td>
<td>Test control for outputs E REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only, direct-with-normal-security</td>
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<td>Allw Non Dir</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
<td>Allows prot activation as non-dir when dir info is invalid E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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## 6.2.68 LN: DPHHPTOC2 Name: PTOC (ED1)

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<th>Remarks</th>
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<td>Str</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_threephase</td>
<td>Operate</td>
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<td>TmACrv</td>
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<td>Minimum Operate Time</td>
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<td>OpDIT-Tmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1</td>
<td>Operate Delay Time</td>
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<td>TypRsCrv</td>
<td>ABBIED600_Rev3_ENG_SG_TypRsCrv_ED1</td>
<td>Selection of reset curve type</td>
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<td>Ratio of start time / operate time</td>
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<td>Test control for outputs</td>
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</table>
### Protection and Control IED

#### Model Implementation Conformance Statement

| AllowNon-Dir | ABBIED600_Rev1_SPG_SP_e | Allows prot activation as non-dir when dir info is invalid | E | RE620 MICS:2015>IEC 61850-7-4:2003 |
| NonDir | ABBIED600_Rev1_SPS_e | Forces protection to non-directional | E | RE620 MICS:2015>IEC 61850-7-4:2003 |

#### 6.2.69 LN: PHPVOC1 Name: PVOC (ED1)

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<th>Explanation</th>
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<tr>
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<td>Block signal for all binary outputs</td>
<td>E</td>
<td>RE620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_threephase</td>
<td>Start</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_threephase</td>
<td>Operate</td>
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<td>Voltage high limit for voltage control</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.2.70 LN: PHPVOC2 Name: PVOC (ED1)

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<td>LoStrVal</td>
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### 6.2.71 LN: EFLPTOC2 Name: PTOC (ED1)

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<td>Behaviour</td>
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</tr>
<tr>
<td>Health</td>
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<td>Op</td>
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<td>Minimum Operate Time</td>
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<tr>
<td>OpDI Tmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Operate Delay Time</td>
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<tr>
<td>TypRsCrv</td>
<td>AB-BI ED600_Rev3_ENG_SG_TypRsCrv_ED1</td>
<td>Type of Reset Curve</td>
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<td>RE\text{\textsuperscript{620 MICS:2015\textgreater{}IEC 61850-7-4:2003}}</td>
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<td>StrValMult</td>
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<td>ABBIED600_Rev20_INC_TstOut_ED1_e</td>
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### 6.2.72 LN: EFIPTOC1 Name: PTOC (ED1)

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<td>OpDiTmms</td>
<td>ABBIED600_Rev1_ING_SP_ED1</td>
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### Model Implementation Conformance Statement

#### TypRsCrv

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#### RsDlTmms

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#### DirMod

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#### VStr

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<tr>
<td>ABBIED600_Rev3_ASG_SG_i_ED1_e</td>
<td>Voltage start value</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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#### StrValMult

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<td>Multiplier for scaling the start value</td>
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#### AllwNonDir

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<tr>
<td>ABBIED600_Rev1_SPG_SP_e</td>
<td>Allows prot activation as non-dir when dir info is invalid</td>
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#### AMeasMod

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<tr>
<td>ABBIED600_Rev3_ENG_SP_MeasMod_e</td>
<td>Selects used measurement mode</td>
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#### InEnaMult

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<tr>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Enables current multiplier</td>
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#### StrDur

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<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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<td>Enable voltage limit</td>
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### 6.2.75 LN: WPSDE1 Name: PSDE (ED1)

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### 6.2.76 LN: WPSDE2 Name: PSDE (ED1)

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<tr>
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<td>Behaviour</td>
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## 6.2.78 LN: MFADPSDE1 Name: PSDE (ED1)

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**6.2.81 LN: NSPTOC1 Name: PTOC (ED1)**
### 6.2.82 LN: NSPTOC2 Name: PTOC (ED1)

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### 6.2.83 LN: PDNSPTOC1 Name: PTOC (ED1)

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### Model Implementation Conformance Statement

#### 6.2.86 LN: FRPTRC6 Name: PTRC (ED1)

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#### 6.2.87 LN: T1PTTR1 Name: PTTR (ED1)

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<td>TmpMax</td>
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<td>InEnaMult</td>
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### 6.2.88 LN: PHPTUC1 Name: PTUC (ED1)

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### 6.2.89 LN: INRPHAR1 Name: PHAR (ED1)

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<tr>
<td>RsDITmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
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### 6.2.92 LN: LSHDPTRC3 Name: PTRC (ED1)

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<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
<td></td>
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</tr>
<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>LodShdMod</td>
<td>ABBIED600_Rev2_ENG_SG_OpMod-ProHz_ED1_e</td>
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### 6.2.93 LN: LSHDPTRC4 Name: PTRC (ED1)

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<th>Remarks</th>
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<td>ABBIED600_Rev2_INC_Mod_Of fOn_FD_ED1</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<td>Name plate</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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### 6.2.94 LN: LSHDPTRC5 Name: PTRC (ED1)

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<td>Beh</td>
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<td>Behaviour</td>
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<td>Health</td>
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<td>NamPlt</td>
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<td>Name plate</td>
<td>ED1</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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</tr>
<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
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<td>OpDITmms</td>
<td>ABBIED600_Rev1_ING_SZ_ED1</td>
<td>Time delay to restore</td>
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<tr>
<td>RsDITmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
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<td>TstOutCmd</td>
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<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate</td>
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<td>LodShdMod</td>
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### 6.2.95 LN: LSHDPTRC6 Name: PTRC (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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ABB Oy – Distribution Automation
### 6.2.96 LN: UPCALH1 Name: CALH (ED1)

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<td>GrAlm</td>
<td>ABBIED600_Rev1_SPS</td>
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<tr>
<td>ColOpn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB_OPEN.Cmd</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>AlmInhTmms</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>CB open hold delay</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>AlmPlsTmms</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>Operate pulse time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>CBOnDI Tmms</td>
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### 6.2.97 LN: UPCALH2 Name: CALH (ED1)

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### 6.2.98 LN: UPCALH3 Name: CALH (ED1)

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<td>GrAlm</td>
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<td>Operate</td>
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<tr>
<td>ColOpn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>CB_OPEN_CMD</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>AlmInhTmms</td>
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<td>E</td>
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<td>AlmPlsTmms</td>
<td>ABBIED600_Rev1_ING_SP_1_e</td>
<td>Operate pulse time</td>
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<td>CBOndITTmms</td>
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<td>Signal pwr on delay</td>
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### 6.2.99 LN: PH3HPTOC1 Name: PTOC (ED1)

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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_threephase</td>
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### 6.2.100 LN: PH3HPTOC2 Name: PTOC (ED1)

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<tr>
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<td>Tm Mult</td>
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<td>Behaviour</td>
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</tr>
<tr>
<td>Health</td>
<td><code>ABBIED600_Rev4_INS_health_ED1</code></td>
<td>Health</td>
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<td>NamPlt</td>
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<td>Blk</td>
<td><code>ABBIED600_Rev1_SPS_simple</code></td>
<td>Block signal for all binary outputs</td>
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<td><code>REx620 MICS:2015&gt;IEC 61850-7-4:2003</code></td>
</tr>
<tr>
<td>Str</td>
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<tr>
<td>Op</td>
<td><code>ABBIED600_Rev1_ACT_threephase</code></td>
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<td><code>ABBIED600_Rev1_SPS_e</code></td>
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<td><code>ABBIED600_Rev3_ENG_SP_StrPhSel_e</code></td>
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<td>Ratio of start time / operate time</td>
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<tr>
<td>AMeasMod</td>
<td><code>ABBIED600_Rev3_ENG_SP_MeasMod_e</code></td>
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### 6.2.101 LN: PH3LPTOC1 Name: PTOC (ED1)

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<tr>
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<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<td>Op</td>
<td><code>ABBIED600_Rev1_ACT_threephase</code></td>
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<td>Explanation</td>
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<td>Health</td>
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<td>TmA Crv</td>
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### 6.2.102 LN: PH3LPTOC2 Name: PTOC (ED1)

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<td>ABBIED600_Rev1_ING_SP</td>
<td>Operate Delay Time</td>
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**Model Implementation Conformance Statement**
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<th>M/O/E</th>
<th>Remarks</th>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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### 6.2.104 LN: DPH3HPTOC1 Name: PTOC (ED1)

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<td>OpDiTmms</td>
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<td>ABBIED600_Rev1_ING_SP</td>
<td>Reset Delay Time</td>
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<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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</table>
AMeasMod | ABBIED600_Rev3_ENG_SP_MeasMod_e | Selects used measurement mode | E | RX620 MICS:2015>=IEC 61850-7-4:2003


AllwNonDir | ABBIED600_Rev1_SPG_SP_e | Allows prot activation as non-dir when dir info is invalid | E | RX620 MICS:2015>=IEC 61850-7-4:2003

NonDir | ABBIED600_Rev1_SPS_e | Forces protection to non-directional | E | RX620 MICS:2015>=IEC 61850-7-4:2003

### 6.2.105 LN: DPH3HPTOC2 Name: PTOC (ED1)

<table>
<thead>
<tr>
<th>Attribute name</th>
<th>Attribute type</th>
<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<td>Beh</td>
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<td>Behaviour</td>
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</tr>
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<td>ABBIED600_Rev1_ING_SP_ED1</td>
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<td>TypRsCrv</td>
<td>ABBIED600_Rev3_ENG_SG_TypRsCrv_ED1</td>
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<tr>
<td>RsDlTmms</td>
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<td>Reset Delay Time</td>
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<tr>
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<td>ABBIED600_Rev3_ENG_SG_DirMod_ED1</td>
<td>Directional Mode</td>
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</table>
| Blk            | ABBIED600_Rev1_SPS_simple | Block signal for all binary outputs | E | RX620 MICS:2015>=IEC 61850-7-4:2003
| InEnaMult      | ABBIED600_Rev1_SPS_e | Enables current multiplier | E | RX620 MICS:2015>=IEC 61850-7-4:2003
| NumPh          | ABBIED600_Rev3_ENG_SP_StrPhSel_e | Number of phases required for operate activation | E | RX620 MICS:2015>=IEC 61850-7-4:2003
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<th>Explanation</th>
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<tr>
<td>Health</td>
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<td>Operate Delay Time</td>
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<td>Reset Delay Time</td>
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<td>Dir Mod</td>
<td>ABBIED600_Rev3_ENG_SG_DirMod_ED1</td>
<td>Directional Mode</td>
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6.2.106 LN: DPH3LPTOC1 Name: PTOC (ED1)
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<td>AMeasMod</td>
<td>ABBIED600_Rev3_ENG_SP_MeasMod_e</td>
<td>Measuring mode</td>
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<tr>
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<td>Allows prot activation as non-dir when dir info is invalid</td>
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### 6.2.107 LN: DPH3LPTOC2 Name: PTOC (ED1)

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<th>Remarks</th>
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### 6.2.108 LN: DARREC1 Name: RREC (ED1)

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ABB Oy – Distribution Automation 271
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<td>Str3Tmms1</td>
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<td>RE(\text{Ex}620) MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>DARREC1 counters</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
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<td>AutoRecOn</td>
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<td>ABBIED600_Rev1_SPS_e</td>
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<td>CB position input</td>
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<td>Shot pointer increment by one</td>
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<td>InIni1</td>
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<td>InIni2</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>InIni5</td>
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<td>Resetable operation counter (all shots)</td>
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<td>ABBIED600_Rev1_ACT_threephase</td>
<td>Operate (close command to XCBR)</td>
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<td>PrgDsr</td>
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<td>PrgCutOut</td>
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<td>CB position input</td>
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<td>InIncrPntr</td>
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<td>Blocks and resets dead time</td>
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## 6.2.110 LN: RESCMMXU1 Name: MMXU (ED1)

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## 6.2.111 LN: RCAVMMXU1 Name: MMXU (ED1)

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### 6.2.114 LN: PHAPTUV1 Name: PTUV (ED1)

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### 6.2.115 LN: PHAPTOV1 Name: PTOV (ED1)
### Model Implementation Conformance Statement

#### 6.2.116 LN: SECRSYN1 Name: RSYN (ED1)

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<td>Selection of synchro check command or Continuous control mode</td>
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<td>Energization state of Line and Bus</td>
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<td>Correction of phase difference between measured U_BUS and U_LINE</td>
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**6.2.117 LN: VAMMXU2 Name: MMXU (ED1)**

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### 6.2.118 LN: VAAVMMXU2 Name: MMXU (ED1)

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### 6.2.119 LN: RESVMMXU1 Name: MMXU (ED1)

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### 6.2.121 LN: RVMAMMXU1 Name: MMXU (ED1)

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<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
<td>ED1 only</td>
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<tr>
<td>PhV</td>
<td>ABBIED600_Rev3_WYE_res_simpler_i</td>
<td>Residual voltage</td>
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<tr>
<td>ClcMod</td>
<td>ABBIED600_Rev2_ENG_SP_ClcMod</td>
<td>Calculation mode</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>ClcSrc</td>
<td>ABBIED600_Rev4_ORG_SP_1</td>
<td>Object reference to source logical node</td>
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### 6.2.122 LN: RVMIMMXU1 Name: MMXU (ED1)

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<th>Remarks</th>
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<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
<td>Mode</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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### 6.2.123 LN: MNSPTOC1 Name: PTOC (ED1)

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<th>Remarks</th>
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<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOrOn_FD_ED1</td>
<td>Mode</td>
<td></td>
<td>status-only, direct-with-normal-security</td>
</tr>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
<td></td>
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</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
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<td></td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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<tr>
<td>TmACrv</td>
<td>ABBIED600_Rev2_CURVE_SG_setCharact_ED1</td>
<td>Operating Curve Type</td>
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<tr>
<td>StrVal</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Start value</td>
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<tr>
<td>TmMult</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Machine time Mult</td>
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<tr>
<td>MinOpTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Minimum Operate Time</td>
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</tr>
<tr>
<td>MaxOpTmms</td>
<td>ABBIED600_Rev1_ING_SP</td>
<td>Maximum Operate Time</td>
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<tr>
<td>OpDIITmms</td>
<td>ABBIED600_Rev1_ING_SP_ED1</td>
<td>Operate Delay Time</td>
<td></td>
<td></td>
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<tr>
<td>RsDIITmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>StrInh</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Overheated machine reconnection blocking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARef</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Rated current (Ir) of the machine (used only in the IDMT)</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.2.124 LN: MNSPTOC2 Name: PTOC (ED1)

<table>
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<tr>
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<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>Mode</td>
<td>status-only,direct-with-normal-security</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
<td>ED1 only</td>
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<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
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</tr>
<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TmACrv</td>
<td>ABBIED600_Rev2_CURVE_SG_setCharact_ED1</td>
<td>Operating Curve Type</td>
<td></td>
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</tr>
<tr>
<td>StrVal</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Start value</td>
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<tr>
<td>TmMult</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Machine time Mult</td>
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<tr>
<td>MinOp-Tmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Minimum Operate Time</td>
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<tr>
<td>Max-OpTmms</td>
<td>ABBIED600_Rev1_ING_SP</td>
<td>Maximum Operate Time</td>
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<tr>
<td>OpDiTmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1</td>
<td>Operate Delay Time</td>
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<tr>
<td>RsDiTmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
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</tr>
<tr>
<td>StrInh</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Overheated machine reconnection blocking</td>
<td></td>
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<tr>
<td>ARef</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Rated current (Ir) of the machine (used only in the IDMT)</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>TstOutCmd</td>
<td>ABBIED600_Rev20_INC_TstOut_ED1_e</td>
<td>Test control for outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-</td>
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### 6.2.125 LN: LOFLPTUC1 Name: PTUC (ED1)

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<tr>
<th>Attribute name</th>
<th>Attribute type</th>
<th>Explanation</th>
<th>M/O/E</th>
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<tbody>
<tr>
<td>Mod</td>
<td>ABBI600_Rev2_INC_Mod_OfFOn_FD_ED1</td>
<td>Mode status-only, direct-with-normal-security</td>
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<tr>
<td>Beh</td>
<td>ABBI600_Rev2_INS_beh_ED1</td>
<td>Behaviour ED1 only</td>
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<tr>
<td>Health</td>
<td>ABBI600_Rev4_INS_health_ED1</td>
<td>Health ED1 only</td>
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<tr>
<td>NamPlt</td>
<td>ABBI600_Rev1_LPL_1</td>
<td>Name plate ED1 only</td>
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<tr>
<td>Blk</td>
<td>ABBI600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Str</td>
<td>ABBI600_Rev1_ACD_simple</td>
<td>Start</td>
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<tr>
<td>Op</td>
<td>ABBI600_Rev1_ACT_simple</td>
<td>Operate</td>
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<tr>
<td>StrVal</td>
<td>ABBI600_Rev3_ASG_SG_i_ED1</td>
<td>Current setting/start value high</td>
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<tr>
<td>OpDITrms</td>
<td>ABBI600_Rev1_ING_SP_ED1</td>
<td>Operate delay time</td>
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<tr>
<td>RsDITrms</td>
<td>ABBI600_Rev1_ING_SP_1</td>
<td>Reset delay time</td>
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<td>BlkValA</td>
<td>ABBI600_Rev3_ASG_SG_i_ED1_e</td>
<td>Current setting/start value low</td>
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<td>StrDur</td>
<td>ABBI600_Rev3_MV_2_e</td>
<td>Ratio of start time/operate time</td>
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<td>TstOutCmd</td>
<td>ABBI600_Rev20_INC_TstOut_ED1_e</td>
<td>Test control for outputs</td>
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### 6.2.126 LN: LOFLPTUC2 Name: PTUC (ED1)

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<td>Mod</td>
<td>ABBI600_Rev2_INC_Mod_OfFOn_FD_ED1</td>
<td>Mode status-only, direct-with-normal-security</td>
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<tr>
<td>Beh</td>
<td>ABBI600_Rev2_INS_beh_ED1</td>
<td>Behaviour ED1 only</td>
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<tr>
<td>Health</td>
<td>ABBI600_Rev4_INS_health_ED1</td>
<td>Health ED1 only</td>
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<td>NamPlt</td>
<td>ABBI600_Rev1_LPL_1</td>
<td>Name plate ED1 only</td>
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<td>Blk</td>
<td>ABBI600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
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### 6.2.127 LN: JAMPTOC1 Name: PTOC (ED1)

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<th>M/O/E</th>
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<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>Mode</td>
<td>status-only, direct-with-normal-security</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
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<td>Health</td>
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<tr>
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<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_threephase</td>
<td>Start</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_threephase</td>
<td>Operate</td>
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</tr>
<tr>
<td>StrVal</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Start value</td>
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<tr>
<td>OpDITmms</td>
<td>ABBIED600_Rev1_ING_SP</td>
<td>Operate Delay Time</td>
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<tr>
<td>RsDITmms</td>
<td>ABBIED600_Rev1_ING_SP_1</td>
<td>Reset Delay Time</td>
<td></td>
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</tr>
<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.2.128 LN: STTPMSS1 Name: PMSS (ED1)

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<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>BLOCK</td>
<td>status-only, direct-with-normal-security</td>
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<td>Attribute name</td>
<td>Attribute type</td>
<td>Explanation</td>
<td>M/O/E</td>
<td>Remarks</td>
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</tr>
<tr>
<td>Beh ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<td></td>
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</tr>
<tr>
<td>Health ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td></td>
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<td>ED1 only</td>
</tr>
<tr>
<td>NamPlt ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<td>ED1 only</td>
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<tr>
<td>Str ABBIED600_Rev1_ACD_simple</td>
<td>Signal to show that motor startup is in progress</td>
<td></td>
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</tr>
<tr>
<td>Op ABBIED600_Rev1_ACT_simple</td>
<td>Operate/trip signal for stalling protection.</td>
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</tr>
<tr>
<td>MotStr ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Current value to indicate starting of motor</td>
<td></td>
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<tr>
<td>Lo-kRotTms ABBIED600_Rev1_ING_SG_ED1</td>
<td>Lock Rotor Time, permissible locked rotor time</td>
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<tr>
<td>Blk ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>OpMod-StUp ABBIED600_Rev2_ENG_SP_OpMod-StUp_e</td>
<td>Motor start-up operation mode</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>StrOvDIT-mms ABBIED600_Rev1_ING_SG_ED1_e</td>
<td>Time delay to check for completion of motor startup period</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>StrDur ABBIED600_Rev3_MV_simple_i_e</td>
<td>Start time relative to the operate time for stall cond</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>EnaEmg-Str ABBIED600_Rev1_SPS_e</td>
<td>Enable emergency start to disable lock of start motor</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Stllnd ABBIED600_Rev1_SPS_e</td>
<td>Input signal for showing the motor is not stalling</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>BlkLOStr ABBIED600_Rev1_SPS_e</td>
<td>Blocks lock out condition for restart of motor</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>InPosCls ABBIED600_Rev1_SPS_e</td>
<td>Input showing the status of motor circuit breaker</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>TestPro ABBIED600_Rev2_INC_TestPro_ED1_e</td>
<td>Test control for outputs</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
</tr>
<tr>
<td>MotStop ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Current limit to check for motor standstill condition</td>
<td>E</td>
<td></td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.2.130 LN: MPTTR1 Name: PTTR (ED1)

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<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_Of fOn_FD_ED1</td>
<td>Mode</td>
<td>status-only, direct-with-normal-security</td>
<td></td>
</tr>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
<td>ED1 only</td>
<td></td>
</tr>
<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
<td></td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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<tr>
<td>StrVal</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Start value</td>
<td></td>
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<tr>
<td>OpDiTmms</td>
<td>ABBIED600_Rev1_ING_SP_ED1</td>
<td>Operate time delay</td>
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<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>TstOutCmd</td>
<td>ABBIED600_Rev20_INC_TstOut_ED1_e</td>
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<td>PREVPTOC1</td>
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### 6.2.130 LN: MPTTR1 Name: PTTR (ED1)
### Protection and Control IED

#### Model Implementation Conformance Statement

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<thead>
<tr>
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<th>Remarks</th>
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<td>RsTmp</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>MPTTR1 temperature</td>
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<td>DropoutVal</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
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<td>WghFact</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1_e</td>
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<td>OvlFact</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1_e</td>
<td>Overload factor (k)</td>
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<td>NgSeqFact</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1_e</td>
<td>Heating effect factor for negative sequence current</td>
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<td>EnvTmpSet</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1_e</td>
<td>Ambient temperature</td>
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<td>IniTmp</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Initial thermal Val</td>
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<td>EnvTmpMod</td>
<td>ABBIED600_Rev2_ENG_SG_EnvTmp-Mod_ED1_e</td>
<td>Mode of measuring ambient temperature</td>
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<td>EnaEmgStr</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Enable emergency start to disable lock of start motor</td>
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<td>TmpUsed</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
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<td>TmpAmb</td>
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<td>ThmLevStr</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Thermal level at beginning of motor startup</td>
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<td>ThmLevEnd</td>
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<td>Thermal level at the end of motor startup situation</td>
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<td>BlkThmRsTm</td>
<td>ABBIED600_Rev1_INS_e</td>
<td>Estimated time to reset of block restart</td>
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#### 6.2.131 LN: MRE1PTOC1 Name: PTOC (ED1)

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<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
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<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behavior</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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### 6.2.132 LN: ESMGAPC1 Name: GAPC (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
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<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
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<td>StrVal</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Motor standstill A</td>
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<td>RqEmgStr</td>
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### 6.2.133 LN: MPTRC1 Name: PTRC (ED1)

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<td>Op</td>
<td>ABBIED600_Rev1_ACT_threephase</td>
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### 6.2.134 LN: CMMXU2 Name: MMXU (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<tr>
<td>A</td>
<td>ABBIED600_Rev3_WYE_threephase_full_i</td>
<td>Phase currents</td>
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<td>AMeas-Mod</td>
<td>ABBIED600_Rev3_ENG_SP_Meas-Mod_e</td>
<td>Selects used measurement mode</td>
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<td>NumPh</td>
<td>ABBIED600_Rev3_ENG_SP_StrPhSel_e</td>
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<td>LoWrn</td>
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<td>Low warning</td>
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<td>Low alarm</td>
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### 6.2.135 LN: CAVMMXU2 Name: MMXU (ED1)

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<td>A</td>
<td>ABBIED600_Rev3_WYE_threephase_simpler_i</td>
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### 6.2.136 LN: CMAMMXU2 Name: MMXU (ED1)

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<td>A</td>
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### 6.2.137 LN: CMIMMXU2 Name: MMXU (ED1)

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### 6.2.138 LN: PHLPTOC2 Name: PTOC (ED1)

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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### Str
- **ABBIED600_Rev1_ACD_threephase**: Start
- **ABBIED600_Rev1_ACT_threephase**: Operate
- **ABBIED600_Rev2_CURVE_SG_ED1**: Operating Curve Type
- **ABBIED600_Rev3_ASG_SG_i_ED1**: Start value
- **ABBIED600_Rev3_ASG_SG_i_ED1**: Time Dial Multiplier
- **ABBIED600_Rev1_ING_SP_1**: Minimum Operate Time
- **ABBIED600_Rev1_ING_SP_1**: Operate Delay Time
- **ABBIED600_Rev3_ASG_SG_i_ED1**: Type of Reset Curve
- **ABBIED600_Rev1_ING_SP_1**: Reset Delay Time
- **ABBIED600_Rev1_SPS_e**: Enable signal for current multiplier
- **ABBIED600_Rev3_ENG_SP_StrPhSel_e**: Number of phases required for operate activation
- **ABBIED600_Rev3_ASG_SG_i_ED1_e**: Multiplier for scaling the start value
- **ABBIED600_Rev3_MV_2_e**: Ratio of start time / operate time
- **ABBIED600_Rev3_ENG_SP_MeasMod_e**: Measuring mode
- **ABBIED600_Rev20_INC_TstOut_ED1_e**: Test control for outputs

#### 6.2.139 LN: PHIPTOC2 Name: PTOC (ED1)

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### 6.2.140 LN: EFHPTOC2 Name: PTOC (ED1)

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## 6.2.142 LN: OEPVPH2 Name: PVPH (ED1)

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### 6.2.143 LN: T2PTTR1 Name: PTTR (ED1)

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### 6.2.144 LN: PHPTUC2 Name: PTUC (ED1)

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### 6.2.145 LN: TR2PTRC1 Name: PTRC (ED1)

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<tr>
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<td>ABBIED600_Rev1_ACT_threephase</td>
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### 6.2.146 LN: DPPDUP1 Name: PDUP (ED1)

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<th>Remarks</th>
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<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>Mode</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<tr>
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### Block Signal for all Binary Outputs

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### Start

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### Operate

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### Start Value

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### Operate Delay Time

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### Reset Delay Time

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### Measurement Mode for Power Calculation

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### Rotate Polarizing Quantity

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### Test Control for Outputs

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### Start Duration

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### Signal to Block the Function during Generator Startup

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### Additional Wait Time after CB Closing

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### Attribute Name | Attribute Type | Explanation | M/O/E | Remarks |
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<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>Mode</td>
<td>status-only,direct-with-normal-security</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<tr>
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<td>Block signal for all binary outputs</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
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<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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<tr>
<td>StrVal</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
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<td>OpDiTmms</td>
<td>ABBIED600_Rev1_ING_SG_time_ED1</td>
<td>Operate delay time</td>
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<tr>
<td>RsDiTmms</td>
<td>ABBIED600_Rev1_ING_SP</td>
<td>Reset delay time</td>
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<tr>
<td>PwrMeas-Mod</td>
<td>ABBIED600_Rev3_ENG_SP_PwrMeasMod_e</td>
<td>Measurement mode for power calculation</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>RevPol</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
<td>Rotate polarizing quantity</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.2.148 LN: DPPDOP1 Name: PDOP (ED1)

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<th>Remarks</th>
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<td>ABBIED600_Rev2_INC_Mod_Off_on_FD_ED1</td>
<td>Mode status-only,direct-with-normal-security</td>
<td>E</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health ED1 only</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate ED1 only</td>
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<tr>
<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
</tr>
<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
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<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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<tr>
<td>DirMod</td>
<td>ABBIED600_Rev3_ENG_SG_Dir-Mod_ED1</td>
<td>Directional mode</td>
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<tr>
<td>StrVal</td>
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<tr>
<td>OpDlTmms</td>
<td>ABBIED600_Rev1_ING_SG_time_ED1</td>
<td>Operate delay time</td>
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<tr>
<td>RsDlTmms</td>
<td>ABBIED600_Rev1_ING_SP</td>
<td>Reset delay time</td>
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<tr>
<td>PwrMeas-Mod</td>
<td>ABBIED600_Rev3_ENG_SG_Pwr-MeasMod_e</td>
<td>Measurement mode for power calculation</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>RevPol</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
<td>Rotate polarizing quantity</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>PwrAng</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1_e</td>
<td>Power angle</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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### 6.2.149 LN: DPPDOP2 Name: PDOP (ED1)

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<tr>
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<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>Mode</td>
<td>status-only,direct-with-normal-security</td>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
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<td>Health</td>
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<td>Block signal for all binary outputs E</td>
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<td>Str</td>
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<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
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<td>DirMod</td>
<td>ABBIED600_Rev3_ENG_SP_DirMod_ED1</td>
<td>Directional mode</td>
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<td>OpDiTmms</td>
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<td>RsDiTmms</td>
<td>ABBIED600_Rev1_ING_SP</td>
<td>Reset delay time</td>
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<tr>
<td>PwrMeas-Mod</td>
<td>ABBIED600_Rev3_ENG_SP_PwrMeasMod_e</td>
<td>Measurement mode for power calculation E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>RevPol</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
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### 6.2.150 LN: DPPDOP3 Name: PDOP (ED1)

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<td>Op</td>
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### 6.2.151 LN: RESCMMXU2 Name: MMXU (ED1)

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<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>A</td>
<td>ABBIED600_Rev3_WYE_res_full_i</td>
<td>Residual current</td>
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<td>ABBIED600_Rev3_ENG_SP_Meas-Mod_e</td>
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<td>ABBIED600_Rev2_SPC_control_e</td>
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### 6.2.152 LN: RCAVMMXU2 Name: MMXU (ED1)

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### 6.2.153 LN: RCMAMMXX2 Name: MMXU (ED1)

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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
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</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
<td>ED1 only</td>
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</tr>
<tr>
<td>A</td>
<td>ABBIED600_Rev3_WYE_res_simpler_i</td>
<td>Residual current</td>
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<tr>
<td>ClcMod</td>
<td>ABBIED600_Rev2_ENG_SP_ClcMod</td>
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### 6.2.154 LN: RCMIMMXX2 Name: MMXU (ED1)

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<td>Mode</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
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</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
<td>ED1 only</td>
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<td>Object reference to source logical node</td>
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### 6.2.155 LN: VAMMXU3 Name: MMXU (ED1)

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<tbody>
<tr>
<td>Mod</td>
<td>ABBIED600_Rev2_INC_Mod_OffOn_FD_ED1</td>
<td>Mode</td>
<td>status-only,direct-with-normal-security</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
<td>ED1 only</td>
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</tr>
<tr>
<td>PPV</td>
<td>ABBIED600_Rev1_DEL_onephaseAB_full_i</td>
<td>Single phase to phase AB voltages</td>
<td></td>
<td></td>
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<tr>
<td>PhV</td>
<td>ABBIED600_Rev1_WYE_onephaseA_full_i</td>
<td>Single phase to ground A voltage</td>
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<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VMeas-Mod</td>
<td>ABBIED600_Rev3_ENG_SP_MeasMod_e</td>
<td>Selects used measurement mode</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>HiAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>High alarm</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>HiWrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>High warning</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>LoWrn</td>
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<td>Low warning</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>LoAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Low alarm</td>
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### 6.2.156 LN: VAAVMMXU3 Name: MMXU (ED1)

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<th>Remarks</th>
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<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
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<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<td>Health</td>
<td>ED1 only</td>
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<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
<td>ED1 only</td>
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<tr>
<td>PPV</td>
<td>ABBIED600_Rev1_DEL_5_onephaseAB_simpler</td>
<td>Single phase to phase AB voltages</td>
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<tr>
<td>PhV</td>
<td>ABBIED600_Rev1_WYE_onephaseA_simpler_i</td>
<td>Single phase to ground A voltage</td>
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<tr>
<td>ClcMth</td>
<td>ABBIED600_Rev3_ENG_SP_ClcMth</td>
<td>Calculation method</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>ClcMod</td>
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<td>ABBIED600_Rev4_ORG_SP_1</td>
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### 6.2.157 LN: IL1TCTR1 Name: TCTR (ED1)

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ABB Oy – Distribution Automation
## Protection and Control IED

Model Implementation Conformance Statement

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<td>AB-BIED600_Rev1_INC_Mod_On_ED1</td>
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<td>Beh</td>
<td>AB-BIED600_Rev2_INS_beh_ED1</td>
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<td>Health</td>
<td>AB-BIED600_Rev4_INS_health_ED1</td>
<td>Mode ED1 only</td>
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<td>AB-BIED600_Rev2_LPL_InNs_Ed2</td>
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<td>AmpSv</td>
<td>AB-BIED600_Rev1_SAV_92_lite</td>
<td>Current (Sampled value) phase A</td>
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<td>ARTg</td>
<td>AB-BIED600_Rev3_ASG_SP_ARtg_VRtg</td>
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<td>Cor</td>
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<td>Phase A Current phasor magnitude correction of an external current transformer</td>
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<tr>
<td>AngCor</td>
<td>AB-BIED600_Rev3_ASG_SP_i</td>
<td>Phase A Current phasor angle correction of an external current transformer</td>
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<tr>
<td>Alm</td>
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<td>Alarm E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Wrn</td>
<td>AB-BIED600_Rev1_SPS_e</td>
<td>Warning E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>ARTgScy</td>
<td>AB-BIED600_Rev2_ENG_SP_ARtgSec_e</td>
<td>Secondary rated current E REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>ARTgNom</td>
<td>AB-BIED600_Rev1_ASG_SP_f_e</td>
<td>Network Nominal Current E REx620 MICS:2015&gt;IEC 61850-7-4:2003, order code dependent</td>
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<td>VRtgScyRat</td>
<td>AB-BIED600_Rev1_ASG_SP_f_e</td>
<td>Rated Secondary Value E REx620 MICS:2015&gt;IEC 61850-7-4:2003, order code dependent</td>
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### 6.2.158 LN: RESTCTR1 Name: TCTR (ED1)

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<td>Health</td>
<td>AB-BIED600_Rev4_INS_health_ED1</td>
<td>Mode ED1 only</td>
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<td>AmpSv</td>
<td>AB-BIED600_Rev1_SAV_92_lite</td>
<td>Current (Sampled value)</td>
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<td>ARTg</td>
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<td>Cor</td>
<td>AB-BIED600_Rev1_ASG_SP_f</td>
<td>Current phasor magnitude correction of an external current transformer</td>
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<tr>
<td>AngCor</td>
<td>AB-BIED600_Rev3_ASG_SP_i</td>
<td>Residual Current phasor angle correction of an external current transformer</td>
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### 6.2.159 LN: UL1TVTR1 Name: TVTR (ED1)

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<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Mode</td>
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<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Mode</td>
<td>ED1 only</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNsEd2</td>
<td>Name plate</td>
<td>ED1 only</td>
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<tr>
<td>VolSv</td>
<td>ABBIED600_Rev1_SAV_92_lite</td>
<td>Voltage (sampled value) phase A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FuFail</td>
<td>ABBIED600_Rev1_SPS</td>
<td>TVTR fuse failure</td>
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<tr>
<td>VRtg</td>
<td>ABBIED600_Rev3_ASG_SP_ARTg_VRtg</td>
<td>Primary rated voltage</td>
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<td>Rat</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Division ratio</td>
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<td>Cor</td>
<td>ABBIED600_Rev1_ASG_SP_f</td>
<td>Amplitude corr. A</td>
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<td>AngCor</td>
<td>ABBIED600_Rev3_ASG_SP_i</td>
<td>Angle corr. A</td>
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<td>Alm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Alarm</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>Wrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Warning</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VRtgScy</td>
<td>ABBIED600_Rev1_ASG_SP_f_e</td>
<td>Secondary rated voltage</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VConnTyp</td>
<td>ABBIED600_Rev3_ENG_SP_ConnType_e</td>
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<td>VInTyp</td>
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<td>Type of the voltage input</td>
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### 6.2.160 LN: RESTVTR1 Name: TVTR (ED1)

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<td>Mod</td>
<td>ABBIED600_Rev1_INC_Mod_On_ED1</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev2_LPL_InNsEd2</td>
<td>Name plate</td>
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<td>VolSv</td>
<td>ABBIED600_Rev1_SAV_92_lite</td>
<td>Voltage (sampled value)</td>
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VRtg | AB-BIED600_Rev3_ASG_SP_ARtg_VRtg | Rated primary voltage |  
Cor | ABBIED600_Rev1_ASG_SP_f | Voltage phasor magnitude correction of external voltage transformer |  
AngCor | ABBIED600_Rev3_ASG_SP_i | Residual Voltage phasor angle correction of an external voltage transformer |  
Alm | ABBIED600_Rev1_SPS_e | Alarm |  
Wrn | ABBIED600_Rev1_SPS_e | Warning |  
VRtgScy | ABBIED600_Rev1_ASG_SP_f_e | Rated secondary voltage |  

**6.2.161 LN: VMMXU1 Name: MMXU (ED1)**

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<td>Health</td>
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<tr>
<td>PPV</td>
<td>ABBIED600_Rev3_DEL_threephase_full_i</td>
<td>Phase to phase voltages</td>
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<tr>
<td>PhV</td>
<td>ABBIED600_Rev3_WYE_4</td>
<td>Phase to ground voltages</td>
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<td>Blk</td>
<td>ABBIED600_Rev1_SPS_simple</td>
<td>Block signal for all binary outputs</td>
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<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>VM_measMod</td>
<td>ABBIED600_Rev3_ENG_SP_MeasMod_e</td>
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<td>ABBIED600_Rev1_SPS_e</td>
<td>High alarm</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>HiWrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>High warning</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>LoWrn</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Low warning</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<td>LoAlm</td>
<td>ABBIED600_Rev1_SPS_e</td>
<td>Low alarm</td>
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**6.2.162 LN: VAVMMXU1 Name: MMXU (ED1)**

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### 6.2.163 LN: UL1TVTR2 Name: TVTR (ED1)

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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Mode</td>
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<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
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<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
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<td>PPV</td>
<td>ABBIED600_Rev3_DEL_5_simpler</td>
<td>Phase to phase voltages</td>
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<tr>
<td>PhV</td>
<td>ABBIED600_Rev3_WYE_threephase_simpler_i</td>
<td>Phase to earth voltages</td>
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<td>ClcMth</td>
<td>ABBIED600_Rev3_ENG_SP_ClcMth</td>
<td>Calculation method</td>
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<td>TVTR fuse failure</td>
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<tr>
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<td>Phase A Voltage phasor magnitude correction of an external voltage transformer</td>
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<tr>
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### 6.2.164 LN: IL1TCTR2 Name: TCTR (ED1)

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<th>Remarks</th>
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<td>AmpSv</td>
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<td>VRTgScyRat</td>
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### 6.2.165 LN: RESTCTR2 Name: TCTR (ED1)

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### 6.2.167 LN: XRGGIO110 Name: GGIO (ED1)

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### 6.2.168 LN: XRGGIO105 Name: GGIO (ED1)

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<th>Remarks</th>
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### 6.2.170 LN: PHIZ1 Name: PHIZ (ED1)

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<td>PosOpn</td>
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<td>Security Level</td>
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### 6.2.171 LN: ARCSARC11 Name: SARC (ED1)
### Model Implementation Conformance Statement

**620 SERIES**

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<td>FACntRs</td>
<td>ABBIED600_Rev2_INC_control_int</td>
<td>Fault arc counter</td>
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### 6.2.172 LN: ARCSARC21 Name: SARC (ED1)

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### 6.2.173 LN: ARCSARC31 Name: SARC (ED1)

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### FACntRs
- **Model**: ABBIED600_Rev2_INC_control_int
- **Description**: Fault arc counter
- **Status**: status-only,direct-with-normal-security

### FADet
- **Model**: ABBIED600_Rev1_SPS
- **Description**: Fault arc detected

### Blk
- **Model**: ABBIED600_Rev1_SPS_simple
- **Description**: Block signal for all binary outputs
- **Status**: E REx620 MICS:2015>IEC 61850-7-4:2003

### InRemFA
- **Model**: ABBIED600_Rev1_SPS_e
- **Description**: Remote Fault arc detected
- **Status**: E REx620 MICS:2015>IEC 61850-7-4:2003

### TstOutCmd
- **Model**: ABBIED600_Rev20_INC_TstOut_ED1_e
- **Description**: Test control for outputs
- **Status**: E REx620 MICS:2015>IEC 61850-7-4:2003, status-only, direct-with-normal-security

### 6.2.174 LN: SCEFRFLO1 Name: RFLO (ED1)

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<td>EFAlgASel</td>
<td>ABBIED600_Rev2_ENG_SP_EFAlgASel_e</td>
<td>Earth fault current model</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>EnaLodComp</td>
<td>ABBIED600_Rev1_SPG_SP_e</td>
<td>Enable load compensation</td>
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<td>SimpMod</td>
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<tr>
<td>DisEstVa</td>
<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>Allowed variation of short circuit distance estimate</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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<tr>
<td>PhVMeas</td>
<td>AB-BIIED600_Rev2_ENG_SP_PhVMeas_e</td>
<td>Phase voltage measurement principle</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003</td>
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6.2.175 LN: COL1PTOC1 Name: PTOC (ED1)
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<tr>
<th>Mod</th>
<th>ABBIED600_Rev2_INC_Mod_OfFOn_FD_ED1</th>
<th>Mode</th>
<th>status-only, direct-with-normal-security</th>
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<tbody>
<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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</tr>
<tr>
<td>Health</td>
<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
<td>ED1 only</td>
</tr>
<tr>
<td>NamPlt</td>
<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
<td>ED1 only</td>
</tr>
<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
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</tr>
<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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</tr>
<tr>
<td>StrVal</td>
<td>ABBIED600_Rev3_ASG_SG_i_ED1</td>
<td>Start value</td>
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<tr>
<td>NumPh</td>
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<td>Number of phases required for operate activation</td>
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<tr>
<td>StrDur</td>
<td>ABBIED600_Rev3_MV_2_e</td>
<td>Ratio of start time / operate time</td>
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<tr>
<td>PkIntgAPhA</td>
<td>ABBIED600_Rev3_MV_simple_i_e</td>
<td>Peak value of integrated current phase A</td>
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<td>PkIntgAPhB</td>
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<td>Peak value of integrated current phase B</td>
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<tr>
<td>PkIntgAPhC</td>
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<td>Peak value of integrated current phase C</td>
<td>E</td>
</tr>
<tr>
<td>TestPro</td>
<td>ABBIED600_Rev2_INC_TestPro_ED1_e</td>
<td>Test control for outputs</td>
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6.2.176 LN: CUB1PTOC1 Name: PTOC (ED1)

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<th>Attribute name</th>
<th>Attribute type</th>
<th>Explanation</th>
<th>M/O/E</th>
<th>Remarks</th>
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<tr>
<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
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<td>Block signal for all binary outputs</td>
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<tr>
<td>Str</td>
<td>ABBIED600_Rev1_ACD_simple</td>
<td>Start</td>
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<tr>
<td>Op</td>
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<td>OpDltmms</td>
<td>ABBIED600_Rev1_ING_SG_ED1</td>
<td>Alarm delay</td>
<td>REx620 MICS:2015-IEC 61850-7-4:2003,status-only,direct-with-normal-security</td>
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<td>FailCnt</td>
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<td>CntBr1PhsA</td>
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<td>CntBr2PhsA</td>
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<td>Capacitor element failures in branch2 of phase A</td>
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<tr>
<td>CntBr1PhsB</td>
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<td>Capacitor element failures in branch1 of phase B</td>
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<td>FailCntLim</td>
<td>ABBIED600_Rev1_ING_SG_ED1_e</td>
<td>Maximum permissible element failures</td>
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<td>NatCompEna</td>
<td>ABBIED600_Rev1_SPG_SG_ED1_e</td>
<td>Enable natural unbalance compensation</td>
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<td>RcdUnb</td>
<td>ABBIED600_Rev2_SPC_control_e</td>
<td>Record natural Unbalance current</td>
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### 6.2.177 LN: SRC1PTOC1 Name: PTOC (ED1)

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<th>Remarks</th>
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<td>Str</td>
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<td>OpDlTmms</td>
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### 6.2.178 LN: DQPTUV1 Name: PTUV (ED1)

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<td>Beh</td>
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<td>Health</td>
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### 6.2.179 LN: DQPTUV2 Name: PTUV (ED1)

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<td>Mod</td>
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<td>Beh</td>
<td>ABBIED600_Rev2_INS_beh_ED1</td>
<td>Behaviour</td>
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<tr>
<td>Health</td>
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### 6.2.180 LN: LVRTPTUV1 Name: PTUV (ED1)

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<td>Beh</td>
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ABB Oy – Distribution Automation 329
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
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<tr>
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<td>ABBIED600_Rev4_INS_health_ED1</td>
<td>Health</td>
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<tr>
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<td>ABBIED600_Rev1_LPL_1</td>
<td>Name plate</td>
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<tr>
<td>Blk</td>
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</tr>
<tr>
<td>Str</td>
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<td>Start</td>
</tr>
<tr>
<td>Op</td>
<td>ABBIED600_Rev1_ACT_simple</td>
<td>Operate</td>
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<tr>
<td>StrVal</td>
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<td>ABBIED600_Rev1_CSG_SP_10</td>
<td>Multiline curve characteristic definition</td>
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<td>NumPt</td>
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<td>Coordinates used for defining LVRT curve</td>
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<tr>
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<td>3rd time coordinate for defining LVRT curve</td>
</tr>
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<td>4th time coordinate for defining LVRT curve</td>
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<td>6th time coordinate for defining LVRT curve</td>
</tr>
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<tr>
<td>CrvPt7Tmms</td>
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<tr>
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<tr>
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Note: The values in the "Value" column represent the expected conformance statements according to IEC 61850-7-4:2003.
<table>
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<th>Attribute name</th>
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<th>Explanation</th>
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<td>ABBIED600_Rev3_ASG_SP_i_e</td>
<td>3rd voltage coordinate for defining LVRT curve</td>
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<tr>
<td>CrvPt9Ydir</td>
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<td>ABBIED600_Rev2_INC_TestPro_ED1_e</td>
<td>Test control for outputs</td>
<td>E</td>
<td>REx620 MICS:2015&gt;IEC 61850-7-4:2003, status-only, direct-with-normal-security</td>
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**6.2.181 LN: LVRTPTUV2 Name: PTUV (ED1)**

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<th>Explanation</th>
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<th>Remarks</th>
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**6.2.182 LN: LVRTPTUV3 Name: PTUV (ED1)**

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**6.2.183 LN: VVSPPAM1 Name: PPAM (ED1)**

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- ABBIED600_Rev4_INS_health_ED1

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- ABBIED600_Rev1_LPL_1

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- ABBIED600_Rev1_SPS_simple

### Start signal
- ABBIED600_Rev1_ACD_simple

### Start value
- ABBIED600_Rev3_ASG_SG_i_ED1

### Block value (minimum operating voltage)
- ABBIED600_Rev3_ASG_SG_i_ED1_e

### Protection function internally blocked
- ABBIED600_Rev1_ACT_simple_e

### Monitored voltage phase
- ABBIED600_Rev2_ENG_SP_PhSv_e

### Voltage above which function is internally blocked
- ABBIED600_Rev3_ASG_SG_i_ED1_e

### Vector shift for ph-earth voltage A or ph-ph voltage AB
- ABBIED600_Rev3_MV_simple_i_e

### Vector shift for ph-earth voltage B or ph-ph voltage BC
- ABBIED600_Rev3_MV_simple_i_e

### Vector shift for ph-earth voltage C or ph-ph voltage CA
- ABBIED600_Rev3_MV_simple_i_e

### Positive sequence voltage
- ABBIED600_Rev3_MV_simple_i_e

### Test control for outputs
- ABBIED600_Rev2_INC_TestPro_ED1_e

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**6.2.184 LN: UEXPDIS1 Name: PDIS (ED1)**

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7 Common Data Class Extensions

7.1 New common data classes

7.2 Extented data classes ED1

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### 7.2.28 ABBIED600_Rev8_DPL_eeprom_2_ED1

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### 7.2.30 ABBIED600_Rev4_DPC_simple

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<td>qchg</td>
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### 7.2.31 ABBIED600_Rev8_DPC_control

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### 8 Enum type extensions

#### 8.1 New Enum types

##### 8.1.1 ABBIED600_Rev1_CtlModelKind_StatusDirect

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<td>direct-with-normal-security</td>
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##### 8.1.2 ABBIED600_Rev1_OpModSG
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<tr>
<td>1</td>
<td>Logic mode 1</td>
<td>SG operation mode, Operation mode for setting group change</td>
</tr>
<tr>
<td>2</td>
<td>Logic mode 2</td>
<td>SG operation mode, Operation mode for setting group change</td>
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### 8.1.3 ABBIED600_Rev1_CpySG

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</thead>
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<tr>
<td>1</td>
<td>Cancel</td>
<td>Copy group 1, Copy setting group 1 values into selected group</td>
</tr>
<tr>
<td>2</td>
<td>Copy 1 into 2</td>
<td>Copy group 1, Copy setting group 1 values into selected group</td>
</tr>
<tr>
<td>3</td>
<td>Copy 1 into 3</td>
<td>Copy group 1, Copy setting group 1 values into selected group</td>
</tr>
<tr>
<td>4</td>
<td>Copy 1 into 4</td>
<td>Copy group 1, Copy setting group 1 values into selected group</td>
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<tr>
<td>5</td>
<td>Copy 1 into 5</td>
<td>Copy group 1, Copy setting group 1 values into selected group</td>
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<td>6</td>
<td>Copy 1 into 6</td>
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<td>Copy 1 into all</td>
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### 8.1.4 ABBIED600_Rev1_CtlModelKind_Status

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### 8.1.5 ABBIED600_Rev1_SetSvMaxDl

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<td>1.90 1.58 ms</td>
<td>SMV Max Delay, SMV Maximum allowed delay</td>
</tr>
<tr>
<td>1</td>
<td>3.15 2.62 ms</td>
<td>SMV Max Delay, SMV Maximum allowed delay</td>
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<td>2</td>
<td>4.40 3.67 ms</td>
<td>SMV Max Delay, SMV Maximum allowed delay</td>
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<td>3</td>
<td>5.65 4.71 ms</td>
<td>SMV Max Delay, SMV Maximum allowed delay</td>
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<tr>
<td>4</td>
<td>6.90 5.75 ms</td>
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### 8.1.6 ABBIED600_Rev1_BlkMod

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<td>Use Global</td>
<td>Blocking mode, Behaviour for function BLOCK inputs</td>
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<tr>
<td>1</td>
<td>Freeze timer</td>
<td>Blocking mode, Behaviour for function BLOCK inputs</td>
</tr>
<tr>
<td>2</td>
<td>Block all</td>
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</tr>
<tr>
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<td>Block OPERATE output</td>
<td>Blocking mode, Behaviour for function BLOCK inputs</td>
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### 8.1.7 ABBIED600_Rev1_HzSet

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<td>Rated frequency, Rated frequency of the network</td>
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### 8.1.8 ABBIED600_Rev1_PhRotSet

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<td>Phase rotation, Phase rotation order</td>
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### 8.1.9 ABBIED600_Rev1_PhOrdSet

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<td>Phase order mode, Selection for phase connection order</td>
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<tr>
<td>2</td>
<td>BCA</td>
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</tr>
<tr>
<td>3</td>
<td>CAB</td>
<td>Phase order mode, Selection for phase connection order</td>
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<tr>
<td>4</td>
<td>ACB</td>
<td>Phase order mode, Selection for phase connection order</td>
</tr>
<tr>
<td>5</td>
<td>CBA</td>
<td>Phase order mode, Selection for phase connection order</td>
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<tr>
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### 8.1.10 ABBIED600_Rev1_DmdAvMod

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<td>Linear</td>
<td>A demand Av mode, Current demand calculation method</td>
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<tr>
<td>2</td>
<td>Logarithmic</td>
<td>A demand Av mode, Current demand calculation method</td>
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### 8.1.11 ABBIED600_Rev1_dmdItrv

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<td>Demand interval, Interval for demand calculation</td>
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<td>10 minutes</td>
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### 8.1.12 ABBIED600_Rev1_ModRemCtl

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<td>Remote test mode, Authority for remote activation of test mode</td>
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### 8.1.13 ABBIED600_Rev4_Languages

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<td>Chinese (cn, iec)</td>
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<td>Swedish (se, iec)</td>
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<td>Spanish (es, iec)</td>
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<td>Language selection, Language selection</td>
</tr>
<tr>
<td>Value</td>
<td>Description</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>en-US-IEC</td>
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</tr>
<tr>
<td>2</td>
<td>en-US-ANSI</td>
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</tr>
<tr>
<td>3</td>
<td>zh-CN-IEC</td>
<td>Language files, Name of the language files</td>
</tr>
<tr>
<td>4</td>
<td>de-DE-IEC</td>
<td>Language files, Name of the language files</td>
</tr>
<tr>
<td>5</td>
<td>sv-SE-IEC</td>
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</tr>
<tr>
<td>6</td>
<td>es-ES-IEC</td>
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</tr>
<tr>
<td>7</td>
<td>ru-RU-IEC</td>
<td>Language files, Name of the language files</td>
</tr>
<tr>
<td>8</td>
<td>pl-PL-IEC</td>
<td>Language files, Name of the language files</td>
</tr>
<tr>
<td>9</td>
<td>pt-BR-IEC</td>
<td>Language files, Name of the language files</td>
</tr>
<tr>
<td>10</td>
<td>pt-PT-IEC</td>
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</tr>
<tr>
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<td>it-IT-IEC</td>
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<tr>
<td>12</td>
<td>fi-FI-IEC</td>
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<td>13</td>
<td>fr-FR-IEC</td>
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<td>14</td>
<td>nb-NO-IEC</td>
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<td>Language files,Name of the language files</td>
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</tr>
<tr>
<td>---</td>
<td>------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>ar-SA-IEC</td>
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</tr>
<tr>
<td>17</td>
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<td>18</td>
<td>ko-KR-IEC</td>
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</tr>
<tr>
<td>19</td>
<td>ni-NL-IEC</td>
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</tr>
<tr>
<td>20</td>
<td>da-DK-IEC</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>es-MX-ANSI</td>
<td></td>
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<tr>
<td>22</td>
<td>pt-BR-ANSI</td>
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</tr>
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<td>23</td>
<td>tr-TR-IEC</td>
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<td>hr-HR-IEC</td>
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</tr>
<tr>
<td>25</td>
<td>uk-UA-IEC</td>
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<tr>
<td>26</td>
<td>hu-HU-IEC</td>
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<tr>
<td>27</td>
<td>language1</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>language2</td>
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</tr>
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<td>29</td>
<td>language3</td>
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</tr>
<tr>
<td>30</td>
<td>language4</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>language5</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>language6</td>
<td></td>
</tr>
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<td>33</td>
<td>language7</td>
<td></td>
</tr>
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<td>34</td>
<td>language8</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>language9</td>
<td></td>
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<tr>
<td>36</td>
<td>language10</td>
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</table>

### 8.1.15 ABBIED600_Rev1_FormatTime

<table>
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<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24H:MM:SS:MS</td>
<td>Time format, Time format</td>
</tr>
<tr>
<td>2</td>
<td>12H:MM:SS:MS</td>
<td>Time format, Time format</td>
</tr>
</tbody>
</table>

### 8.1.16 ABBIED600_Rev1_FormatDate

<table>
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<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DD.MM.YYYY</td>
<td>Date format, Date format</td>
</tr>
<tr>
<td>2</td>
<td>DD/MM/YYYY</td>
<td>Date format, Date format</td>
</tr>
<tr>
<td>3</td>
<td>DD-MM-YYYY</td>
<td>Date format, Date format</td>
</tr>
<tr>
<td>4</td>
<td>MM,DD.YYYY</td>
<td>Date format, Date format</td>
</tr>
<tr>
<td>5</td>
<td>MM/DD/YYYY</td>
<td>Date format, Date format</td>
</tr>
<tr>
<td>6</td>
<td>YYYY-MM-DD</td>
<td>Date format, Date format</td>
</tr>
<tr>
<td>7</td>
<td>YYYY-DD-MM</td>
<td>Date format, Date format</td>
</tr>
<tr>
<td>8</td>
<td>YYYY/DD/MM</td>
<td>Date format, Date format</td>
</tr>
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### 8.1.17 ABBIED600_Rev1_NamingConvention

<table>
<thead>
<tr>
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<th>Remarks</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>IEC61850</td>
<td>FB naming convention, FB naming convention used in IED</td>
</tr>
<tr>
<td>2</td>
<td>IEC60617</td>
<td>FB naming convention, FB naming convention used in IED</td>
</tr>
<tr>
<td>3</td>
<td>IEC-ANSI</td>
<td>FB naming convention, FB naming convention used in IED</td>
</tr>
<tr>
<td>Value</td>
<td>Description</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>1</td>
<td>Measurements</td>
<td>Default view, LHMI default view</td>
</tr>
<tr>
<td>2</td>
<td>Main menu</td>
<td>Default view, LHMI default view</td>
</tr>
<tr>
<td>3</td>
<td>SLD</td>
<td>Default view, LHMI default view</td>
</tr>
</tbody>
</table>

### 8.1.19 ABBIED600_Rev1_WhmiMod

<table>
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<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Active read only</td>
<td>Web HMI mode, Web HMI functionality</td>
</tr>
<tr>
<td>2</td>
<td>Active</td>
<td>Web HMI mode, Web HMI functionality</td>
</tr>
<tr>
<td>3</td>
<td>Disabled</td>
<td>Web HMI mode, Web HMI functionality</td>
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</tbody>
</table>

### 8.1.20 ABBIED600_Rev1_SLDSymbolFormat

<table>
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<th>Description</th>
<th>Remarks</th>
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<tbody>
<tr>
<td>1</td>
<td>IEC</td>
<td>SLD symbol format, Single Line Diagram symbol format</td>
</tr>
<tr>
<td>2</td>
<td>ANSI</td>
<td>SLD symbol format, Single Line Diagram symbol format</td>
</tr>
</tbody>
</table>

### 8.1.21 ABBIED600_Rev1_InUseMod

<table>
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<th>Value</th>
<th>Description</th>
<th>Remarks</th>
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<tr>
<td>1</td>
<td>In use</td>
<td>Close delay mode, Selection for using delayed LHMI close</td>
</tr>
<tr>
<td>2</td>
<td>Not in use</td>
<td>Close delay mode, Selection for using delayed LHMI close</td>
</tr>
</tbody>
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### 8.1.22 ABBIED600_Rev1_SetVsb

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<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Basic</td>
<td>Setting visibility, Setting visibility for HMI</td>
</tr>
<tr>
<td>2</td>
<td>Advanced</td>
<td>Setting visibility, Setting visibility for HMI</td>
</tr>
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### 8.1.23 ABBIED600_Rev8_AuthAcs

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<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No activity</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>1</td>
<td>Configuration change</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>2</td>
<td>Firmware change</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>3</td>
<td>Firmware change fail</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>4</td>
<td>Attached to retrofit test case</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>5</td>
<td>Removed from retrofit test case</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>10</td>
<td>Setting group remote</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>11</td>
<td>Setting group local</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>20</td>
<td>Control remote</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>21</td>
<td>Control local</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>22</td>
<td>Test on</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
<tr>
<td>23</td>
<td>Test off</td>
<td>Viewer access, Viewer authority actions</td>
</tr>
</tbody>
</table>
### 8.1.24 ABBIED600_Rev1_AuthAcsLev

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>None</td>
<td>Authority logging,Authority logging level</td>
</tr>
<tr>
<td>2</td>
<td>Configuration change</td>
<td>Authority logging,Authority logging level</td>
</tr>
<tr>
<td>3</td>
<td>Setting group</td>
<td>Authority logging,Authority logging level</td>
</tr>
<tr>
<td>4</td>
<td>Setting group, control</td>
<td>Authority logging,Authority logging level</td>
</tr>
<tr>
<td>5</td>
<td>Settings edit</td>
<td>Authority logging,Authority logging level</td>
</tr>
<tr>
<td>6</td>
<td>All</td>
<td>Authority logging,Authority logging level</td>
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### 8.1.25 ABBIED600_Rev1_AlmLedSt

<table>
<thead>
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<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
<td>Programmable LED 1,Status of programmable LED 1</td>
</tr>
<tr>
<td>1</td>
<td>Ok</td>
<td>Programmable LED 1,Status of programmable LED 1</td>
</tr>
<tr>
<td>2</td>
<td>Warning</td>
<td>Programmable LED 1,Status of programmable LED 1</td>
</tr>
<tr>
<td>3</td>
<td>Alarm</td>
<td>Programmable LED 1,Status of programmable LED 1</td>
</tr>
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### 8.1.26 ABBIED600_Rev2_LedMode

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Follow-S</td>
<td>Alarm mode,Alarm mode for programmable LED 1</td>
</tr>
<tr>
<td>1</td>
<td>Follow-F</td>
<td>Alarm mode,Alarm mode for programmable LED 1</td>
</tr>
<tr>
<td>2</td>
<td>Latched-S</td>
<td>Alarm mode,Alarm mode for programmable LED 1</td>
</tr>
<tr>
<td>3</td>
<td>LatchedAck-F-S</td>
<td>Alarm mode,Alarm mode for programmable LED 1</td>
</tr>
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### 8.1.27 ABBIED600_Rev2_LedColor

<table>
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<th>Value</th>
<th>Description</th>
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<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Green</td>
<td>Alarm colour,Colour for the alarm state of the LED</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Red</td>
<td>Alarm colour,Colour for the alarm state of the LED</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Yellow</td>
<td>Alarm colour,Colour for the alarm state of the LED</td>
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## 8.1.28 ABBIED600_Rev5_SyncSrc

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
<td>Synch source, Time synchronization source</td>
</tr>
<tr>
<td>1</td>
<td>SNTP</td>
<td>Synch source, Time synchronization source</td>
</tr>
<tr>
<td>2</td>
<td>Modbus</td>
<td>Synch source, Time synchronization source</td>
</tr>
<tr>
<td>3</td>
<td>IEEE 1588</td>
<td>Synch source, Time synchronization source</td>
</tr>
<tr>
<td>5</td>
<td>IRIG-B</td>
<td>Synch source, Time synchronization source</td>
</tr>
<tr>
<td>8</td>
<td>Line differential</td>
<td>Synch source, Time synchronization source</td>
</tr>
<tr>
<td>9</td>
<td>DNP</td>
<td>Synch source, Time synchronization source</td>
</tr>
<tr>
<td>16</td>
<td>IEC60870-5-101</td>
<td>Synch source, Time synchronization source</td>
</tr>
<tr>
<td>17</td>
<td>IEC60870-5-103</td>
<td>Synch source, Time synchronization source</td>
</tr>
<tr>
<td>18</td>
<td>IEC60870-5-104</td>
<td>Synch source, Time synchronization source</td>
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## 8.1.29 ABBIED600_Rev3_TmSrc

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</tr>
</thead>
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<tr>
<td>0</td>
<td>Not defined</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>1</td>
<td>SNTP primary</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>2</td>
<td>SNTP secondary</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>3</td>
<td>SNTP tertiary or further</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>4</td>
<td>IEEE 1588 master</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>5</td>
<td>IEEE 1588 slave</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>6</td>
<td>IEEE 1588 further</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>7</td>
<td>IRIG-B</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>8</td>
<td>DNP 3.0</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>9</td>
<td>Modbus</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>10</td>
<td>SPA</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>11</td>
<td>LON VATS</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>12</td>
<td>LON other</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>13</td>
<td>PPS</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>14</td>
<td>Minute pulse</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>15</td>
<td>local GPS</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>16</td>
<td>IEC60870-5-101</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>17</td>
<td>IEC60870-5-103</td>
<td>Synch source, Current time source</td>
</tr>
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<td>18</td>
<td>IEC60870-5-104</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>19</td>
<td>EXT</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>20</td>
<td>LHMI</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>21</td>
<td>Line differential</td>
<td>Synch source, Current time source</td>
</tr>
<tr>
<td>99</td>
<td>Free running, locally generated</td>
<td>Synch source, Current time source</td>
</tr>
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## 8.1.30 ABBIED600_Rev1_PTPTmSrc

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<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Atomic clock</td>
<td>Grandmaster time Src, GrandMaster timeSource enum according to PTPv2</td>
</tr>
<tr>
<td>2</td>
<td>GPS</td>
<td>Grandmaster time Src, GrandMaster timeSource enum according to PTPv2</td>
</tr>
</tbody>
</table>
### 8.1.31 ABBIED600_Rev1_PTPClkAcc

<table>
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<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25 ns</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>2</td>
<td>100 ns</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>3</td>
<td>250 ns</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>4</td>
<td>1 us</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>5</td>
<td>2.5 us</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>6</td>
<td>10 us</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>7</td>
<td>25 us</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>8</td>
<td>100 us</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>9</td>
<td>250 us</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>10</td>
<td>1 ms</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>11</td>
<td>2.5 ms</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>12</td>
<td>10 ms</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>13</td>
<td>25 ms</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>14</td>
<td>100 ms</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>15</td>
<td>250 ms</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>16</td>
<td>1 s</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>17</td>
<td>10 s</td>
<td>Grandmaster accuracy,Grandmaster clockAccuracy enum according to PTPv2</td>
</tr>
<tr>
<td>18</td>
<td>more than 10 s</td>
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### 8.1.32 ABBIED600_Rev1_PTPAnncMod

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### 8.1.33 ABBIED600_Rev2_StrPhSel

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<td>Num of start phases, Number of phases required for operate activation</td>
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<td>Num of start phases, Number of phases required for operate activation</td>
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<td>Exactly 1 of 3</td>
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<td>Exactly 2 of 3</td>
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<td>6</td>
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### 8.1.34 ABBIED600_Rev2_MeasMod

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### 8.1.35 ABBIED600_Rev2_TestProKind

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<tr>
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<tr>
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### 8.1.36 ABBIED600_Rev1_AResSigSel

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<td>IoCos</td>
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### 8.1.38 ABBIED600_Rev1_VResSigSel

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<td>pos sequence</td>
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### 8.1.40 ABBIED600_Rev1_OpModProHz

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<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Freq&lt;</td>
<td>Operation mode, Frequency protection operation mode selection</td>
</tr>
<tr>
<td>2</td>
<td>Freq&gt;</td>
<td>Operation mode, Frequency protection operation mode selection</td>
</tr>
<tr>
<td>3</td>
<td>df/dt</td>
<td>Operation mode, Frequency protection operation mode selection</td>
</tr>
<tr>
<td>Value</td>
<td>Description</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>Freq&lt; + df/dt</td>
<td>Operation mode,Frequency protection operation mode selection</td>
</tr>
<tr>
<td>5</td>
<td>Freq&gt; + df/dt</td>
<td>Operation mode,Frequency protection operation mode selection</td>
</tr>
<tr>
<td>6</td>
<td>Freq&lt; OR df/dt</td>
<td>Operation mode,Frequency protection operation mode selection</td>
</tr>
<tr>
<td>7</td>
<td>Freq&gt; OR df/dt</td>
<td>Operation mode,Frequency protection operation mode selection</td>
</tr>
<tr>
<td>8</td>
<td>Freq&lt; AND df/dt</td>
<td>Operation mode,Frequency protection operation mode selection</td>
</tr>
<tr>
<td>9</td>
<td>Freq&gt; AND df/dt</td>
<td>Operation mode,Frequency protection operation mode selection</td>
</tr>
<tr>
<td>10</td>
<td>Freq&lt; OR Freq&lt;</td>
<td>Operation mode,Frequency protection operation mode selection</td>
</tr>
</tbody>
</table>

**8.1.42 ABBIED600_Rev1_buTripMode**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 out of 4 CB failure trip mode, Backup trip current check mode</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1 out of 3 CB failure trip mode, Backup trip current check mode</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1 out of 4 CB failure trip mode, Backup trip current check mode</td>
<td></td>
</tr>
</tbody>
</table>

**8.1.43 ABBIED600_Rev1_StrLtcMod**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rising edge</td>
<td>Start latching mode, Start reset delayed or immediately</td>
</tr>
<tr>
<td>2</td>
<td>Level sensitive</td>
<td>Start latching mode, Start reset delayed or immediately</td>
</tr>
</tbody>
</table>

**8.1.44 ABBIED600_Rev1_TrOutMod**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Non-latched</td>
<td>Trip output mode, Select the operation mode for trip output</td>
</tr>
<tr>
<td>2</td>
<td>Latched</td>
<td>Trip output mode, Select the operation mode for trip output</td>
</tr>
<tr>
<td>3</td>
<td>Lockout</td>
<td>Trip output mode, Select the operation mode for trip output</td>
</tr>
</tbody>
</table>

**8.1.45 ABBIED600_Rev1_OpModComp**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Over</td>
<td>Operation mode, Operation mode</td>
</tr>
<tr>
<td>2</td>
<td>Under</td>
<td>Operation mode, Operation mode</td>
</tr>
</tbody>
</table>

**8.1.46 ABBIED600_Rev3_TestSpvnKind**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Reset</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>1</td>
<td>Activate START</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>2</td>
<td>Deactive START</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>3</td>
<td>Activate OPERATE</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>4</td>
<td>Deactive OPERATE</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>5</td>
<td>Activate ALARM</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>6</td>
<td>Deactive ALARM</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>7</td>
<td>Activate WARNING</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>8</td>
<td>Deactive WARNING</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>9</td>
<td>Act. TRV_T_OP_ALM</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td>10</td>
<td>Deact. TRV_T_OP_ALM</td>
<td>SSCBR1, Test control for outputs</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Module</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>11</td>
<td>Act. TRV_T_CL_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>12</td>
<td>Deact. TRV_T_CL_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>13</td>
<td>Act. DIFTRVTOPALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>14</td>
<td>Deact. DIFTRVTOPALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>15</td>
<td>Act. DIFTRVTCLALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>16</td>
<td>Deact. DIFTRVTCLALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>17</td>
<td>Activate SPR_CHR_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>18</td>
<td>Deactive SPR_CHR_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>19</td>
<td>Activate OPR_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>20</td>
<td>Deactive OPR_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>21</td>
<td>Activate OPR_LO</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>22</td>
<td>Deactive OPR_LO</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>23</td>
<td>Activate IPOW_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>24</td>
<td>Deactive IPOW_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>25</td>
<td>Activate IPOW_LO</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>26</td>
<td>Deactive IPOW_LO</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>27</td>
<td>Activate CB_LIFE_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>28</td>
<td>Deactive CB_LIFE_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>29</td>
<td>Activate MON_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>30</td>
<td>Deactive MON_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>31</td>
<td>Activate PRES_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>32</td>
<td>Deactive PRES_ALM</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>33</td>
<td>Activate PRES_LO</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>34</td>
<td>Deactive PRES_LO</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>35</td>
<td>Activate OPENPOS</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>36</td>
<td>Deactive OPENPOS</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>37</td>
<td>Activate INVALIDPOS</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>38</td>
<td>Deactive INVALIDPOS</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>39</td>
<td>Activate CLOSEPOS</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>40</td>
<td>Deactive CLOSEPOS</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>41</td>
<td>Activate FAIL</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>42</td>
<td>Deactive FAIL</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>43</td>
<td>Activate FUSEF_3PH</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>44</td>
<td>Deactive FUSEF_3PH</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>45</td>
<td>Activate FUSEF_U</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>46</td>
<td>Deactive FUSEF_U</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>47</td>
<td>Activate FAIL_CTGRP1</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>48</td>
<td>Deactive FAIL_CTGRP1</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>49</td>
<td>Activate FAIL_CTGRP2</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>50</td>
<td>Deactive FAIL_CTGRP2</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>51</td>
<td>Activate FAIL_CTGRP3</td>
<td>SSCBR1</td>
</tr>
<tr>
<td>52</td>
<td>Deactive FAIL_CTGRP3</td>
<td>SSCBR1</td>
</tr>
</tbody>
</table>
53 Activate U_LIVE SSCBR1, Test control for outputs
54 Deactive U_LIVE SSCBR1, Test control for outputs
55 Activate U_DEAD SSCBR1, Test control for outputs
56 Deactive U_DEAD SSCBR1, Test control for outputs
57 Activate U_A_AB_LIVE SSCBR1, Test control for outputs
58 Deactive U_A_AB_LIVE SSCBR1, Test control for outputs
59 Activate U_B_BC_LIVE SSCBR1, Test control for outputs
60 Deactive U_B_BC_LIVE SSCBR1, Test control for outputs
61 Activate U_C_CA_LIVE SSCBR1, Test control for outputs
62 Deactive U_C_CA_LIVE SSCBR1, Test control for outputs
63 Activate U_A_AB_DEAD SSCBR1, Test control for outputs
64 Deactive U_A_AB_DEAD SSCBR1, Test control for outputs
65 Activate U_B_BC_DEAD SSCBR1, Test control for outputs
66 Deactive U_B_BC_DEAD SSCBR1, Test control for outputs
67 Activate U_C_CA_DEAD SSCBR1, Test control for outputs
68 Deactive U_C_CA_DEAD SSCBR1, Test control for outputs
69 Activate WARNING_AUX SSCBR1, Test control for outputs
70 Deactive WARNING_AUX SSCBR1, Test control for outputs
71 Activate WARNING_I SSCBR1, Test control for outputs
72 Deactive WARNING_I SSCBR1, Test control for outputs

### 8.1.47 ABBIED600_Rev1_TravClcMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From Cmd to Pos</td>
<td>Travel time Clc mode, Travel time calculation mode selection</td>
</tr>
<tr>
<td>2</td>
<td>From Pos to Pos</td>
<td>Travel time Clc mode, Travel time calculation mode selection</td>
</tr>
</tbody>
</table>

### 8.1.48 ABBIED600_Rev1_DirMod2

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Forward</td>
<td>Active power Dir, Direction of active power flow: Forward, Reverse</td>
</tr>
<tr>
<td>2</td>
<td>Reverse</td>
<td>Active power Dir, Direction of active power flow: Forward, Reverse</td>
</tr>
</tbody>
</table>

### 8.1.49 ABBIED600_Rev1_DefHzSel

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nominal</td>
<td>Def frequency Sel, Default frequency selection</td>
</tr>
<tr>
<td>2</td>
<td>Zero</td>
<td>Def frequency Sel, Default frequency selection</td>
</tr>
</tbody>
</table>

### 8.1.50 ABBIED600_Rev1_DmdWinMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sliding</td>
<td>Demand window, Demand calculation window type</td>
</tr>
<tr>
<td>2</td>
<td>Non-sliding</td>
<td>Demand window, Demand calculation window type</td>
</tr>
</tbody>
</table>

### 8.1.51 ABBIED600_Rev2_PhSv
### 8.1.52 ABBIED600_Rev1_OpModPh

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Three Phase</td>
<td>Phase mode, Three/Single phase mode</td>
</tr>
<tr>
<td>2</td>
<td>Single Phase</td>
<td>Phase mode, Three/Single phase mode</td>
</tr>
</tbody>
</table>

### 8.1.53 ABBIED600_Rev2_VVaTyp

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No variation</td>
<td>Variation enable, Enable variation type</td>
</tr>
<tr>
<td>1</td>
<td>Swell</td>
<td>Variation enable, Enable variation type</td>
</tr>
<tr>
<td>2</td>
<td>Dip</td>
<td>Variation enable, Enable variation type</td>
</tr>
<tr>
<td>3</td>
<td>Swell + dip</td>
<td>Variation enable, Enable variation type</td>
</tr>
<tr>
<td>4</td>
<td>Interruption</td>
<td>Variation enable, Enable variation type</td>
</tr>
<tr>
<td>5</td>
<td>Swell + Int</td>
<td>Variation enable, Enable variation type</td>
</tr>
<tr>
<td>6</td>
<td>Dip + Int</td>
<td>Variation enable, Enable variation type</td>
</tr>
<tr>
<td>7</td>
<td>Swell + dip + Int</td>
<td>Variation enable, Enable variation type</td>
</tr>
</tbody>
</table>

### 8.1.54 ABBIED600_Rev1_TrgModPQ

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Single</td>
<td>Trigger mode, Specifies the observation period triggering mode</td>
</tr>
<tr>
<td>2</td>
<td>Periodic</td>
<td>Trigger mode, Specifies the observation period triggering mode</td>
</tr>
<tr>
<td>3</td>
<td>Continuous</td>
<td>Trigger mode, Specifies the observation period triggering mode</td>
</tr>
</tbody>
</table>

### 8.1.55 ABBIED600_Rev1_ObsPerSel

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 Hour</td>
<td>Obs period selection, Observation period for unbalance calculation</td>
</tr>
<tr>
<td>2</td>
<td>12 Hours</td>
<td>Obs period selection, Observation period for unbalance calculation</td>
</tr>
<tr>
<td>3</td>
<td>1 Day</td>
<td>Obs period selection, Observation period for unbalance calculation</td>
</tr>
<tr>
<td>4</td>
<td>7 Days</td>
<td>Obs period selection, Observation period for unbalance calculation</td>
</tr>
<tr>
<td>5</td>
<td>User defined</td>
<td>Obs period selection, Observation period for unbalance calculation</td>
</tr>
</tbody>
</table>

### 8.1.56 ABBIED600_Rev1_TestOthKind

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Reset</td>
<td>VSQVUB1, Test control for outputs</td>
</tr>
<tr>
<td>1</td>
<td>Activate START</td>
<td>VSQVUB1, Test control for outputs</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Remarks</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Deactive START VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Activate OPERATE VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Deactive OPERATE VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Activate SWELLST VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Deactive SWELLST VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Activate DIPST VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Deactive DIPST VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Activate INTST VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Deactive INTST VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Activate MN_UNB_AL VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Deactive MN_UNB_AL VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Activate PCT_UNB_AL VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Deactive PCT_UNB_AL VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Activate OBS_PR_ACT VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Deactive OBS_PR_ACT VSQVUB1, Test control for outputs</td>
<td></td>
</tr>
</tbody>
</table>

### 8.1.57 ABBIED600_Rev2_CtlMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Voltage control</td>
<td>Control mode, Type of control</td>
</tr>
<tr>
<td>2</td>
<td>Input control</td>
<td>Control mode, Type of control</td>
</tr>
<tr>
<td>3</td>
<td>Voltage and input Ctl</td>
<td>Control mode, Type of control</td>
</tr>
<tr>
<td>4</td>
<td>No Volt dependency</td>
<td>Control mode, Type of control</td>
</tr>
</tbody>
</table>

### 8.1.58 ABBIED600_Rev2_OpModTEF

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Intermittent EF</td>
<td>Operation mode, Operation criteria</td>
</tr>
<tr>
<td>2</td>
<td>Transient EF</td>
<td>Operation mode, Operation criteria</td>
</tr>
<tr>
<td>3</td>
<td>General EF</td>
<td>Operation mode, Operation criteria</td>
</tr>
<tr>
<td>4</td>
<td>Alarming EF</td>
<td>Operation mode, Operation criteria</td>
</tr>
</tbody>
</table>

### 8.1.59 ABBIED600_Rev1_OpQtySel

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adaptive</td>
<td>Operating quantity, Operating quantity selection</td>
</tr>
<tr>
<td>2</td>
<td>Amplitude</td>
<td>Operating quantity, Operating quantity selection</td>
</tr>
</tbody>
</table>

### 8.1.60 ABBIED600_Rev1_AutoManMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Disabled</td>
<td>Restore mode, Mode of operation of restore functionality</td>
</tr>
<tr>
<td>2</td>
<td>Auto</td>
<td>Restore mode, Mode of operation of restore functionality</td>
</tr>
<tr>
<td>3</td>
<td>Manual</td>
<td>Restore mode, Mode of operation of restore functionality</td>
</tr>
</tbody>
</table>

### 8.1.61 ABBIED600_Rev1_RecOp
### 8.1.62 ABBIED600_Rev1_TermPrio

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>None</td>
<td>Terminal priority</td>
</tr>
<tr>
<td>2</td>
<td>Low (follower)</td>
<td>Terminal priority</td>
</tr>
<tr>
<td>3</td>
<td>High (master)</td>
<td>Terminal priority</td>
</tr>
</tbody>
</table>

### 8.1.63 ABBIED600_Rev1_ProCrdMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No condition</td>
<td>Protection coord mode</td>
</tr>
<tr>
<td>2</td>
<td>AR inoperative</td>
<td>Protection coord mode</td>
</tr>
<tr>
<td>3</td>
<td>CB close manual</td>
<td>Protection coord mode</td>
</tr>
<tr>
<td>4</td>
<td>AR inop, CB man</td>
<td>Protection coord mode</td>
</tr>
<tr>
<td>5</td>
<td>Always</td>
<td>Protection coord mode</td>
</tr>
</tbody>
</table>

### 8.1.64 ABBIED600_Rev1_AutoIniCnd

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not allowed</td>
<td>Auto init condition</td>
</tr>
<tr>
<td>2</td>
<td>When sync fails</td>
<td>Auto init condition</td>
</tr>
<tr>
<td>3</td>
<td>CB doesn't close</td>
<td>Auto init condition</td>
</tr>
<tr>
<td>4</td>
<td>Both</td>
<td>Auto init condition</td>
</tr>
</tbody>
</table>

### 8.1.65 ABBIED600_Rev3_TestCtlKind

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Reset</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>1</td>
<td>Activate START</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>2</td>
<td>Deactive START</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>3</td>
<td>Activate ALARM</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>4</td>
<td>Deactive ALARM</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>5</td>
<td>Activate OPEN_CB</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>6</td>
<td>Deactive OPEN_CB</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>7</td>
<td>Activate CLOSE_CB</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>8</td>
<td>Deactive CLOSE_CB</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>9</td>
<td>Activate CMD_WAIT</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>10</td>
<td>Deactive CMD_WAIT</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>11</td>
<td>Activate PROT_CRD</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>12</td>
<td>Deactive PROT_CRD</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>13</td>
<td>Activate INPRO</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>14</td>
<td>Deactive INPRO</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td>15</td>
<td>Activate LOCKED</td>
<td>DARREC1, Test control</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Module, Test control for outputs</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>16</td>
<td>Deactive LOCKED</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>17</td>
<td>Activate UNSUC_RECL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>18</td>
<td>Deactive UNSUC_RECL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>19</td>
<td>Activate AR_ON</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>20</td>
<td>Deactive AR_ON</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>21</td>
<td>Activate READY</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>22</td>
<td>Deactive READY</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>23</td>
<td>Activate RAISE</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>24</td>
<td>Deactive RAISE</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>25</td>
<td>Activate LOWER</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>26</td>
<td>Deactive LOWER</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>27</td>
<td>Activate PAR_FAIL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>28</td>
<td>Deactive PAR_FAIL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>29</td>
<td>Activate SYNC_INPRO</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>30</td>
<td>Deactive SYNC_INPRO</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>31</td>
<td>Activate SYNC_OK</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>32</td>
<td>Deactive SYNC_OK</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>33</td>
<td>Activate CL_FAIL_AL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>34</td>
<td>Deactive CL_FAIL_AL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>35</td>
<td>Activate CMD_FAIL_AL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>36</td>
<td>Deactive CMD_FAIL_AL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>37</td>
<td>Activate LLDB</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>38</td>
<td>Deactive LLDB</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>39</td>
<td>Activate LLLB</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>40</td>
<td>Deactive LLLB</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>41</td>
<td>Activate DLLB</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>42</td>
<td>Deactive DLLB</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>43</td>
<td>Activate DLDB</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>44</td>
<td>Deactive DLDB</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>45</td>
<td>Activate ACTIVE</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>46</td>
<td>Deactive ACTIVE</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>47</td>
<td>Activate OPEN_CB1</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>48</td>
<td>Deactive OPEN_CB1</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>49</td>
<td>Activate CLOSE_CB1</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>50</td>
<td>Deactive CLOSE_CB1</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>51</td>
<td>Activate OPEN_CB2</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>52</td>
<td>Deactive OPEN_CB2</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>53</td>
<td>Activate CLOSE_CB2</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>54</td>
<td>Deactive CLOSE_CB2</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>55</td>
<td>Activate BLKD_AL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
<tr>
<td>56</td>
<td>Deactive BLKD_AL</td>
<td>DARREC1, Test control for outputs</td>
</tr>
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</table>
### 8.1.66 ABBIED600_Rev1_OpModSC

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Off</td>
<td>Synchro check mode, Synchro check operation mode</td>
</tr>
<tr>
<td>2</td>
<td>Synchronous</td>
<td>Synchro check mode, Synchro check operation mode</td>
</tr>
<tr>
<td>3</td>
<td>Asynchronous</td>
<td>Synchro check mode, Synchro check operation mode</td>
</tr>
</tbody>
</table>

### 8.1.67 ABBIED600_Rev1_OpModCtrl

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Continuous</td>
<td>Control mode, Selection of synchro check command or Continuous control mode</td>
</tr>
<tr>
<td>2</td>
<td>Command</td>
<td>Control mode, Selection of synchro check command or Continuous control mode</td>
</tr>
</tbody>
</table>

### 8.1.68 ABBIED600_Rev1_EnergSt

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Unknown</td>
<td>ENERG_STATE, Energization state of Line and Bus</td>
</tr>
<tr>
<td>1</td>
<td>Both Live</td>
<td>ENERG_STATE, Energization state of Line and Bus</td>
</tr>
<tr>
<td>2</td>
<td>Live L, Dead B</td>
<td>ENERG_STATE, Energization state of Line and Bus</td>
</tr>
<tr>
<td>3</td>
<td>Dead L, Live B</td>
<td>ENERG_STATE, Energization state of Line and Bus</td>
</tr>
<tr>
<td>4</td>
<td>Both Dead</td>
<td>ENERG_STATE, Energization state of Line and Bus</td>
</tr>
</tbody>
</table>

### 8.1.69 ABBIED600_Rev1_OpModStUp

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ill</td>
<td>Operation mode, Motor start-up operation mode</td>
</tr>
<tr>
<td>2</td>
<td>Ill, CB</td>
<td>Operation mode, Motor start-up operation mode</td>
</tr>
<tr>
<td>3</td>
<td>Ill + stall</td>
<td>Operation mode, Motor start-up operation mode</td>
</tr>
<tr>
<td>4</td>
<td>Ill + stall, CB</td>
<td>Operation mode, Motor start-up operation mode</td>
</tr>
</tbody>
</table>

### 8.1.70 ABBIED600_Rev1_EnvTmpMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FLC Only</td>
<td>Env temperature mode, Mode of measuring ambient temperature</td>
</tr>
<tr>
<td>2</td>
<td>Use input</td>
<td>Env temperature mode, Mode of measuring ambient temperature</td>
</tr>
<tr>
<td>3</td>
<td>Set Amb Temp</td>
<td>Env temperature mode, Mode of measuring ambient temperature</td>
</tr>
</tbody>
</table>

### 8.1.71 ABBIED600_Rev1_CTConnTyp

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type 1</td>
<td>CT connection type, CT connection type. Determined by the directions of the connected current transformers</td>
</tr>
<tr>
<td>2</td>
<td>Type 2</td>
<td>CT connection type, CT connection type. Determined by the directions of the connected current transformers</td>
</tr>
</tbody>
</table>

### 8.1.72 ABBIED600_Rev1_VPhSel

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A or AB</td>
<td>Phase selection, Parameter for phase selection</td>
</tr>
<tr>
<td>2</td>
<td>B or BC</td>
<td>Phase selection, Parameter for phase selection</td>
</tr>
</tbody>
</table>
### 8.1.73 ABBIED600_Rev2_Wnd1Typ

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Y</td>
<td>Winding 1 type, Connection of the HV side windings</td>
</tr>
<tr>
<td>2</td>
<td>YN</td>
<td>Winding 1 type, Connection of the HV side windings</td>
</tr>
<tr>
<td>3</td>
<td>D</td>
<td>Winding 1 type, Connection of the HV side windings</td>
</tr>
<tr>
<td>4</td>
<td>Z</td>
<td>Winding 1 type, Connection of the HV side windings</td>
</tr>
<tr>
<td>5</td>
<td>ZN</td>
<td>Winding 1 type, Connection of the HV side windings</td>
</tr>
</tbody>
</table>

### 8.1.74 ABBIED600_Rev2_Wnd2Typ

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>y</td>
<td>Winding 2 type, Connection of the LV side windings</td>
</tr>
<tr>
<td>2</td>
<td>yn</td>
<td>Winding 2 type, Connection of the LV side windings</td>
</tr>
<tr>
<td>3</td>
<td>d</td>
<td>Winding 2 type, Connection of the LV side windings</td>
</tr>
<tr>
<td>4</td>
<td>z</td>
<td>Winding 2 type, Connection of the LV side windings</td>
</tr>
<tr>
<td>5</td>
<td>zn</td>
<td>Winding 2 type, Connection of the LV side windings</td>
</tr>
</tbody>
</table>

### 8.1.75 ABBIED600_Rev1_CLKNum

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Clk Num 0</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>1</td>
<td>Clk Num 1</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>2</td>
<td>Clk Num 2</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>3</td>
<td>Clk Num 3</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>4</td>
<td>Clk Num 4</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>5</td>
<td>Clk Num 5</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>6</td>
<td>Clk Num 6</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>7</td>
<td>Clk Num 7</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>8</td>
<td>Clk Num 8</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>9</td>
<td>Clk Num 9</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>10</td>
<td>Clk Num 10</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
<tr>
<td>11</td>
<td>Clk Num 11</td>
<td>Clock number, Setting the phase shift between HV and LV with clock number for connection group compensation (e.g. Dyn11 -&gt; 11)</td>
</tr>
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</table>

### 8.1.76 ABBIED600_Rev3_ZroAElm

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not eliminated</td>
<td>Zro A elimination, Elimination of the zero-sequence current</td>
</tr>
<tr>
<td>2</td>
<td>Winding 1</td>
<td>Zro A elimination, Elimination of the zero-sequence current</td>
</tr>
</tbody>
</table>
## 8.1.77 ABBIED600_Rev1_WndSel

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not in use</td>
<td>Tapped winding, The winding where the tap changer is connected to</td>
</tr>
<tr>
<td>2</td>
<td>Winding 1</td>
<td>Tapped winding, The winding where the tap changer is connected to</td>
</tr>
<tr>
<td>3</td>
<td>Winding 2</td>
<td>Tapped winding, The winding where the tap changer is connected to</td>
</tr>
<tr>
<td>4</td>
<td>Winding 3</td>
<td>Tapped winding, The winding where the tap changer is connected to</td>
</tr>
</tbody>
</table>

## 8.1.78 ABBIED600_Rev1_PwrMeasMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PhsA, PhsB, PhsC</td>
<td>Measurement mode, Selection of power calculation method</td>
</tr>
<tr>
<td>2</td>
<td>Arone</td>
<td>Measurement mode, Selection of power calculation method</td>
</tr>
<tr>
<td>3</td>
<td>Pos Seq</td>
<td>Measurement mode, Selection of power calculation method</td>
</tr>
<tr>
<td>4</td>
<td>PhsAB</td>
<td>Measurement mode, Selection of power calculation method</td>
</tr>
<tr>
<td>5</td>
<td>PhsBC</td>
<td>Measurement mode, Selection of power calculation method</td>
</tr>
<tr>
<td>6</td>
<td>PhsCA</td>
<td>Measurement mode, Selection of power calculation method</td>
</tr>
<tr>
<td>7</td>
<td>PhsA</td>
<td>Measurement mode, Selection of power calculation method</td>
</tr>
<tr>
<td>8</td>
<td>PhsB</td>
<td>Measurement mode, Selection of power calculation method</td>
</tr>
<tr>
<td>9</td>
<td>PhsC</td>
<td>Measurement mode, Selection of power calculation method</td>
</tr>
</tbody>
</table>

## 8.1.79 ABBIED600_Rev1_BCMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NAT2INT</td>
<td>Operation mode, Operation mode selection</td>
</tr>
<tr>
<td>2</td>
<td>BCD2INT</td>
<td>Operation mode, Operation mode selection</td>
</tr>
<tr>
<td>3</td>
<td>GRAY2INT</td>
<td>Operation mode, Operation mode selection</td>
</tr>
</tbody>
</table>

## 8.1.80 ABBIED600_Rev1_ARtgSec

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.2A</td>
<td>Secondary current, Rated secondary current</td>
</tr>
<tr>
<td>2</td>
<td>1A</td>
<td>Secondary current, Rated secondary current</td>
</tr>
<tr>
<td>3</td>
<td>5A</td>
<td>Secondary current, Rated secondary current</td>
</tr>
</tbody>
</table>

## 8.1.81 ABBIED600_Rev2_ConnType

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wye</td>
<td>VT connection, Voltage transducer measurement connection</td>
</tr>
<tr>
<td>2</td>
<td>Delta</td>
<td>VT connection, Voltage transducer measurement connection</td>
</tr>
<tr>
<td>3</td>
<td>U12</td>
<td>VT connection, Voltage transducer measurement connection</td>
</tr>
</tbody>
</table>
## 8.1.82 ABBIED600_Rev1_AnInpType

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Voltage trafo</td>
<td>Voltage input type, Type of the voltage input</td>
</tr>
<tr>
<td>2</td>
<td>Current trafo</td>
<td>Voltage input type, Type of the voltage input</td>
</tr>
<tr>
<td>3</td>
<td>CVD sensor</td>
<td>Voltage input type, Type of the voltage input</td>
</tr>
<tr>
<td>4</td>
<td>Rogowski sensor</td>
<td>Voltage input type, Type of the voltage input</td>
</tr>
</tbody>
</table>

## 8.1.83 ABBIED600_Rev1_SenInMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not in use</td>
<td>Input mode, Analogue input mode</td>
</tr>
<tr>
<td>2</td>
<td>Resistance</td>
<td>Input mode, Analogue input mode</td>
</tr>
<tr>
<td>5</td>
<td>0..20mA</td>
<td>Input mode, Analogue input mode</td>
</tr>
<tr>
<td>10</td>
<td>Pt100</td>
<td>Input mode, Analogue input mode</td>
</tr>
<tr>
<td>11</td>
<td>Pt250</td>
<td>Input mode, Analogue input mode</td>
</tr>
<tr>
<td>20</td>
<td>Ni100</td>
<td>Input mode, Analogue input mode</td>
</tr>
<tr>
<td>21</td>
<td>Ni120</td>
<td>Input mode, Analogue input mode</td>
</tr>
<tr>
<td>22</td>
<td>Ni250</td>
<td>Input mode, Analogue input mode</td>
</tr>
<tr>
<td>30</td>
<td>Cu10</td>
<td>Input mode, Analogue input mode</td>
</tr>
</tbody>
</table>

## 8.1.84 ABBIED600_Rev1_FibMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No fiber</td>
<td>Fiber mode, Fiber mode</td>
</tr>
<tr>
<td>2</td>
<td>Fiber optic</td>
<td>Fiber mode, Fiber mode</td>
</tr>
</tbody>
</table>

## 8.1.85 ABBIED600_Rev1_SerMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RS485 2Wire</td>
<td>Serial mode, Serial mode</td>
</tr>
<tr>
<td>2</td>
<td>RS485 4Wire</td>
<td>Serial mode, Serial mode</td>
</tr>
<tr>
<td>3</td>
<td>RS232 no handshake</td>
<td>Serial mode, Serial mode</td>
</tr>
<tr>
<td>4</td>
<td>RS232 with handshake</td>
<td>Serial mode, Serial mode</td>
</tr>
</tbody>
</table>

## 8.1.86 ABBIED600_Rev1_BaudRate

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>300</td>
<td>Baudrate, Baudrate</td>
</tr>
<tr>
<td>2</td>
<td>600</td>
<td>Baudrate, Baudrate</td>
</tr>
<tr>
<td>3</td>
<td>1200</td>
<td>Baudrate, Baudrate</td>
</tr>
<tr>
<td>4</td>
<td>2400</td>
<td>Baudrate, Baudrate</td>
</tr>
<tr>
<td>5</td>
<td>4800</td>
<td>Baudrate, Baudrate</td>
</tr>
<tr>
<td>6</td>
<td>9600</td>
<td>Baudrate, Baudrate</td>
</tr>
<tr>
<td>7</td>
<td>19200</td>
<td>Baudrate, Baudrate</td>
</tr>
<tr>
<td>8</td>
<td>38400</td>
<td>Baudrate, Baudrate</td>
</tr>
<tr>
<td>Value</td>
<td>Description</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>9</td>
<td>57600 Baudrate,Baudrate</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>115200 Baudrate,Baudrate</td>
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</tr>
</tbody>
</table>

### 8.1.87 ABBIED600_Rev2_EthPortMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Off Port 1 mode, Ethernet port mode</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>On Port 1 mode, Ethernet port mode</td>
<td></td>
</tr>
</tbody>
</table>

### 8.1.88 ABBIED600_Rev1_PHIZMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grounded System type, System Type</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ungrounded System type, System Type</td>
<td></td>
</tr>
</tbody>
</table>

### 8.1.89 ABBIED600_Rev1_OpModArc

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Light+current Operation mode, Operation mode</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Light only Operation mode, Operation mode</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>BI controlled Operation mode, Operation mode</td>
<td></td>
</tr>
</tbody>
</table>

### 8.1.90 ABBIED600_Rev1_EFAlg

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Load compensation EF algorithm Sel, Selection for PhE-loop calculation algorithm</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Load modelling EF algorithm Sel, Selection for PhE-loop calculation algorithm</td>
<td></td>
</tr>
</tbody>
</table>

### 8.1.91 ABBIED600_Rev1_EFAlgASel

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Io based EF algorithm Cur Sel, Selection for earth-fault current model</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I2 based EF algorithm Cur Sel, Selection for earth-fault current model</td>
<td></td>
</tr>
</tbody>
</table>

### 8.1.92 ABBIED600_Rev4_TestProRlKind

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Reset SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Activate OPERATE SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Deactive OPERATE SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Activate CB_FAULT_AL SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Deactive CB_FAULT_AL SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Activate TRBU SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Deactive TRBU SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Activate TRRET SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Deactive TRRET SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Activate BLK2H SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Deactive BLK2H SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Activate BLK2H_A SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Deactive BLK2H_A SCEFRFLO1, Test control for outputs</td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>Description</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>1</td>
<td>Accurate Phase voltage Meas, Phase voltage measurement principle</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ph-to-ph without Uo Phase voltage Meas, Phase voltage measurement principle</td>
<td></td>
</tr>
</tbody>
</table>

## 8.1.94 ABBIED600_Rev1_CubAlmMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Normal Alarm mode, Mode of operation for Alarm stage</td>
<td></td>
</tr>
</tbody>
</table>
### 8.1.95 ABBIED600_Rev1_FuLoct

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internal</td>
<td>Fuse location, Location of capacitor fuse</td>
</tr>
<tr>
<td>2</td>
<td>External</td>
<td>Fuse location, Location of capacitor fuse</td>
</tr>
</tbody>
</table>

### 8.1.96 ABBIED600_Rev1_VCrtSel

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Highest Ph-to-E</td>
<td>Voltage selection, Parameter to select voltage for curve monitoring</td>
</tr>
<tr>
<td>2</td>
<td>Lowest Ph-to-E</td>
<td>Voltage selection, Parameter to select voltage for curve monitoring</td>
</tr>
<tr>
<td>3</td>
<td>Highest Ph-to-Ph</td>
<td>Voltage selection, Parameter to select voltage for curve monitoring</td>
</tr>
<tr>
<td>4</td>
<td>Lowest Ph-to-Ph</td>
<td>Voltage selection, Parameter to select voltage for curve monitoring</td>
</tr>
<tr>
<td>5</td>
<td>Positive Seq</td>
<td>Voltage selection, Parameter to select voltage for curve monitoring</td>
</tr>
</tbody>
</table>

### 8.1.97 ABBIED600_Rev1_ZMeasMod

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1-Phase-to-earth</td>
<td>Impedance Meas mode, Select voltage and currents for impedance calculation</td>
</tr>
<tr>
<td>2</td>
<td>1-Phase-to-phase</td>
<td>Impedance Meas mode, Select voltage and currents for impedance calculation</td>
</tr>
<tr>
<td>3</td>
<td>3-Phase-to-earth</td>
<td>Impedance Meas mode, Select voltage and currents for impedance calculation</td>
</tr>
<tr>
<td>4</td>
<td>3-Phase-to-phase</td>
<td>Impedance Meas mode, Select voltage and currents for impedance calculation</td>
</tr>
<tr>
<td>5</td>
<td>Pos sequence</td>
<td>Impedance Meas mode, Select voltage and currents for impedance calculation</td>
</tr>
</tbody>
</table>

### 8.1.98 ABBIED600_Rev3_OpModSetATCC

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manual</td>
<td>Operation mode, The operation mode</td>
</tr>
<tr>
<td>2</td>
<td>Auto single</td>
<td>Operation mode, The operation mode</td>
</tr>
<tr>
<td>3</td>
<td>Auto parallel</td>
<td>Operation mode, The operation mode</td>
</tr>
<tr>
<td>4</td>
<td>Input control</td>
<td>Operation mode, The operation mode</td>
</tr>
<tr>
<td>5</td>
<td>Command</td>
<td>Operation mode, The operation mode</td>
</tr>
</tbody>
</table>

### 8.1.99 ABBIED600_Rev1_ManBlkType

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Custom disabled</td>
<td>Custom Man blocking, Customized manual blocking</td>
</tr>
<tr>
<td>2</td>
<td>OC</td>
<td>Custom Man blocking, Customized manual blocking</td>
</tr>
<tr>
<td>3</td>
<td>UV</td>
<td>Custom Man blocking, Customized manual blocking</td>
</tr>
<tr>
<td>4</td>
<td>OC, UV</td>
<td>Custom Man blocking, Customized manual blocking</td>
</tr>
<tr>
<td>5</td>
<td>EXT</td>
<td>Custom Man blocking, Customized manual blocking</td>
</tr>
<tr>
<td>6</td>
<td>OC, EXT</td>
<td>Custom Man blocking, Customized manual blocking</td>
</tr>
<tr>
<td>7</td>
<td>UV, EXT</td>
<td>Custom Man blocking, Customized manual blocking</td>
</tr>
<tr>
<td>8</td>
<td>OC, UV, EXT</td>
<td>Custom Man blocking, Customized manual blocking</td>
</tr>
</tbody>
</table>

### 8.1.100 ABBIED600_Rev1_TimerOn

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 8.1.101 ABBIED600_Rev1_OpModATCC

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Not in use</td>
<td>OPR_MODE_STS, The acting operation mode of the function block</td>
</tr>
<tr>
<td>1</td>
<td>Manual</td>
<td>OPR_MODE_STS, The acting operation mode of the function block</td>
</tr>
<tr>
<td>2</td>
<td>Auto single</td>
<td>OPR_MODE_STS, The acting operation mode of the function block</td>
</tr>
<tr>
<td>3</td>
<td>Auto master</td>
<td>OPR_MODE_STS, The acting operation mode of the function block</td>
</tr>
<tr>
<td>4</td>
<td>Auto follower</td>
<td>OPR_MODE_STS, The acting operation mode of the function block</td>
</tr>
<tr>
<td>5</td>
<td>MCC</td>
<td>OPR_MODE_STS, The acting operation mode of the function block</td>
</tr>
<tr>
<td>6</td>
<td>NRP</td>
<td>OPR_MODE_STS, The acting operation mode of the function block</td>
</tr>
</tbody>
</table>

### 8.1.102 ABBIED600_Rev1_AlmReas

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No alarm</td>
<td>ALARM_REAS, Status and reason for alarm</td>
</tr>
<tr>
<td>1</td>
<td>Cmd error</td>
<td>ALARM_REAS, Status and reason for alarm</td>
</tr>
<tr>
<td>2</td>
<td>TCO error</td>
<td>ALARM_REAS, Status and reason for alarm</td>
</tr>
<tr>
<td>3</td>
<td>Cmd + TCO err</td>
<td>ALARM_REAS, Status and reason for alarm</td>
</tr>
<tr>
<td>4</td>
<td>Pump error</td>
<td>ALARM_REAS, Status and reason for alarm</td>
</tr>
<tr>
<td>5</td>
<td>Pump + cmd err</td>
<td>ALARM_REAS, Status and reason for alarm</td>
</tr>
<tr>
<td>6</td>
<td>Pump + TCO err</td>
<td>ALARM_REAS, Status and reason for alarm</td>
</tr>
<tr>
<td>7</td>
<td>Pmp+TCO+cmd err</td>
<td>ALARM_REAS, Status and reason for alarm</td>
</tr>
</tbody>
</table>

### 8.1.103 ABBIED600_Rev1_FllwFlt

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No failed followers</td>
<td>FAIL_FLLW, Failed followers</td>
</tr>
<tr>
<td>1</td>
<td>Follower 1</td>
<td>FAIL_FLLW, Failed followers</td>
</tr>
<tr>
<td>2</td>
<td>Follower 2</td>
<td>FAIL_FLLW, Failed followers</td>
</tr>
<tr>
<td>3</td>
<td>Followers 1+2</td>
<td>FAIL_FLLW, Failed followers</td>
</tr>
<tr>
<td>4</td>
<td>Follower 3</td>
<td>FAIL_FLLW, Failed followers</td>
</tr>
<tr>
<td>5</td>
<td>Followers 1+3</td>
<td>FAIL_FLLW, Failed followers</td>
</tr>
<tr>
<td>6</td>
<td>Followers 2+3</td>
<td>FAIL_FLLW, Failed followers</td>
</tr>
<tr>
<td>7</td>
<td>Followers 1+2+3</td>
<td>FAIL_FLLW, Failed followers</td>
</tr>
</tbody>
</table>

### 8.1.104 ABBIED600_Rev1_ParUnits

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No parall units</td>
<td>PAR_UNIT_MCC, Parallel units included in MCC calculation</td>
</tr>
<tr>
<td>1</td>
<td>Trafo 1</td>
<td>PAR_UNIT_MCC, Parallel units included in MCC calculation</td>
</tr>
</tbody>
</table>
8.1.105 ABBIED600_Rev3_CmdRsp

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No commands</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>1</td>
<td>Select open</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>2</td>
<td>Select close</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>3</td>
<td>Operate open</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>4</td>
<td>Operate close</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>5</td>
<td>Direct open</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>6</td>
<td>Direct close</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>7</td>
<td>Cancel</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>8</td>
<td>Position reached</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>9</td>
<td>Position timeout</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>10</td>
<td>Object status only</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>11</td>
<td>Object direct</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>12</td>
<td>Object select</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>13</td>
<td>RL local allowed</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>14</td>
<td>RL remote allowed</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>15</td>
<td>RL off</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>16</td>
<td>Function off</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>17</td>
<td>Function blocked</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>18</td>
<td>Command progress</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>19</td>
<td>Select timeout</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>20</td>
<td>Missing authority</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>21</td>
<td>Close not enabled</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>22</td>
<td>Open not enabled</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>23</td>
<td>Internal fault</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>24</td>
<td>Already close</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>25</td>
<td>Wrong client</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>26</td>
<td>RL station allowed</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>27</td>
<td>RL change</td>
<td>Command response, Latest command response</td>
</tr>
<tr>
<td>28</td>
<td>Abortion by trip</td>
<td>Command response, Latest command response</td>
</tr>
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8.1.106 ABBIED600_Rev3_LocKeyHMI

<table>
<thead>
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<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Off</td>
<td>LR state, LR state monitoring</td>
</tr>
<tr>
<td>1</td>
<td>Local</td>
<td>LR state, LR state monitoring</td>
</tr>
<tr>
<td>Value</td>
<td>Description</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>1</td>
<td>LR key</td>
<td>LR control, LR control through LR key or binary input</td>
</tr>
<tr>
<td>2</td>
<td>Binary input</td>
<td>LR control, LR control through LR key or binary input</td>
</tr>
</tbody>
</table>

### 8.1.108 ABBIED600_Rev1_StaLevSet

<table>
<thead>
<tr>
<th>Value</th>
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<th>Remarks</th>
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<tr>
<td>1</td>
<td>L,R</td>
<td>Station authority, Control command originator category usage</td>
</tr>
<tr>
<td>2</td>
<td>L,S,R</td>
<td>Station authority, Control command originator category usage</td>
</tr>
<tr>
<td>3</td>
<td>L,R,L+R</td>
<td>Station authority, Control command originator category usage</td>
</tr>
<tr>
<td>4</td>
<td>L,S,S+R,L+S,L+S+R</td>
<td>Station authority, Control command originator category usage</td>
</tr>
</tbody>
</table>

### 8.1.109 ABBIED600_Rev1_EStoRte

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>8 samples / cycle</td>
<td>Storage rate, Storage rate for waveform recordings in samples per cycle</td>
</tr>
<tr>
<td>16</td>
<td>16 samples / cycle</td>
<td>Storage rate, Storage rate for waveform recordings in samples per cycle</td>
</tr>
<tr>
<td>32</td>
<td>32 samples / cycle</td>
<td>Storage rate, Storage rate for waveform recordings in samples per cycle</td>
</tr>
</tbody>
</table>

### 8.1.110 ABBIED600_Rev1_EStoMod

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</tr>
</thead>
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<td>0</td>
<td>Waveform</td>
<td>Stor. mode periodic, Storage mode selection (waveform / trend) for periodic trigger</td>
</tr>
<tr>
<td>1</td>
<td>Trend / cycle</td>
<td>Stor. mode periodic, Storage mode selection (waveform / trend) for periodic trigger</td>
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### 8.1.111 ABBIED600_Rev4_RadrChNum

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<th>Remarks</th>
</tr>
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<tr>
<td>0</td>
<td>Disabled</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>1</td>
<td>Io</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>2</td>
<td>IL1</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>3</td>
<td>IL2</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>4</td>
<td>IL3</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>5</td>
<td>IoB</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>6</td>
<td>IL1B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>7</td>
<td>IL2B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>8</td>
<td>IL3B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>9</td>
<td>Uo</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>10</td>
<td>U1</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Function Description</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
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</tr>
<tr>
<td>11</td>
<td>U2</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>12</td>
<td>U3</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>13</td>
<td>UoB</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>14</td>
<td>U1B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>15</td>
<td>U2B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>16</td>
<td>U3B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>17</td>
<td>ClO</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
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<tr>
<td>18</td>
<td>SI1</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>19</td>
<td>SI2</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>20</td>
<td>SU0</td>
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</tr>
<tr>
<td>21</td>
<td>SU1</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>22</td>
<td>SU2</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>23</td>
<td>ClOB</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>24</td>
<td>SI1B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>25</td>
<td>SI2B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>26</td>
<td>SU0B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>27</td>
<td>SU1B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>28</td>
<td>SU2B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>29</td>
<td>U12</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>30</td>
<td>U23</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>31</td>
<td>U31</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
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<td>32</td>
<td>UL1</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>33</td>
<td>UL2</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>34</td>
<td>UL3</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>35</td>
<td>U12B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>36</td>
<td>U23B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>37</td>
<td>U31B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>38</td>
<td>UL1B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>39</td>
<td>UL2B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>40</td>
<td>UL3B</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>41</td>
<td>U1T</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>42</td>
<td>U2T</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>43</td>
<td>U3T</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>44</td>
<td>PD</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>45</td>
<td>IOC</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>46</td>
<td>IL1C</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>47</td>
<td>IL2C</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>48</td>
<td>IL3C</td>
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</tr>
<tr>
<td>49</td>
<td>ClOC</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>50</td>
<td>SI1C</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>51</td>
<td>SI2C</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
<tr>
<td>52</td>
<td>U1C</td>
<td>Channel selection, Select a signal, which will be recorded by this channel</td>
</tr>
</tbody>
</table>
53 U1D Channel selection, Select a signal, which will be recorded by this channel

### 8.2 Extented Enum types

#### 8.2.1 ABBIED600_Rev1_HomeKind

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>Waiting</td>
<td></td>
</tr>
<tr>
<td>-1</td>
<td>Test</td>
<td></td>
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<tr>
<td>1</td>
<td>Ok</td>
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</tr>
<tr>
<td>2</td>
<td>Warning</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Alarm</td>
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#### 8.2.2 ABBIED600_Rev1_PhaseFaultDirectionKind

<table>
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</tr>
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<td>both</td>
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</tr>
<tr>
<td>0</td>
<td>unknown</td>
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</tr>
<tr>
<td>1</td>
<td>forward</td>
<td></td>
</tr>
<tr>
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<td>backward</td>
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#### 8.2.3 ABBIED600_Rev1_CurveCharKind

<table>
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<th>Value</th>
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<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANSI Extremely Inverse</td>
<td>Operating curve type, Selection of time delay curve type, ANSI Ext. inv.</td>
</tr>
<tr>
<td>2</td>
<td>ANSI Very Inverse</td>
<td>Operating curve type, Selection of time delay curve type, ANSI Very inv.</td>
</tr>
<tr>
<td>3</td>
<td>ANSI Normal Inverse</td>
<td>Operating curve type, Selection of time delay curve type, ANSI Norm. inv.</td>
</tr>
<tr>
<td>4</td>
<td>ANSI Moderate Inverse</td>
<td>Operating curve type, Selection of time delay curve type, ANSI Mod. inv.</td>
</tr>
<tr>
<td>5</td>
<td>ANSI Definite Time</td>
<td>Operating curve type, Selection of time delay curve type, ANSI Def. Time</td>
</tr>
<tr>
<td>6</td>
<td>Long-Time Extremely Inverse</td>
<td>Operating curve type, Selection of time delay curve type, L.T.E. inv.</td>
</tr>
<tr>
<td>7</td>
<td>Long-Time Very Inverse</td>
<td>Operating curve type, Selection of time delay curve type, L.T.V. inv.</td>
</tr>
<tr>
<td>8</td>
<td>Long-Time Inverse</td>
<td>Operating curve type, Selection of time delay curve type, L.T. inv.</td>
</tr>
<tr>
<td>9</td>
<td>IEC Normal Inverse</td>
<td>Operating curve type, Selection of time delay curve type, IEC Norm. inv.</td>
</tr>
<tr>
<td>10</td>
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</tr>
<tr>
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<td>Operating curve type, Selection of time delay curve type, IEC inv.</td>
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</tr>
<tr>
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<td>Operating curve type, Selection of time delay curve type, IEC L.T. inv.</td>
</tr>
<tr>
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<td>IEC Definite Time</td>
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<td>Reserved</td>
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<td>Operating curve type, Selection of time delay curve type, Programmable</td>
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<td>Operating curve type, Selection of time delay curve type, RI type</td>
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<td>Polynom 3</td>
<td>Operating curve type, Selection of time delay curve type, RD type</td>
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<td>Polynom 5</td>
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<td>Polynom 6</td>
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<tr>
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<td>Name</td>
<td>Description</td>
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<td>------------------------------------------------------------------------------</td>
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<tr>
<td>23</td>
<td>Polynom 7</td>
<td>Operating curve type, Selection of time delay curve type</td>
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<td>Polynom 8</td>
<td>Operating curve type, Selection of time delay curve type</td>
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<td>Multiline 3</td>
<td>Operating curve type, Selection of time delay curve type</td>
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<td>37</td>
<td>Multiline 5</td>
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<td>38</td>
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<tr>
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<td>Multiline 9</td>
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</tr>
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<td>42</td>
<td>Multiline 10</td>
<td>Operating curve type, Selection of time delay curve type</td>
</tr>
<tr>
<td>43</td>
<td>Multiline 11</td>
<td>Operating curve type, Selection of time delay curve type</td>
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<td>44</td>
<td>Multiline 12</td>
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<td>45</td>
<td>Multiline 13</td>
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</tr>
<tr>
<td>46</td>
<td>Multiline 14</td>
<td>Operating curve type, Selection of time delay curve type</td>
</tr>
<tr>
<td>47</td>
<td>Multiline 15</td>
<td>Operating curve type, Selection of time delay curve type</td>
</tr>
<tr>
<td>48</td>
<td>Multiline 16</td>
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<td>Operating curve type, Selection of time delay curve type</td>
</tr>
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-103 Activate ST_ALARM  PHLPTOC1, Test control for outputs
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-121 Activate ST_OVLOD  PHLPTOC1, Test control for outputs
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8.2.6 ABBIED600_Rev2_cmdQual

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8.2.7 ABBIED600_Rev32_ProFcn

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### 8.2.8 ABBIED600_Rev2_AutoReclosingKind

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### 8.2.9 ABBIED600_Rev1_LiveDeadModeKind

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</tbody>
</table>

### 8.2.11 ABBIED600_Rev2_FaultLoopKind

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>-5</td>
<td>No fault</td>
<td>FAULT_LOOP,Fault impedance loop</td>
</tr>
<tr>
<td>-4</td>
<td>PhaseAtoBtoCtoGround</td>
<td>FAULT_LOOP,Fault impedance loop,ABCG Fault</td>
</tr>
<tr>
<td>-3</td>
<td>PhaseCtoAGround</td>
<td>FAULT_LOOP,Fault impedance loop,CAG Fault</td>
</tr>
<tr>
<td>-2</td>
<td>PhaseBtoCGround</td>
<td>FAULT_LOOP,Fault impedance loop,BCG Fault</td>
</tr>
<tr>
<td>-1</td>
<td>PhaseAtoBGround</td>
<td>FAULT_LOOP,Fault impedance loop,ABG Fault</td>
</tr>
<tr>
<td>1</td>
<td>PhaseAtoGround</td>
<td>FAULT_LOOP,Fault impedance loop,AG Fault</td>
</tr>
<tr>
<td>2</td>
<td>PhaseBtoGround</td>
<td>FAULT_LOOP,Fault impedance loop,BG Fault</td>
</tr>
<tr>
<td>3</td>
<td>PhaseCtoGround</td>
<td>FAULT_LOOP,Fault impedance loop,CG Fault</td>
</tr>
<tr>
<td>4</td>
<td>PhaseAtoB</td>
<td>FAULT_LOOP,Fault impedance loop,AB Fault</td>
</tr>
<tr>
<td>5</td>
<td>PhaseBtoC</td>
<td>FAULT_LOOP,Fault impedance loop,BC Fault</td>
</tr>
<tr>
<td>6</td>
<td>PhaseCtoA</td>
<td>FAULT_LOOP,Fault impedance loop,CA Fault</td>
</tr>
<tr>
<td>7</td>
<td>Others</td>
<td>FAULT_LOOP,Fault impedance loop,ABC Fault</td>
</tr>
</tbody>
</table>

### 9 Control Block Extensions

None