



Primary control program

Release_LP_AINLX_v2.90.0.0.zip

2d eb bc 0b eb e0 b9 88 42 a5 7b 31 59 6d 01 77 ba 7c 9f 8d 03 a9 86 ef ca 73 d8 fc 41 f0 f8 11 2a
aa 54 ba 4d b2 47 34 d7 52 fc 6f 1f e4 24 23 53 9e ef 6b a3 d3 11 d3 8e 1c 12 4b 51 0c e9 d0

Release_LP_AINLX_v3.10.0.0.zip

a8 79 25 b5 f9 74 9f 33 98 3f 31 93 6a 4a 04 d8 a6 a4 64 9f 2e ce f3 b6 43 9c d9 3b 16 d1 9b 8b 93
62 22 52 fb 7a 54 70 c0 6e f4 55 03 1a 40 70 3e 2e 51 0a 19 e2 6f 3a 80 98 76 7f 93 09 68 c4

Release_LP_AINLX_v3.11.0.0.zip

ab 53 da 1c c2 e4 6d d2 34 49 67 3b ad a8 2c fc fe 61 ed 36 bf eb 68 e5 6f 69 66 df f2 ea 70 a8 89
ee 20 74 9b e9 41 65 f4 8f d2 5c a3 cd 89 ca 7d ce 4d 4d 13 c9 87 83 5c a7 75 ec f5 a7 b3 ad

Release_LP_AINLX_v3.12.0.0.zip

91b06d1775e2f255f571e8d4e64a26a7d2f59a0085aedc2805d4211b5f2e9e3815de1eec2f5f06db4
007d2ea7e7dfb6c2351480f7ededae3039e9bea7d406b

Release_LP_AINFX_v3.13.0.0.zip

0d963fc15c3db768367acb28dc12bdb7c000fcb690b33e6561181bb8bc78e03798e3f9e64ed79de89
13cc7185023f4fd16690a2de535116e10370af27624b250

Release_LP_AINLX_3.40.0.0.zip

99fcff0ec628f55c94c076d0efb3df6482e9b6055e4ce2b22683445f9e758afd1f88f7abe50f948aa8c7
58175d0525f78b0e15a27d5a4f9b7d73a16cc8750b79

Release_LP_AINLX_3.41.0.0.zip

750dcba4d5fa47230bb58e4266f379d242a4b1fdbe4b0d4681e0132f0ea36e37fff073c55801a204f6
1657a979dd2a1c84484cbbd31506043868a9816ef2488c

Release_LP_AINLX_3.42.0.0.zip

748bfc9c791b1f06f7212ead7221bc2d44293a4987344afe98ed414db545ca650d93ed6c2ae32503
9437f9031be2c8105dc27b722296504e9a6cade4872038

Release_LP_AINLX_3.45.0.0.zip

f9cf97c67e20df6e68a88e3110c73636ac7fb5b9ee2b77ea5b6c8b7d49ae6c7f1aa98ab03b769fd85e
b56ebd9df0b7da1504b022cb8e3c71beb59d84f1a147d3

Test bench control program

Release_LP_ATBLX_v3.40.0.0.zip

980a53a303f23fad88a4a0dda36984a8c4ee17e5fabbf72e0d571550d445b109f7e2ffe5a246b188d6
231ee937c68dcb9e9fd4ed68e5a553cbafe610cfe993



Release_LP_ATBLX_v3.44.0.0.zip
483f539c9400e052a6e9e2deb223fd5f6a0b796fb5a0e7fc32d36f55ca39aac96855790c047871efac2
bbaa12b2fbbc90a7ef690fd7cf6092e5e3c66fb0f1e1e

IGBT supply control program

Release_LP_AISLX_v3.40.0.0.zip
5963c98f74c87f3a5480174e928623628ed7da78eedd17451786f8fb6a656cc763179c8f8f1144f16b
454b806d50036147f9d58bba513ddc00df9299d12cc878

Release_LP_AISLX_v3.41.0.0.zip
7d25cb1b023b1a50a6c83f4c19803671e89fbd162d9d7ef0b0d0c1b371b07232a52e9fe089f027e69
d475d17e1ce2ffbf6c35e3df7cc728f3f01ec7ef882efb3

IGBT supply control program (2Q)

Release_LP_ALHLX_v3.40.0.0.zip
8372f3bc0639e1076c1dbc0817c4dc83c430cfbafcaa63db46ac2ed9588417e0fda0da53c1536dc25c
7519e43e87a50752b52cf2e8ae5ffab2459196a3e409ea

Release_LP_ALHLX_v3.41.0.0.zip
7cac23e5a3ce0b1a42b054e09138140f1cf9d47dfea5350ee3126368e9f4a6859b078ecfc5ce34d1ed
38deda82dba30e4e1045881b90c663714c3b78d71568e3

Diode supply control program

Release_LP_ADILX_v3.01.0.0.zip:
1a 20 86 7e 9c 5d d0 a7 47 fd 64 64 25 c6 c0 8d 3a 94 87 72 51 0f 28 6e 36 48 44 7c ed d6 30 5d f8
b2 ac 68 a6 4b 9d b7 67 b6 48 e4 4b 72 e9 a3 48 e7 4d d1 0d 58 7f 0d 9b 1c 7f df f1 a1 9c 9c

Release_LP_ADILX_v3.02.0.0.zip:
21 8f 69 3c 69 45 ef 02 ec 5e f2 f8 fd 34 7c 2a 54 75 35 28 66 a6 37 bc de 3b 4a fa bf 0a 92 9b 55 3e
a6 0d 80 2a c3 ff 47 2b d1 e8 12 12 6f 2a 6c 03 c2 55 17 3a 89 5e c6 2a 81 5d b9 c3 7f 9b

Release_LP_ADILX_v3.03.0.0.zip:
07197f27aea1a20c4af2ebe6f391342a8b2960b7938746a74c094c06dd37e365027bc4587ee2d1204
343d01584182526230ec2836712ff2937d3a071eb7c2b26

Regenerative rectifier control program

Release_LP_ARRLX_v3.40.0.0.zip:



944c41953a43ae481a162f5c3cf10a7128069e3ed517a4e8ed0c9e7bd6bec3745b75b46b1c807a1a6
aa519825f5f8010421888007b19c3773afacb11d57070c3

Brake chopper control program

Release_LP_ABCLX_v2.71.0.0.zip:

14 2c d4 4f 63 a2 f8 93 0d ff 53 6a a1 69 f9 ae 32 3a a3 85 4a 6c b5 a9 23 59 0e 11 0c 9e 98 eb ba
bc 95 8e 91 c1 89 bc 5c e7 d9 8e 80 45 71 c0 f6 50 9b df 57 27 2d 35 22 3a bf 3e cb 93 04 0e

DC/DC converter control program

Release_LP_ADCLX v2.71.0.0.zip:

fecb61ed6be80d4d5bb3666fe2eab4d87749338be721377cc050d58952a19f8d39c2b40a526aea03f
738106ec257ce81b4ce89de82187d27b348c6b002903f81

Winder control program (+N5000)

Release_LP_AWILX_v1.20.0.0.zip:

a7 6f 63 b6 18 c5 ab 83 ae 31 40 7d ec ce 97 98 ec 4b 8b 95 59 ae f6 45 84 5e 5d e4 fb 6e 1d 4a 7e
21 15 49 ba 3b ad d5 d7 f7 9e d3 19 4f 27 f2 f3 12 6f ac 02 5b a6 7a 5e 25 a6 48 57 34 26 32

Release_LP_AWILX_v1.21.0.0.zip:

33 33 b5 28 6b f2 ca 83 a4 39 f3 50 52 8c e8 37 21 1d 2e 48 d9 6b d3 07 1d c4 59 33 49 3f 97 73 9f
b8 0f 49 2f 31 a9 a1 cc 4d 24 6b b8 38 32 13 83 04 ba 89 14 4d 94 92 99 4b 0f 46 9f 47 1b 05

Release_LP_AWILX_v1.22.0.0.zip:

b3 1f e8 d1 7f e8 9f 4d 21 32 a4 ba f2 59 98 74 8e 45 05 4c ad db b8 ce 1b ef dc 36 8a f9 72 69 58
aa fa 46 c9 9f 24 08 e6 a4 3b dd 92 01 87 35 3e 39 e7 0b 2e 8e ce 73 d0 27 57 93 37 6a c6 f5

Release_LP_AWILX v1.30.0.0.zip:

7e 29 3e f7 20 a8 3a a6 52 15 e7 6d d8 eb 56 9c fd 5e 58 3f 29 44 fe 2c 92 5d b3 69 68 aa 10 6c 3e
35 ae a7 9d e0 c7 96 6c 08 2a 23 60 67 80 19 68 c2 62 53 8a a5 8d a4 c8 13 7f 54 4a 4b a0 25

Release_LP_AWILX v1.40.0.0.zip:

91 07 4c 8d 4a 8a c6 9f 3d 2a 72 94 0d 00 8d 6e 1f 96 0b 6c df 7e 5d 52 a5 dd 93 74 7e 1f 90 30 05
37 9e 20 8a eb 8a 4f 7d d3 f6 01 da 50 ce 58 9b fe 57 bf 61 90 d1 f6 73 2d c4 16 33 17 ee 4c

Crane control program (+N5050)

Release_LP_ACRLX_v4.03.0.0.zip:

40 20 4b 46 a6 75 93 0c 3b 8d 2d db 6c 3c b4 f2 27 ea 04 63 be d8 f2 e2 85 4e 0b 04 a4 67 48 a5 f9
a8 fc ea 49 d5 1e 93 9a 16 c4 e8 20 c5 1a 0e dc f3 2f 14 74 ca 0a db 4f 57 2f 60 94 da 39 f2

Release_LP_ACRLX_v4.04.0.0.zip:



0a 8e 29 9b 99 c8 38 92 1f fd 37 9c 22 48 13 ab 84 c0 5c 4c d2 aa 70 79 9b bf a4 37 27 ea 5d 95 b7
e3 2d 5f 81 ff b2 59 b4 fa c4 27 08 99 c8 ed 75 8e 04 9d 83 79 9e 7a cf a4 21 04 79 83 fe 44

Release_LP_ACRLX_v4.10.0.0.zip:

aa 89 40 66 27 16 2b 0d 92 69 6f ff c9 41 1b c1 8d 7e a4 32 9f fe ed 52 35 54 c8 c9 f7 b2 4e a1 ea
ad 09 e1 cd d5 d2 3f ca 0b 92 27 be 11 08 57 8b 67 53 84 60 c4 be 8a 42 1f 5e a2 66 bb e0 0b

Release ACRLX v4.20.0.0 Loading package.zip:

1f 65 6a ae 8e ad a3 2d e8 aa 0c 31 ca b4 4f 01 01 93 91 15 07 1e 32 2b 8d cd 32 ee cb 3f 4f e0 da
b9 3c 21 87 8c 07 2b fd e9 27 ac ea b2 07 0c c0 83 62 43 18 c6 3f 45 6b d2 49 7b 52 58 7a e3

Release ACRLX v4.30.0.0 Loading package.zip:

4f 96 f8 a6 08 71 18 a0 a2 4d 54 0d 80 69 82 d2 1e c6 d3 37 1b 91 f6 41 ff 3f 7b 6f 53 91 fa 93 cd 7c
c8 12 94 19 f5 81 a9 a7 f7 0f 3b cf 0d 78 3d 2e 1f 3a 48 40 6d 96 4b 17 59 23 3c a3 b9 26

Release ACRLX v4.40.0.0 Loading package.zip:

8c 16 ca b4 1e 08 8d 9c b9 91 f9 6f 36 a6 5f 5c 2c b9 08 a0 cb ca 61 67 75 1b 86 e7 dc 86 69 69 cd
72 e3 1a 39 37 0f af 88 bd 20 0d 5b 2d a6 14 77 fe fd 65 df ae 2e 3b 71 3e fd fd b7 cf d7 30

Release ACRLX v4.41.0.0 Loading package.zip:

1e a2 40 e7 5d f7 73 ca 12 ba 2a c7 72 dd 2e 40 89 05 40 18 0f e9 52 91 17 7c a4 f2 83 40 6c bf 19
d7 5c 8d 8d 12 a3 06 f7 48 8c 25 23 70 bf 20 57 ef 20 7a 3d d0 25 38 06 22 e4 fa 06 b8 de e9

Release ACRLX v4.42.0.0 Loading package.zip:

03 b3 77 c8 9d 5e 97 01 aa 69 d5 2f cc ae f4 81 4e 4a 17 3b d0 8a 73 aa 5d ba b0 37 57 d1 57 f0 71 91
20 1b e6 9d a0 99 de 8b af 40 55 73 c4 b0 07 ba 35 cc 21 e9 17 ec 3a eb cf a9 9c 7b 4d 22

Release ACRLX v4.43.0.0 Loading package.zip:

3f 26 ea 83 0f d3 25 ad 50 24 1b e1 b5 1f ee 07 0b f2 3f 42 21 b7 ac 45 63 f1 4c 94 7d 15 1e f9 bf 43 c3
9f 10 04 c9 f6 8a 72 e1 7a 0d a6 cc 88 e8 de 7d 43 53 60 91 58 1f 48 34 aa 14 39 fd 6f

Winch control program (+N5100)

Release_LP_AWCLX_v3.02.0.0.zip:

10 3b 04 30 1b a2 03 d8 97 a4 00 1f 8c b3 7c 10 6a b8 ee b1 a7 46 44 60 7a e2 12 5f 20 b5 83 c6 ed
0d 88 51 a5 b3 e4 8a 90 dd 27 8e c1 e0 e6 56 3f ef c5 52 58 56 33 5c bc 13 78 a3 a0 85 71 0a

Release_LP_AWCLX_v3.03.0.0.zip:

3c 39 f3 c8 ed a9 18 d5 0e cd c4 88 ac 9d 9a 6e f6 9c 7d 09 e7 5f 74 4e 55 d6 23 7d 0c 4b de e7 8a
aa e7 97 d1 29 7c bd 28 4a 6a e5 01 05 29 42 2f 6b 9a b0 0d 31 e2 b8 8a 5a 7d 4c 35 b7 7a 55

Release AWCLx_v3.10.0.0.zip:

1e 83 3b c5 a6 98 2a 7f 25 9f 88 d3 6c 43 62 f4 1d 2c 1d 04 df d8 f7 a6 cb b1 49 28 63 93 b9 94 8e
53 76 88 9d 4c 30 04 bf 67 19 76 b9 47 03 36 0f b1 41 a9 8c 88 14 32 83 ec 24 0a 3b 68 56 86



Release AWCLx_v4.00.0.0.zip:

3d 7e d4 58 05 78 9e 66 15 5f 49 30 15 89 05 ef 5e fd f3 ea 43 ef 58 cc 0c 86 21 b9 fa 41 ce 02 97
63 15 f7 7a c8 7f 78 ce 1e 4c 50 8a cf ff 28 0d 34 1a 53 ce cc f7 85 05 59 9a f0 81 1e 91 b9

Release AWCLx_v4.10.0.0.zip:

f5 0f 58 bd 6e 5d 1e d0 ea 7b b3 62 ef 32 a9 27 12 3b 80 7b 6d fc ff d8 fb 94 87 d3 39 ef f2 5e b7 77
bc 84 2c fe d4 ec c3 b5 70 5c 1a f5 0b d2 22 6a 9c 14 1f 70 86 5c 88 4e d1 df f5 28 39 cb

Release AWCLx_v4.11.0.0.zip:

fd7b 5e 0d 69 89 7e 98 46 d2 57 1c 86 39 7a 72 16 8c 3d c4 87 40 c2 a0 e9 bb 0c a0 ff 21 eb 13 b1 08
11 58 f7 5b f6 a2 c9 fb 8b 8a ea 89 b0 72 c2 75 44 81 8e a3 79 df 1f 23 b9 37 1c ce b0 59

Centrifuge/Decanter control program (+N5150)

Release_LP_ACDLx_v1.10.0.0.zip:

a4 68 6e 6e 52 72 c1 bd 55 18 33 71 1d 43 b7 7c e1 11 02 ca 61 cb 15 3c e8 7a 60 76 07 aa b5 c1 b5
81 12 9c a7 41 e0 78 16 cd 34 d6 99 03 3f a4 02 84 24 10 00 e3 db e7 90 6c 33 8f 64 23 52 06

Release_LP_ACDLx_v1.11.0.0.zip:

98 15 1d 81 49 18 57 a2 ae 19 7f 67 21 ab 37 2b a0 a6 82 5c 9f 85 c6 87 c5 0a 61 2c 61 1f b6 8e e7
9e 9a a5 d7 f7 b5 f1 8b 4e 5e a9 4e 74 cb cb 45 65 fe 52 68 bf 75 70 fc 7f f7 ae b0 24 4e ac

Release_LP_ACDLX v1.20.0.0.zip:

ff 7e dd cb 5d 9c 90 77 26 ac 26 75 7c df 58 64 56 27 a9 f3 20 54 d7 d7 b6 db 55 d1 75 2e 3e e6 4d
ac 7f 24 2a 59 65 1d be 4d 62 74 5e 25 ec 0d 83 f2 3a ae 77 a3 d6 06 d8 04 41 2f 40 1b 35 4c

PCP control program (+N5200)

Release_LP_AOALx v1.21.0.0.zip:

f4 da 50 49 5e 4c 9b 1a 9a 92 8b c0 ed f4 7a 37 8d 69 f3 ac c8 3a aa 67 3c 6a a9 74 f9 8f 4d b9 86
a9 8a e8 ee 53 a8 1d ad 08 17 50 45 02 72 ec 78 41 e9 5a 68 25 c1 34 9c 89 7a 72 d5 f1 5b 17

Release_LP_AOALx v1.30.0.0.zip:

e9 de 62 c7 5f d1 82 52 d8 6b e6 0d 42 95 8b b5 2b 43 c0 3b 74 28 fa 19 de 3a 96 0f 29 8c 8d 9d 9f
11 d9 3a e3 37 36 e0 1a 63 b3 80 92 ba c9 3b be c5 ea 7d 74 58 ef a6 dc 1d f7 f9 99 56 16 39

Release_LP_AOALx v1.40.0.0.zip:

a4 8b d5 1c d9 ee 0e 1e 17 15 b2 98 8b 84 59 69 a9 6e d6 27 59 bd 8e 36 49 19 86 b9 54 c4 b6 e0
33 f5 92 9e bc 5f 81 8c c1 28 85 fb ac c3 2a 11 84 92 2f 7b 16 75 04 1a a7 ae 2d 84 15 eb 8b 80

Release_LP_AOALX_v1.61.0.0.zip:

e0 c4 2b a6 c4 55 c9 07 16 1e c9 87 9f 1b 06 c3 65 eb 90 20 b0 cd 42 63 c3 76 03 ed a5 9c 53 29 1b
05 ac 12 d3 96 ff 8b b1 56 19 fe 45 44 a1 8c 99 bd 9b 70 92 63 91 c3 68 cc 03 2b 0e 95 04 94



Release LP_AOALX_v1.64.0.0.zip:

6e 26 cb bc 8d 80 1a 3a 91 a6 0a a6 a8 8a ba 6c ea 02 dd 86 66 12 9d 19 3a ec d8 f1 67 89 9c 14 53
39 65 f0 6d 6f 64 d7 31 2f b5 a7 4d a5 b5 61 28 ec 17 8e 02 85 98 bf 15 4f a5 25 25 31 d8 4f

Rod pump control program (+N5250)

Release LP_ARPLC v1.12.0.0.zip:

f9 76 7e 85 17 8b 67 d2 de c6 6a 82 7d dd 94 1f 98 83 6f 47 b0 ad be 39 df 42 75 50 49 43 89 6b
7d 7a 4c 0e ab eb 7a 76 d8 a5 5a 86 92 84 74 a4 38 65 ba b0 f1 9d 00 fc c3 e2 4e 05 60 39 73 58

Release LP_ARPLC v1.20.0.0.zip:

1f f0 ba ea f0 3b 06 24 8a f4 41 b7 78 0f 0f ca 8f 86 3b 45 a3 5e 5a aa c9 26 6a 44 62
ba 95 9c d7 a2 34 11 a0 b4 79 de f3 d4 1a 79 23 09 f6 f5 66 02 05 77 86 45 2f 17 5f 4b 31 1b 30
a7 50 a6

Release LP_ARPLX v1.30.0.0.zip:

36 b1 1c 5c 0f 79 32 01 7e cf d0 7e d1 bf bf a3 34 08 95 0d 97 0a 00 f7 b2 2b e8 b9 13 02 e0 52
e4 44 1e 6b a7 15 81 43 1f 5b 6c 85 58 84 d9 91 ba e4 4c fc 01 42 a0 26 16 16 83 08
68 26 04 00

Cooling tower control program (+N5350)

Release BCTLx_v2.00.3.1

24 c6 cc eb 53 06 45 e4 af 92 80 ab 70 7c 60 36 e5 51 cd 43 c2 f7 45 4a b1 06 bc ca 2e 89 d4 27 07
77 bc 9f 28 fb 8d 07 2f 1f 2e fc 17 6e 1f 81 84 99 4a a1 c5 04 e3 50 64 e2 a3 c7 06 f7 5c 42

Release BCTLx_v2.00.3.3

5d 4e 5d 37 be 17 e9 77 18 c2 85 81 bb fd a0 84 a0 6e ef 2b c5 74 8d 21 f9 2a 28 b9 bf 3d 9e af af
5c ee ee 85 cf cc e1 2e 92 f5 c9 a5 a3 b4 13 e6 a0 88 38 ca 6c cd e4 87 66 fd 1e c7 68 5c 48

Release BCTLx_v2.00.5.0

39 a9 65 3e da 67 3b 12 f8 d8 9c 4f a9 76 ca 83 58 31 70 8c 15 2c ac 2c 1d 7a e8 54 51 85 57 3f bd
e9 fa f3 b5 be d4 2f 18 d9 14 13 90 49 cb e6 be 7c 3e a5 ef 14 70 38 8c 34 99 2e ca e5 1d dc

ACS880 Override control program (+N5450)

LP_AOILX_v1.10.0.0.zip

c8 ec ff 13 e4 2c 3b 15 c1 38 a7 ad 3c a7 f9 bb 3d 89 d3 c4 1c 32 ec 97 7d ea 32 ea 3e d8 2f 72 2f
40 65 cb 23 dc a7 7e 0d 8c 56 01 89 47 51 3d 12 ad 9d 8b 0b 6e 7e 8d 3f 76 aa 2f 37 2a ec e5

Spinning control program (+N5500)

Release LP_ASPLC_v2.10.0.0.zip:

c5 dd ba 43 a6 89 b0 52 e5 3f e0 8f 94 e2 21 86 6e 40 f0 64 d1 2c 03 58 e2 70 20 d9 dd a0 23 ed 25
89 91 52 a6 b3 ef 34 17 44 1b 41 41 10 3d d8 93 92 54 72 c9 1a d2 3e d2 a4 27 f1 1e 86 09 11



Release LP_ASPLC_v2.11.0.0.zip:

33 99 a9 7b b3 22 05 a4 35 26 00 d2 30 18 41 cd dc 34 0c 86 38 82 2a d6 f0 9a 8f dc 3b ca c2 ac f0 4c 9c df
f4 06 ca 6b 7c 4b 59 9e 88 dd 1d 04 1e 6f b5 55 cb ee 04 0b 7a 29 53 ea b1 69 f6 c3

ESP control program (+N5600)

Release_LP_AESLx_v1.00.0.0.zip:

a6 ee 62 da 07 51 09 6c 8b 8f de 3e 31 b6 40 34 e9 94 91 f3 79 20 2f 92 0c 2f 7c e8 5c 73 00 27 55
0e 95 0f 95 73 ff 9b dd 05 16 e3 29 08 54 66 c5 32 52 f4 bf 46 32 d5 e3 b4 69 1a 45 03 53 e5

Release_LP_AESLx_v1.01.0.0.zip:

09 b3 8d f9 8d df 75 1c 46 b4 bf 8e 4a 20 4d 05 bb 05 d2 15 c7 ef 6e 89 4e f9 4e d9 50 70 1f 72 a8
aa 96 71 12 3a ac 6b 4b aa db b3 6c 50 64 ca c5 09 de 1d 29 07 f6 06 57 3f f8 f2 bf 91 29 85

Release_LP_AESLx_v1.02.0.0.zip:

4b 69 f1 88 46 36 5a 10 59 dc 84 bb af 1d 98 21 e1 85 ff a4 dc e2 65 20 4e 9b a6 17 33 d8 94 54 36
e2 95 5a 58 83 74 a2 9f 40 ce 25 d4 59 a8 85 38 3c 7a f4 28 f3 1e a0 24 fc cf d0 9b 58 7e 4c

Release_LP_AESLx_v1.04.0.0.zip:

40 b9 37 55 a8 b5 a0 ba b2 b8 4e 01 39 17 64 71 d3 1a 10 ac be af a8 ff 56 f3 c5 d7 4d f5 72 3c a8
12 27 80 cd 7a 83 f8 60 70 3b 94 65 e2 3b 10 95 f2 3b d2 d4 e9 f0 ed dc ab 16 e6 10 bf 25 8c

Release_LP_AESLX_v1.06.zip:

90 03 c2 8b 7d ba f4 17 1e a2 46 5a bc 3b 2b 42 71 63 6c b8 3a 2c 0c 52 5b b3 e4 5b 0c bd 8e 19 9a
59 36 b8 b8 02 3d 88 17 f1 c8 21 bd e1 d2 e7 28 62 f9 86 7a a7 95 24 c2 31 43 71 46 a4 7f 3b

Release_LP_AESLX_v1.08.zip:

4a 4c 43 83 2d e9 75 7a 69 70 2b 48 2e 40 89 14 65 04 9b c1 59 13 d6 0f ed 72 c4 22 2b d5 a4
76 c3 41 85 1a a9 44 f1 fb 0c 8b b5 e9 10 8e 37 93 92 39 75 ed 01 fb b1 d5 8e 14 6f 84 5a 56 2f b5

Release_LP_AESLX_v1.09.zip:

0a 07 4d 38 45 b0 06 4b f5 84 79 18 62 b4 dd 75 93 b5 01 b1 34 1d 6c ab 36 ee d3 56 61 7d 09 83 a8 ca
be 23 30 50 cd 63 0d 9c 92 4f d7 58 3d 83 9c fa 13 90 a1 7f 9a 61 91 16 11 f4 e2 52 27 32

Tower crane control program (+N5650)

LP_ATCLC_v1.00.0.0 Loading package.zip:

74 26 4d df 63 ef 39 da 86 f0 71 a3 b0 ff e8 b7 ce dd 83 6d 1f 54 35 39 05 d7 6d 25 2a c5 94 5f 3a
29 25 ba 6f cb 5f cc 01 4d f5 ee b7 cf 17 02 59 61 5e e9 c0 da 2c 06 e4 46 53 cb 8c 2d 83 5f

LP_ATCLC_v1.10.0.0 Loading package.zip:

71 ef f2 60 32 1d 90 69 cf 8f 07 8d f5 4d af 42 08 da 42 47 59 7e cc 94 04 6f 01 b5 cb be 18 84 53
e8 8f a0 33 d1 18 0c d6 f7 04 79 e3 10 03 4f d2 9f 73 2e 59 b7 dc 2a 53 40 4f 5b f1 c9 d4 4c



LP_ATCLC_v1.20.0.0 Loading package.zip:

f4 bd ee b9 a1 c4 a4 7d bf a6 d9 eb 40 a9 a2 32 7d 56 18 1e f7 eb 32 45 95 6d fc 40 59 cd 77 0c 3e
09 8a 0e 9b c9 26 a9 6b a0 00 b7 9b 1c 1b 8b 16 94 92 ff 98 45 f6 81 39 ed 96 4a d7 7f ef 56

LP_ATCLC_v1.30.0.0 Loading package.zip:

7b b2 aa 32 51 d4 26 8d 47 07 36 ba 17 f7 73 33 ed 14 80 8b 28 71 7a d0 a0 ee 4f 35 91 10 a9 7d 1d 8c
f6 5f 6f 5b 1c d6 54 70 e0 ca 4d 77 95 b3 de 6b 87 e2 bc 97 96 d5 a7 c5 97 e7 cf c8 dc 2e

ACS880 Position control program (+N5700)

LP_APCLX_v1.02.0.2 Loading package:

f6 c0 e5 d8 1a 8d 3e 4f f8 93 c6 f7 67 1f e2 cd 82 9d e3 3f af f5 57 bc 8a c0 43 31 04 d5 70 f5 24 6b
a7 bb 9a d6 f4 23 32 f7 eb e8 ba 65 de 3c bf 39 5b 66 4f c8 e6 82 a9 1a 08 2a a5 3d 0e f6

ACS880 Anti-cavitation control program (+N5900)

LP_AACAP_v1.00.0.0 Loading package:

8b ec 8a 63 29 5b 33 f5 a8 08 a4 41 11 e5 9c e0 29 03 4b f4 0e 40 58 a1 53 4f f9 82 d8
74 d1 8c da e8 ab 0a 1e 57 98 c1 5f 67 dd 78 32 e6 97 b6 25 5d b9 73 c3 a6 63 8e 6b c2 57 dc
0d 55 ed fd

ACS880 Liquid cooling unit program

Release_LP_ALCLX_v2.50.0.0.zip

01 ff 0c 3c d7 52 14 e0 59 ca 8d 78 39 e7 81 47 c4 c8 a1 38 a5 1a 5b 81 c2 d7 b6 86 94 ee 96 2b cf
bd a1 80 d8 20 7f 9c 49 cb 28 81 78 87 08 09 59 7b f4 89 09 d3 32 c1 4f b0 26 c2 0e f9 d4 ea

Release_LP_ALCL6_v2.60.zip

c2 b7 6f e7 92 9b 94 d2 7e f6 c4 18 fb 67 a0 08 1f 6e 61 08 17 31 3c 05 82 7c cb d1 46 87 7c 5f 54
8d 96 90 e2 2e a8 46 a6 45 84 65 19 4a 6d 5c 87 78 44 b6 42 cb a1 d8 84 4e 16 6a 66 a7 aa be

Release_LP_ALCL6_v2.80.zip

03 0c e3 87 39 f1 cf 25 a5 51 ca 6c b2 24 b2 88 88 79 67 d7 15 87 d9 82 d0 22 4c de 78 fb ef f5 e8
59 da ad e4 06 f2 ca cf a0 e4 a7 2f c6 3c 6a 6b 8a b5 35 78 ea 9d 16 98 95 6c b1 c0 a9 b1 8b

Release_LP_ALCL6_v2.81.zip

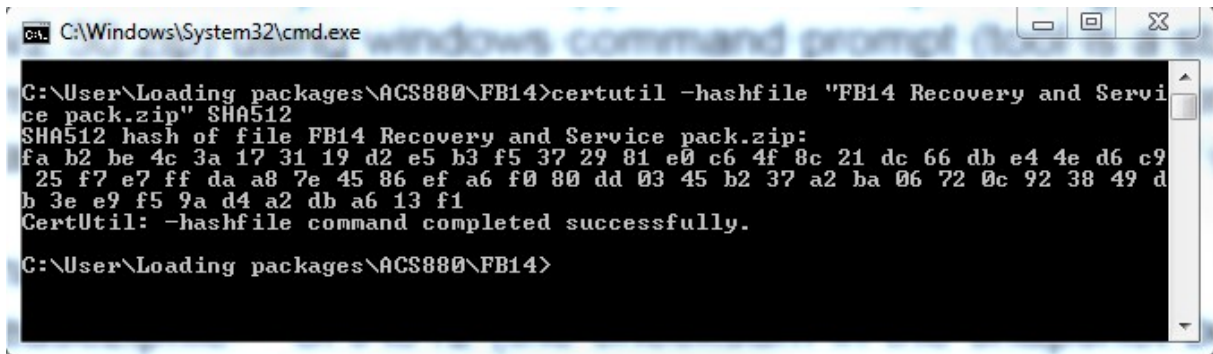
2c2e6b89cb072fe3b3f9844663e693a9c2e90a9f1fbacf63be2e40bf68f0667972a21e3df8120311c90
4645ea7cae0723769def04dc0d201f9a9f0ad23326646

Instructions

To verify integrity of firmware downloaded eg. from IHMM, following additional steps are recommended. The purpose of integrity verification is to ensure that local copy of release zip file is consistent with zip file originally released by ABB.

Please note, that when downloading a loading package file from IHMM, its name may include also some additional data e.g. Release_LP_AINLX_v3.11.0.0.zip in this document is actually Release_LP_AINLX_v3.11.0.0_3AXD10000104317_AR.zip when downloaded from IHMM. However, this does not change the checksum.

- SHA-512 checksum consist of 64 bytes of hexadecimal values.
- Calculate SHA-512 checksum of your local copy of release zip file (e.g. Release_LP_AINLX_v2.50.zip) using windows command prompt (tool is a standard Windows tool)
- Open windows command prompt by typing "cmd" to windows search and pressing enter
- Go to directory containing your local copy of release zip file, program itself is part Windows operating system
- Give following command to re-calculate SHA-512 checksum
certutil -hashfile "<releasezipfile>" SHA512 (the checksum in the snapshot below is an example only)



```
C:\Windows\System32\cmd.exe
C:\User>Loading packages\ACS880\FB14>certutil -hashfile "FB14 Recovery and Service pack.zip" SHA512
SHA512 hash of file FB14 Recovery and Service pack.zip:
fa b2 be 4c 3a 17 31 19 d2 e5 b3 f5 37 29 81 e0 c6 4f 8c 21 dc 66 db e4 4e d6 c9
25 f7 e7 ff da a8 7e 45 86 ef a6 f0 80 dd 03 45 b2 37 a2 ba 06 72 0c 92 38 49 d
b 3e e9 f5 9a d4 a2 db a6 13 f1
CertUtil: -hashfile command completed successfully.

C:\User>Loading packages\ACS880\FB14>
```

Example:

```
certutil -hashfile "Release_LP_AINLX_v3.45.0.0.zip" SHA512
```

Compare calculated checksum to checksum obtained from ABB library (this document) and proceed further in firmware download procedure if checksums are matching