Product description

The device is a modular installation device (MDRC) in pro M design. It is intended for installation in distribution boards on 35 mm mounting rails. Physical address assignment and parametrization are carried out with ETS. The device is powered by the ABB i-bus® KNX bus and requires no additional auxiliary voltage supply. The device is ready for operation after connecting the bus voltage.
**Connection diagram**

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**LEGEND**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Label carrier</td>
</tr>
<tr>
<td>2</td>
<td>Programming LED</td>
</tr>
<tr>
<td>3</td>
<td>Programming button</td>
</tr>
<tr>
<td>4</td>
<td>Bus connection terminal</td>
</tr>
<tr>
<td>5</td>
<td>Cover cap</td>
</tr>
<tr>
<td>6</td>
<td>Inputs (a, b, c, d)</td>
</tr>
<tr>
<td>7</td>
<td>Valve output A</td>
</tr>
<tr>
<td>8</td>
<td>Valve output B</td>
</tr>
<tr>
<td>9</td>
<td>Fan output</td>
</tr>
<tr>
<td>10</td>
<td>Auxiliary relay</td>
</tr>
<tr>
<td>11</td>
<td>Valve output changeover button/LED</td>
</tr>
<tr>
<td>12</td>
<td>Valve output open/close button/LED</td>
</tr>
<tr>
<td>13</td>
<td>Relay output open/close button/LED</td>
</tr>
<tr>
<td>14</td>
<td>Switch fan speed button/LED</td>
</tr>
<tr>
<td>15</td>
<td>Manual operation button/LED</td>
</tr>
<tr>
<td>16</td>
<td>Inputs (a, b, c, d) status indicator LEDs</td>
</tr>
</tbody>
</table>
## General technical data

<table>
<thead>
<tr>
<th>Supply</th>
<th>Bus voltage</th>
<th>21…32 V DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current consumption, bus</td>
<td>&lt; 12 mA</td>
<td></td>
</tr>
<tr>
<td>Leakage loss, bus</td>
<td>Maximum 250 mW</td>
<td></td>
</tr>
<tr>
<td>Leakage loss, device</td>
<td>Maximum 3 W</td>
<td></td>
</tr>
<tr>
<td>KNX connection</td>
<td>0.25 W</td>
<td></td>
</tr>
<tr>
<td>Relay 16 A</td>
<td>1.0 W</td>
<td></td>
</tr>
</tbody>
</table>

**Terminals**

| KNX                     | Via bus connection terminal |
|                        |                           |
| Inputs/Outputs         | Via screw terminals       |

**Connection terminals**

<table>
<thead>
<tr>
<th>Screw terminal</th>
<th>Screw terminal with universal head (PZ 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2...4 mm² stranded, 2 x (0.2...2.5 mm²)</td>
<td></td>
</tr>
<tr>
<td>0.2...6 mm² single core, 2 x (0.2...4 mm²)</td>
<td></td>
</tr>
</tbody>
</table>

| Wire end ferrule without plastic sleeve | 0.25...2.5 mm² |
| Wire end ferrule with plastic sleeve   | 0.25...4 mm²  |
| TWIN ferrules                          | 0.5...2.5 mm² |
| Wire end ferrule contact pin length    | Min. 10 mm    |
| Tightening torque                      | Max. 0.6 Nm   |
| Grid                                   | 6.35          |

**Protection degree and class**

<table>
<thead>
<tr>
<th>Degree of protection</th>
<th>IP 20 to EN 60529</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection class</td>
<td>II to EN 61140</td>
</tr>
</tbody>
</table>

**Isolation category**

<table>
<thead>
<tr>
<th>Overvoltage category</th>
<th>III to EN 60664-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution degree</td>
<td>II to EN 60664-1</td>
</tr>
</tbody>
</table>

**SELV**

| KNX safety extra low voltage | SELV 24 V DC |

**Temperature range**

<table>
<thead>
<tr>
<th>Operation</th>
<th>-5...+45°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>-25...+70°C</td>
</tr>
<tr>
<td>Storage</td>
<td>-25...+55°C</td>
</tr>
</tbody>
</table>

**Ambient conditions**

<table>
<thead>
<tr>
<th>Maximum air humidity</th>
<th>93%, no condensation allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atmospheric pressure</td>
<td>Atmosphere up to 2,000 m</td>
</tr>
</tbody>
</table>

**Design**

<table>
<thead>
<tr>
<th>Modular installation device (MDRC)</th>
<th>Modular installation device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>ProM</td>
</tr>
<tr>
<td>Housing/color</td>
<td>Plastic housing, gray</td>
</tr>
</tbody>
</table>

**Dimensions**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>90 x 105 x 63.5 mm (H x W x D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting width in space units</td>
<td>6x 17.5 mm modules</td>
</tr>
<tr>
<td>Mounting depth</td>
<td>63.5 mm</td>
</tr>
</tbody>
</table>

**Mounting**

<table>
<thead>
<tr>
<th>35 mm mounting rail</th>
<th>To EN 60715</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting position</td>
<td>Any</td>
</tr>
<tr>
<td>Weight</td>
<td>0.21 kg</td>
</tr>
<tr>
<td>Fire classification</td>
<td>Flammability V-0 as per UL94</td>
</tr>
</tbody>
</table>

**Approvals**

<table>
<thead>
<tr>
<th>KNX certification</th>
<th>To EN 50491</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certification</td>
<td>To EN 60669</td>
</tr>
<tr>
<td>CE marking</td>
<td>In accordance with the EMC directive and low voltage directive</td>
</tr>
</tbody>
</table>
### Device type

<table>
<thead>
<tr>
<th>Device type</th>
<th>Fan Coil Controller</th>
<th>FCC/S 1.3.2.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Fan Coil Unit Controller, 0-10 V, continuous, manual operation /*</td>
<td></td>
</tr>
<tr>
<td>Maximum number of group objects</td>
<td>118</td>
<td></td>
</tr>
<tr>
<td>Maximum number of group addresses</td>
<td>255</td>
<td></td>
</tr>
<tr>
<td>Maximum number of assignments</td>
<td>255</td>
<td></td>
</tr>
</tbody>
</table>

/* = Current version number of the application. Please refer the software information on our homepage for this purpose.

### Inputs

<table>
<thead>
<tr>
<th>For Analog Room Controller</th>
<th>Number</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact scanning</td>
<td>Scanning current</td>
<td>1 mA</td>
</tr>
<tr>
<td></td>
<td>Scanning voltage</td>
<td>12 V</td>
</tr>
<tr>
<td>Resistance</td>
<td>Select</td>
<td>User-defined</td>
</tr>
<tr>
<td></td>
<td>PT 1.000</td>
<td>2-conductor technology</td>
</tr>
<tr>
<td></td>
<td>PT 100</td>
<td>2-conductor technology</td>
</tr>
<tr>
<td></td>
<td>KT</td>
<td>1k</td>
</tr>
<tr>
<td></td>
<td>KTY</td>
<td>2k</td>
</tr>
<tr>
<td></td>
<td>NI</td>
<td>1k</td>
</tr>
<tr>
<td></td>
<td>NTC</td>
<td>20k</td>
</tr>
</tbody>
</table>

Line length between sensor and device input: Max. 100 m, one-way

### Rated current output 16 A

<table>
<thead>
<tr>
<th>Rated values</th>
<th>Number</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>$U_{\text{in}}$ rated voltage</td>
<td>250 V AC (50/60 Hz)</td>
<td></td>
</tr>
<tr>
<td>$I_{\text{in}}$ rated current (per output pair)</td>
<td>16 A (resistive load for additional heater)</td>
<td></td>
</tr>
<tr>
<td>Switching currents</td>
<td>AC3* operation ($\cos \phi = 0.45$) to EN 60947-4-1</td>
<td>16 A / 230 V AC</td>
</tr>
<tr>
<td></td>
<td>AC1* operation ($\cos \phi = 0.8$) to EN 60947-4-1</td>
<td>16 A / 230 V AC</td>
</tr>
<tr>
<td></td>
<td>Minimum switching capacity at 100 mA</td>
<td>24 V AC</td>
</tr>
<tr>
<td></td>
<td>DC current switching capacity, resistive load, at 16 A</td>
<td>24 V DC</td>
</tr>
<tr>
<td>Service life</td>
<td>Mechanical service life</td>
<td>&gt; 3 x 10⁶ cycles</td>
</tr>
<tr>
<td></td>
<td>Electrical endurance of switching contacts to IEC 60947-4-1</td>
<td>&gt; 10⁶ cycles</td>
</tr>
<tr>
<td></td>
<td>AC1* ($240 V/cos \phi=0.8$)</td>
<td>&gt; 10⁶ cycles</td>
</tr>
<tr>
<td>Switching times</td>
<td>Maximum relay position change per output and minute if only one relay is switched.</td>
<td>&gt; 500</td>
</tr>
</tbody>
</table>
## Valve output (analog)

<table>
<thead>
<tr>
<th>Rated values</th>
<th>Number</th>
<th>2, non-isolated, short-circuit proofed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control signal</td>
<td>0…10 V DC</td>
<td></td>
</tr>
<tr>
<td>Signal type</td>
<td>Analog</td>
<td></td>
</tr>
<tr>
<td>Output load</td>
<td>&gt; 10 kohms</td>
<td></td>
</tr>
<tr>
<td>Output tolerance</td>
<td>± 10%</td>
<td></td>
</tr>
<tr>
<td>Current limitation</td>
<td>max. 1.5 mA</td>
<td></td>
</tr>
</tbody>
</table>
Note

For a detailed description of the application see product manual. It is available free-of-charge at http://www.abb.com/knx

ETS and the current version of the device application are required for programming.

The device does not support the locking function of a KNX device in ETS. If you use a BCU code to inhibit access to all the project devices, it has no effect on this device. Data can still be read and programmed.
### Ordering details

<table>
<thead>
<tr>
<th>Description</th>
<th>MB</th>
<th>Type</th>
<th>Order No.</th>
<th>Packaging unit [pcs.]</th>
<th>Weight 1 pc. [g]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fan Coil Controller</td>
<td>6</td>
<td>FCC/S 1.1.1.1</td>
<td>2CDG 110 210 R0011</td>
<td>1</td>
<td>230</td>
</tr>
<tr>
<td>Fan Coil Controller</td>
<td>6</td>
<td>FCC/S 1.1.2.1</td>
<td>2CDG 110 211 R0011</td>
<td>1</td>
<td>235</td>
</tr>
<tr>
<td>Fan Coil Controller</td>
<td>6</td>
<td>FCC/S 1.2.1.1</td>
<td>2CDG 110 212 R0011</td>
<td>1</td>
<td>230</td>
</tr>
<tr>
<td>Fan Coil Controller</td>
<td>6</td>
<td>FCC/S 1.2.2.1</td>
<td>2CDG 110 213 R0011</td>
<td>1</td>
<td>235</td>
</tr>
<tr>
<td>Fan Coil Controller</td>
<td>6</td>
<td>FCC/S 1.3.1.1</td>
<td>2CDG 110 214 R0011</td>
<td>1</td>
<td>210</td>
</tr>
<tr>
<td>Fan Coil Controller</td>
<td>6</td>
<td>FCC/S 1.3.2.1</td>
<td>2CDG 110 215 R0011</td>
<td>1</td>
<td>215</td>
</tr>
<tr>
<td>Fan Coil Controller</td>
<td>6</td>
<td>FCC/S 1.4.1.1</td>
<td>2CDG 110 209 R0011</td>
<td>1</td>
<td>215</td>
</tr>
<tr>
<td>Fan Coil Controller</td>
<td>6</td>
<td>FCC/S 1.5.1.1</td>
<td>2CDG 110 234 R0011</td>
<td>1</td>
<td>210</td>
</tr>
<tr>
<td>Fan Coil Controller</td>
<td>6</td>
<td>FCC/S 1.5.2.1</td>
<td>2CDG 110 235 R0011</td>
<td>1</td>
<td>215</td>
</tr>
</tbody>
</table>