

**2.6 Binary Input with manual operation, 8-fold, contact scanning, MDRC**



2CDC 071 008 F0005

Fig. 16: BE/S 8.20.1

The 8-fold Binary Input BE/S 8.20.1 with manual operation is a rail mounted device for insertion in the distribution board. The device is suitable for reading out of floating contacts. The pulsed polling voltage is generated internally.

Buttons on the front of the device can be used to simulate the input state. The status of the inputs are displayed by yellow LEDs.

The device is ready for operation after connection to the bus voltage. The Binary Input is parameterised via ETS2 V1.3a or higher. The connection to the bus is established using the front side bus connection terminal.

**2.6.1 Technical data**

<b>Power supply</b>	<ul style="list-style-type: none"> <li>– Bus voltage</li> <li>– Current consumption,</li> <li>– Leakage loss, bus</li> </ul>	21 ... 32 V DC < 12 mA Max. 250 mW
<b>Inputs</b>	<ul style="list-style-type: none"> <li>– Number</li> <li>– Polling voltage <math>U_n</math></li> <li>– Sensing current <math>I_n</math></li> <li>– Sensing current <math>I_n</math> when switching on</li> <li>– Permitted cable lengths</li> </ul>	8 32 V, pulsed 0.1 mA Max. 355 mA $\leq 100$ m with 1.5 mm <sup>2</sup>
<b>Connections</b>	<ul style="list-style-type: none"> <li>– EIB / KNX</li> <li>– Inputs</li> </ul>	via bus connection terminal, without screws via screw terminals
<b>Connection terminals</b>	<ul style="list-style-type: none"> <li>– Screw terminals</li> <li>– Tightening torque</li> </ul>	0.2 ... 2.5 mm <sup>2</sup> finely stranded 0.2 ... 4.0 mm <sup>2</sup> single core Max. 0.6 Nm
<b>Operating and display elements</b>	<ul style="list-style-type: none"> <li>– Programming LED (3)</li> <li>– Programming button (2)</li> <li>– Channel LED (8)</li> <li>– Manual operation button (9)</li> <li>– Manual/Automatic LED (Man.) (6)</li> <li>– Manual/Automatic button (Man.) (5)</li> </ul>	for assignment of the physical address for assignment of the physical address 1 LED per channel for display of the input state 1 button per channel for changing the input state 1 LED for display of the manual/automatic mode states 1 button for switchover of manual and automatic mode
<b>Enclosure</b>	<ul style="list-style-type: none"> <li>– IP 20</li> </ul>	to DIN EN 60 529
<b>Safety class</b>	<ul style="list-style-type: none"> <li>– II</li> </ul>	to DIN EN 61 140
<b>Temperature range</b>	<ul style="list-style-type: none"> <li>– Operation</li> <li>– Storage</li> <li>– Transport</li> </ul>	– 5 °C...+ 45 °C – 25 °C...+ 55 °C – 25 °C...+ 70 °C
<b>Design</b>	<ul style="list-style-type: none"> <li>– Modular installation device (MDRC)</li> <li>– Dimensions</li> <li>– Mounting width in space units</li> <li>– Mounting depth</li> </ul>	Modular installation device, ProM 90 x 72 x 67.5 mm (H x W x D) 4, 4 modules at 18 mm 67.5 mm
<b>Installation</b>	<ul style="list-style-type: none"> <li>– On 35 mm mounting rails</li> </ul>	to DIN EN 60 715
<b>Mounting position</b>	<ul style="list-style-type: none"> <li>– as required</li> </ul>	
<b>Weight</b>	<ul style="list-style-type: none"> <li>– 0.2 kg</li> </ul>	
<b>Housing/colour</b>	<ul style="list-style-type: none"> <li>– Plastic housing, grey</li> </ul>	
<b>Approvals</b>	<ul style="list-style-type: none"> <li>– EIB / KNX to EN 50 090-1, -2</li> </ul>	certificate
<b>CE mark</b>	<ul style="list-style-type: none"> <li>– in accordance with the EMC guideline and low voltage guideline</li> </ul>	
<b>Halogen free</b>	<ul style="list-style-type: none"> <li>– Yes, conform to DIN VDE 0472 part 815</li> </ul>	

Table 11: Technical data BE/S 8.20.1

Application program	Max. number of communication objects	Max. number of group addresses	Max. number of associations
Binär, 8f20M/1	83	254	254

Table 12: Application program BE/S 8.20.1

**Note:** The programming requires EIB Software Tool ETS2 V1.3a or higher. If ETS3 is used a “.VD3” type file must be imported. The application program is available in the ETS2 / ETS3 at ABB/Input/Binary Input 4-fold.

2.6.2 Circuit diagram

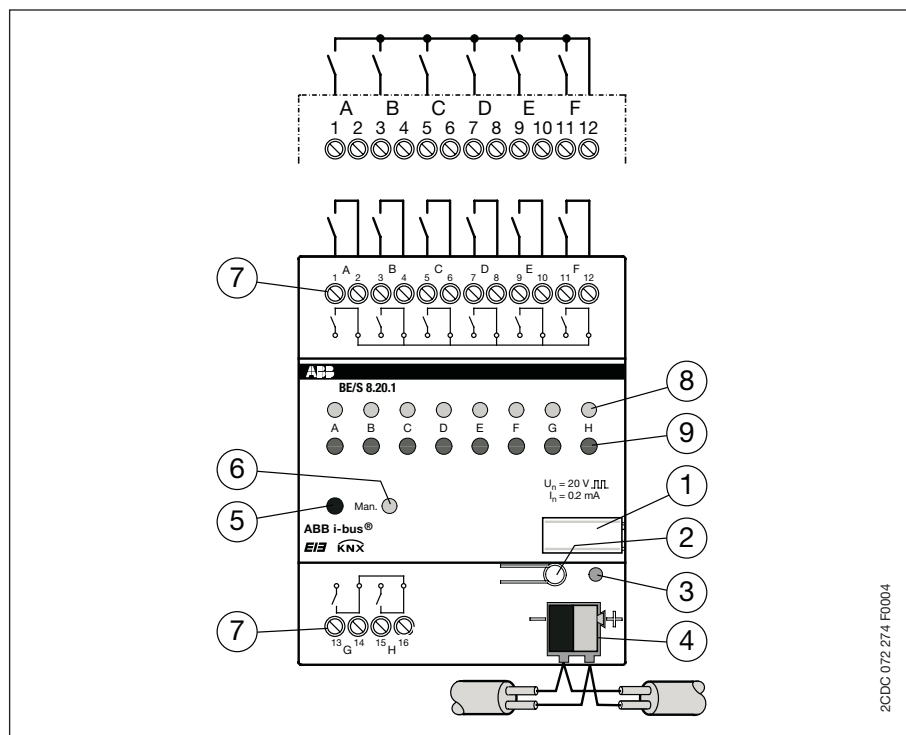


Fig. 17: Circuit diagram of BE/S 8.20.1

- 1 Label carriers
- 2 Programming button
- 3 Programming LED
- 4 Bus connection terminal
- 5 Manual/Automatic button
- 6 Manual/Automatic LED
- 7 Connection terminals
- 8 Channel LED
- 9 Manual operation button

**Note:** An external voltage connection is not permitted in the Binary Input BE/S 8.20.1.

2.6.3 Dimension drawing

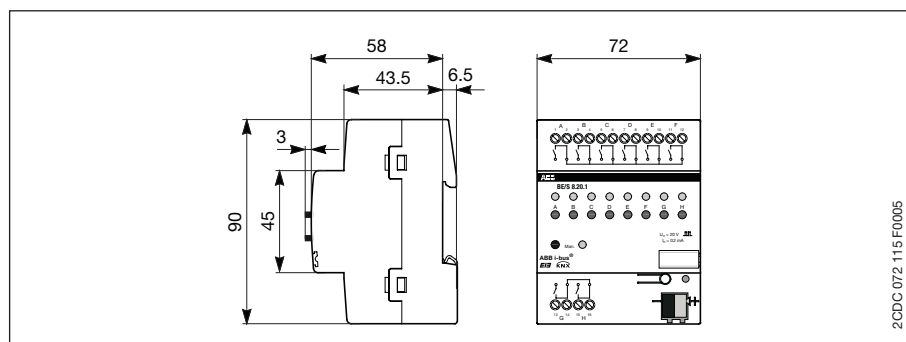


Fig. 18: Dimension drawing of BE/S 8.20.1

#### 2.6.4 Assembly and installation

The Binary Input is a modular installation device for fast installation in the distribution board on 35 mm mounting rails to DIN EN 60 715.

The electrical connection is implemented using screw terminals. The connection to the bus is implemented using the supplied bus connection terminal.

The device is ready for operation after connection to the bus voltage. Accessibility of the devices for the purpose operation, testing, visual inspection, maintenance and repair must be provided (conform to DIN VDE 0100-520).

##### Commissioning requirements

To put the Binary Input BE/S 8.20.1 into operation, you require a PC with the Engineering Tool Software ETS2 from V1.3a onwards in conjunction with an RS232 interface or a USB interface. The device is ready for operation after connection to the bus voltage.

The installation and commissioning may only be carried out by electrical specialists. The appropriate norms, guidelines, regulations and specifications should be observed when planning and setting up electrical installations.

- The device should be protected from damp, dirt and damage during transport, storage and operation.
- The device should not be operated outside the specified technical data!
- The device should only be operated in a closed housing (distribution board)!

##### Supplied state

The Binary Input is supplied with the physical address 15.15.255. The **Binary, 8f20M/1** user program is preinstalled. Hence, only group addresses and parameters must be loaded during commissioning. The entire application can be reloaded as required. A longer downtime may result if the application program is changed or after a discharge.

##### Assignment of the physical address

The assignment and programming of the physical address is carried out in the ETS.

##### Cleaning

If devices become dirty, they can be cleaned using a dry cloth. Should a dry cloth not remove the dirt, the devices can be cleaned using a slightly damp cloth and soap solution. Corrosive materials or solutions should never be used.

##### Maintenance

The device is maintenance-free. No repairs should be carried out by unauthorised personnel if damage occurs (e.g. during transport or storage). The warranty expires if the device is opened.