# Zone Terminal, 4-fold, MDRC
# MT/S 4.12.1, GH Q631 0027 R0111

The zone terminal is a DIN rail mounted device for installation in the distribution board. The connection to the EIB is carried out via the bus connecting terminal supplied.

The device is used for the monitored connection of passive detectors to the EIB and/or to connect other floating contacts in applications with increased safety requirements e.g. magnetic contacts, glass breakage sensors.

It has four zone inputs whose status is displayed via 4 LEDs. There are two 12 V outputs “Walk test” and “Set/Unset” available for the control of passive infrared detectors. The zone terminal is not an alarm system in the sense of VdS.

An external 12 V DC power supply is required.

**Technical Data**

| | | |
|---|---|---|
| **Power supply** | – EIB | 24 VDC, via the bus line |
| | – External voltage supply | 12V DC ±15%, SELV |
| | – Residual ripple | ≤ 1.0 Vss |
| **Inputs** | – 4 zones | Primary lines,<br>matching resistor 2.7 kΩ |
| **Outputs** | – 2 control outputs | “Set/Unset”, “Walk test” |
| **Operating and display elements** | – Red LED and push button | for assigning the<br>physical address |
| | – 4 LED | Status per zone |
| | – 2 LED | Status of outputs “Set/Unset”<br>and “Walk test” |
| **Connections** | – Inputs and outputs | Screw terminals<br>Wire range 0.2 … 2.5 mm² |
| | – EIB | Pins for bus connecting terminal |
| **Type of protection** | – IP 20 according to EN 60529 | |
| **Ambient temperature range** | – Operation | - 5 °C … 45 °C |
| | – Storage | -25 °C … 55 °C |
| | – Transport | -25 °C … 70 °C |
| **Design** | – modular installation device, pro*M* | |
| **Housing, colour** | – Plastic housing, grey | |
| **Mounting** | – on a 35 mm mounting rail,<br>DIN EN 50022 | |
| **Dimensions** | – 90 x 72 x 64 mm (H x W x D) | |
| **Mounting depth/width** | – 68 mm / 4 modules at 18 mm | |
| **Weight** | – 0.16 kg | |
| **Certification** | – EIB-certified | |
| **CE norm** | – in accordance with the EMC guideline and<br>the low voltage guideline | |



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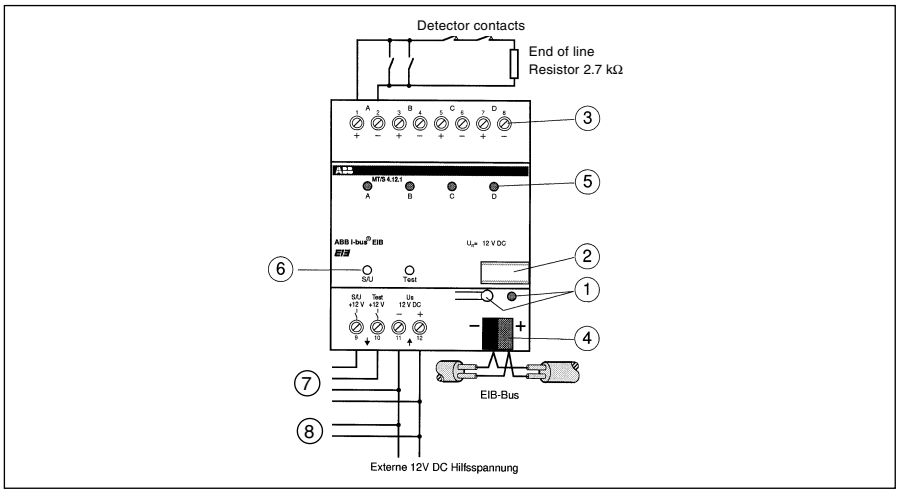
| Application programs | Number of communication objects | Max. number of group addresses | Max. number of associations |
|---|---|---|---|
| Monitor Report Display /1 | 8 | 8 | 8 |



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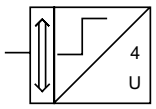
**Note**

When the device is deactivated, the current status of the zones is displayed via four LEDs. When the device is set, there is no display. The current status of the zones is displayed again once the device is deactivated.

The required 12 V DC SELV supply voltage is connected to terminals 11 and 12. Terminal 11 is also used as a common reference potential for outputs “S/U” and “Test”.

The four zones are designed with 2.7 kΩ matching resistors. To enable the zone terminal to function correctly, it is important to ensure that even unused inputs are terminated with a 2.7 kΩ resistor. This can be carried out directly at the input terminals.

**Monitor Report Display /1**




**Selection in ETS2**

– ABB
  └Input
    └Binary input, general

The zone terminal has three different operating modes: unset, set or unset with stored alarm. The device reacts differently to various events depending on the mode it is in.

The toggling of the operating mode takes place via communication object no. 4 “Set/unset request”. A set request can only be carried out if the zone terminal is in the unset mode without a stored alarm and if there are no faults in the zones or the supply voltage. When the operating mode changes, the zone terminal issues a status report via object no. 7 “Set confirmation”. If the set request cannot be executed successfully because e.g. there is a fault in the zones, it reports the status “unset”.

The status after bus voltage recovery is set via the parameters.

## Monitor

The zone terminal monitors the connected zones and the 12 V supply voltage. Via the parameters it is possible to select for the supply voltage whether the communication object is sent once or cyclically. In both cases a fault in the supply voltage until a reset is stored internally via object no. 5. If there is no cyclical sending, a telegram with the value “1” is sent once when a fault occurs. If cyclical sending is activated, the zone terminal sends telegrams cyclically with the value “0” until a fault occurs. Due to the internal memory function, once a fault occurs it only send telegrams with the value “1” until the fault is rectified and a telegram is received to reset the fault.

## Report

The zone terminal has four 1 bit communication objects for the input contacts. Depending on the status of the zone terminal, these objects send different telegrams.

– When the device is deactivated, the objects send corresponding telegrams after every change in the status of the inputs. The object value “0” means “OK”, the object value “1” means “Fault”, i.e. detector contact is operated or the line to the detector contact has been interrupted.

– When the device is set, the zone terminal operates with an internal stored logic function. If a fault occurs in one of the zones, the corresponding communication object sends a telegram once only.

– If a fault is stored in at least one of the zones when switching to the unset mode, the communication objects of the four zones do not send any more telegrams. Only once the stored faults have been reset via communication object no. 5 “Reset zones”, does the device switch to the normal unset mode. If no fault is stored, the device is deactivated normally without requiring the zones to be reset.

A fault is only detected after the period specified in the parameter “Debounce time”. As a result false alarms due to chatter of the detector contacts can be avoided.



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Display

When it is deactivated, the zone terminal displays the status of the zones via the LEDs on the front of the housing. The LED “S/U” lights up at the same time.

When the device is set, the LEDs are switched off.

The “Test” output is used for commissioning and for fixing or checking connected PIR detectors. This output can be controlled solely by the parameter “Device status on return of bus”.

**Communication objects**

| No. | Type | Object name | Function |
|---|---|---|---|
| 0 | 1 bit | Input zone A | Telegr. status zone A |
| 1 | 1 bit | Input zone B | Telegr. status zone B |
| 2 | 1 bit | Input zone C | Telegr. status zone C |
| 3 | 1 bit | Input zone D | Telegr. status zone D |
| 4 | 1 bit | Input telegr. | Set/unset request |
| 5 | 1 bit | Input telegr. | Reset zones A … D |
| 6 | 1 bit | Output telegr. | Supply voltage fault |
| 7 | 1 bit | Output telegr. | Set confirmation |

**Parameters**
The default setting for the values is **printed in bold type.**

| | |
|---|---|
| – Debounce time for zones A … D | 10 ms / 20 ms / … / **100 ms** / 130 ms |
| – Cyclical sending of the fault object | yes<br>**no** |
| only for cyclical sending: | |
| – Time base for cyclical sending | ca. 260 ms. / … / **ca. 1.0 s** /<br>… / ca. 1.2 h |
| – Factor for cyclical sending | **10** |
| – Device status on return of bus | Device set / walk test ON<br>Device set / walk test OFF<br>Device unset / walk test ON<br>**Device unset / walk test OFF** |



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