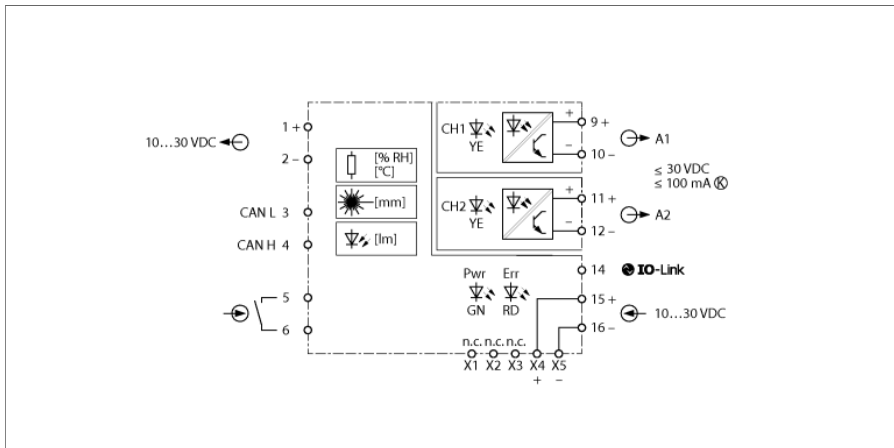


# Cabinet Guard

## Internal and External Sensors

### IM12-CCM03-MTIS-3T-IOLC-PR/24V



The cabinet guard IM12-CCM03-MTIS-3T-IOLC-PR/24V monitors preset environmental limits inside the control cabinet. The environmental conditions are detected by a humidity or temperature sensor, a brightness sensor and a triangulation sensor that detects an incorrectly closed cabinet door. When exceeding or falling below the set limits an error message appears on the LED display or is reported via the switching outputs and the IO-Link interface to the host control system. The device can be fed via a power bridge.

The device is supplied with 24 VDC

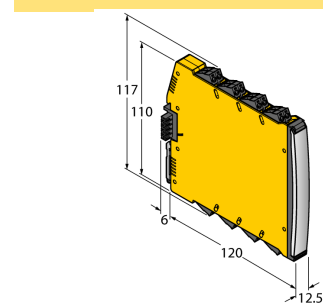
The teaching is done manually on the device; extended parameterization is carried out via the IO-Link interface.

The device is equipped with 8 screw terminals for connecting the power supply and switching outputs and can be mounted on a DIN rail acc. to EN 60715.

Furthermore, the device has 4 front-mounted LEDs to display the operating status (green), the error message (red) and the states of the switching outputs (2 × yellow).

The device is equipped with removable screw terminals.

- Two potential-free contacts
- Temperature detection
- Moisture detection
- Detection of distance to cabinet door
- IO-Link parameterizable
- Connection of two devices via CAN bus
- Power bridge
- Galvanic isolation of outputs (A1/A2)
- Removable screw terminals

**Dimensions**


|                               |                                                                                                                                                                                                          |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                          | IM12-CCM03-MTIS-3T-IOLC-PR/24V                                                                                                                                                                           |
| ID                            | 7570102                                                                                                                                                                                                  |
| Nominal voltage               | 24 VDC                                                                                                                                                                                                   |
| Operating voltage $U_s$       | 10...30 VDC                                                                                                                                                                                              |
| Power consumption             | $\leq 0.5 \text{ W}$                                                                                                                                                                                     |
| Installed sensors CCM         | Triangulation sensor 40...500 mm<br>Humidity sensor 10...90 % rel. hum.<br>Temperature sensor -25...+70 °C<br>Dry contact                                                                                |
| Reference temperature         | 23 °C                                                                                                                                                                                                    |
| Output circuits               |                                                                                                                                                                                                          |
| Semiconductor output circuits |                                                                                                                                                                                                          |
| Output circuits (digital)     | 2 x transistor (potential-free) NO/NC                                                                                                                                                                    |
| Switching voltage             | $\leq 30 \text{ VDC}$                                                                                                                                                                                    |
| Switching current per output  | $\leq 0.1 \text{ A}$                                                                                                                                                                                     |
| Voltage drop                  | $\leq 1 \text{ V}$                                                                                                                                                                                       |
| Moisture Sensor               |                                                                                                                                                                                                          |
| Accuracy max.                 | $\pm 4.5 \%$ relative humidity in the range 10...90 %                                                                                                                                                    |
| Repeat accuracy               | 0.2 % RF                                                                                                                                                                                                 |
| Temperature Sensor            |                                                                                                                                                                                                          |
| Max. accuracy                 | $\pm 2 \text{ °C}$                                                                                                                                                                                       |
| Repeat accuracy               | 0.16 °C                                                                                                                                                                                                  |
| Distance Sensor               |                                                                                                                                                                                                          |
| Beam angle                    | 6 °                                                                                                                                                                                                      |
| Measuring range               | 40...500 mm                                                                                                                                                                                              |
| Relative accuracy             | $\pm 50 \text{ mm}$ in the range of $\leq 500 \text{ mm}$                                                                                                                                                |
| Temperature coefficient       | +/- 30 mm in the range of $\leq 500 \text{ mm}$ at $-25^\circ\text{C} \leq T \leq 70^\circ\text{C}$<br>+/- 15 mm in the range of $\leq 500 \text{ mm}$ at $0^\circ\text{C} \leq T \leq 50^\circ\text{C}$ |
| Max. linearity error          | $\leq 2 \%$ of full scale                                                                                                                                                                                |
| Displays/Operating elements   |                                                                                                                                                                                                          |
| Operational readiness         | Green                                                                                                                                                                                                    |
| Switching state               | Yellow                                                                                                                                                                                                   |
| Error indication              | red                                                                                                                                                                                                      |

|                                  |                                   |                              |
|----------------------------------|-----------------------------------|------------------------------|
| Mechanical data                  |                                   |                              |
| Protection class                 | IP20                              |                              |
| Flammability class acc. to UL 94 | V-0                               |                              |
| Ambient temperature              | -25...+60 °C                      |                              |
| Storage temperature              | -25...+80 °C                      |                              |
| Dimensions                       | 120 x 12.5 x 117 mm               |                              |
| Weight                           | 168 g                             |                              |
| Mounting instructions            | DIN rail (NS35)                   |                              |
| Housing material                 | Plastic, Polycarbonate/ABS        |                              |
| Electrical connection            | Removable screw terminals, 2-pin  |                              |
| Terminal cross-section           | 0.2...2.5 mm² (AWG: 24...14)      |                              |
| Tightening torque                | 0.5 Nm                            |                              |
| Tightening torque                | 4.43 LBS-Inch                     |                              |
| Environmental conditions         | Operating height                  | Up to 2000 m above sea level |
|                                  | Pollution degree                  | II                           |
|                                  | Standards used                    |                              |
|                                  | Voltage resistance and insulation |                              |
|                                  |                                   | EN 50178                     |
|                                  |                                   | EN 61010-1                   |
|                                  | Shock                             |                              |
|                                  |                                   | EN 60068-2-6                 |
|                                  |                                   | EN 60068-2-27                |
|                                  | Temperature                       |                              |
|                                  |                                   | EN 60068-2-1 Ad              |
|                                  |                                   | EN 60068-2-2 Bd              |
|                                  |                                   | EN 60068-2-1                 |
|                                  | Air humidity                      |                              |
|                                  |                                   | EN 60068-2-38                |
|                                  | EMC                               |                              |
|                                  |                                   | EN 61000-4-2                 |
|                                  |                                   | EN 61000-4-3                 |
|                                  |                                   | EN 61000-4-4                 |
|                                  |                                   | EN 61000-4-5                 |
|                                  |                                   | EN 61000-4-6                 |
|                                  |                                   | EN 61000-4-8                 |
|                                  | Emission                          |                              |
|                                  |                                   | CISPR16                      |

Accessories

| Type code      | Ident-No. |                                         | Dimension drawing                                                                   |
|----------------|-----------|-----------------------------------------|-------------------------------------------------------------------------------------|
| USB-2-IOL-0002 | 6825482   | IO-Link Master with integrated USB port |  |