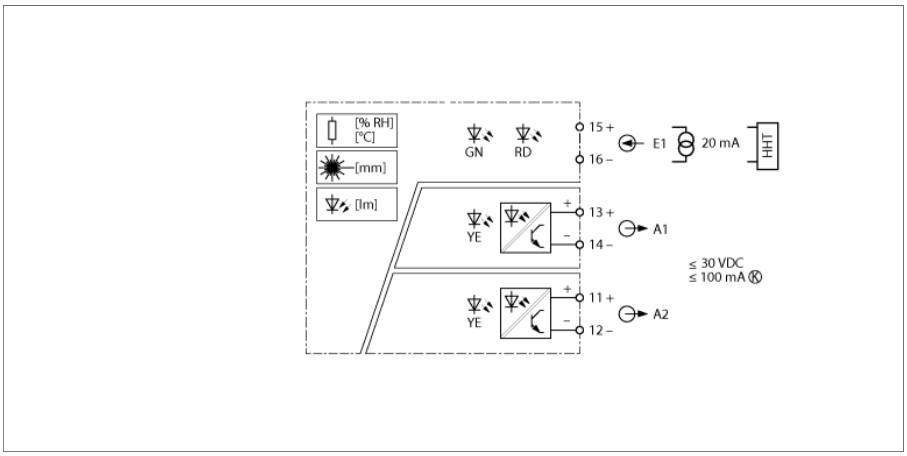
Cabinet Guard
Internal Sensors
IMX12-CCM02-MTI-1I2T-HC/L



The cabinet guard IMX12-CCM02-MTI-1I2T-HC/L 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 limit values an error message appears on the LED display or is reported via the switching outputs and the HART interface to the host control system.

The device is supplied loop powered from the 4…20 mA current interface. The device can be supplied via the Turck isolating transducer IMX12-AI01-….

Teach-in can be performed manually on the device. The device can be more extensively parameterized using the DTM (e.g. PACTware) via the HART interface.

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

Furthermore, the device has four front-mounted LEDs to display the operating status (green), the fault signal (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
- Galvanic isolation of outputs (A1/A2)
- Removable screw terminals
- ATEX, IECEx

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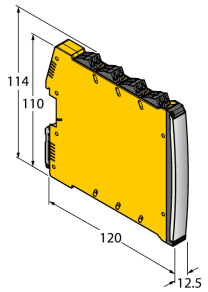
Type	IMX12-CCM02-MTI-1I2T-HC/L
ID	7570092
Nominal voltage	24 VDC loop-powered
Operating voltage U_B	10…28 VDC
Power consumption	≤ 0.32 W
Installed sensors CCM	Triangulation sensor 4…20 cm Humidity sensor 0…80 % rel. hum. Brightness sensor Temperature sensor -25…+60 °C
Reference temperature	23 °C
Output circuits	
Output current	20 mA firmly set
Semiconductor output circuits	
Output circuits (digital)	2 x transistor (potential-free) NO/NC
Switching voltage	≤ 30 VDC
Switching current per output	≤ 0.085 A at < 45 °C (T4) 0.100 A
Voltage drop	≤ 3.5 V
Moisture Sensor	
Accuracy max.	± 4.5 % relative humidity in the range 10…90 %
Repeat accuracy	0.2 % RF
Temperature Sensor	
Max. accuracy	±1.5 °C
Repeat accuracy	0.16 °C
Distance Sensor	Information has been empirically determined, white target with matte finish
Beam angle	6 °
Measuring range	40…200 mm
Relative accuracy	±8 mm In the range of ≤ 200 mm
Max. temperature coefficient	+/-6 mm in the range of ≤ 200 mm
Max. linearity error	≤ 2 % of full scale
Important note	For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply.
Ex approval acc. to conformity certificate	IBEXU 16 ATEX 1005
Application area	II 2G
Ignition protection category	Ex ib op is IIC T4 Gb
Displays/Operating elements	
Operational readiness	Green
Switching state	Yellow
Error indication	red

Dimensions



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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	135 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	
		NE21
		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

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Accessories

Type code	Ident no.		Dimension drawing
ISHRT USB	7570098	HRT-USB modem for parameterization of IMX12 CCM02 modules.	
IMX12-SC-2X-4BK	7580940	Screw terminals for IM(X)12 modules; included in delivery: 4 pcs. of 2-pin black terminals	
IMX12-SC-2X-4BU	7580941	Screw terminals for IM(X) 12 modules; included in delivery: 4 pcs. of 2-pin blue terminals	
IMX12-CC-2X-4BK	7580942	Spring terminals for IM(X)12 modules; included in delivery: 4 pcs. black terminals, 2-pin	
IMX12-CC-2X-4BU	7580943	Spring terminals for IM(X)12 modules; included in delivery: 4 pcs. blue terminals, 2-pin	

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