

Limit value switches - MINI MCR-2-UI-REL-PT - 2902035

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Universally configurable limit value switch with PDT relay output and plug-in connection technology for switching analog limit values. Configurable via DIP switch or software. Push-in connection technology, standard configuration.

Product Description

Universally configurable limit value switch with PDT relay output and plug-in connection technology for switching analog limit values. Current signals between 0 mA ... 24 mA and voltage signals between 0 V ... 12 V can be processed on the input side. A relay with PDT contact is available on the output side. It is then possible to switch loads up to 250 V AC/DC and max. 6 A. You can configure the device using one of the free software solutions. Default settings can also be made directly on the device by simply using the DIP switches (see configuration table). The measuring transducer supports fault monitoring and NFC communication.



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 649711
GTIN	4046356649711
Weight per Piece (excluding packing)	68.700 g
Custom tariff number	85437090
Country of origin	Germany

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	6.2 mm
Height	110.5 mm
Depth	120.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
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Technical data

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
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Input data

Configurable/programmable	Yes
Voltage input signal	0 V ... 10 V (via DIP switch)
	0 V ... 12 V (via DIP switch)
Current input signal	0 mA ... 20 mA (via DIP switch)
	0 mA ... 24 mA (can be set via software)
max. input voltage	12 V
Max. input current	24 mA
Input resistance of voltage input	> 120 kΩ
Input resistance current input	approx. 50 Ω (+ 0.7 V for test diode)

Switching output

Output name	Relay output
Contact type	1 PDT
Contact material	AgSnO ₂ , hard gold-plated
Maximum switching voltage	250 V AC
	240 V AC (UL)
Limiting continuous current	6 A
Min. switching current	100 mA (12 V DC)
Mechanical service life	2 x 10 ⁷ cycles
Setting range of the response delay	0 s ... 10 s (can be set freely via software)
Internal hysteresis	can be set freely via software
Max. switching current	6 A (for 250 V AC)

Power supply

Nominal supply voltage	24 V DC
Supply voltage range	9.6 V DC ... 30 V DC (The DIN rail bus connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715))
Typical current consumption	40 mA (12 V DC)
	20 mA (24 V DC)
Power consumption	≤ 0.5 W

Connection data

Connection method	Push-in connection
Single conductor/terminal point, solid, with ferrule, min.	0.14 mm ²
Single conductor/terminal point, solid, with ferrule, max.	2.5 mm ²
Single conductor/terminal point, solid, without ferrule, min.	0.14 mm ²
Single conductor/terminal point, solid, without ferrule, max.	2.5 mm ²
Conductor cross section flexible min.	0.14 mm ²
Conductor cross section flexible max.	2.5 mm ²

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Technical data

Connection data

Min. AWG conductor cross section, flexible	24
Max. AWG conductor cross section, flexible	12
Stripping length	10 mm

General

No. of channels	1
Maximum transmission error	0.1 % (of final value)
Maximum temperature coefficient	0.01 %/K
Switching point accuracy	< 0.1 %
Status display	Yellow LED (switching output)
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Overvoltage category	II
Degree of pollution	2
Rated insulation voltage	300 V (effective)
Test voltage, input/output/supply	3 kV (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Color	gray
Housing material	PBT
Mounting position	any
Assembly instructions	The T connector can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715.
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC IIC T4 Gc X
UL, USA/Canada	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T4A
	Class I, Zone 2, Group IIC T4A
GL	GL applied for
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC IIC T4 Gc X
UL, USA/Canada	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T4A

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Technical data

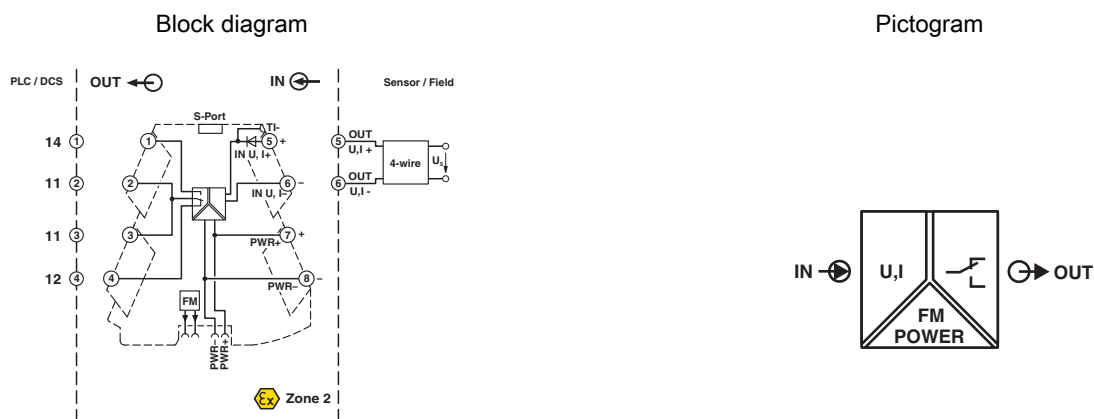
Standards and Regulations

	Class I, Zone 2, Group IIC T4A
GL	GL applied for
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2

Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings



Classifications

eCl@ss

eCl@ss 5.1	27210122
eCl@ss 6.0	27210122
eCl@ss 7.0	27210122
eCl@ss 8.0	27210122
eCl@ss 9.0	27210122

ETIM

ETIM 4.0	EC002654
ETIM 5.0	EC002654
ETIM 6.0	EC002654

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Classifications

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed

Ex Approvals

UL Listed / cUL Listed / ATEX / cULus Listed

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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EAC			RU C- DE.A*30.B.01082
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cULus Listed			
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Accessories

Accessories

Device marking

Limit value switches - MINI MCR-2-UI-REL-PT - 2902035

Accessories

Marker for end clamp - UCT-EM (30X5) - 0801505



Marker for end clamp, Sheet, white, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm

Marker for end clamp - UCT-EM (30X5) YE - 0830340



Marker for end clamp, Sheet, yellow, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm

Plastic label - UC-EMLP (15X5) - 0819301



Plastic label, Sheet, white, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - UC-EMLP (15X5) YE - 0822615



Plastic label, Sheet, yellow, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - UC-EMLP (15X5) SR - 0828095



Plastic label, Sheet, silver, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: adhesive, lettering field size: 15 x 5 mm

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Accessories

Plastic label - US-EMLP (15X5) - 0828790



Plastic label, Card, white, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - US-EMLP (15X5) YE - 0828873



Plastic label, Card, yellow, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - US-EMLP (15X5) SR - 0828874



Plastic label, Card, silver, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm

DIN rail connector

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

Evaluation unit

Monitoring module - MINI MCR-2-FM-RC - 2904504



Fault monitoring module with plug-in connection technology for evaluating and reporting group errors from the FM system and for monitoring the supply voltages. Error message via N/C contact. Screw connection technology, standard configuration

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Accessories

Monitoring module - MINI MCR-2-FM-RC-PT - 2904508



Fault monitoring module with plug-in connection technology for evaluating and reporting group errors from the FM system and for monitoring the supply voltages. Error message via N/C contact. Push-in connection technology, standard configuration

Labeled device marker

Marker for end clamp - UCT-EM (30X5) CUS - 0801589



Marker for end clamp, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm

Marker for end clamp - UCT-EM (30X5) YE CUS - 0830348



Marker for end clamp, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm

Plastic label - UC-EMLP (15X5) CUS - 0824550



Plastic label, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - UC-EMLP (15X5) YE CUS - 0824551



Plastic label, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

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Accessories

Plastic label - UC-EMLP (15X5) SR CUS - 0828099



Plastic label, can be ordered: by sheet, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - US-EMLP (15X5) CUS - 0830076



Plastic label, can be ordered: By card, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - US-EMLP (15X5) YE CUS - 0830077



Plastic label, can be ordered: By card, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - US-EMLP (15X5) SR CUS - 0830078



Plastic label, can be ordered: By card, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

Power module

Power terminal block - MINI MCR-2-PTB - 2902066



Power terminal with plug-in connection technology for delivering the supply voltage to the DIN rail connector. Monitoring of the supply voltages in combination with the fault monitoring module. Screw connection technology

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Accessories

Power terminal block - MINI MCR-2-PTB-PT - 2902067



Power terminal with plug-in connection technology for delivering the supply voltage to the DIN rail connector. Monitoring of the supply voltages in combination with the fault monitoring module. Push-in connection technology

Power supply

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



Primary-switched MINI POWER supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653



Primary-switched power supply MINI POWER for DIN rail mounting, input: 1-phase, output: 24 V DC/1,5 A, for the potentially explosive area

Programming adapter

Adapter - IFS-BT-PROG-ADAPTER - 2905872



Bluetooth adapter with micro USB and S-PORT interface for wireless communication with the MINI Analog, MINI Analog Pro, MACX Analog, INTERFACE system gateways, and PLC logic device series.

Programming adapter - IFS-USB-PROG-ADAPTER - 2811271



Programming adapter with USB interface, for programming with software. The USB driver is included in the software solutions for the products to be programmed, such as measuring transducers or motor managers.

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Accessories

Programming adapter - TWN4 MIFARE NFC USB ADAPTER - 2909681



Near Field Communication (NFC) programming adapter with USB interface for the wireless configuration of NFC-capable products from PHOENIX CONTACT with software. No separate USB driver is required.

Terminal marking

Marker strip - SK 5,0 WH:REEL - 0805221



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK S1.1, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5 mm

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GY - 2695439



DIN rail connector (TBUS), 5-pos., for bridging the supply voltage, can be snapped onto NS 35/... DIN rails according to EN 60715