

# Isolation amplifier - MINI MCR-2-NAM-2RO-PT - 2902005

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Configurable NAMUR signal conditioner with plug-in connection technology for proximity sensors, floating switch contacts, and switch contacts with resistance circuit. 2 transistor outputs. Configurable via DIP switch. Push-in connection technology.

## Article description

Configurable NAMUR 4-way signal conditioner with plug-in connection technology for operating proximity sensors according to EN 60947-5-6, floating switch contacts, and switch contacts with resistance circuit. Two transistor outputs are available on the output side. The second output can be used either for duplicating signals or for signaling faults on the sensor line. You can configure the signal conditioner via DIP switches. The device supports fault monitoring and NFC communication.

## Your advantages

- Floating contacts and contacts with resistance circuit can be connected
- Power supply possible via the foot element (TBUS)
- Highly compact isolation amplifier for electrical isolation, amplification, and duplication of proximity sensor signals
- For proximity sensors according to IEC 60947-5-6 and EN 50227
- Second output can be used as a duplicator or error signaling output
- Error indication via diagnostic LED and analog signal
- N/O contacts at output
- Input and output signals can be configured via DIP switches
- 3-way isolation



## Key commercial data

package_quantity	1
GTIN	4046356649513

## 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

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## Technical data

### Ambient conditions

<b>Ambient temperature (operation)</b>	-40 °C ... 70 °C
<b>Ambient temperature (storage/transport)</b>	-40 °C ... 85 °C
<b>Degree of protection</b>	IP20

### Power supply

<b>Nominal supply voltage</b>	24 V DC
<b>Supply voltage range</b>	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))
<b>Typical current consumption</b>	18 mA (24 V DC)
<b>Typical current consumption</b>	35 mA (12 V DC)
<b>Power consumption</b>	450 mW (9.6 V DC)

### Connection data

<b>Connection method</b>	Push-in connection
<b>Single conductor/terminal point, solid, with ferrule, min.</b>	0.14 mm <sup>2</sup>
<b>Single conductor/terminal point, solid, with ferrule, max.</b>	2.50 mm <sup>2</sup>
<b>Single conductor/terminal point, solid, without ferrule, min.</b>	0.14 mm <sup>2</sup>
<b>Single conductor/terminal point, solid, without ferrule, max.</b>	2.50 mm <sup>2</sup>
<b>Conductor cross section flexible min.</b>	0.14 mm <sup>2</sup>
<b>Conductor cross section flexible max.</b>	2.5 mm <sup>2</sup>
<b>Min. AWG conductor cross section, flexible</b>	24
<b>Max. AWG conductor cross section, flexible</b>	12
<b>Stripping length</b>	10 mm

### General

<b>No. of channels</b>	1
<b>Status display</b>	Yellow LED (switching output)
<b>Status display</b>	Yellow LED (switching output)
<b>Electrical isolation</b>	Reinforced insulation in accordance with IEC 61010-1
<b>Overvoltage category</b>	II
<b>Degree of pollution</b>	2
<b>Rated insulation voltage</b>	300 V (effective)
<b>Test voltage, input/output/supply</b>	3 kV (50 Hz, 1 min.)
<b>Electromagnetic compatibility</b>	Conformance with EMC directive
<b>Noise emission</b>	EN 61000-6-4
<b>Noise immunity</b>	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
<b>Color</b>	gray
<b>Housing material</b>	PBT
<b>Mounting position</b>	any
<b>Assembly instructions</b>	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.
<b>Conformance</b>	CE-compliant

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## Technical data

### General

<b>ATEX</b>	⊕ II 3 G Ex nA IIC T4 Gc X
<b>UL, USA/Canada</b>	UL 508 Listed
<b>UL, USA/Canada</b>	Class I, Div. 2, Groups A, B, C, D T6
<b>UL, USA/Canada</b>	Class I, Zone 2, Group IIC T6
<b>GL</b>	GL applied for
<b>Fire protection for rail vehicles (DIN EN 45545-2) R22</b>	HL 1 - HL 2
<b>Fire protection for rail vehicles (DIN EN 45545-2) R23</b>	HL 1 - HL 2
<b>Fire protection for rail vehicles (DIN EN 45545-2) R24</b>	HL 1 - HL 2

### EMC data

<b>Designation</b>	Electromagnetic RF field
<b>Standards/regulations</b>	EN 61000-4-3
<b>Designation</b>	Fast transients (burst)
<b>Standards/regulations</b>	EN 61000-4-4
<b>Designation</b>	Conducted interferences
<b>Standards/regulations</b>	EN 61000-4-6

### Standards and Regulations

<b>Electromagnetic compatibility</b>	Conformance with EMC directive
<b>Noise emission</b>	EN 61000-6-4
<b>Standards/regulations</b>	EN 61000-4-2
<b>Designation</b>	Electromagnetic RF field
<b>Standards/regulations</b>	EN 61000-4-3
<b>Standards/regulations</b>	EN 61000-4-4
<b>Standards/regulations</b>	EN 61000-4-5
<b>Designation</b>	Conducted interferences
<b>Standards/regulations</b>	EN 61000-4-6
<b>Electrical isolation</b>	Reinforced insulation in accordance with IEC 61010-1
<b>Conformance</b>	CE-compliant
<b>ATEX</b>	⊕ II 3 G Ex nA IIC T4 Gc X
<b>UL, USA/Canada</b>	UL 508 Listed
<b>UL, USA/Canada</b>	Class I, Div. 2, Groups A, B, C, D T6
<b>UL, USA/Canada</b>	Class I, Zone 2, Group IIC T6
<b>GL</b>	GL applied for

### Environmental Product Compliance

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

## Classifications

### eCl@ss

<b>eCl@ss 4.0</b>	27210121
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## Classifications

### eCl@ss

eCl@ss 4.1	27210121
eCl@ss 5.0	27210121
eCl@ss 5.1	27210121
eCl@ss 6.0	27210121
eCl@ss 7.0	27210121
eCl@ss 8.0	27210121
eCl@ss 9.0	27210121

### ETIM

ETIM 2.0	EC001485
ETIM 3.0	EC001485
ETIM 4.0	EC001485
ETIM 5.0	EC001485
ETIM 6.0	EC001485

### UNSPSC

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

## Approvals

UL Listed / cUL Listed / cULus Listed / UL Listed / cUL Listed / cULus Listed /

### Approval details

UL Listed
cUL Listed
cULus Listed

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## Accessories

### DIN rail connector

ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



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### Power module

MINI MCR-2-PTB - 2902066



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MINI MCR-2-PTB-PT - 2902067



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### Evaluation unit

MINI MCR-2-FM-RC - 2904504



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



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## Accessories

### Power supply

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



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



### System adapter

MINI MCR-2-V8-FLK 16 - 2901993



### Communication module

MINI MCR-2-V8-MOD-RTU - 2905634



MINI MCR-2-V8-MOD-TCP - 2905635



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## Accessories

MINI MCR-2-V8-PB-DP - 2905636



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### Device marking

UCT-EM (30X5) - 0801505



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UCT-EM (30X5) YE - 0830340



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UC-EMLP (15X5) - 0819301



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UC-EMLP (15X5) YE - 0822615



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### Accessories

UC-EMLP (15X5) SR - 0828095



US-EMLP (15X5) - 0828790



US-EMLP (15X5) YE - 0828873



US-EMLP (15X5) SR - 0828874



### Labeled device marker

UCT-EM (30X5) CUS - 0801589





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### Accessories

UCT-EM (30X5) YE CUS - 0830348



UC-EMLP (15X5) CUS - 0824550



UC-EMLP (15X5) YE CUS - 0824551



UC-EMLP (15X5) SR CUS - 0828099



US-EMLP (15X5) CUS - 0830076



US-EMLP (15X5) YE CUS - 0830077



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### Accessories

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US-EMLP (15X5) SR CUS - 0830078



### Terminal marking

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SK 5,0 WH:REEL - 0805221



### Accessories

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ME 6,2 TBUS-2 1,5/5-ST-3,81 GY - 2695439



UC-EMLP (15X5)L - 0820138



UC-EMLP (15X5)L CUS - 0824552

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## Accessories

UC-EMLP (15X5)L YE - 0825325

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UC-EMLP (15X5)L YE CUS - 0826680

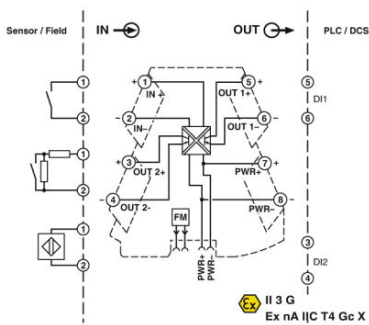
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UC-EMLP (15X5)L SR - 0828103

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## Drawings

### Block diagram



### Pictogram

