

# MINI MCR-SL-NAM-2RNO-SP - Switching amplifier



2810269

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NAMUR switching amplifier for proximity sensors, can be configured, floating switching contacts and switching contacts with a resistance circuit. Output-side 2 N/O contact, with spring-cage connection, can be configured. Replacement part: 2902005 MINI MCR-2-NAM-2RO-PT.

## 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
- Error indication via diagnostic LED and analog signal
- Second output can be used as a duplicator or error signaling output
- N/O contacts at output
- Input and output signals can be configured via DIP switches
- 3-way isolation
- Operating current/closed circuit current switch-over (inverted switching behavior)

## Commercial data

Item number	2810269
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C403
Product key	DK1133
GTIN	4017918996086
Weight per piece (including packing)	93.8 g
Weight per piece (excluding packing)	63.9 g
Customs tariff number	85437090
Country of origin	DE

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## Technical data

### Product properties

Product type	Isolating switch amplifier
Product family	MINI Analog
No. of channels	1

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Electrical properties

Rated insulation voltage	150 V AC (Input/relay outputs (reinforced insulation))
	150 V AC (Supply/relay outputs (reinforced insulation))
	150 V AC (Relay output 1/relay output 2 (reinforced insulation))
	30 V AC (Input/supply)
	50 V DC (Input/supply)
Electrical isolation	Reinforced insulation in accordance with EN 61010-1
Electrical isolation between input and output	yes
Test voltage, input/output/supply	1.5 kV AC (50 Hz, 60 s)

### Supply

Designation	Supply
Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC
Max. current consumption	< 25 mA
Power consumption	< 600 mW

### Input data

Signal: NAMUR

Number of inputs	1
Available input sources	NAMUR proximity sensors (IEC/EN 60947-5-6)
	floating switch contacts
	Switch contacts with resistance circuit
Switching threshold "0" signal current	< 1.2 mA (blocking)
Switching threshold "1" signal, current	> 2.1 mA (conductive)
Line fault detection	> 6 mA (Short circuit)
	< 0.35 mA (Line break)
	Activated /deactivated via DIP switch
Open-circuit voltage	8.2 V DC $\pm$ 10 %

### Output data

Switching:

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Maximum switching voltage	250 V AC
	125 V DC
	150 V AC (UL)
	125 V DC (UL)

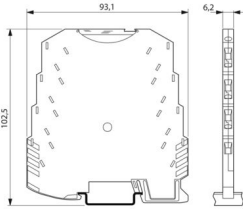
## Signal

Number of outputs	2
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## Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12

## Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

## Material specifications

Color	green (RAL 6021)
Housing material	PBT
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

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

## Approvals

CE

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Certificate	CE-compliant
ATEX	
Identification	Ⓜ II 3 G Ex nA nC IIC T4 Gc X
UL, USA/Canada	
Identification	UL 508 Recognized Class I, Div. 2, Groups A, B, C, D T4
Shipbuilding approval	
Identification	BBBAA
Certificate	DNV GL TAA00000N1

## EMC data

Electromagnetic compatibility	Conformance with EMC directive
Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.

## Noise emission

Standards/regulations	EN 61000-6-4
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## Electromagnetic HF field

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Evaluation criterion	A

## Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Evaluation criterion	A

## Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Evaluation criterion	A

## Standards and regulations

Electrical isolation	Reinforced insulation in accordance with EN 61010-1
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## Mounting

Mounting type	DIN rail mounting
Mounting position	any

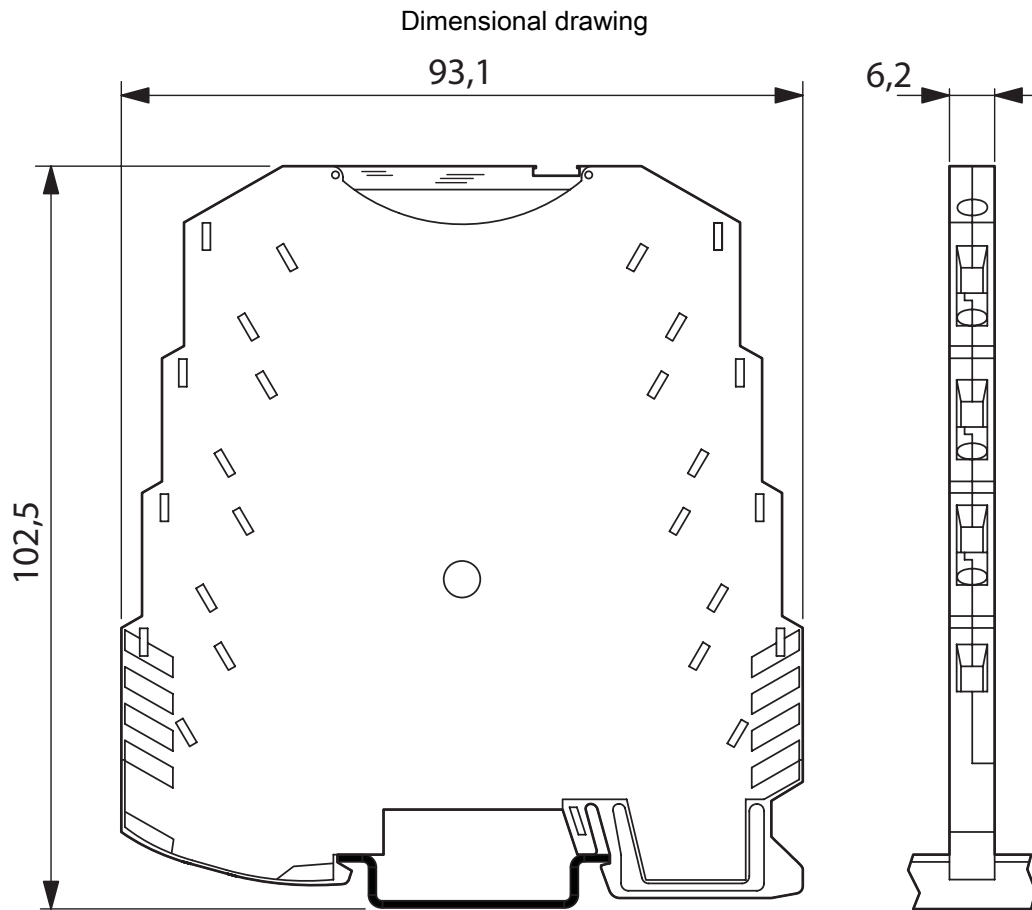
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## Drawings



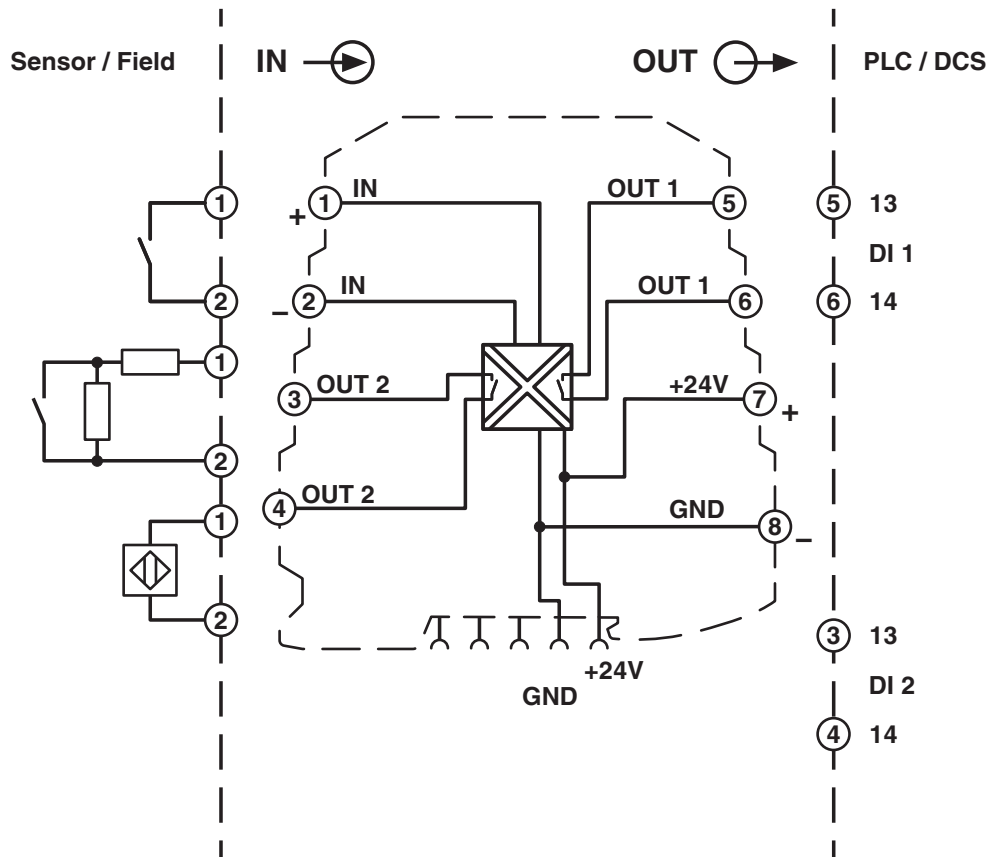
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Block diagram



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## Environmental product compliance

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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