MINI MCR-SL-NAM-2RNO - NAMUR isolation switch amplifier

2864105

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Configurable NAMUR switching amplifier for proximity sensors, floating switching contacts and switching contacts with resistance circuit. On the output side 2 N/O contact, with screw connection

Product description

The 6.2 mm wide MINI MCR-SL-NAM-2RNO.... is a configurable 4-way isolation amplifier. It is suited for the operation of proximity sensors in acc. with EN 60947-5-6 and switches and also has two relay outputs. The second output can either be used to duplicate signals or for signaling faults for the sensor line.
The DIP switches are accessible on the housing side and allow the following parameters to be configured:
- Switchover from open circuit to closed circuit current behavior
- Activation of line fault detection of the sensor line as well as
- Selection of signal duplication/fault signaling
Power (19.2 V DC to 30 V DC) can be supplied through connection terminal blocks on the modules or in conjunction with the DIN rail connector.

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 fault monitoring output
- Error indication via diagnostic LED and analog signal
- N/O contacts at output
- Input and output signals can be configured via DIP switches
- Operating current/closed circuit current switch-over (inverted switching behavior)

Commercial data

Item number	2864105
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C403
Product key	DK1133
GTIN	4046356046459
Weight per piece (including packing)	65.2 g
Weight per piece (excluding packing)	71.2 g
Customs tariff number	85365019
Country of origin	DE

Technical data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area

Product properties

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

System properties

Functionality

Configuration	DIP switches

Electrical properties

Electrical isolation	4-way isolation
Electrical isolation between input and output	yes

Electrical isolation

Overvoltage category	II
Pollution degree	2

Electrical isolation Input/power supply IEC/EN 61010

Standards/regulations	IEC/EN 61010
Rated insulation voltage	30 V AC
	50 V DC
Insulation	Basic insulation

Electrical isolation Input/output

Rated insulation voltage	150 V AC
Insulation	Reinforced insulation

Electrical isolation Supply/output

Rated insulation voltage	150 V AC
Insulation	Reinforced insulation

Electrical isolation Output 1/output 2

Rated insulation voltage	150 V AC
Insulation	Reinforced insulation

Electrical isolation Input/output/power supply

Test voltage	1.5 kV AC (50 Hz, 60 s)

Supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (The DIN rail connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, item no. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail in accordance with EN 60715)
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 ±10 %

Output data

Switching: Relay

Output description	Output 1: Signal output; Output 2: Fault monitoring output or signal duplicator, can be set via DIP switches
Contact switching type	2 N/O contacts
Contact material	Hard gold plated AgNi
Maximum switching voltage	250 V AC
	125 V DC
	150 V AC (UL)
	125 V DC (UL)
Maximum inrush current	2 A
Min. switching current	1 mA (5 V DC)
Typical response time	15 ms
Typical turn-off time	20 ms
Switching frequency	0.5 Hz (240 V AC / 30 V DC / 2 A)
	10 Hz (without load)

Signal

Number of outputs	2

Connection data

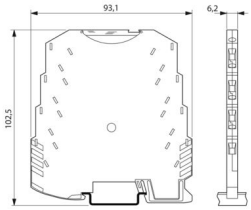
Connection method	Screw connection

Stripping length	12 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm² ... 2.5 mm²
Conductor cross-section flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section AWG	26 ... 12

Signaling

Status display	Red LED (error messages)
	Yellow LED (relay status messages)

Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	101.2 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

Certificate	CE-compliant

UL, USA/Canada

Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T4

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

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

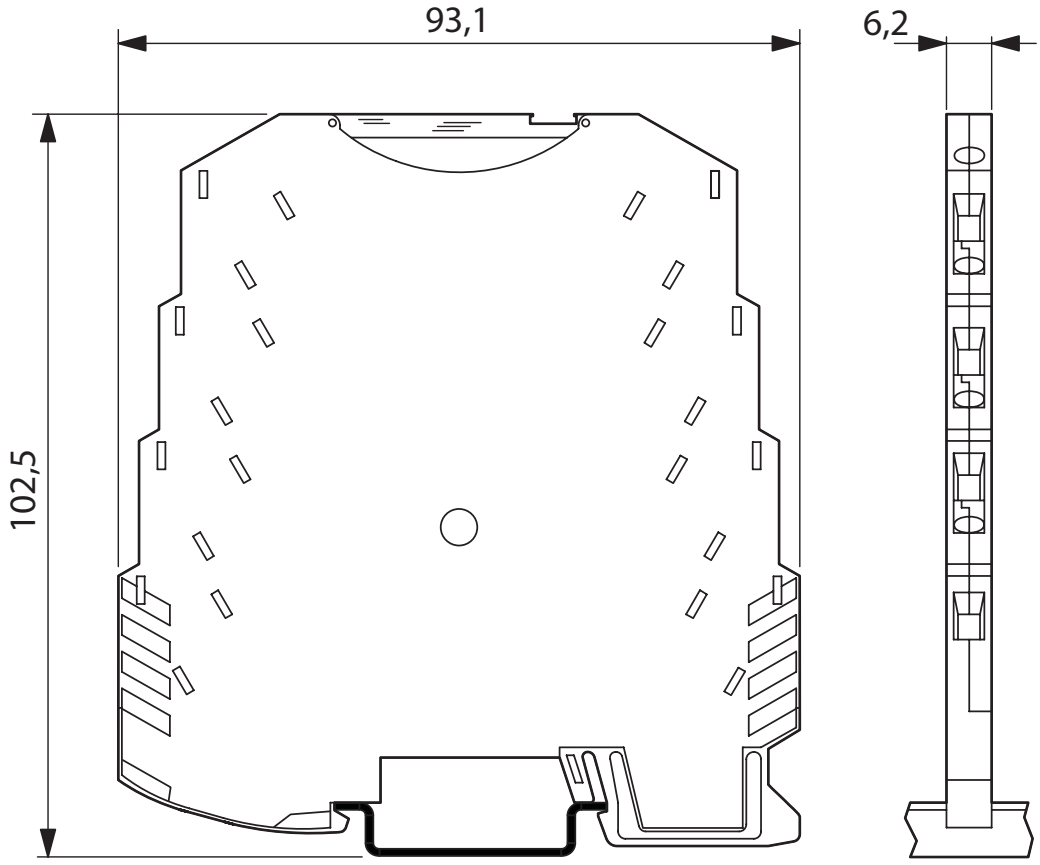
Electrical isolation	4-way isolation

Mounting

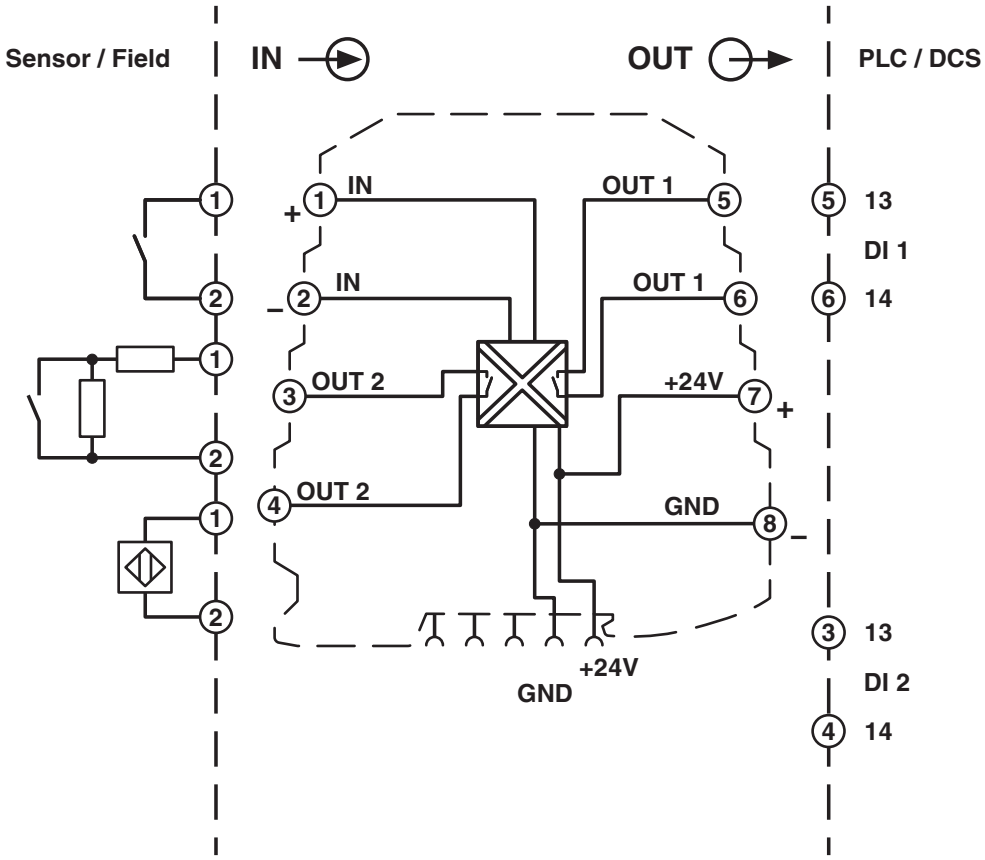
Mounting type	DIN rail mounting
Mounting position	any

Drawings

Dimensional drawing



Block diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2864105

cUL Recognized
Approval ID: E238705

UL Recognized
Approval ID: E238705

cUL Listed
Approval ID: E199827

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Classifications

ECLASS

ECLASS-13.0	27210121
ECLASS-15.0	27210121

ETIM

ETIM 10.0	EC001485

UNSPSC

UNSPSC 21.0	39121000

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

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.)	Lead(CAS: 7439-92-1)
SCIP	6c6ab73b-1a05-446f-bf21-c6c060b1b5c1

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