Isolation amplifier - MACX MCR-SL-2NAM-T-SP - 2924281

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The illustration shows the versions with screw connection

NAMUR isolation amplifier, 2-channel for operating proximity sensors and switches. The signals are transmitted to the control level via transistor outputs (passive). Line fault detection (LFD), 3-way electrical isolation, SIL 2.

Product Features

- Power supply and error indication possible via DIN rail connector
- Up to SIL 2 according to EN 61508
- Installation in zone 2, protection type "n" (EN 60079-15) permitted
- Line fault detection (LFD), can be activated/deactivated, error indicated by red flashing LED with disabling of transistor output
- Input for NAMUR proximity sensors (EN 60947-5-6), floating contacts or contacts with resistance circuit
- LED indicators for supply voltage, switching state, and malfunction according to NAMUR NE 44
- 2-channel
- Transistor signal output (passive); up to 5 kHz
- 3-way electrical isolation
- Direction of operation can be selected (operating or closed circuit current behavior)

Key Commercial Data

Packing unit	1 pc
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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Technical data

Dimensions

Width	12.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C (Any mounting position)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Degree of protection	IP20

Input data

Non-load voltage	~ 8 V DC
Switching points (attenuated)	< 1.2 mA (blocking)
Switching points (unattenuated)	> 2.1 mA (conductive)

Output data

Switching output	1 transistor output, passive (per channel)
Maximum switching voltage	30 V DC
Min. contact current	5 mA (short-circuit resistant)

Power supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (24 V DC -20%...+25%)
Max. current consumption	< 34 mA (24 V DC)
Power consumption	1000 mW
	1000 mW

Connection data

Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	1.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm
Connection method	Push-in connection

General

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Technical data

General

No. of channels	2
Status display	Green LED (supply voltage)
	LED yellow (switching state)
	Red LED (line errors)
Flammability rating according to UL 94	V0
Degree of pollution	2
Overvoltage category	II
Emitted interference	EN 61000-6-4
Housing material	PA 66-FR
Color	green
Designation	Input/output
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Designation	Input/output/supply, DIN rail connector
Electrical isolation	300 V_{rms} (Rated insulation voltage (overvoltage category II; degree of pollution 2, safe isolation as per EN 61010-1))
	2.5 kV (50 Hz, 1 min., test voltage)
Designation	Input/supply, DIN rail connector
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Designation	Output 1/output 2
Electrical isolation	50 V_{rms} (Rated insulation voltage (overvoltage category II; degree of pollution 2, basic insulation as per EN 61010-1))
	1 kV (50 Hz, 1 min., test voltage)
Conformance	CE-compliant, additionally EN 61326
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA / Canada	UL 508 Listed
	UL 61010 Listed
	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC T4
GL	C, EMC1

EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Evaluation criterion	A
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Evaluation criterion	A
Designation	Conducted interferences

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Technical data

EMC data

Standards/regulations	EN 61000-4-6
Evaluation criterion	A

Standards and Regulations

Noise emission	EN 61000-6-4
Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Evaluation criterion	A
Standards/regulations	EN 61000-4-4
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Evaluation criterion	A
Flammability rating according to UL 94	V0
Conformance	CE-compliant, additionally EN 61326
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA / Canada	UL 508 Listed
	UL 61010 Listed
	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC T4
GL	C, EMC1

Classifications

eCl@ss

eCl@ss 4.0	27210121
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

ETIM

ETIM 2.0	EC001430
ETIM 3.0	EC001599
ETIM 4.0	EC002653
ETIM 5.0	EC001485

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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

Functional Safety / UL Listed / cUL Listed / cULus Listed

Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

Functional Safety

UL Listed

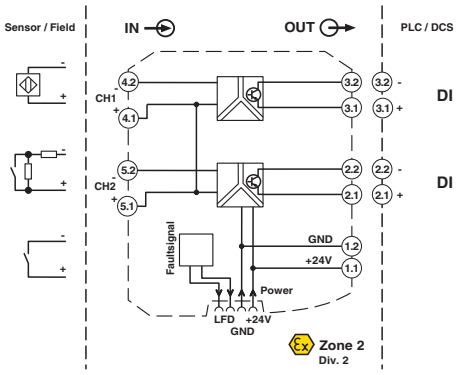
cUL Listed

cULus Listed

Drawings

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Block diagram



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