Loop-powered isolators - MACX MCR-SL-I-I-ILP - 2905278

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Single-channel input loop-powered 2-way isolator with plug-in connection technology for the electrical isolation of analog signals. Input signal = output signal: 0(4) mA ... 20 mA. Screw connection technology.

Product Description

Single-channel input-loop-powered 2-way isolator with plug-in connection technology for the electrical isolation and filtering of analog signals. The input-loop-powered isolator allows operation with active sensor technology with a supply voltage of 6 V DC to 30 V DC. The device is powered via the current loop of the sensor. Input signal = output signal: 0(4) mA to 20 mA. With screw connection.

Key Commercial Data

Packing unit	1 STK
Weight per Piece (excluding packing)	120.000 g
Custom tariff number	85437090
Country of origin	Germany

Technical data

Dimensions

Width	12.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	< 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Noise immunity	EN 61326-1
Degree of protection	IP20

Input data

Signal input	Current input
Configurable/programmable	no
Max. voltage input signal	< 30.5 V

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Input data

Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
Input voltage limitation	30.5 V
Voltage dissipation	2.9 V (I = 20 mA)
Step response (10-90%)	5 ms (500 Ω load)

Output data

Signal output	Current output
Configurable/programmable	no
Max. voltage output signal	27.5 V
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
Transmission Behavior	1:1 to input signal
Load/output load current output	≤ 1375 Ω (I = 20 mA)
Residual ripple	< 10 mV_{rms} (500 Ω load)

Power supply

Supply voltage range	no separate supply voltage necessary

Connection data

Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	7 mm
Connection method	Screw connection
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

General

No. of channels	1
Maximum transmission error	≤ 0.1 % (of final value)
Maximum temperature coefficient	≤ 0.002 %/K (of measured value / 100 Ω load)
Flammability rating according to UL 94	V0
Degree of pollution	2
Overvoltage category	II
Electromagnetic compatibility	Conformance with EMC directive

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Technical data

General

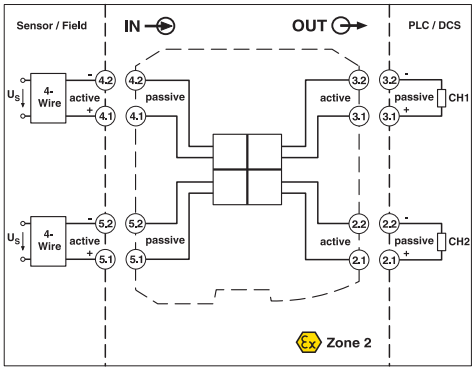
Housing material	PA 66
Color	green
Designation	Input/output/power supply
Electrical isolation	300 V_{rms} (Rated insulation voltage (overvoltage category II; degree of pollution 2, safe isolation as per EN 61010-1))
	2.5 kV (50 Hz, 1 min., test voltage)
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 61010 Listed
	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC T4

Standards and Regulations

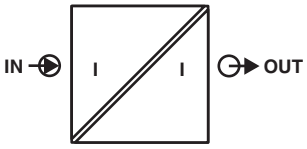
Electromagnetic compatibility	Conformance with EMC directive
Noise immunity	EN 61326-1
Flammability rating according to UL 94	V0
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 61010 Listed
	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC T4

Drawings

Block diagram



Pictogram



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Classifications

eCl@ss

eCl@ss 5.1	27210121
eCl@ss 6.0	27210121
eCl@ss 8.0	27210120
eCl@ss 9.0	27210120

ETIM

ETIM 5.0	EC002653

Approvals

Approvals

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UL Listed / cUL Listed / Functional Safety / cULus Listed

Ex Approvals

UL Recognized / cUL Recognized / cULus Recognized

Approval details

UL Listed http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 330267

cUL Listed http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 330267

Functional Safety 968/FSP 1200.00/15

cULus Listed