Repeater power supply - MACX PL-EX-RPSS-2I-2I - 2904963

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Ex i measuring transducer repeater power supply, 2-channel; HART-transparent. Supplies Ex i 2-wire measuring transducers and transmits the 4 - 20 mA signal from the Ex area to the safe area. 5-way electrical isolation, PLd, screw connection

Product Features

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

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)

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Ambient conditions

Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Degree of protection	IP20

Input data

Signal input	Intrinsically safe
Current input signal	4 mA ... 20 mA
Transmitter supply voltage	> 16 V (at 20 mA)

Output data

Signal output	Current output
Current output signal	4 mA ... 20 mA (active)
Transmission Behavior	1:1 to input signal
Load/output load current output	≤ 450 Ω (20 mA)
	≤ 375 Ω (24 mA)
Output behavior in the event of an error	< 3.6 mA (In the event of cable break at the input (as per NE 43))
	> 22.5 mA (In the event of cable short circuit at the input (as per NE 43))

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	< 100 mA (24 V / 20 mA)
Power consumption	< 1.4 W (at 24 V DC / 20 mA)

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
Screw thread	M3
Connection method	Screw connection
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

General

Maximum transmission error	< 0.1 % (of final value)
Transmission error, typical	< 0.05 % (of final value)

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General

Maximum temperature coefficient	< 0.01 %/K
Step response (10-90%)	< 1.3 ms (for 4 mA ... 20 mA step)
Status display	Green LED (supply voltage)
Inflammability class according to UL 94	V0
Pollution degree	2
Surge voltage category	II
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Emitted interference	EN 61000-6-4
Housing material	PA 66-FR
Color	yellow
Designation	Input/output, power supply
Electrical isolation	300 V_{rms} (Rated insulation voltage (surge voltage category II; pollution degree 2, safe isolation as per EN 61010-1))
	2.5 kV (50 Hz, 1 min., test voltage)
Designation	Input/output
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Designation	Input/power supply
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Designation	Output 1/output 2/ power supply
Electrical isolation	1.5 kV (50 Hz, 1 min., test voltage)
Conformance	CE-compliant, additionally EN 61326
ATEX	# II (1) G [Ex ia Ga] IIC/IIB
	# II (1) D [Ex ia Da] IIIC
	# II 3(1) G Ex nA [ia Ga] IIC T4 Gc
IECEx	[Ex ia Ga] IIC/IIB
	[Ex ia Da] IIIC
	Ex nA [ia Ga] IIC T4 Gc
UL, USA / Canada	UL 61010 Listed

Data communication (bypass)

HART function	Yes
Protocols supported	HART

Safety data

Max. output voltage U_o	25.2 V
Max. output current I_o	93 mA
Max. output power P_o	587 mW
Group	IIC

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Safety data

Max. external inductivity L_o	2 mH
Max. external capacity C_o	107 nF
Group	IIB
Max. external inductivity L_o	4 mH
Max. external capacity C_o	820 nF
Safety-related maximum voltage U_m	253 V AC (125 V DC)

Classifications

eCl@ss

eCl@ss 5.1	27210121
eCl@ss 6.0	27200206
eCl@ss 8.0	27210121

ETIM

ETIM 4.0	EC002653
ETIM 5.0	EC002653

Approvals

Approvals

Approvals

UL Listed / cUL Listed / GL / Functional Safety / cULus Listed

Ex Approvals

ATEX / IECEx / UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Listed

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Approvals

cUL Listed

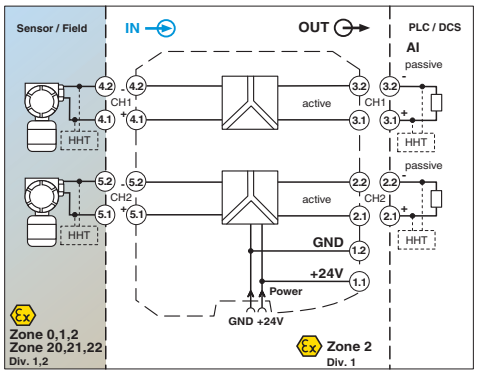
GL

Functional Safety

cULus Listed

Drawings

Block diagram



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