

# MACX MCR-EX-SL-RPSSI-I-UP-SP

Order No.: 2924029


The illustration shows the versions with screw connection

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2924029>

Ex-i repeater power supply and input isolating amplifier, HART Sends fed or active 0/4-20 mA signals from the Ex area to a load (active or passive) to the safe area. Electrical 3-way isolation; SIL 2, wide range power supply.



## Commercial data

GTIN (EAN)	
sales group	H720
Pack	1 pcs.
Customs tariff	85437090
Catalog page information	Page 441 (IF-2011)

## Product notes

WEEE/RoHS-compliant since:  
11/04/2008



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## Technical data

### Input data

Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
Transmitter supply voltage	> 16 V (at 20 mA)

Voltage drop	< 3.5 V (in input isolating amplifier operation)
<b>Output data</b>	
Signal output	Current output
Voltage output signal	0 V ... 5 V (internal resistance, 250 Ω, 0.1%)
Current output signal	0 mA ... 20 mA (active)
	4 mA ... 20 mA (active)
	0 mA ... 20 mA (14 ... 26 V ext. source voltage)
	4 mA ... 20 mA (14 ... 26 V ext. source voltage)
Transmission Behavior	1:1 to input signal
Load/output load current output	< 600 Ω (I output)
Output ripple	< 20 mV <sub>rms</sub>
<b>Power supply</b>	
Supply voltage range	24 V AC/DC ... 230 V AC/DC (-20%/+10%, 50/60 Hz)
Max. current consumption	< 80 mA (at 24 V DC)
Power consumption	< 1.6 W
<b>Connection data</b>	
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Connection method	Spring-cage conn.
<b>General data</b>	
No. of channels	1
Maximum transmission error	< 0.1 % (of final value)
Transmission error, typical	< 0.05 % (of final value)
Maximum temperature coefficient	< 0.01 %/K
Ambient temperature (operation)	-20 °C ... 60 °C (Any mounting position)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Permissible humidity (operation)	10 % ... 95 % (no condensation)
Step response (10-90%)	< 600 μs (for 4 mA ... 20 mA step)
Status display	Green LED (supply voltage)

Width	17.5 mm
Height	99 mm
Depth	114.5 mm
Inflammability class acc. to UL 94	V0
Pollution degree	2
Surge voltage category	II
Housing material	PA 66-FR
Degree of protection	IP20
Color	green
Electrical isolation input / output / supply	2.5 kV (50 Hz, 1 min., test voltage)
Electrical isolation input / output	375 V (Peak value in accordance with EN 60079-11)
Electrical isolation input / supply	375 V (Peak value in accordance with EN 60079-11)
Conformance	CE-compliant, additionally EN 61326
ATEX	Ex II (1)G [Ex ia] IIC/IIB Ex II (1) D [Ex iaD] Ex II 3 (1)G Ex nA [ia] IIC/IIB T4
IECEX	[Ex ia] IIC/IIB; [Ex iaD]; Ex nA [ia] IIC/IIB T4
UL, USA / Canada	Class I Div 2; IS for Class I, II, III Div 1
Functional safety (SIL)	SIL 2 according to EN 61508

#### Data communication (bypass)

HART function	Yes
Protocols supported	HART

#### Safety data

Max. voltage $U_o$	25.2 V
Max. current $I_o$	93 mA
Max. power $P_o$	587 mW
Gas group	II C
Max. external inductivity $L_o$	2 mH
Max. external capacity $C_o$	107 nF
Safety-related maximum voltage $U_m$	253 V AC (125 V DC)

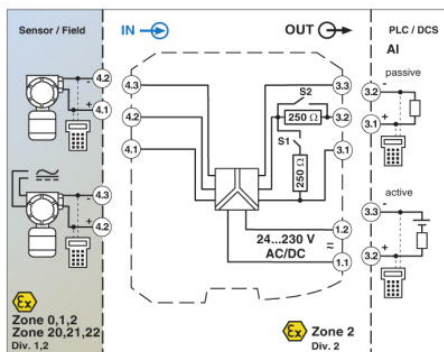
#### Certificates / Approvals



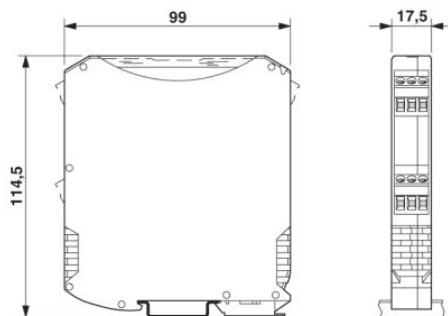
Certification CUL Listed, UL Listed  
Certification Ex: CUL-EX LIS, IECEx, UL-EX LIS  
Certifications applied for: GL

### Diagrams/Drawings

#### Block diagram



#### Dimensioned drawing



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