

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

Order No.: 2924029

The illustration shows the versions with screw connection



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

EAN	 4 046356 338172
Pack	1
Customs tariff	85389091
Product key	09720
Country of Origin	DE
Catalog page information	Page 441 (IF-2011)

## Product notes

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



Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation at <http://www.download.phoenixcontact.com>. The General Terms and Conditions of Use apply to Internet downloads.

## 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)

---

**Output data**

Signal output	Current output
Voltage output signal	0 V ... 5 V (internal resistance, 250 $\Omega$ , 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 $\Omega$ (I output)
Output ripple	< 20 mV <sub>rms</sub>

**Power supply**

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

**Connection data**

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.

**General data**

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 $\mu$ s (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 according 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



Certification

CUL Listed, UL Listed

Certification Ex:

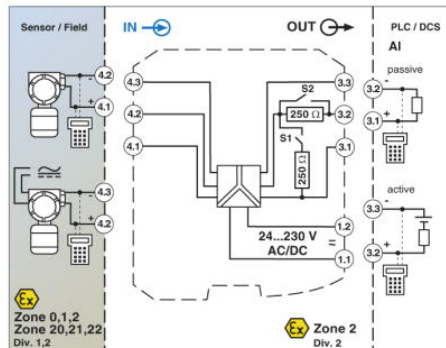
CUL-EX LIS, IECEEx, UL-EX LIS

Certifications applied for:

GL

## Drawings

### Block diagram



### Dimensioned drawing

