

Repeater power supply - MACX MCR-SL-RPSSI-I-UP-SP - 2924210

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Repeater power supply for supplying 2 and 3-conductor transmitters with HART transmission and wide range power supply, SIL, Push-in connection

Your advantages

- ✓ 250 Ω resistor that can be activated via DIP switches to increase HART impedance for low-resistance systems
- ✓ Up to SIL 2 according to EN 61508
- ✓ Installation in zone 2, protection type "n" (EN 60079-15) permitted
- ✓ Bidirectional transmission of digital HART communication signals
- ✓ Plug-in screw or spring-cage connection technology (Push-in technology), with integrated sockets for HART communicators
- ✓ Wide-range power supply of 19.2 ... 253 V AC/DC
- ✓ 3-way electrical isolation
- ✓ 0/4 ... 20 mA output (active or passive), 0/1 ... 5 V, can be selected via DIP switches
- ✓ 0/4 ... 20 mA input (powered or not powered)



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 449502
GTIN	4046356449502

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
-------------------------	---

Dimensions

Width	17.5 mm
Height	116 mm
Depth	114.5 mm

Repeater power supply - MACX MCR-SL-RPSSI-I-UP-SP - 2924210

Technical data

Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C (Any mounting position)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Noise immunity	EN 61000-6-2

Input data

Signal input	Repeater power supply operation
Current input signal	4 mA ... 20 mA
Transmitter supply voltage	> 16 V (20 mA)
	> 15.3 V (22.5 mA)
Signal input	Signal conditioner operation
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
Voltage drop	< 3.5 V (in input isolating amplifier operation)

Output data

Signal output	Repeater power supply operation
Voltage output signal	1 V ... 5 V (internal resistance, 250 Ω, 0.1%)
	Configurable via DIP switches
Current output signal	4 mA ... 20 mA (active)
	4 mA ... 20 mA (14 ... 26 V ext. source voltage)
Transmission Behavior	1:1 to input signal
Load/output load current output	< 600 Ω (20 mA)
	< 525 Ω (22.5 mA)
Output ripple	< 20 mV _{rms}
Output behavior in the event of an error	0 mA (Cable break in the input)
	≥ 22.5 mA (Cable short-circuit in the input)
Signal output	Signal conditioner operation
Voltage output signal	0 V ... 5 V (internal resistance, 250 Ω, 0.1%)
	1 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)
Load/output load current output	< 600 Ω (20 mA)
	< 525 Ω (22.5 mA)
Output ripple	< 20 mV _{rms}
Output behavior in the event of an error	0 mA (Cable break in the input)
	0 mA (Cable short-circuit in the input)

Power supply

Repeater power supply - MACX MCR-SL-RPSSI-I-UP-SP - 2924210

Technical data

Power supply

Designation	Repeater power supply operation
Nominal supply voltage range	24 V AC/DC ... 230 V AC/DC (50/60 Hz)
Supply voltage range	19.2 V AC/DC ... 253 V AC/DC (24 V AC/DC ... 230 V AC/DC (-20 % ... +10 %, 50/60 Hz))
Max. current consumption	< 75 mA (24 V DC / 20 mA)
Power dissipation	< 1.6 W (24 V DC / 20 mA)
Power consumption	< 1.9 W
Designation	Signal conditioner operation
Nominal supply voltage range	24 V ... 230 V AC/DC (-20 %/+10 %, 50/60 Hz)
Max. current consumption	< 45 mA (24 V DC / 20 mA)
Power dissipation	< 1.1 W (24 V DC / 20 mA)
Power consumption	< 1.1 W

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm
Connection method	Push-in connection

General

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
Step response (10-90%)	< 600 µs (for 4 mA ... 20 mA step)
Status display	Green LED (supply voltage)
Flammability rating according to UL 94	V0
Degree of pollution	2
Overvoltage category	II
Electromagnetic compatibility	Conformance with EMC directive
Interference emission	EN 61000-6-4
Housing material	PA 6.6-FR
Color	gray
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)
Conformance	CE-compliant, additionally EN 61326-1

Repeater power supply - MACX MCR-SL-RPSSI-I-UP-SP - 2924210

Technical data

General

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
SIL	2

Data communication (bypass)

HART function	Yes
Protocols supported	HART

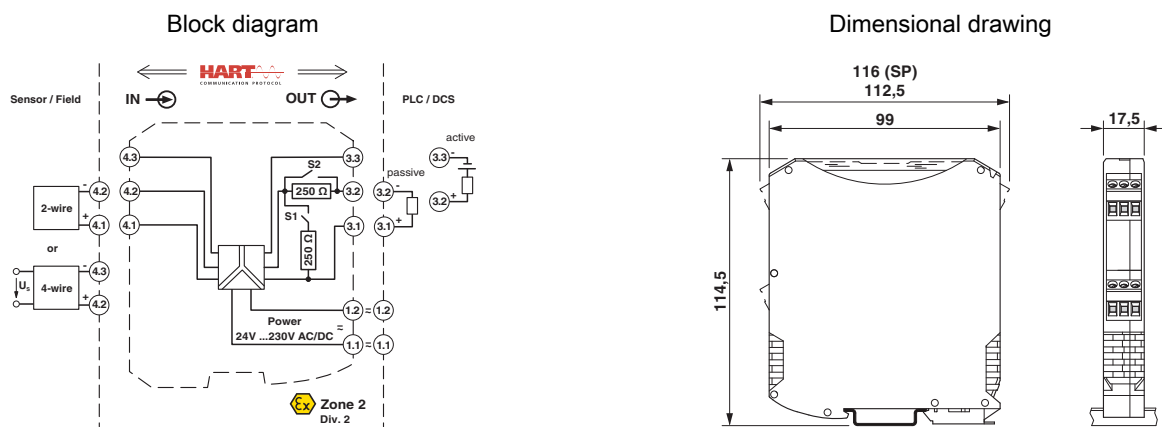
Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Flammability rating according to UL 94	V0
Conformance	CE-compliant, additionally EN 61326-1
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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

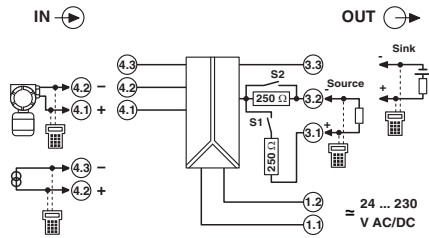
Drawings



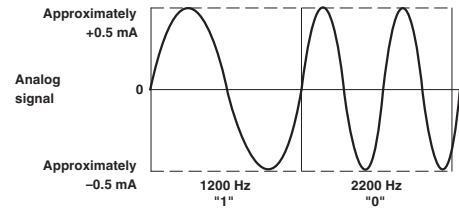
Connection example

Repeater power supply - MACX MCR-SL-RPSSI-I-UP-SP - 2924210

Block diagram

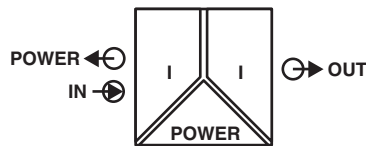


Diagram



Signal transmission analog and digital at the same time

Pictogram



Approvals

Approvals

Approvals

UL Listed / cUL Listed / Functional Safety / cULus Listed

Ex Approvals

UL Listed / cUL Listed / EAC Ex / cULus Listed


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
------------	--	---	---------------

Repeater power supply - MACX MCR-SL-RPSSI-I-UP-SP - 2924210

Approvals

Functional Safety	BVS PB 09/08
cULus Listed	

Phoenix Contact 2019 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>