

## Repeater power supply - MACX MCR-SL-RPSSI-2I - 2924825

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Measuring transducer power supply and input isolating amplifier, HART-transparent. Transfers supplied or active 0/4-20 mA signals from the field galv. isolated to two burdens. Galvanic 4-way isolation, SIL 2 according to IEC 61508, screw connection

### Product Features

- Power supply possible via DIN rail connector
- Up to SIL 2 according to EN 61508
- Installation in zone 2, protection type "n" (EN 60079-15) permitted
- Two electrically isolated 0/4 mA ... 20 mA (active) outputs
- Bidirectional transmission of digital HART communication signals (both outputs)
- Plug-in screw or spring-cage connection technology (Push-in technology), with integrated sockets for HART communicators
- 0/4 ... 20 mA input (powered or not powered)
- 4-way electrical isolation



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	160.0 g
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
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#### Dimensions

Width	12.5 mm
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#### Dimensions

Height	99 mm
Depth	114.5 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C (Any mounting position)
	-20 °C ... 70 °C (any mounting position, module distance# 5 mm, MTBF reduction factor 2.5, not assessed by UL)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Degree of protection	IP20

#### Input data

Signal input	Repeater power supply operation
Current input signal	4 mA ... 20 mA
Transmitter supply voltage	> 21.5 V (20 mA)
	> 21 V (23 mA)
Signal input	Signal conditioner operation
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
Voltage drop	< 3.9 V (in input isolating amplifier operation)

#### Output data

Signal output	Repeater power supply operation
Current output signal	4 mA ... 20 mA (active)
	0 mA ... 20 mA
Load/output load current output	< 450 Ω (20 mA)
	< 380 Ω (23 mA)
Output ripple	< 20 mV <sub>rms</sub>
Output behavior in the event of an error	0 mA (Cable break in the input)
	≥ 23 mA (Cable short-circuit in the input)
Signal output	Signal conditioner operation
Current output signal	0 mA ... 20 mA (active)
	4 mA ... 20 mA (active)
Load/output load current output	< 450 Ω (20 mA)
	< 380 Ω (23 mA)
Output ripple	< 20 mV <sub>rms</sub>

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#### Output data

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

Designation	Repeater power supply operation
Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (24 V DC -20%...+25%)
Max. current consumption	< 75 mA (24 V DC / 20 mA)
Power consumption	< 1.45 W (24 V DC/ 20 mA)

#### Connection data

Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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)
Maximum temperature coefficient	< 0.01 %/K
Step response (10-90%)	< 1.3 μs (for 4 mA ... 20 mA step)
Status display	Green LED (PWR supply voltage)
Flammability rating according to UL 94	V0
Emitted interference	EN 61000-6-4
Housing material	PA 66-FR
Color	green
Designation	Input/output/power supply
Electrical isolation	300 V <sub>rms</sub> (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)
Designation	Output 1/output 2
Electrical isolation	1.5 kV AC (50 Hz, 1 min., test voltage)

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## Technical data

### General

Conformance	CE-compliant, additionally EN 61326-1
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
Functional Safety (SIL)	SIL 2

### Data communication (bypass)

HART function	Yes
Protocols supported	HART

### EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	3 %
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	3 %
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	3 %

### Standards and Regulations

Noise emission	EN 61000-6-4
Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
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 61010 Listed
	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC T4

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## Classifications

### eCl@ss

eCl@ss 4.0	27210120
eCl@ss 4.1	27210120
eCl@ss 5.0	27210120
eCl@ss 5.1	27210120
eCl@ss 6.0	27210120
eCl@ss 7.0	27210120
eCl@ss 8.0	27210120
eCl@ss 9.0	27210120

### ETIM

ETIM 2.0	EC001485
ETIM 3.0	EC001485
ETIM 4.0	EC001485
ETIM 5.0	EC002653

### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

## Approvals

### Approvals

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#### Approvals

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

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#### Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed

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Approvals submitted

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### Approval details

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## Approvals

Functional Safety

Functional Safety

UL Listed

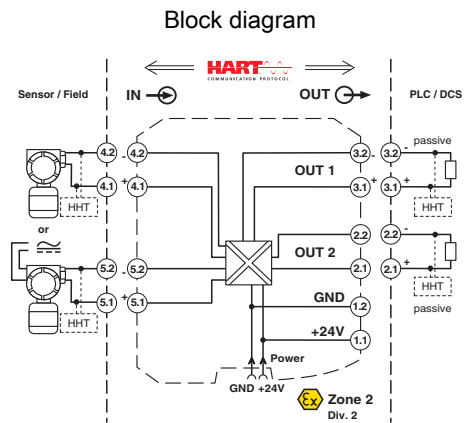
cUL Listed

GL

EAC

cULus Listed

## Drawings



Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

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- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
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- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

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- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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