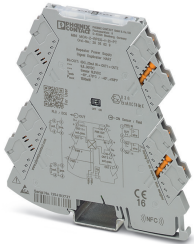


Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

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4-way power supply doubler with plug-in connection technology. HART-transparent, 0(4) mA ... 20 mA input signal, 0(4) mA ... 20 mA output signals. The device can be used in both signal and power supply doubler modes. Push-in connection technology.

Product Description

The power supply duplicator with plug-in connection technology supplies the transmitter in the field and electrically isolates the input signal transmitted to two loads. HART data protocols can be transmitted bi-directionally via both outputs. You can use the device in signal and power supply duplicator mode with a transmitter supply voltage of >19.5 V. On the output side, the module can be connected to passive input cards. For a maximum load of $\leq 500 \Omega$ per channel, electrically isolated analog standard signals 0 mA ... 20 mA or 4 mA ... 20 mA are available. The measuring transducer supports fault monitoring and NFC communication.



Key Commercial Data

| | |
|--------------------------------------|---------------|
| Packing unit | 1 pc |
| GTIN | |
| GTIN | 4046356999441 |
| Weight per Piece (excluding packing) | 120.000 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 |
|-------------------------|---|

Dimensions

| | |
|--------|-----------|
| Width | 6.2 mm |
| Height | 109.81 mm |
| Depth | 119.2 mm |

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Technical data

Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 5 % ... 95 % (non-condensing) |
| Degree of protection | IP20 (not assessed by UL) |
| Noise immunity | EN 61000-6-2 When being exposed to interference, there may be minimal deviations. |

Input data

| | |
|--------------------------------|--|
| Description of the input | Current input (sensor circuit) |
| Number of inputs | 1 |
| Current input signal | 4 mA ... 20 mA (Power supply and signal duplicator mode) |
| | 0 mA ... 20 mA (Signal duplicator mode) |
| Input resistance current input | 90 Ω (+1.6 V) |
| Transmitter supply voltage | > 19.5 V |

Output data

| | |
|---------------------------------|---|
| Output name | Current output |
| Number of outputs | 2 |
| Current output signal | 4 mA ... 20 mA (repeater power supply and isolator operation) |
| | 0 mA ... 20 mA (isolator operation) |
| Max. output current | 25 mA |
| Load/output load current output | ≤ 500 Ω (per channel) |
| Ripple | < 20 mV _{PP} (at 500 Ω) |
| Transmission Behavior | 1:1 to input signal |

Power supply

| | |
|-----------------------------|--|
| Nominal supply voltage | 24 V DC |
| Supply voltage range | 9.6 V DC ... 30 V DC (The DIN rail bus connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715)) |
| Typical current consumption | 40 mA (For 24 V DC and in signal duplicator mode) |
| | 65 mA (For 24 V DC and in power supply duplicator mode) |
| | 75 mA (For 12 V DC and in signal duplicator mode) |
| | 130 mA (For 12 V DC and in power supply duplicator mode) |
| Power consumption | 1.6 W (at I _{OUT} = 20 mA, 500 Ω load) |

Connection data

| | |
|-------------------------------|--|
| Connection method | Push-in connection |
| Stripping length | 10 mm |
| Conductor cross section solid | 0.2 mm ² ... 2.5 mm ² (with ferrule) |

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Technical data

Connection data

| | |
|----------------------------------|--|
| | 0.14 mm ² ... 2.5 mm ² (without ferrule) |
| Conductor cross section flexible | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 24 ... 12 (flexible) |

General

| | |
|--|--|
| No. of channels | 2 |
| Maximum transmission error | 0.05 % (of final value) |
| Maximum temperature coefficient | 0.0075 %/K |
| Limit frequency (3 dB) | > 1 kHz (typ.) |
| Step response (10-90%) | < 400 µs (typ.) |
| Electrical isolation | Reinforced insulation in accordance with IEC 61010-1 |
| Overvoltage category | II |
| Degree of pollution | 2 |
| Rated insulation voltage | 300 V |
| Test voltage, input/output/supply | 3 kV (50 Hz, 1 min.) |
| Electromagnetic compatibility | Conformance with EMC directive |
| Noise emission | EN 61000-6-4 |
| Noise immunity | EN 61000-6-2 When being exposed to interference, there may be minimal deviations. |
| Color | gray |
| Housing material | PBT |
| Mounting position | any |
| Assembly instructions | The T connector can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715. |
| Fire protection for rail vehicles (DIN EN 45545-2) R22 | HL 1 - HL 2 |
| Fire protection for rail vehicles (DIN EN 45545-2) R23 | HL 1 - HL 2 |
| Fire protection for rail vehicles (DIN EN 45545-2) R24 | HL 1 - HL 2 |

Data communication (bypass)

| | |
|------------------------|---------------|
| Limit frequency (3 dB) | approx. 1 kHz |
|------------------------|---------------|

EMC data

| | |
|-----------------------|--------------------------|
| Designation | Electromagnetic RF field |
| Standards/regulations | EN 61000-4-3 |
| Designation | Fast transients (burst) |
| Standards/regulations | EN 61000-4-4 |
| Designation | Conducted interferences |
| Standards/regulations | EN 61000-4-6 |

Standards and Regulations

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Technical data

Standards and Regulations

| | |
|-------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC directive |
| Noise emission | EN 61000-6-4 |
| Standards/regulations | EN 61000-4-2 |
| Designation | Electromagnetic RF field |
| Standards/regulations | EN 61000-4-3 |
| | EN 61000-4-4 |
| | EN 61000-4-5 |
| Designation | Conducted interferences |
| Standards/regulations | EN 61000-4-6 |
| Designation | GB Standard |
| Standards/regulations | GB 3836.1 |
| | GB 3836.4 |
| | GB 3836.8 |
| Electrical isolation | Reinforced insulation in accordance with IEC 61010-1 |

Conformance/approvals

| | |
|----------------|---|
| Designation | CE |
| Certificate | CE-compliant |
| Designation | ATEX |
| Identification | # II 3 G Ex ec ic IIC T4 Gc |
| Certificate | BVS 19 ATEX E 047 X |
| Designation | IECEX |
| Identification | Ex ec ic IIC T4 Gc |
| Certificate | IECEX BVS 19.0041X |
| Designation | CCC / China-Ex |
| Identification | Ex nA ic IIC T4 Gc |
| Designation | UL, USA / Canada |
| Identification | UL 508 Listed |
| | Class I, Div. 2, Groups A, B, C, D T5 |
| | Class I, Zone 2, Group IIC T5 |
| Designation | Shipbuilding approval |
| Certificate | DNV GL TAA000021E |
| Temperature | B |
| Humidity | B |
| Vibration | A |
| EMC | A |
| Enclosure | Required protection according to the Rules shall be provided upon installation on board |

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

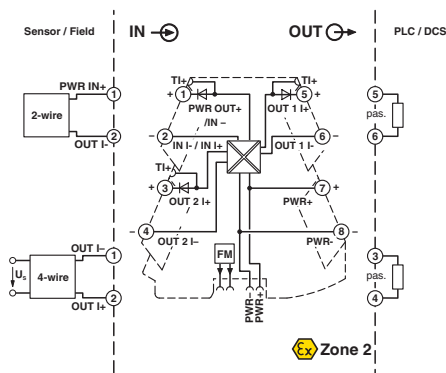
Technical data

Environmental Product Compliance

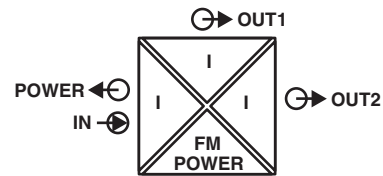
| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Drawings

Block diagram



Pictogram



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27210120 |
| eCl@ss 11.0 | 27210120 |
| eCl@ss 4.0 | 27210100 |
| eCl@ss 4.1 | 27210100 |
| eCl@ss 5.0 | 27210100 |
| eCl@ss 5.1 | 27210100 |
| eCl@ss 6.0 | 27210100 |
| eCl@ss 7.0 | 27210120 |
| eCl@ss 9.0 | 27210120 |

ETIM

| | |
|----------|----------|
| ETIM 4.0 | EC002653 |
| ETIM 6.0 | EC002653 |
| ETIM 7.0 | EC002653 |

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Classifications

UNSPSC

| | |
|-------------|----------|
| UNSPSC 18.0 | 39121008 |
| UNSPSC 19.0 | 39121008 |
| UNSPSC 20.0 | 39121008 |
| UNSPSC 21.0 | 39121008 |

Approvals

Approvals


Approvals


UL Listed / cUL Listed / DNV GL / EAC / CCC / cULus Listed

Ex Approvals


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

Approval details

| | | | |
|-----------|---|---|---------------|
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
|-----------|---|---|---------------|

| | | | |
|------------|---|---|---------------|
| cUL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
|------------|---|---|---------------|

| | | | |
|--------|---|---|------------|
| DNV GL |  | https://approvalfinder.dnvgl.com/ | TAA000021E |
|--------|---|---|------------|

| | | | |
|-----|---|--|----------------------|
| EAC |  | | RU*DE.*08.B.01608/19 |
|-----|---|--|----------------------|

| | | | |
|-----|---|--|------------------|
| CCC |  | | 2021322303003858 |
|-----|---|--|------------------|

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Approvals

cULus Listed



Accessories

Accessories

Communication module

Communication module - MINI MCR-2-V8-MOD-RTU - 2905634



Eight MINI Analog Pro signal conditioners and measuring transducers can be quickly and easily integrated into a Modbus/RTU network via a communication adapter.

Communication module - MINI MCR-2-V8-MOD-TCP - 2905635



Eight MINI Analog Pro signal conditioners and measuring transducers can be quickly and easily integrated into a Modbus/TCP network via a communication adapter.

Communication module - MINI MCR-2-V8-PB-DP - 2905636



Eight MINI Analog Pro signal conditioners and measuring transducers can be quickly and easily integrated into a PROFIBUS DP network via a communication adapter.

Device marking

Marker for end clamp - UCT-EM (30X5) - 0801505



Marker for end clamp, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Accessories

Plastic label - UC-EMLP (15X5) - 0819301



Plastic label, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 10

Plastic label - UC-EMLP (15X5) YE - 0822615



Plastic label, Sheet, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 10

Plastic label - UC-EMLP (15X5) SR - 0828095



Plastic label, Sheet, silver, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 10

Plastic label - US-EMLP (15X5) - 0828790



Plastic label, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

Plastic label - US-EMLP (15X5) YE - 0828873



Plastic label, Card, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Accessories

Plastic label - US-EMLP (15X5) SR - 0828874



Plastic label, Card, silver, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

Marker for end clamp - UCT-EM (30X5) YE - 0830340



Marker for end clamp, Sheet, yellow, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

DIN rail connector

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GY - 2695439



DIN rail connector (TBUS), 5-pos., for bridging the supply voltage, can be snapped onto NS 35/... DIN rails according to EN 60715

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

Evaluation unit

Monitoring module - MINI MCR-2-FM-RC - 2904504



Fault monitoring module with plug-in connection technology for evaluating and reporting group errors from the FM system and for monitoring the supply voltages. Error message via N/C contact. Screw connection technology, standard configuration

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Accessories

Monitoring module - MINI MCR-2-FM-RC-PT - 2904508



Fault monitoring module with plug-in connection technology for evaluating and reporting group errors from the FM system and for monitoring the supply voltages. Error message via N/C contact. Push-in connection technology, standard configuration

Labeled device marker

Marker for end clamp - UCT-EM (30X5) CUS - 0801589



Marker for end clamp, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

Plastic label - UC-EMLP (15X5) CUS - 0824550



Plastic label, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - UC-EMLP (15X5) YE CUS - 0824551



Plastic label, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

Plastic label - UC-EMLP (15X5) SR CUS - 0828099



Plastic label, can be ordered: by sheet, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 10

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Accessories

Plastic label - US-EMLP (15X5) CUS - 0830076



Plastic label, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

Plastic label - US-EMLP (15X5) YE CUS - 0830077



Plastic label, can be ordered: by card, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

Plastic label - US-EMLP (15X5) SR CUS - 0830078



Plastic label, can be ordered: by card, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

Marker for end clamp - UCT-EM (30X5) YE CUS - 0830348



Marker for end clamp, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

Power module

Power terminal block - MINI MCR-2-PTB - 2902066



Power terminal with plug-in connection technology for delivering the supply voltage to the DIN rail connector. Monitoring of the supply voltages in combination with the fault monitoring module. Screw connection technology

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Accessories

Power terminal block - MINI MCR-2-PTB-PT - 2902067



Power terminal with plug-in connection technology for delivering the supply voltage to the DIN rail connector. Monitoring of the supply voltages in combination with the fault monitoring module. Push-in connection technology

Power supply

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



Please use the following item in new systems: 2904614
Primary-switched MINI POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

Programming cable

Cable adapter - GW HART USB MODEM - 1003824



USB HART modem cable for communication between a PC and HART devices, cable length: 1m.

System adapter

System adapter - MINI MCR-2-V8-FLK 16 - 2901993



Eight MINI Analog Pro signal conditioners and measuring transducers can be connected to a controller with minimal cabling effort and without any errors using system adapters and system cabling.

Terminal marking

Repeater power supply - MINI MCR-2-RPSS-I-2I-PT - 2905629

Accessories

Marker strip - SK 5,0 WH:REEL - 0805221



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5 mm, Number of individual labels: 90000