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

2905629

https://www.phoenixcontact.com/us/products/2905629

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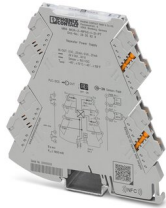
4-way power supply doubler with plug-in connection technology. HART-transparent, 0(4) mA ... 20 mA input signal, 0(4) mA ... 20 mA output signals. The device can be used in both signal and power supply doubler modes. Push-in connection technology.

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 ≤500 Ω 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.

Commercial data

Item number	2905629
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C404
Product key	CK1411
Catalog page	Page 78 (C-5-2019)
GTIN	4046356999441
Weight per piece (including packing)	120.6 g
Weight per piece (excluding packing)	120 g
Customs tariff number	85437090
Country of origin	DE

Technical data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area

Product properties

Product type	Repeater power supplies
Product family	MINI Analog Pro
No. of channels	2
Type	Signal conditioner
Configuration	DIP switches

Insulation characteristics: GB Standard

Overvoltage category	II
Pollution degree	2

Electrical properties

No. of channels	2
Electrical isolation	4-way isolation
Limit frequency (3 dB)	> 1 kHz
Signal transmission behavior	In = Out
Step response (10-90%)	< 400 µs
Maximum temperature coefficient	0.0075 %/K
Maximum transmission error	0.05 % (of final value)

Electrical isolation Input/output/power supply

Rated insulation voltage	300 V_{rms}
Test voltage	3 kV AC (50 Hz, 60 s)
Insulation	Reinforced insulation according to IEC/EN 61010-1

Supply

Nominal supply voltage	24 V DC
Supply voltage range	9.6 V DC ... 30 V DC (The DIN rail connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, item no. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail in accordance with 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)

Input data

Signal: Current

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

Output data

Signal: Current

Number of outputs	2
Non-load voltage	< 20 V
Current output signal	0 mA ... 20 mA (Signal duplicator mode)
	4 mA ... 20 mA (Power supply and signal duplicator mode)
Max. current output signal	25 mA
Load/output load current output	≤ 500 Ω (per channel)
Ripple	< 20 mV_{PP} (500 Ω)

Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section rigid	0.2 mm² ... 2.5 mm² (with ferrule)
	0.14 mm² ... 2.5 mm² (without ferrule)
Conductor cross section flexible	0.14 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12 (flexible)

Ex data

Ex installation (EPL)	Gc
	Div. 2

Interfaces

Data communication (bypass)

HART function	Yes
Limit frequency (3 dB)	≈ ⎍ kHz

Signaling

Status display	Green LED (supply voltage)

Dimensions

Width	6.2 mm
Height	109.81 mm
Depth	119.2 mm

Material specifications

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
Housing material	PBT

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20 (not assessed by UL)
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

Approvals

CE

Certificate	CE-compliant

ATEX

Identification	Ⓔ II 3 G Ex ec ic IIC T4 Gc
Certificate	BVS 19 ATEX E 047 X

UKCA Ex (UKEX)

Identification	Ⓔ II 3 G Ex ec ic IIC T4 Gc
Certificate	PxCIF21UKEX2902000X

IECEx

Identification	Ex ec ic IIC T4 Gc
Certificate	IECEx BVS 19.0041X

CCC / China-Ex

Identification	Ex nA ic IIC T4 Gc

UL, USA/Canada

Identification	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T5
	Class I, Zone 2, Group IIC T5

Shipbuilding approval

Certificate	DNV GL TAA000021E Rev. 1

EAC Ex

Identification	ЕАС Ex ⏋ˍ∫ Ex ec ic IIC T4 Gc
Certificate	BY/112 02.01 TP012 103.01 00081

DNV GL data

Temperature	B
Humidity	B
Vibration	A
EMC	A
Enclosure	Required protection according to the Rules shall be provided upon installation on board

EMC data

Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4

Electrostatic discharge

Standards/regulations	EN 61000-4-2

Electrostatic discharge

Comments	Safety measures must be taken to prevent electrostatic discharge.

Electromagnetic HF field

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3

Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4

Surge current load (surge)

Standards/regulations	EN 61000-4-5

Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6

Standards and regulations

Electrical isolation	4-way isolation

GB Standard

Standards/regulations	GB 3836.1
	GB 3836.4
	GB 3836.8

Mounting

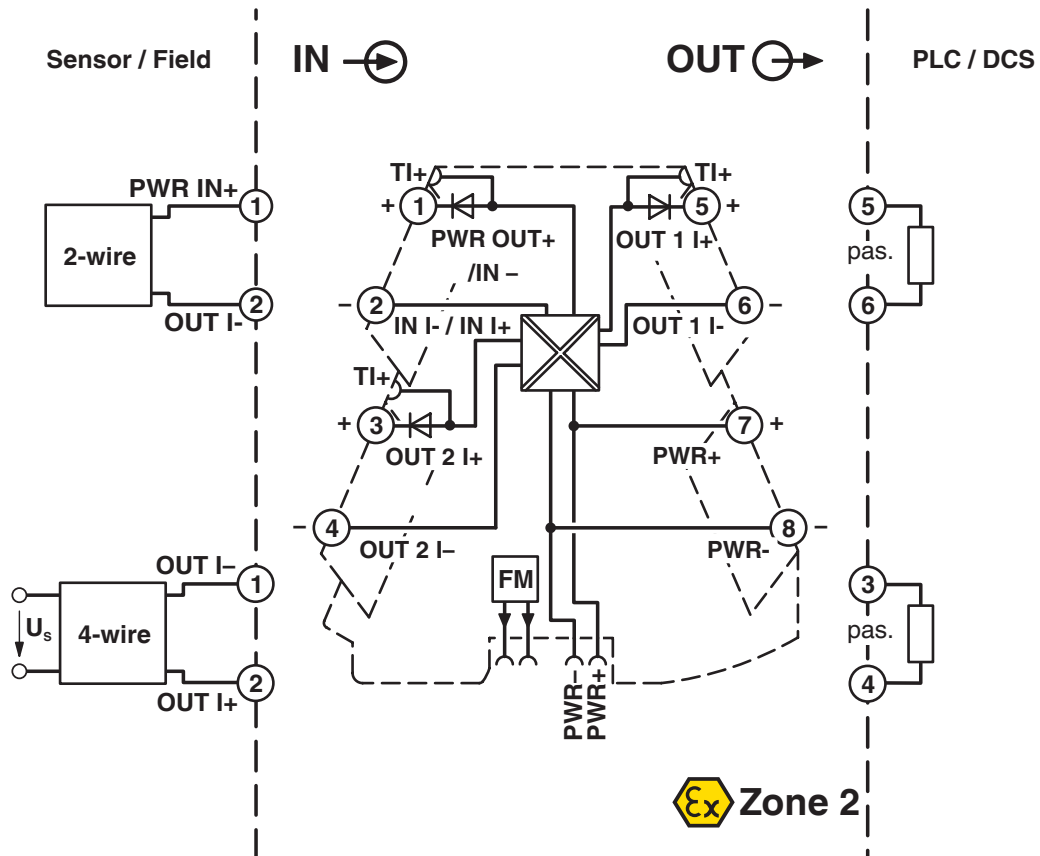|	
Mounting type	DIN rail mounting
Assembly instructions	The DIN rail connector can be used for bridging the supply voltage. It can be snapped onto a 35 mm EN 60715 DIN rail.
Mounting position	any

Drawings

Block diagram

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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2905629

EAC
Approval ID: RU*DE.*08.B.01608/19

DNV GL
Approval ID: TAA000021E

UL Listed
Approval ID: FILE E 238705

CCC
Approval ID: 2021322303003858

cUL Listed
Approval ID: FILE E 238705

IECEx
Approval ID: IECEx BVS 19.0041X

cUL Listed
Approval ID: FILE E 196811

UL Listed
Approval ID: FILE E 196811

ATEX
Approval ID: BVS 19 ATEX E 047 X

cULus Listed

cULus Listed

Classifications

ECLASS

ECLASS-11.0	27210120
ECLASS-12.0	27210120
ECLASS-13.0	27210120

ETIM

ETIM 9.0	EC002653

UNSPSC

UNSPSC 21.0	39121000

Environmental product compliance

REACh SVHC	Lead 7439-92-1

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

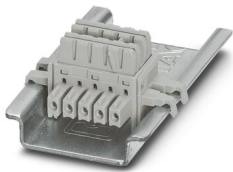# MINI MCR-2-RPSS-I-2I-PT - Repeater power supply

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Accessories

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

2695439

https://www.phoenixcontact.com/us/products/2695439

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

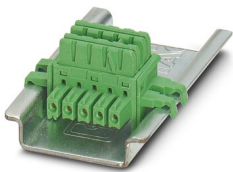### ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - DIN rail bus connectors

2869728

https://www.phoenixcontact.com/us/products/2869728

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

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GW HART USB MODEM - Cable adapter

1003824

https://www.phoenixcontact.com/us/products/1003824
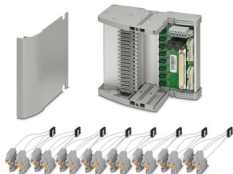
USB HART modem cable for communication between a PC and HART devices, cable length: 1m.

TC-D37SUB-AIO16-MP-PS-UNI - Module carrier

2906640

https://www.phoenixcontact.com/us/products/2906640

Universal Termination Carrier for connecting 16 MINI Analog Pro signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection), with HART multiplexer connection

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

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TC-D37SUB-ADIO16-MP-P-UNI - Module carrier

2906639

https://www.phoenixcontact.com/us/products/2906639

Universal Termination Carrier for connecting 16 MINI Analog Pro signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection)

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

2901993

https://www.phoenixcontact.com/us/products/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.

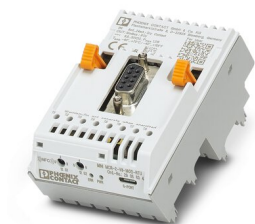# MINI MCR-2-RPSS-I-2I-PT - Repeater power supply

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

2905634

https://www.phoenixcontact.com/us/products/2905634

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

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

2905635

https://www.phoenixcontact.com/us/products/2905635

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

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

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

2905636

https://www.phoenixcontact.com/us/products/2905636

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

MINI MCR-2-V8-PN - Communication module

2905637

https://www.phoenixcontact.com/us/products/2905637

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

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

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FASTCON PRO-SET - Connector set

2906227

https://www.phoenixcontact.com/us/products/2906227

FASTCON Pro plug set consisting of four plugs with screw connection, one for each position on the module. Suitable for all MINI Analog Pro modules.

FASTCON PRO-SET-PT - Connector set

2906228

https://www.phoenixcontact.com/us/products/2906228

FASTCON Pro plug set consisting of four plugs with push-in connection, one for each position on the module. Suitable for all MINI Analog Pro modules.

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

0801505

https://www.phoenixcontact.com/us/products/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, lettering field size: 30 x 5 mm, Number of individual labels: 24

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

0801589

https://www.phoenixcontact.com/us/products/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

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

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SK 5,0 WH:REEL - Marker strip

0805221

https://www.phoenixcontact.com/us/products/0805221

Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 5 mm, Number of individual labels: 10

UC-EMLP (15X5) - Plastic label

0819301

https://www.phoenixcontact.com/us/products/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
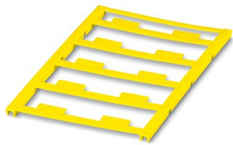
MINI MCR-2-RPSS-I-2I-PT - Repeater power supply

2905629

https://www.phoenixcontact.com/us/products/2905629

UC-EMLP (15X5) YE - Plastic label

0822615

https://www.phoenixcontact.com/us/products/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

UC-EMLP (15X5) CUS - Plastic label

0824550

https://www.phoenixcontact.com/us/products/0824550

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

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

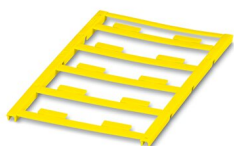## UC-EMLP (15X5) YE CUS - Plastic label

Plastic label, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm
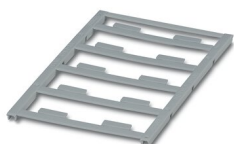
UC-EMLP (15X5) SR - Plastic label

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

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

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

0828099

https://www.phoenixcontact.com/us/products/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

US-EMLP (15X5) - Plastic label

0828790

https://www.phoenixcontact.com/us/products/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

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

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US-EMLP (15X5) YE - Plastic label

0828873

https://www.phoenixcontact.com/us/products/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

US-EMLP (15X5) SR - Plastic label

0828874

https://www.phoenixcontact.com/us/products/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

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

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US-EMLP (15X5) CUS - Plastic label

0830076

https://www.phoenixcontact.com/us/products/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

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

0830077

https://www.phoenixcontact.com/us/products/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

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

2905629

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

0830078

https://www.phoenixcontact.com/us/products/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

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

0830340

https://www.phoenixcontact.com/us/products/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, lettering field size: 30 x 5 mm, Number of individual labels: 24

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

2905629

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

0830348

https://www.phoenixcontact.com/us/products/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

MINI MCR-2-PTB - Power terminal block

2902066

https://www.phoenixcontact.com/us/products/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

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

2902067

https://www.phoenixcontact.com/us/products/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

QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply unit

2904614

https://www.phoenixcontact.com/us/products/2904614

Primary-switched power supply, QUINT POWER, screw connection, DIN rail mounting, supply of devices possible via the TBUS DIN rail connector, protective coating, input: single-phase, output: 24 V DC/2.5 A

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

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https://www.phoenixcontact.com/us/products/2905629

MINI MCR-2-FM-RC - Monitoring block

2904504

https://www.phoenixcontact.com/us/products/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

MINI MCR-2-FM-RC-PT - Monitoring block

2904508

https://www.phoenixcontact.com/us/products/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

SZS 0,6X3,5 - Screwdriver

1205053

https://www.phoenixcontact.com/us/products/1205053

Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip