

MINI MCR-EX-IDS-I-I-PT - Output signal conditioner



2908806

<https://www.phoenixcontact.com/in/products/2908806>

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Ex i-Output signal conditioner for isolating and transmitting 0 mA / 4 mA ... 20 mA signals from the controller to an intrinsically safe load in the Ex area. HART-transparent, no-load voltage: 27 V DC, Standard configuration, Safety Integrity Level (SIL, IEC 61508): 3, Push-in connection

Commercial data

Item number	2908806
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DK1222
GTIN	4055626357539
Weight per piece (including packing)	118.5 g
Weight per piece (excluding packing)	118.5 g
Country of origin	DE

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Technical data

Product properties

Product type	Output signal conditioner
Product family	MINI Analog Pro
Configuration	DIP switches

System properties

Functionality

Configuration	DIP switches
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Electrical properties

Signal transmission behavior	In = Out
Step response (10-90%)	≤ 10 ms
Maximum temperature coefficient	≤ 0.01 %
Maximum transmission error	0.1 %

Electrical isolation

Overvoltage category	II (≤ 5000 m)
Pollution degree	2 (≤ 5000 m)

Electrical isolation Input/output/power supply IEC/EN 61010-1

Standards/regulations	IEC/EN 61010-1
Rated insulation voltage	300 V _{rms}
Test voltage	2.5 kV AC (50 Hz, 60 s)
Insulation	Double/reinforced insulation

Electrical isolation Output/input, power supply IEC/EN 60079-11

Standards/regulations	IEC/EN 60079-11
Rated insulation voltage	253 V _{rms}

Electrical isolation Input/output/power supply IEC/EN 60079-7

Standards/regulations	IEC/EN 60079-7
Rated insulation voltage	251 V _{rms}

Supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC
Power consumption	≤ 1.2 W

Input data

Signal: Current

Number of inputs	1
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA (SIL)

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Input current	$\leq 30 \text{ mA}$
Voltage drop	$< 3.5 \text{ V DC (20 mA)}$

Output data

Signal: Current

Output description	intrinsically safe
Number of outputs	1
Current output signal	0 mA ... 20 mA 4 mA ... 20 mA (SIL)
Load/output load current output	$\leq 700 \Omega (20 \text{ mA})$ $\leq 630 \Omega (21 \text{ mA})$
Output ripple	20 mV (rms)
Non-load voltage	$\leq 27 \text{ V DC}$
Short-circuit-proof	yes
Line fault detection	$> 10 \text{ k}\Omega$ (Line break) $< 50 \Omega$ (Short circuit)

Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section rigid	0.2 mm ² ... 1.5 mm ² (with ferrule) 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)

Ex data

Ex installation (EPL)	Gc Div. 2
Ex i circuits (EPL)	Ga Da Ma Div. 1

Safety data

Max. internal inductance L_i	negligible
Max. internal capacitance C_i	7 nF
Max. output voltage U_o	26.4 V
Max. output current I_o	98 mA
Max. output power P_o	647 mW
Safety-related maximum voltage U_m	253 V AC 125 V DC
IIA/I (simple circuit): Max. external inductivity L_o / Max. external capacitance C_o	10 mH / 2.48 μ F
IIB/III (simple circuit): Max. external inductivity L_o / Max. external capacitance C_o	4 mH / 730 nF

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IIC (simple circuit): Max. external inductivity L_o / Max. external capacitance C_o	2 mH / 89 nF
IIA/I (mixed circuit): Max. external inductivity L_o / Max. external capacitance C_o	10 mH / 493 nF, 1 mH / 553 nF, 500 μ H / 653 nF, 200 μ H / 833 nF, 100 μ H / 993 nF
IIB/III (mixed circuit): Max. external inductivity L_o / Max. external capacitance C_o	4 mH / 303 nF, 1 mH / 383 nF, 500 μ H / 463 nF, 200 μ H / 613 nF, 100 μ H / 733 nF
IIC (mixed circuit): Max. external inductivity L_o / Max. external capacitance C_o	1.4 mH / 42 nF, 1 mH / 49 nF, 500 μ H / 66 nF, 200 μ H / 89 nF

Interfaces

Data communication (bypass)

Protocols supported	HART-transparent
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Signaling

Status display	Green LED (supply voltage)
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Dimensions

Width	6.2 mm
Height	109.81 mm
Depth	119.2 mm

Material specifications

Color	gray (RAL 7042)
Housing material	PBT

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C (Any mounting position)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (at 25 °C, non-condensing)
Shock (operation)	15g (DIN EN 60068-2-27)
Vibration (operation)	5g (DIN EN 60068-2-6)

Altitude range (IEC/EN 61010-1)

Height range	> 2000 m ... 3000 m
Ambient temperature (operation)	-40 °C ... 63 °C
Rated insulation voltage	300 V _{rms} (Input/output/power supply)
Insulation	Double/reinforced insulation

Altitude range (IEC/EN 61010-1)

Height range	> 3000 m ... 4000 m
Ambient temperature (operation)	-40 °C ... 56 °C
Rated insulation voltage	300 V _{rms} (Input/output/power supply)
Insulation	Double/reinforced insulation

Altitude range (IEC/EN 61010-1)

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Height range	> 4000 m ... 5000 m
Ambient temperature (operation)	-40 °C ... 49 °C
Rated insulation voltage	150 V _{rms} (Input/output/power supply)
Insulation	Double/reinforced insulation

Altitude range (IEC/EN 60079-11)

Height range	> 2000 m ... 3000 m
Ambient temperature (operation)	-40 °C ... 63 °C
Safety-related maximum voltage U _m	121 V AC 110 V DC
Rated insulation voltage	150 V _{rms} (Output/input, power supply)

Altitude range (IEC/EN 60079-11)

Height range	> 3000 m ... 4000 m
Ambient temperature (operation)	-40 °C ... 56 °C
Safety-related maximum voltage U _m	33 V AC/DC
Rated insulation voltage	60 V _{rms} (Output/input, power supply)

Altitude range (IEC/EN 60079-11)

Height range	> 4000 m ... 5000 m
Ambient temperature (operation)	-40 °C ... 49 °C
Safety-related maximum voltage U _m	33 V AC/DC
Rated insulation voltage	60 V _{rms} (Output/input, power supply)

Altitude range (IEC/EN 60079-7)

Height range	> 2000 m ... 3000 m
Ambient temperature (operation)	-40 °C ... 63 °C
Rated insulation voltage	162 V _{rms} (Input/output/power supply)

Altitude range (IEC/EN 60079-7)

Height range	> 3000 m ... 4000 m
Ambient temperature (operation)	-40 °C ... 56 °C
Rated insulation voltage	60 V _{rms} (Input/output/power supply)

Altitude range (IEC/EN 60079-7)

Height range	> 4000 m ... 5000 m
Ambient temperature (operation)	-40 °C ... 49 °C
Rated insulation voltage	60 V _{rms} (Input/output/power supply)

Approvals

CE

Certificate	CE-compliant
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ATEX

Identification	II (1) G [Ex ia Ga] IIC II (1) D [Ex ia Da] IIIC II 3 (1) G Ex ec [ia Ga] IIC T4 Gc
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	Ⓔ I (M1) [Ex ia Ma] I
Certificate	BVS 23 ATEX 006 X

IECEX

Identification	[Ex ia Ga] IIC
	[Ex ia Da] IIIC
	Ex ec [ia Ga] IIC T4 Gc
	[Ex ia Ma] I
Certificate	IECEX BVS 23.0003X

UL, USA/Canada

Identification	UL 61010-2-201
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Safety Integrity Level (SIL, IEC 61508)

Identification	3
Note	Single-channel

EMC data

Electromagnetic compatibility	Tested in accordance with the following standards and regulations: EN 61326-1 For industrial use, NAMUR NE 21
Low Voltage Directive	Conformance with Low Voltage Directive
Noise immunity	EN 61000-6-2
	EN 61326-3-2
Noise emission	EN 61000-6-4

Mounting

Mounting type	DIN rail mounting
Mounting position	any

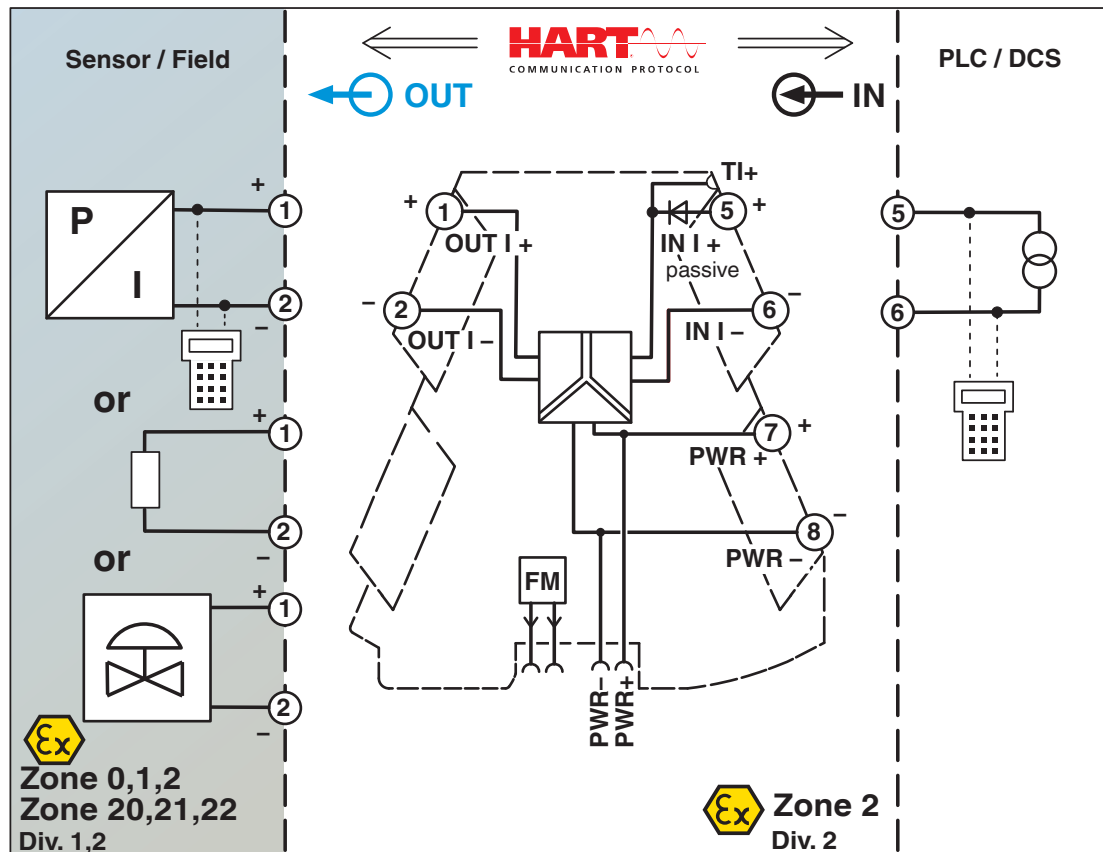
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Drawings

Block diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/2908806>



ATEX

Approval ID: BVS 23 ATEX E 006 X



IECEx

Approval ID: IECEx BVS 23.0003X



ATEX

Approval ID: BVS 23 ATEX E 006 X



CCC

Approval ID: 2023122310117250EN



UKCA-EX

Approval ID: CML22UKEX3727XIssue0

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Classifications

ECLASS

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

ETIM

ETIM 9.0	EC002653
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UNSPSC

UNSPSC 21.0	39121008
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol(CAS: 79-94-7)
SCIP	afc8d24d-0e73-4b4b-a954-93f91410b0d4

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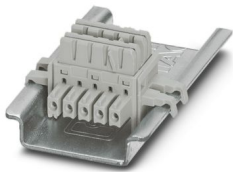
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Accessories

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

2695439

<https://www.phoenixcontact.com/in/products/2695439>

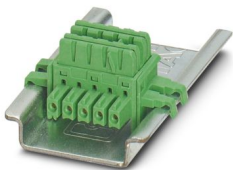


DIN rail connector (TBUS), 5-pos., for bridging the supply voltage, can be snapped onto NS 35/... DIN rail in accordance with EN 60715

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

2869728

<https://www.phoenixcontact.com/in/products/2869728>



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

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MCR-DP - Separating plate

1430594

<https://www.phoenixcontact.com/in/products/1430594>

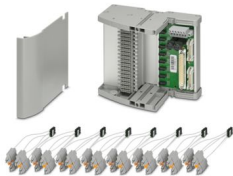


The partition plate is used to maintain Ex i isolating distances when Ex i and non-Ex i devices are mounted side by side on a DIN rail.

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

2906640

<https://www.phoenixcontact.com/in/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

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

2906639

<https://www.phoenixcontact.com/in/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/in/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.

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

0801505

<https://www.phoenixcontact.com/in/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: latching, Number of individual labels: 24, text field height: 5 mm, text field width: 30 mm

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

0801589

<https://www.phoenixcontact.com/in/products/0801589>



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

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SK 5,0 WH:REEL - Marker strip

0805221

<https://www.phoenixcontact.com/in/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, Number of individual labels: 10, text field height: 5 mm, text field width: 90000 mm

UC-EMLP (15X5) - Plastic label

0819301

<https://www.phoenixcontact.com/in/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, Number of individual labels: 10, text field height: 5 mm, text field width: 15 mm

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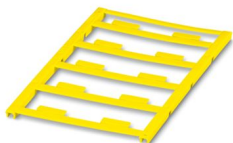
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UC-EMLP (15X5) YE - Plastic label

0822615

<https://www.phoenixcontact.com/in/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, Number of individual labels: 10, text field height: 5 mm, text field width: 15 mm

UC-EMLP (15X5) CUS - Plastic label

0824550

<https://www.phoenixcontact.com/in/products/0824550>



Plastic label, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: adhesive, text field height: 5 mm, text field width: 15 mm

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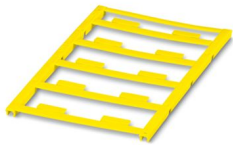
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UC-EMLP (15X5) YE CUS - Plastic label

0824551

<https://www.phoenixcontact.com/in/products/0824551>



Plastic label, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: adhesive, text field height: 5 mm, text field width: 15 mm

UC-EMLP (15X5) SR - Plastic label

0828095

<https://www.phoenixcontact.com/in/products/0828095>



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

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

0828099

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

US-EMLP (15X5) - Plastic label

0828790

<https://www.phoenixcontact.com/in/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, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm

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US-EMLP (15X5) YE - Plastic label

0828873

<https://www.phoenixcontact.com/in/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, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm

US-EMLP (15X5) SR - Plastic label

0828874

<https://www.phoenixcontact.com/in/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, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm

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US-EMLP (15X5) CUS - Plastic label

0830076

<https://www.phoenixcontact.com/in/products/0830076>

Plastic label, Card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm



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

0830077

<https://www.phoenixcontact.com/in/products/0830077>

Plastic label, Card, can be ordered: by card, yellow, labeled according to customer specifications, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm



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

0830078

<https://www.phoenixcontact.com/in/products/0830078>

Plastic label, Card, can be ordered: by card, silver, labeled according to customer specifications, mounting type: adhesive, Number of individual labels: 189, text field height: 5 mm, text field width: 15 mm



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

0830340

<https://www.phoenixcontact.com/in/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: latching, Number of individual labels: 24, text field height: 5 mm, text field width: 30 mm



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

0830348

<https://www.phoenixcontact.com/in/products/0830348>

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



MINI MCR-2-PTB - Power terminal block

2902066

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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



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

2902067

<https://www.phoenixcontact.com/in/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/in/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

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MINI MCR-2-FM-RC - Monitoring block

2904504

<https://www.phoenixcontact.com/in/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/in/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

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SZS 0,6X3,5 - Screwdriver

1205053

<https://www.phoenixcontact.com/in/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

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