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

### **Product Description**

Thanks to its innovative plug-in concept, the communication adapter offers a time-saving wiring solution. Eight MINI Analog Pro signal converters can be quickly and easily integrated into a Modbus/TCP network using a communication adapter. Flexible signal combinations and eliminating the need for I/O input cards saves space and money in the control cabinet.



## **Key Commercial Data**

Packing unit	1 STK
GTIN	4 046356 996716
GTIN	4046356996716
Weight per Piece (excluding packing)	205.100 g
Custom tariff number	85389099
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	51.1 mm
Height	104.1 mm
Depth	61 mm

### Supply

Nominal supply voltage range	12 V 24 V
Supply voltage range	9.6 V 30 V



## Technical data

## Supply

Typical current consumption	130 mA (at 9.6 V DC)
Power consumption	< 1200 mW

## Input data

Available input sources	floating switch contact
	Current source
Number of inputs	8
Configurable/programmable	Yes
Current input signal	4 mA 20 mA
Maximum input current	24 mA
Input resistance current input	50 Ω
Maximum input voltage	5 V

### Output data

Number of outputs	1
Configurable/programmable	Yes
Transmission speed	10 Mbps
	100 Mbps
Data update rate	15 ms

### General

Maximum transmission error	0.1 %
Maximum temperature coefficient	0.01 %
Degree of protection	IP20 (Finger safety)
Overvoltage category	II
Degree of pollution	2
Rated insulation voltage	50 V <sub>rms</sub>
Test voltage, input/output/supply	0.5 kV
Status display	Green LED
Indication	Red LED
Housing material	PBT 7% GF V0
Mounting position	any

### Connection data

Connection name	Output
Connection method	RJ45
Number of positions	8

### Ambient conditions

Ambient temperature (operation)	-40 °C 55 °C
Ambient temperature (storage/transport)	-40 °C 70 °C
Permissible humidity (operation)	5 % 95 %
Permissible humidity (storage/transport)	5 % 95 %



## Technical data

## Ambient conditions

Maximum altitude	4000 m
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## Standards and Regulations

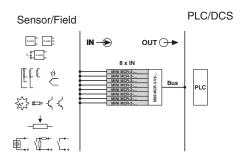
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Conformance	CE-compliant
UL, USA/Canada	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T5
	Class I, Zone 2, Group IIC T5
GL	GL applied for

### **Environmental Product Compliance**

China RoHS	Environmentally Friendly Use Period = 50	
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"	

## **Drawings**

## Block diagram



## Classifications

## eCl@ss

eCl@ss 5.1	27242608
eCl@ss 6.0	27242608
eCl@ss 7.0	27242608
eCl@ss 8.0	27242608
eCl@ss 9.0	27242608

### **ETIM**

ETIM 3.0	EC001604
ETIM 4.0	EC001604
ETIM 5.0	EC001604
ETIM 6.0	EC001604



## Classifications

**UNSPSC** 

01101 00			
UNSPSC 13.2		32151602	
Approvals			
Approvals			
Approvals			
JL Listed / cUL Listed / EAC /	cULus Listed		
Ex Approvals			
JL Listed / cUL Listed / cULus	s Listed		
Approval details			
UL Listed	UL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cUL Listed	CUL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
EAC	ERC		RU C- DE.A*30.B.01082

### Accessories

cULus Listed

Accessories

Device marking

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



Marker for end clamp, Sheet, white, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, mounting type: snapped into marker carrier, lettering field size:  $30 \times 5$  mm



### Accessories

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



Marker for end clamp, Sheet, yellow, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, BLUEMARK CLED, BLUEMARK LED, TOPMARK LASER, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm

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



Plastic label, Sheet, white, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: adhesive, lettering field size: 15 x 5 mm

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



Plastic label, Sheet, yellow, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: adhesive, lettering field size: 15 x 5 mm

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



Plastic label, Sheet, silver, unlabeled, can be labeled with: BLUEMARK CLED, BLUEMARK LED, CMS-P1-PLOTTER, PLOTMARK, mounting type: adhesive, lettering field size: 15 x 5 mm

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



Plastic label, Card, white, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm



### Accessories

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



Plastic label, Card, yellow, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm

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



Plastic label, Card, silver, unlabeled, can be labeled with: THERMOMARK PRIME, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm

### DIN rail connector

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

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



### Accessories

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

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

### Feed-through terminal block

Feed-through terminal block - MINI MCR-2-TB - 2902068



Feed-through terminal block with plug-in connection technology for the transmission of signals already electrically isolated. Screw connection technology

Feed-through terminal block - MINI MCR-2-TB - 2902068



Feed-through terminal block with plug-in connection technology for the transmission of signals already electrically isolated. Screw connection technology

### Frequency transducer

Frequency transducer - MINI MCR-2-UI-FRO-PT - 2902032



Analog frequency transducer with limit value functionality and plug-in connection technology for converting standard signals into frequency or PWM signals. Configurable via DIP switch or software. Push-in connection technology, standard configuration.



### Accessories

Frequency transducer - MINI MCR-2-UI-FRO - 2902031



Analog frequency transducer with limit value functionality and plug-in connection technology for converting standard signals into frequency or PWM signals. Configurable via DIP switch or software. Screw connection technology, standard configuration.

Frequency transducer - MINI MCR-2-UI-FRO-PT-C - 2906202



Analog frequency transducer with limit value functionality and plug-in connection technology for converting standard signals into frequency or PWM signals. Configurable via DIP switch or software. Push-in connection technology, order configuration.

Frequency transducer - MINI MCR-2-UI-FRO-C - 2906201



Analog frequency transducer with limit value functionality and plug-in connection technology for converting standard signals into frequency or PWM signals. Configurable via DIP switch or software. Screw connection technology, order configuration.

Frequency transducer - MINI MCR-2-F-UI - 2902056



Universally configurable frequency transducer for converting frequency and PWM signals into standard signals. Sensor voltages greater than 8.2 V DC are possible in combination with MINI MCR-2-SPS 1033202. Screw connection technology.

Frequency transducer - MINI MCR-2-F-UI-PT - 2902058



Universally configurable frequency transducer for converting frequency and PWM signals into standard signals. Sensor voltages greater than 8.2 V DC are possible in combination with MINI MCR-2-SPS-PT 1033201. Push-in connection technology.

Isolating switch transf.



### Accessories

Isolation amplifier - MINI MCR-2-NAM-2RO-PT - 2902005



Configurable NAMUR signal conditioner with plug-in connection technology for proximity sensors, floating switch contacts, and switch contacts with resistance circuit. 2 transistor outputs. Configurable via DIP switch. Push-in connection technology.

Isolation amplifier - MINI MCR-2-NAM-2RO - 2902004



Configurable NAMUR signal conditioner with plug-in connection technology for proximity sensors, floating switch contacts, and switch contacts with resistance circuit. 2 transistor outputs, configurable via DIP switch. Screw connection technology.

#### 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

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

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



### Accessories

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:  $15 \times 5 \text{ mm}$ 

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

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

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

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

Potiposition transducer



### Accessories

Resistance/potiposition transducer - MINI MCR-2-POT-UI-PT - 2902017



Configurable potiposition transducer with plug-in connection technology for connecting potentiometers from 0  $\Omega$  ... 100  $\Omega$  to 0 k $\Omega$  ... 100 k $\Omega$ . Configurable via DIP switch or software. push-in connection technology, standard configuration

Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016



Configurable potiposition transducer with plug-in connection technology for connecting potentiometers from 0  $\Omega$  ... 100  $\Omega$  to 0 k $\Omega$  ... 100 k $\Omega$  ... 100 k $\Omega$  ... 200 kg configurable via DIP switch or software. Screw connection technology, standard configuration

Resistance/potiposition transducer - MINI MCR-2-POT-UI-PT-C - 2905006



Configurable potiposition transducer with plug-in connection technology for connecting potentiometers from 0  $\Omega$  ... 100 k $\Omega$  ... 100 k $\Omega$  . Configurable via DIP switch or software. Push-in connection technology, order configuration

Resistance/potiposition transducer - MINI MCR-2-POT-UI-C - 2905005



Configurable potiposition transducer with plug-in connection technology for connecting potentiometers from 0  $\Omega$  ... 100  $\Omega$  to 0  $\Omega$  ... 100  $\Omega$  ... Configurable via DIP switch or software. Screw connection technology, order configuration

#### 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



### 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

### Programming adapter

Adapter - IFS-BT-PROG-ADAPTER - 2905872



Bluetooth adapter with micro USB and S-PORT interface for wireless communication with the MINI Analog, MINI Analog Pro, MACX Analog, INTERFACE system gateways, and PLC logic device series.

Programming adapter - IFS-USB-PROG-ADAPTER - 2811271



Programming adapter with USB interface, for programming with software. The USB driver is included in the software solutions for the products to be programmed, such as measuring transducers or motor managers.

Programming adapter - TWN4 MIFARE NFC USB ADAPTER - 2909681



Near Field Communication (NFC) programming adapter with USB interface for the wireless configuration of NFC-capable products from PHOENIX CONTACT with software. No separate USB driver is required.

### Repeater power supplies

Repeater power supply - MINI MCR-2-RPSS-I-I-PT - 2902015



3-way repeater power supply with plug-in connection technology. HART-transparent, input signal 0(4)...20 mA, output signal 0(4)...20 mA. The device can be used in both isolator and repeater power supply operation. push-in connection technology



### Accessories

Repeater power supply - MINI MCR-2-RPSS-I-I - 2902014



3-way repeater power supply with plug-in connection technology. HART-transparent, input signal 0(4)...20 mA, output signal 0(4)...20 mA. The device can be used in both isolator and repeater power supply operation. Screw connection technology

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



4-way power supply doubler with plug-in connection technology. HART transparent, 0(4) ... 20 mA input signal, 0(4)...20 mA output signals. The device can be used in both isolator and repeater power supply mode on active as well as passive analog input cards. Push-in connection technology.

Repeater power supply - MINI MCR-2-RPSS-I-2I - 2905628



4-way power supply doubler with plug-in connection technology. HART transparent, 0(4) ... 20 mA input signal, 0(4)...20 mA output signals. The device can be used in both isolator and repeater power supply mode on active as well as passive analog input cards. Screw connection technology.

### Signal conditioner

Signal conditioner - MINI MCR-2-UNI-UI-UIRO-PT - 2902028



Universally configurable 4-way signal conditioner, with switching output and plug-in connection technology for the electrical isolation of analog signals. Configurable via DIP switch or software. Push-in connection technology, standard configuration.

Signal conditioner - MINI MCR-2-UNI-UI-UIRO - 2902026



Universally configurable 4-way signal conditioner, with switching output and plug-in connection technology for the electrical isolation of analog signals. Configurable via DIP switch or software. Screw connection technology, standard configuration.



### Accessories

Signal conditioner - MINI MCR-2-UNI-UI-UIRO-PT-C - 2902027



Universally configurable 4-way signal conditioner, with switching output and plug-in connection technology for the electrical isolation of analog signals. Configurable via DIP switch or software. Push-in connection technology, order configuration.

### Signal conditioner - MINI MCR-2-UNI-UI-UIRO-C - 2902024



Universally configurable 4-way signal conditioner, with switching output and plug-in connection technology for the electrical isolation of analog signals. Configurable via DIP switch or software. Screw connection technology, order configuration.

### Signal conditioner - MINI MCR-2-UI-UI-PT - 2902040



3-way signal conditioner with plug-in connection technology and calibrated measuring range changeover, for the electrical isolation of unipolar and bipolar analog signals. Input/output configurable via DIP switch. push-in connection technology, standard configuration.

#### Signal conditioner - MINI MCR-2-UI-UI - 2902037



3-way signal conditioner with plug-in connection technology and calibrated measuring range changeover for the electrical isolation of unipolar and bipolar analog signals. Input/output configurable via DIP switch. Screw connection technology, standard configuration.

### Signal conditioner - MINI MCR-2-UI-UI-PT-C - 2902039



3-way signal conditioner with plug-in connection technology and calibrated measuring range changeover for the electrical isolation of unipolar and bipolar analog signals. Input/output configurable via DIP switch. push-in connection technology, order configuration.



### Accessories

Signal conditioner - MINI MCR-2-UI-UI-C - 2902036



3-way signal conditioner with plug-in connection technology and calibrated measuring range changeover for the electrical isolation of unipolar and bipolar analog signals. Input/output configurable via DIP switch. Screw connection technology, order configuration.

Signal conditioner - MINI MCR-2-U-UI-PT - 2902021



3-way signal conditioner, with configurable input/output, for electrical isolation and conversion of analog signals in the mV and V range, unipolar as well as bipolar. Push-in connection technology, standard configuration.

Signal conditioner - MINI MCR-2-U-UI - 2902019

3-way signal conditioner, with configurable input/output, for electrical isolation and conversion of analog signals in the mV and V range, unipolar as well as bipolar. Screw connection technology, standard configuration.

Signal conditioner - MINI MCR-2-U-I0-PT - 2902023



3-way signal conditioner with plug-in connection technology for the electrical isolation of analog signals. Input signal: 0 ... 10 V, output signal: 0 ... 20 mA, push-in connection technology

Signal conditioner - MINI MCR-2-U-I0 - 2902022



3-way signal conditioner with plug-in connection technology for the electrical isolation of analog signals. Input signal:  $0 \dots 10 \text{ V}$ , output signal:  $0 \dots 20 \text{ mA}$ , screw connection technology

Signal conditioner - MINI MCR-2-U-I4-PT - 2902030



3-way signal conditioner with plug-in connection technology for the electrical isolation of analog signals. Input signal: 0 ... 10 V, output signal: 4 ... 20 mA, push-in connection technology



### Accessories

Signal conditioner - MINI MCR-2-U-I4 - 2902029



3-way signal conditioner with plug-in connection technology for the electrical isolation of analog signals. Input signal: 0 ... 10 V, output signal: 4 ... 20 mA, screw connection technology

Signal conditioner - MINI MCR-2-I-I-PT - 2901999



3-way signal conditioner with plug-in connection technology for the electrical isolation of analog signals. Input signal: 0(4) mA ... 20 mA, output signal: 0(4) mA ... 20 mA, push-in connection technology.

Signal conditioner - MINI MCR-2-I-I - 2901998



3-way signal conditioner with plug-in connection technology for the electrical isolation of analog signals. Input signal: 0(4) mA ... 20 mA, output signal: 0(4) mA ... 20 mA, screw connection technology

Loop-powered isolators - MINI MCR-2-I-I-ILP-PT - 2901995



Single-channel input loop-powered 2-way isolator with plug-in connection technology for the electrical isolation of analog signals. Input signal = output signal: 0(4) mA ... 20 mA. Push-in connection technology.

Loop-powered isolators - MINI MCR-2-I-I-ILP - 2901994



Single-channel input loop-powered 2-way isolator with plug-in connection technology for the electrical isolation of analog signals. Input signal = output signal: 0(4) mA ... 20 mA. Screw connection technology.

Signal duplicator



### Accessories

Signal duplicator - MINI MCR-2-UNI-UI-2UI-PT - 2905028



Universally configurable 4-way signal duplicator, with plug-in connection technology for the electrical isolation and duplication of analog signals. Configurable via DIP switch or software. Push-in connection technology, standard configuration.

### Signal duplicator - MINI MCR-2-UNI-UI-2UI - 2905026



Universally configurable 4-way signal duplicator, with plug-in connection technology for the electrical isolation and duplication of analog signals. Configurable via DIP switch or software. Screw connection technology, standard configuration.

### Signal duplicator - MINI MCR-2-UNI-UI-2UI-PT-C - 2905027



Universally configurable 4-way signal duplicator, with plug-in connection technology for the electrical isolation and duplication of analog signals. Configurable via DIP switch or software. Push-in connection technology, order configuration.

#### Signal duplicator - MINI MCR-2-UNI-UI-2UI-C - 2905025



Universally configurable 4-way signal duplicator, with plug-in connection technology for the electrical isolation and duplication of analog signals. Configurable via DIP switch or software. Screw connection technology, order configuration.

### Temperature transmitter

Resistance thermometer measuring transducer - MINI MCR-2-RTD-UI-PT - 2902052



Configurable temperature transducer with plug-in connection technology for connecting 2, 3, and 4-conductor resistance thermometers and resistance-type sensors. Configurable via DIP switch or software. push-in connection technology, standard configuration



### Accessories

Resistance thermometer measuring transducer - MINI MCR-2-RTD-UI - 2902049



Configurable temperature transducer with plug-in connection technology for connecting 2, 3, and 4-conductor resistance thermometers and resistance-type sensors. Configurable via DIP switch or software. Screw connection technology, standard configuration

Resistance thermometer measuring transducer - MINI MCR-2-RTD-UI-PT-C - 2902051



Configurable temperature transducer with plug-in connection technology for connecting 2, 3, and 4-conductor resistance thermometers and resistance-type sensors. Configurable via DIP switch or software. push-in connection technology, order configuration

Resistance thermometer measuring transducer - MINI MCR-2-RTD-UI-C - 2902048



Configurable temperature transducer with plug-in connection technology for connecting 2, 3, and 4-conductor resistance thermometers and resistance-type sensors. Configurable via DIP switch or software. Screw connection technology, order configuration

Thermocouple measuring transducer - MINI MCR-2-TC-UI-PT - 2905249



Configurable temperature transducer with plug-in connection technology for connecting thermocouples. Configurable via DIP switch or software. Push-in connection technology, standard configuration

Thermocouple measuring transducer - MINI MCR-2-TC-UI - 2902055



Configurable temperature transducer with plug-in connection technology for connecting thermocouples. Configurable via DIP switch or software. Screw connection technology, standard configuration



### Accessories

Thermocouple measuring transducer - MINI MCR-2-TC-UI-PT-C - 2905248



Configurable temperature transducer with plug-in connection technology for connecting thermocouples. Configurable via DIP switch or software. Push-in connection technology, order configuration

Thermocouple measuring transducer - MINI MCR-2-TC-UI-C - 2902053



Configurable temperature transducer with plug-in connection technology for connecting thermocouples. Configurable via DIP switch or software. Screw connection technology, order configuration

### Terminal marking

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



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK S1.1, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5 mm

## Threshold value switch

Limit value switches - MINI MCR-2-T-REL-PT - 2905633



Universally configurable temperature limit value switch with N/O relay output for the connection of 2, 3, and 4-conductor resistance thermometers and thermocouples. Configurable via DIP switch or software. Push-in connection technology

Limit value switches - MINI MCR-2-T-REL - 2905632



Universally configurable temperature limit value switch with N/O relay output for the connection of 2, 3, and 4-conductor resistance thermometers and thermocouples. Configurable via DIP switch or software, screw connection technology



## Accessories

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

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