

Technical data

Configuration

Configuration options	DIP switch Potentiometer
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Input

Input signal type	Voltage Current
Input signal (voltage)	±5 V; 0 ... 5 V; 1 ... 5 V; ±10 V; 0 ... 10 V; 2 ... 10 V
Input signal (current)	±10 mA; 0 ... 10 mA; 2 ... 10 mA; ±20 mA; 0 ... 20 mA; 4 ... 20 mA
Input resistance (current input)	≤ 50 Ω
Input resistance (voltage input)	1 MΩ
Input current (max.)	50 mA
Input voltage (max.)	32 V
Zero/span adjustment	± 5 % of upper-range value

Output – analog

Output signal type	Current Voltage
Output signal (voltage)	± 5 V; 0 ... 5 V; 1 ... 5 V; ± 10 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	± 10 mA; 0 ... 10 mA; 2 ... 10 mA; ± 20 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω

Signal processing

Limit frequency	100 Hz / 5 kHz (configurable via DIP switch)
Step response (typ.)	3.5 ms (100 Hz); 68 μs (5 kHz)

Measurement error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Transmission error (max.)	≤ 0.2 % of upper-range value
Transmission error (under interference)	≤ 15 %
Temperature coefficient	≤ 0.01 %/K

Supply

Power supply type	24 VDC (SELV)
Nominal supply voltage U_s	DC 24 V
Supply voltage range	±30 %
Current consumption (default)	≤ 20 mA
Current consumption (max.)	≤ 40 mA

Safety and protection

Rated voltage	300 V
Protection type	IP20

Test voltage

Test voltage (input/output/supply)	AC 3 kV; 50 Hz; 1 min
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Insulation parameters

Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output/supply)	Functional insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)

Connection data

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 22 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches
Cable type	Shielded cable

Physical data

Width	6 mm / 0.236 inches
Height	94 mm / 3.701 inches
Depth from upper-edge of DIN-rail	97.8 mm / 3.85 inches

Mechanical data

Mounting type	DIN-35 rail
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Material Data

Fire load	0.585 MJ
Weight	38.4 g

Environmental requirements

Ambient temperature (operation at U_N)	-25 ... 70 °C
Surrounding air temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Temperature range of connection cable	$\geq (T_{\text{ambient}} + 10 \text{ K})$
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3
Standards/specifications	EN 61010-1 EN 61373 DNV

Commercial data

Product Group	6 (Interface Electronics)
eCl@ss 10.0	27-21-01-20
eCl@ss 9.0	27-21-01-20
ETIM 8.0	EC002653
ETIM 7.0	EC002653
PU (SPU)	1 Stück
Packaging type	Bag
Country of origin	DE
GTIN	4045454828493
Customs tariff number	85437090300

Approvals and certificates

General approvals



Approval	Standard	Certificate name
EAC Brjansker Zertifizierungs- stelle	TP TC 020/2011	EAC_Certificate_RU_C- DE.AM02.B.00115_19

General approvals

UL	UL 508	E175199 Sec.4
UL International Nether- lands B.V. (ORDINARY LO- CATIONS)		

Approvals for marine applications



Approval	Standard	Certificate name
BV Bureau Veritas S.A.	Rules for class. of Steel Ships	40179_B0
DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA00001D1

Approvals for hazardous areas



Approval	Standard	Certificate name
ATEX TUEV Nord Cert GmbH	EN 60079-0	
CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02. B.00144/19 (2 Ex nA IIC T4 Gc X)
IECEX TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0030_X
UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Downloads

Environmental Product Compliance

Compliance Search
Environmental Product Compliance 857-409 ↓

Documentation

Bid Text			
857-409	18.07.2019	xml 6.15 KB	↓
857-409	18.07.2019	docx 18.48 KB	↓
857-409	18.07.2019	pdf 74.80 KB	↓

Instruction Leaflet			
Trennverstärker; bipolares Strom- und Spannungseingangssignal; bipolares Strom- und Spannungsausgangssignal	V 2.1.0 07.04.2022	pdf 2111.32 KB	↓

CAD/CAE-Data

CAD data
2D/3D Models 857-409 ↓

CAE data
EPLAN Data Portal 857-409 ↓
WSCAD Universe 857-409 ↓
ZUKEN Portal 857-409 ↓

1 Compatible products

1.1 Optional accessories

1.1.1 Installation

1.1.1.1 Mounting accessories



Item no.: 249-117

Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

Item no.: 249-197

Screwless end stop; 14 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

Item no.: 249-116

Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray

1.1.2 Interface module

1.1.2.1 Interface adapters



Item no.: 857-980

Interface adapter; 16-pole; analog

1.1.3.1 Jumper



Item no.: 281-482

Jumper; 2-way; insulated; gray

Item no.: 859-410/000-006

Jumper; for jumper slot; 10-way; insulated; blue

Item no.: 859-410

Jumper; for jumper slot; 10-way; insulated; light gray

Item no.: 859-410/000-005

Jumper; for jumper slot; 10-way; insulated; red



Item no.: 859-410/000-029

Jumper; for jumper slot; 10-way; insulated; yellow

Item no.: 859-402/000-006

Jumper; for jumper slot; 2-way; insulated; blue

Item no.: 859-402

Jumper; for jumper slot; 2-way; insulated; light gray

Item no.: 859-402/000-005

Jumper; for jumper slot; 2-way; insulated; red



Item no.: 859-402/000-029

Jumper; for jumper slot; 2-way; insulated; yellow

Item no.: 859-403/000-006

Jumper; for jumper slot; 3-way; insulated; blue

Item no.: 859-403

Jumper; for jumper slot; 3-way; insulated; light gray

Item no.: 859-403/000-005

Jumper; for jumper slot; 3-way; insulated; red



Item no.: 859-403/000-029

Jumper; for jumper slot; 3-way; insulated; yellow

Item no.: 859-404/000-006

Jumper; for jumper slot; 4-way; insulated; blue

Item no.: 859-404

Jumper; for jumper slot; 4-way; insulated; light gray

Item no.: 859-404/000-005

Jumper; for jumper slot; 4-way; insulated; red



Item no.: 859-404/000-029

Jumper; for jumper slot; 4-way; insulated; yellow

Item no.: 859-405/000-006

Jumper; for jumper slot; 5-way; insulated; blue

Item no.: 859-405

Jumper; for jumper slot; 5-way; insulated; light gray

Item no.: 859-405/000-005

Jumper; for jumper slot; 5-way; insulated; red



Item no.: 859-405/000-029

Jumper; for jumper slot; 5-way; insulated; yellow

Item no.: 859-406/000-006

Jumper; for jumper slot; 6-way; insulated; blue

Item no.: 859-406

Jumper; for jumper slot; 6-way; insulated; light gray

Item no.: 859-406/000-005

Jumper; for jumper slot; 6-way; insulated; red



Item no.: 859-406/000-029

Jumper; for jumper slot; 6-way; insulated; signal yellow

Item no.: 859-407/000-006

Jumper; for jumper slot; 7-way; insulated; blue

Item no.: 859-407

Jumper; for jumper slot; 7-way; insulated; light gray

Item no.: 859-407/000-005

Jumper; for jumper slot; 7-way; insulated; red



Item no.: 859-407/000-029

Jumper; for jumper slot; 7-way; insulated; yellow

Item no.: 859-408/000-006

Jumper; for jumper slot; 8-way; insulated; blue

Item no.: 859-408

Jumper; for jumper slot; 8-way; insulated; light gray

Item no.: 859-408/000-005

Jumper; for jumper slot; 8-way; insulated; red



Item no.: 859-408/000-029

Jumper; for jumper slot; 8-way; insulated; yellow

Item no.: 859-409/000-006

Jumper; for jumper slot; 9-way; insulated; blue

Item no.: 859-409

Jumper; for jumper slot; 9-way; insulated; light gray

Item no.: 859-409/000-005

Jumper; for jumper slot; 9-way; insulated; red

1.1.3 Jumper

1.1.3.1 Jumper



Item no.: 859-409/000-029

Jumper; for jumper slot; 9-way; insulated; yellow

1.1.4 Marking

1.1.4.1 Marker



Item no.: 793-5501

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type; white



Item no.: 793-502

WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-566

WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-503

WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-504

WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-505

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-506

WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white



Item no.: 793-501

WMB marking card; as card; not stretchable; plain; snap-on type; white



Item no.: 2009-115

WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white

1.1.4.2 Marking strip



Item no.: 2009-110

Marking strips; for Smart Printer; on reel; not stretchable; plain; snap-on type; white

1.1.5 Power supply

1.1.5.1 Power supply unit



Item no.: 787-2852

Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current

1.1.6 Terminal blocks

1.1.6.1 Supply module



Item no.: 857-979

Supply and through module

1.1.6.2 Through terminal block



Item no.: [857-979](#)

Supply and through module

1.1.7 Tool

1.1.7.1 Operating tool



Item no.: [210-720](#)

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation notes

Configuring

Configuration via DIP switch

Commoning

Commoning, not discrete wiring – Same outline allows use of a single in-line, push-in jumper.