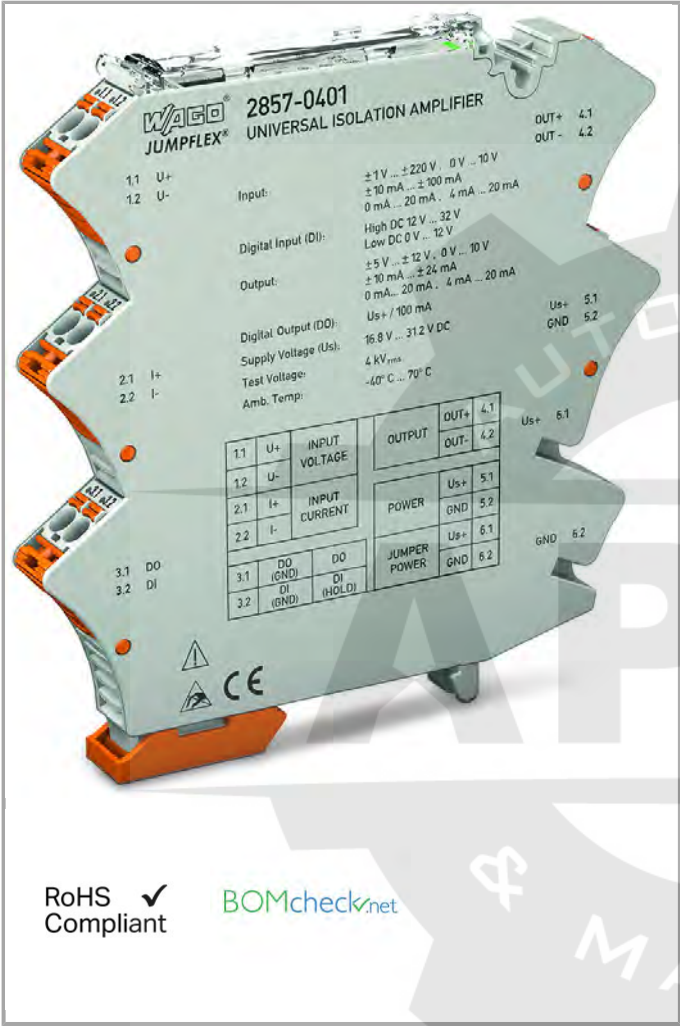


Data sheet | Item number: 2857-401

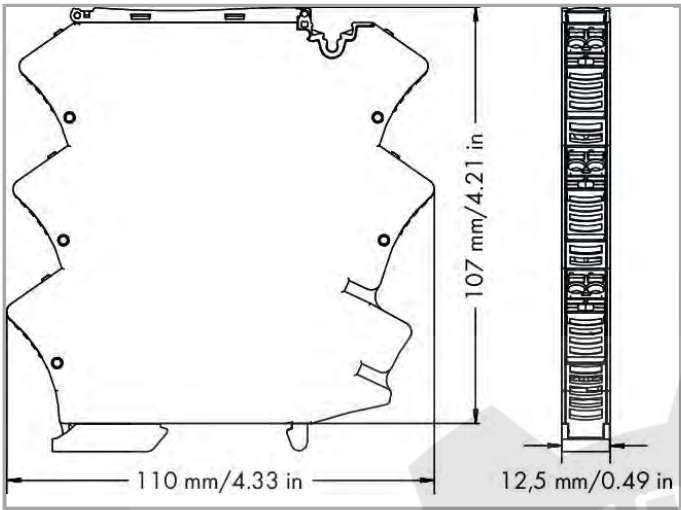
Isolation amplifier; Bipolar current and voltage input signal; Bipolar current and voltage output signal; Digital output; Supply voltage: 24 VDC; 12.5 mm module width



2857-401



1.1	U+	INPUT VOLTAGE	OUTPUT	OUT+	4.1
1.2	U-			OUT-	4.2
2.1	I+	INPUT CURRENT	POWER	U _{S+}	5.1
2.2	I-			GND	5.2
3.1	DO (GND)	DO	JUMPER POWER	U _{S+}	6.1
3.2	DI (GND)	DI (HOLD)		GND	6.2



2857-401

DIP Switch Adjustability

• ON

Default

DIP Switch S1

1		2		3		4		5		6		7		8	
Signal		Polarity		Range / mA		Range / V		Inverted Characteristic		Limit Frequency					
•	Current	•	Unipolar	•	0...20	•	0...10	•	Not Inverted	•	10 kHz				
•	Voltage	•	Bipolar*	•	0...1	•	0...1	•	Inverted	•	5 kHz				
				•	0...5	•	0...5			•	100 Hz				
				•	0...10	•	1...5			•	30 Hz				
				•	2...10	•	2...10								
				•	4...20	•	0...30								
				•	0...50	•	0...100								
				•	0...100	•	0...220								

DIP Switch S1

9		10		1		2	
Signal		Polarity		Range / mA		Range / V	
•	Current	•	Unipolar	•	0...20	•	0...10
•	Voltage	•	Bipolar*	•	4...20	•	2...10
				•	0...50	•	0...5
				•	2...10	•	1...5

DIP Switch S2

3		4		5		6	
Measuring Range Underflow		Output		Measuring Range Overflow		Digital Output (DO)	
•	Lower limit of output range -5%**	•	Lower limit of output range	•	Upper limit of output range +2.5%**	•	DO1
•	Lower limit of output range	•	Upper limit of output range	•	Upper limit of output range	•	DO2
•	Lower limit of output range -5%	•	Upper limit of output range +5%	•	Upper limit of output range	•	DO3

•

Bipolar only applies to ranges starting with 0.

**

acc. to NAMUR NE 43

Item description

Short description:

The Isolation Amplifier converts, amplifies, filters and electrically isolates analog signals.

Features:

- Analog unipolar/bipolar signals at input/output
- A digital signal output reacts to configured measuring range limits (switching ON/OFF delay and threshold value switch function configurable with up to two threshold values).
- A digital HOLD input freezes the output signal.
- Clipping capability provides analog signal limitation to output end values.
- Adjustable software/hardware filter
- Input/Output response simulation via configuration display

Safe 3-way isolation with 4 kV test voltage per EN 61140

Note:

Additional setting options via interface configuration software or interface configuration app

Data Technical Data

Configuration

Configuration options

DIP switches
Interface configuration software
Interface configuration app
Configuration display

Input

Input signal type	Voltage Current
Input signal voltage	$\pm 1\text{ V}$; 0 ... 1 V; $\pm 5\text{ V}$; 0 ... 5 V; 1 ... 5 V; $\pm 10\text{ V}$; 0 ... 10 V; 2 ... 10 V; $\pm 30\text{ V}$; 0 ... 30 V; $\pm 100\text{ V}$; 0 ... 100 V; $\pm 200\text{ V}$; 0 ... 220 V
Input signal, current	$\pm 1\text{ mA}$; 0 ... 1 mA; $\pm 10\text{ mA}$; 0 ... 10 mA; 2 ... 10 mA; $\pm 20\text{ mA}$; 0 ... 20 mA; 4 ... 20 mA; $\pm 100\text{ mA}$; 0 ... 100 mA
Input resistance (input/current)	$\leq 50\ \Omega$
Input resistance (input/voltage)	$\geq 1\text{ M}\Omega$
Max. input current	$\pm 120\text{ mA}$
Max. input voltage	$\pm 250\text{ V}$

Input – Digital

HOLD signal	11.8 V ... U_S
-------------	------------------

Output

Output signal type	Voltage Current
Output signal voltage	$\pm 5\text{ V}$; 0 ... 5 V; 1 ... 5 V; $\pm 10\text{ V}$; 0 ... 10 V; 2 ... 10 V
Output signal current	$\pm 10\text{ mA}$; 0 ... 10 mA; 2 ... 10 mA; $\pm 20\text{ mA}$; 0 ... 20 mA; 4 ... 20 mA
Load impedance (output/voltage)	$\geq 1\text{ k}\Omega$
Load impedance (output/current)	$\leq 600\ \Omega$

Output – Digital

Max. switching voltage (DO)	Supply voltage applied: -0.3 V
Max. continuous current (DO)	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)

Signal processing

Max. operating frequency	10 kHz / 5 kHz / 100 Hz / 30 Hz (configurable via DIP switch or software)
Software filter; adjustable	moving mean value (filtering level: 30)
Step response typ.	1 ms

Measurement error

Transmission error typ.	$\leq 0.1\%$ of upper range value
Temperature coefficient	$\leq 0.01\%$ /K

Power supply

Type of power supply	24 VDC
Nominal supply voltage U_S	DC 24 V
Supply voltage range	$\pm 30\%$
Current consumption at supply voltage	$\leq 70\text{ mA (+ } I_{D0})$

Safety and protection:

Test voltage (input/output/supply)	AC 4 kV; 50 Hz; 1 min
Protection class	IP20

Connection data

Connection technology	Push-in CAGE CLAMP®
WAGO terminal	picoMAX® 5.0
Solid conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch

Geometrical Data

Width	12.5 mm / 0.492 inch
Height from upper-edge of DIN-35 rail	107 mm / 4.213 inch
Depth	110 mm / 4.331 inch

Mechanical data

Type of mounting	DIN-35 rail
------------------	-------------

Material Data

Fire load	0 MJ
Weight	85.859 g

Environmental Requirements

Surrounding air (operating) temperature	-40 ... 70 °C
Surrounding air (storage) temperature	-40 ... 85 °C

Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-4; EN 61326-2-3; EN 50121-3-2

Standards/specifications

EN 60664-1; EN 61373

Commercial data

Product Group	6 (Interface Electronics)
Country of origin	DE
GTIN	4050821676966
Customs Tariff No.	85437090300

Compatible products

General accessories

	Item no.: 2857-900 Configuration display	2857-900
	Item no.: 750-921 Bluetooth® Adapter	750-921
	Item no.: 750-923 Configuration cable; USB connector; Length: 2.5 m	750-923
	Item no.: 750-923/000-001 Configuration cable; USB connector; Length: 5 m	750-923 /000-001
	Item no.: 857-304 Relay module; Nominal input voltage: 24 VDC; 1 changeover contact; Limiting continuous current: 6 A; Yellow status indicator; Module width: 6 mm	857-304
	Item no.: 857-979 Supply and through module	857-979

assembling

	Item no.: 249-116 Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5	249-116
	Item no.: 249-117 Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5	249-117
	Item no.: 249-197 Screwless end stop; 14 mm wide; for DIN-rail 35 x 15 and 35 x 7.5	249-197

Jumper

	Item no.: 281-482 Comb-style jumper bar; insulated; 2-way; IN = IN terminal block	281-482
	Item no.: 859-402 Push-in type jumper bar; 2-way; Nominal current 18 A; insulated	859-402



Item no.: 859-402/000-005
Push-in type jumper bar; 2-way; Nominal current 18 A; insulated

/000-005

859-402



Item no.: 859-402/000-006
Push-in type jumper bar; 2-way; Nominal current 18 A; insulated

/000-006

859-402



Item no.: 859-402/000-029
Push-in type jumper bar; 2-way; Nominal current 18 A; insulated

/000-029

859-402

check



Item no.: 735-500
Test pin; 1 mm Ø; with solder connection for test wire

735-500

Marking accessories



Item no.: 2009-110
Marking strips; on reel; not stretchable; plain; snap-on type

2009-110



Item no.: 2009-115
WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type

2009-115



Item no.: 2009-115/000-002
WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type

/000-002

2009-115



Item no.: 2009-115/000-006
WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type

/000-006

2009-115



Item no.: 2009-115/000-007
WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type

/000-007

2009-115



Item no.: 2009-115/000-012
WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type

/000-012

2009-115



Item no.: 2009-115/000-017
WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type

/000-017

2009-115



Item no.: 2009-115/000-023
WMB-Inline; for Smart Printer; on reel; stretchable 5 - 5.2 mm; plain; snap-on type

/000-023

2009-115



Item no.: 2009-115/000-024
WMB-Inline; for smartPRINTER; on reel; stretchable 5 - 5.2 mm; plain; snap-on type

/000-024

2009-115



Item no.: 2009-141
Micro-WSB-Inline; on reel; plain; snap-on type

2009-141



Item no.: 793-501
WMB marking card; as card; not stretchable; plain; snap-on type

793-501

	Item no.: 793-501/000-002 WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-002
	Item no.: 793-501/000-005 WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-005
	Item no.: 793-501/000-006 WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-006
	Item no.: 793-501/000-007 WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-007
	Item no.: 793-501/000-012 WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-012
	Item no.: 793-501/000-017 WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-017
	Item no.: 793-501/000-023 WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-023
	Item no.: 793-501/000-024 WMB marking card; as card; not stretchable; plain; snap-on type	793-501 /000-024
	Item no.: 793-502 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502
	Item no.: 793-502/000-002 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-002
	Item no.: 793-502/000-005 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-005
	Item no.: 793-502/000-006 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-006
	Item no.: 793-502/000-007 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-007
	Item no.: 793-502/000-012 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-012
	Item no.: 793-502/000-017 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type	793-502 /000-017

	Item no.: 793-502/000-023 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type /0000-023	793-502
	Item no.: 793-502/000-024 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type /0000-024	793-502
	Item no.: 793-503 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type	793-503
	Item no.: 793-503/000-002 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type /0000-002	793-503
	Item no.: 793-503/000-005 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type /0000-005	793-503
	Item no.: 793-503/000-006 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type /0000-006	793-503
	Item no.: 793-503/000-007 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type /0000-007	793-503
	Item no.: 793-503/000-012 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type /0000-012	793-503
	Item no.: 793-503/000-017 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type /0000-017	793-503
	Item no.: 793-503/000-023 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type /0000-023	793-503
	Item no.: 793-503/000-024 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type /0000-024	793-503
	Item no.: 793-504 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type	793-504
	Item no.: 793-504/000-002 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type /0000-002	793-504
	Item no.: 793-504/000-005 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type /0000-005	793-504
	Item no.: 793-504/000-006 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type /0000-006	793-504

**Item no.: 793-504/000-012**

793-504

WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type /0000-012

**Item no.: 793-504/000-017**

793-504

WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type /0000-017

**Item no.: 793-504/000-023**

793-504

WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type /0000-023

**Item no.: 793-505**

793-505

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

**Item no.: 793-505/000-005**

793-505

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type /0000-005

**Item no.: 793-505/000-006**

793-505

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type /0000-006

**Item no.: 793-505/000-007**

793-505

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type /0000-007

**Item no.: 793-505/000-012**

793-505

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type /0000-012

**Item no.: 793-506**

793-506

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

**Item no.: 793-506/000-005**

793-506

WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type /0000-005

**Item no.: 793-506/000-006**

793-506

WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type /0000-006

**Item no.: 793-506/000-012**

793-506

WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type /0000-012

**Item no.: 793-506/000-017**

793-506

WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type /0000-017

**Item no.: 793-5501**

793-5501

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

**Item no.: 793-5501/000-002**

793-5501

WMB marking card; as card; for terminal block width 5 - 17.5 mm; stretchable 5 - 5.2 mm; plain; snap-on type /0000-002



Item no.: 793-5501/000-005

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-005

793-5501



Item no.: 793-5501/000-006

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-006

793-5501



Item no.: 793-5501/000-007

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-007

793-5501



Item no.: 793-5501/000-012

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-012

793-5501



Item no.: 793-5501/000-014

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-014

793-5501



Item no.: 793-5501/000-017

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-017

793-5501



Item no.: 793-5501/000-023

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-023

793-5501



Item no.: 793-5501/000-024

WMB marking card; as card; stretchable 5 - 5.2 mm; plain; snap-on type

/000-024

793-5501



Item no.: 793-566

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

793-566



Item no.: 793-566/000-002

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

/000-002

793-566



Item no.: 793-566/000-005

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

/000-005

793-566



Item no.: 793-566/000-006

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

/000-006

793-566



Item no.: 793-566/000-007

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

/000-007

793-566



Item no.: 793-566/000-012

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

/000-012

793-566



Item no.: 793-566/000-017

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

/000-017

793-566



Item no.: 793-566/000-023

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

793-566

793-566



Item no.: 793-566/000-024

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

793-566

793-566

power supply



Item no.: 787-2852

Switched-mode power supply; for JUMPFLEX® Signal Conditioners; 1-phase; 24 VDC output voltage; 1 A output current

787-2852

tools



Item no.: 210-720

Operating tool with partially insulated shaft; Type 2, blade (3.5 x 0.5) mm

210-720

Downloads

Documentation

Bid Text

2857-401

Trennverstärker,

Mar 9, 2016

doc
32.3 kB

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Instruction Leaflet

JUMPFLEX® Signal Conditioner, Universal Isolation Amplifier, Data Sheet

pdf
2.3 MB

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Additional Information

Disposal; Electrical and electronic equipment, Packaging

V 1.0.0

pdf
265.8 kB

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Engineering-Software

Software for Interface-Products

Interface Configuration Software SMALL

The full setup only includes the WAGO Interface Configuration Software.

1.6.2.11
Jan 14, 2019

exe
47.1 MB

Download

Interface Configuration Software FULL

The full setup, in addition to the WAGO Interface Configuration Software, includes the installation for the Microsoft .NET Framework.

1.6.2.11
Jan 14, 2019

exe
97.5 MB

Download

Runtime Software

Firmware



Firmware: 2857-401 Isolation amplifier; Bipolar current and voltage input signal; Bipolar current and voltage output signal; Digital output; Supply voltage: 24 VDC; 12.5 mm module width	02 May 9, 2017	zip 293.4 kB	Download
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CAD/CAE - Smart Data

CAD data

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Subject to changes.