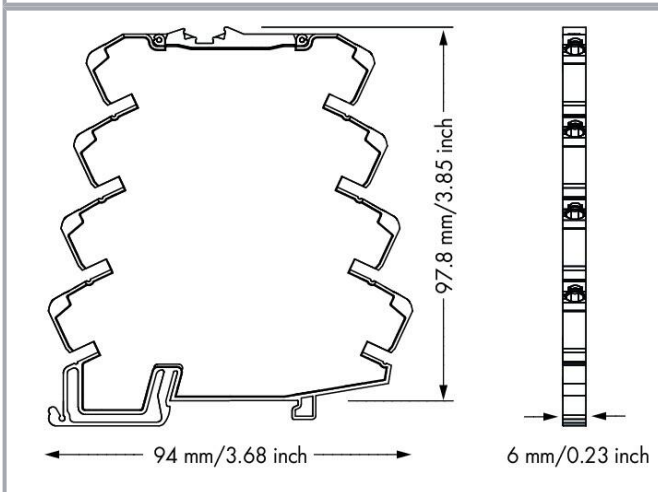
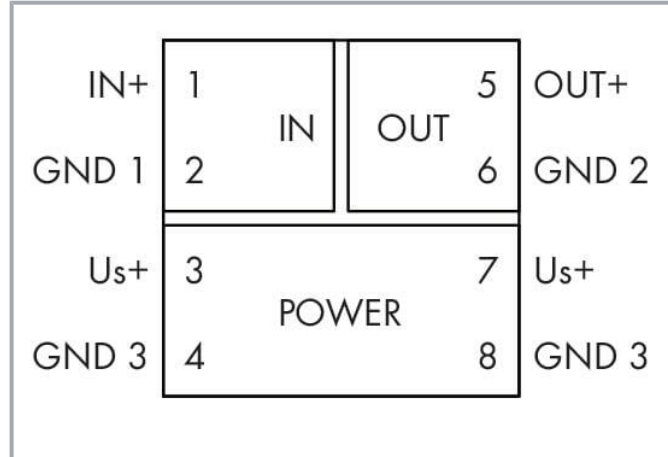
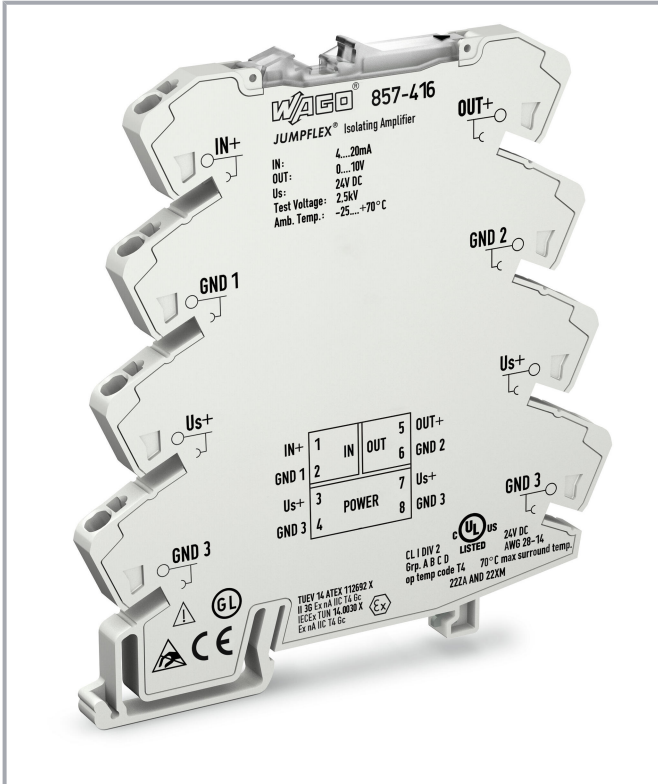


Data sheet | Item number: 857-416

Isolation amplifier; Current input signal; Voltage output signal; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm²



www.wago.com/857-416



Subject to changes. Please also observe the further product documentation!

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Item description

Short description:

WAGO's pre-configured signal conditioner converts, amplifies, filters and electrically isolates analog standard signals.

Features:

- Input/output: current or voltage signal
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Data

Notes

Note	The 3 (Us+), 7 (Us+), 4 (GND 3) and 8 (GND 3) connections are internally commoned. Current carrying capacity between 3/4 and 7/8 connections: 1 A (max.)
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Technical data

Configuration

Configuration options	Pre-configured
-----------------------	----------------

Input

Input signal type	Current
Input signal (current)	4 ... 20 mA
Input resistance (current input)	$\leq 50 \Omega$
Input current (max.)	50 mA

Output (analog)

Output signal type	Voltage
Output signal (voltage)	0 ... 10 V
Load impedance (voltage output)	$\geq 2 \text{ k}\Omega$

Signal Processing

Limit frequency	100 Hz
Step response (typ.)	3.5 ms

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Measurement Error

Transmission error (typ.)	≤ 0.1 % of upper-range value
Temperature coefficient	≤ 0.01 %/K

Supply

Power supply type	24 VDC
Nominal supply voltage U_S	DC 24 V
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 25 mA

Safety and protection

Protection type	IP20
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Test voltage

Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min
------------------------------------	-------------------------

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

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
---------------	-------------

Material Data

Fire load	0.418 MJ
Weight	35.8 g

Subject to changes. Please also observe the further product documentation!



Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
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 61000-6-4
Standards/specifications	DNV

Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
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 pcs
Packaging type	bag
Country of origin	DE
GTIN	4045454609849
Customs tariff number	85437090300

Environmental Product Compliance

CAS-No.	7439-92-1
REACH Candidate List Substance	Lead
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	d5b33c48-654a-4d2a-8d6f-909ea675b6c1
SCIP notification number (Belgium)	7b6a881c-5a5a-4401-a215-5f5135155915
SCIP notification number (Bulgaria)	eb52a478-94a4-467f-a339-b6ac90e97e6d
SCIP notification number (Czech Republic)	aa58bf47-afcd-4ee2-8cef-ae5feab89891
SCIP notification number (Denmark)	562bc52d-5c09-4c5e-9a5e-7d810435a00a

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SCIP notification number (Finland)	86a9a991-3ec4-4df3-b7d4-3ae7124c5787
SCIP notification number (France)	86c2e762-4ad9-4803-ae32-1814f6b3ca11
SCIP notification number (Germany)	8600a108-f13f-48aa-aa38-95a429f60acb
SCIP notification number (Hungary)	731ffd24-903e-475b-8687-da9fda229ed7
SCIP notification number (Italy)	ef2a75f5-fc59-4d35-87e5-4ef52c78a2ab
SCIP notification number (Netherlands)	634ef570-ba1e-4f72-8c87-18949657dc3d
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SCIP notification number (Romania)	26dfd073-77de-49b8-9f1f-c9f30154c7f6
SCIP notification number (Sweden)	4095ca4a-1aa0-44d0-ba8e-3385123568d2

Approvals / Certificates



General approvals

Logo	Approval	Additional Approval Text	Certificate name
	CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C- DE.AM02.B.00115_19

Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	BV Bureau Veritas S.A.	Rules for class. of Steel Ships	40179_B0
	DNV DNV Germany GmbH	DNV-CG-0339, Aug. 2021	TAA00001D1
	PRS	-	TE/2186

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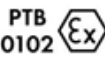





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Polski Rejestr Statków

/880590/18



Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TÜV_14_ATEX_112692_X (II 3 G Ex nA IIC T4 Gc)
	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
	UKEx WAGO GmbH & Co. KG	EN 60079-0	WAGO22UKEX004X
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Optional accessories

Interface module














Interface adapters

	Item no.: 857-980 Interface adapter; 16-pole; analog	www.wago.com/857-980
Jumpers		
Jumper		
	Item no.: 859-408 Jumper; for jumper slot; 8-way; insulated; light gray	www.wago.com/859-408

Subject to changes. Please also observe the further product documentation!

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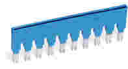
	Item no.: 281-482 Jumper; 2-way; insulated; gray	www.wago.com/281-482
	Item no.: 859-404/000-005 Jumper; for jumper slot; 4-way; insulated; red	www.wago.com/859-404/000-005
	Item no.: 859-404/000-006 Jumper; for jumper slot; 4-way; insulated; blue	www.wago.com/859-404/000-006
	Item no.: 859-405/000-005 Jumper; for jumper slot; 5-way; insulated; red	www.wago.com/859-405/000-005
	Item no.: 859-405/000-029 Jumper; for jumper slot; 5-way; insulated; yellow	www.wago.com/859-405/000-029
	Item no.: 859-405 Jumper; for jumper slot; 5-way; insulated; light gray	www.wago.com/859-405
	Item no.: 859-404/000-029 Jumper; for jumper slot; 4-way; insulated; yellow	www.wago.com/859-404/000-029
	Item no.: 859-406 Jumper; for jumper slot; 6-way; insulated; light gray	www.wago.com/859-406
	Item no.: 859-405/000-006 Jumper; for jumper slot; 5-way; insulated; blue	www.wago.com/859-405/000-006
	Item no.: 859-406/000-005 Jumper; for jumper slot; 6-way; insulated; red	www.wago.com/859-406/000-005
	Item no.: 859-409/000-029 Jumper; for jumper slot; 9-way; insulated; yellow	www.wago.com/859-409/000-029
	Item no.: 859-410/000-005 Jumper; for jumper slot; 10-way; insulated; red	www.wago.com/859-410/000-005
	Item no.: 859-410/000-029 Jumper; for jumper slot; 10-way; insulated; yellow	www.wago.com/859-410/000-029

Subject to changes. Please also observe the further product documentation!



Item no.: 859-410
Jumper; for jumper slot; 10-way; insulated; light gray

www.wago.com/859-410



Item no.: 859-410/000-006
Jumper; for jumper slot; 10-way; insulated; blue

www.wago.com/859-410/000-006



Item no.: 859-403/000-005
Jumper; for jumper slot; 3-way; insulated; red

www.wago.com/859-403/000-005



Item no.: 859-402/000-029
Jumper; for jumper slot; 2-way; insulated; yellow

www.wago.com/859-402/000-029



Item no.: 859-403/000-029
Jumper; for jumper slot; 3-way; insulated; yellow

www.wago.com/859-403/000-029



Item no.: 859-403/000-006
Jumper; for jumper slot; 3-way; insulated; blue

www.wago.com/859-403/000-006



Item no.: 859-408/000-005
Jumper; for jumper slot; 8-way; insulated; red

www.wago.com/859-408/000-005



Item no.: 859-408/000-029
Jumper; for jumper slot; 8-way; insulated; yellow

www.wago.com/859-408/000-029



Item no.: 859-409
Jumper; for jumper slot; 9-way; insulated; light gray

www.wago.com/859-409



Item no.: 859-408/000-006
Jumper; for jumper slot; 8-way; insulated; blue

www.wago.com/859-408/000-006



Item no.: 859-403
Jumper; for jumper slot; 3-way; insulated; light gray

www.wago.com/859-403



Item no.: 859-409/000-005
Jumper; for jumper slot; 9-way; insulated; red

www.wago.com/859-409/000-005



Item no.: 859-404
Jumper; for jumper slot; 4-way; insulated; light gray

www.wago.com/859-404



Item no.: 859-409/000-006
Jumper; for jumper slot; 9-way; insulated; blue

www.wago.com/859-409/000-006

Subject to changes. Please also observe the further product documentation!

	Item no.: 859-402/000-006 Jumper; for jumper slot; 2-way; insulated; blue	www.wago.com/859-402/000-006
	Item no.: 859-402 Jumper; for jumper slot; 2-way; insulated; light gray	www.wago.com/859-402
	Item no.: 859-402/000-005 Jumper; for jumper slot; 2-way; insulated; red	www.wago.com/859-402/000-005
	Item no.: 859-406/000-006 Jumper; for jumper slot; 6-way; insulated; blue	www.wago.com/859-406/000-006
	Item no.: 859-406/000-029 Jumper; for jumper slot; 6-way; insulated; signal yellow	www.wago.com/859-406/000-029
	Item no.: 859-407/000-006 Jumper; for jumper slot; 7-way; insulated; blue	www.wago.com/859-407/000-006
	Item no.: 859-407/000-005 Jumper; for jumper slot; 7-way; insulated; red	www.wago.com/859-407/000-005
	Item no.: 859-407/000-029 Jumper; for jumper slot; 7-way; insulated; yellow	www.wago.com/859-407/000-029
	Item no.: 859-407 Jumper; for jumper slot; 7-way; insulated; light gray	www.wago.com/859-407



Terminal blocks

Supply module

	Item no.: 857-979 Supply and through module	www.wago.com/857-979
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Mounting

Mounting accessories

	Item no.: 249-116 Screwless end stop; 6 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	www.wago.com/249-116
	Item no.: 249-117 Screwless end stop; 10 mm wide; for DIN-rail 35 x 15 and 35 x 7.5; gray	www.wago.com/249-117

Subject to changes. Please also observe the further product documentation!



Item no.: 249-197

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

www.wago.com/249-197

Power supplies

Power supply unit



Item no.: 787-2852

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

www.wago.com/787-2852

Tool

Operating tool



Item no.: 210-720

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

www.wago.com/210-720

Marking accessories

Marking strip



Item no.: 2009-110

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

www.wago.com/2009-110

Marker



Item no.: 2009-115

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

www.wago.com/2009-115



Item no.: 793-501

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

www.wago.com/793-501



Item no.: 793-502

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

www.wago.com/793-502



Item no.: 793-503

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

www.wago.com/793-503



Item no.: 793-504

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

www.wago.com/793-504



Item no.: 793-505

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

www.wago.com/793-505



Item no.: 793-506

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

www.wago.com/793-506



Item no.: 793-566

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

www.wago.com/793-566

Subject to changes. Please also observe the further product documentation!

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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

Downloads

Documentation

Bid Text

857-416 docx - Datei	2019 Jul 18	docx 18.6 kB	Download
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857-416 X81 - Datei	2019 Jul 18	xml 5.4 kB	Download
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857-416 pdf - Datei	2019 Jul 18	pdf 74.1 kB	Download
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Instruction Leaflet

CCC Ex (Additional information) 857_***	2023 Apr 26	pdf 144.4 kB	Download
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Messumformer und Trennverstärker 0(4)...20 mA / 0(4)...20 mA	V 1.2.1 2020 Jan 21	pdf 1.6 MB	Download
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Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 Aug 18	pdf 2.2 MB	Download
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CAD/CAE-Data

CAD data

2D/3D Models 857-416	URL	Download
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CAE data

EPLAN Data Portal 857-416	URL	Download
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WSCAD Universe 857-416	URL	Download
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ZUKEN Portal 857-416	URL	Download
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Subject to changes. Please also observe the further product documentation!

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Environmental Product Compliance

Compliance Search

Environmental Product Compliance 857-416

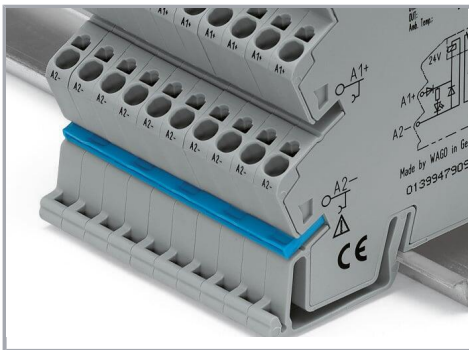
[URL](#)

[Download](#)

Isolation amplifier; Current input signal; Voltage output signal; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm²

Installation Notes

Commoning



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

Subject to changes. Please also observe the further product documentation!