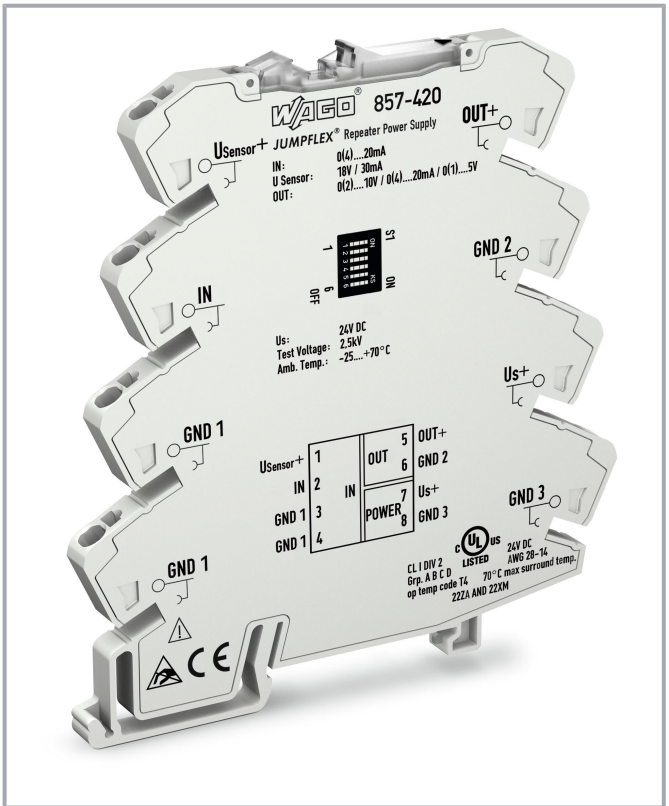
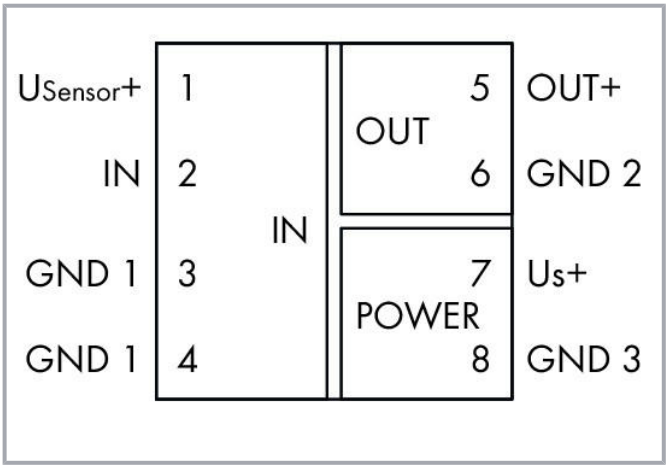
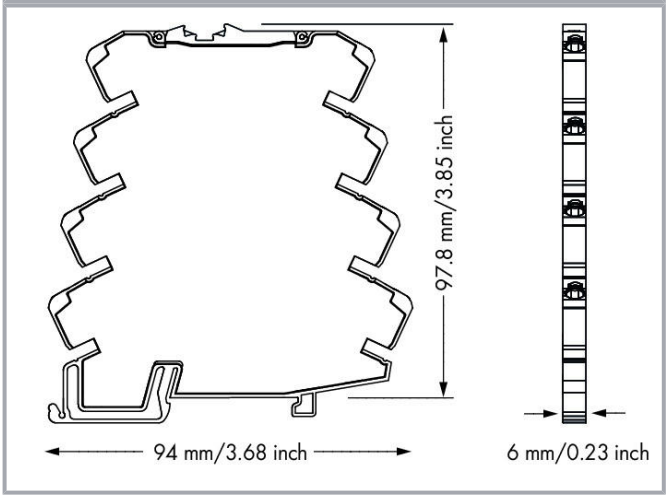
Data sheet | Item number: 857-420

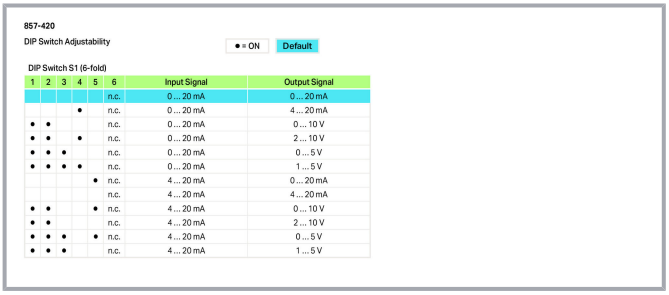
Isolation amplifier; Current input signal; Current and voltage output signal; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm²

www.wago.com/857-420









857-420

DIP Switch Adjustability

● = ON Default

DIP Switch S1 (6-fold)

1	2	3	4	5	6	Input Signal	Output Signal
					n.c.	0 ... 20 mA	0 ... 20 mA
			●		n.c.	0 ... 20 mA	4 ... 20 mA
●	●				n.c.	0 ... 20 mA	0 ... 10 V
●	●		●		n.c.	0 ... 20 mA	2 ... 10 V
●	●	●			n.c.	0 ... 20 mA	0 ... 5 V
●	●	●	●		n.c.	0 ... 20 mA	1 ... 5 V
				●	n.c.	4 ... 20 mA	0 ... 20 mA
					n.c.	4 ... 20 mA	4 ... 20 mA
●	●			●	n.c.	4 ... 20 mA	0 ... 10 V
●	●				n.c.	4 ... 20 mA	2 ... 10 V
●	●	●		●	n.c.	4 ... 20 mA	0 ... 5 V
●	●	●			n.c.	4 ... 20 mA	1 ... 5 V

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Item description

Short description:

This isolation amplifier provides the power required for 2- or 3-wire field transmitters and electrically isolates analog signals.

Features:

- Power supply to SMART transmitters
- Calibrated measurement range switching
- Safe 3-way isolation with 2.5 kV test voltage per EN 61140

Data
Technical data

Configuration

Configuration options	DIP switch DIP switch

Input

Input signal type	Current
Input signal (current)	0 … 20 mA; 4 … 20 mA (calibrated switching)
Input resistance (current input)	≤ 50 Ω
Sensor supply	U_v = 18 V; 30 mA
Input current (max.)	50 mA

Output – analog

Output signal type	Current Voltage
Output signal (voltage)	0 … 5 V; 1 … 5 V; 0 … 10 V; 2 … 10 V (calibrated switching)
Output signal (current)	0 … 20 mA; 4 … 20 mA (calibrated switching)
Load impedance (voltage output)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω
Offset	≤ 20 µA
Residual ripple	≤ 10 mV (rms)

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 %
Power consumption at nominal supply voltage	≤ 45 mA

Safety and protection

Protection type	IP20

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 mm² / 28 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch

Physical data

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

Mechanical data

Mounting type	DIN-35 rail

Material data

Fire load	0.585 MJ
Weight	37 g

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Environmental requirements

Surrounding air temperature (operation)	-25 … 70 °C
Surrounding air temperature (storage)	-40 … 85 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Standards and specifications

Conformity marking	CE

Commercial data

Product Group	6 (Interface Electronics)
PU (SPU)	1 Each
Packaging type	bag
Country of origin	DE
GTIN	4045454471330
Customs tariff number	85437090300

Approvals / Certificates

Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	ANSI/ISA 12.12.01	E198726

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA00001D1

UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.4

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Optional accessories

Power supplies

Power supply

	Item no.: 787-2852 Switched-mode power supply; 1-phase; 24 VDC output voltage; 1 A output current; -	www.wago.com/787-2852

Terminal blocks

Through terminal block

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

Jumpers

Jumper

	Item no.: 859-408 Jumper; for jumper slot; 8-way; insulated; light gray	www.wago.com/859-408
	Item no.: 281-482 Jumper; 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

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Item no.: 859-405/000-006
Jumper; for jumper slot; 5-way; insulated; blue

www.wago.com/859-405/000-006

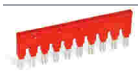


Item no.: 859-406/000-005
Jumper; for jumper slot; 6-way; insulated; red

www.wago.com/859-406/000-005

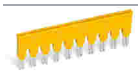
Item no.: 859-409/000-029
Jumper; for jumper slot; 9-way; insulated; yellow

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



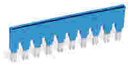
Item no.: 859-410/000-029
Jumper; for jumper slot; 10-way; insulated; yellow

www.wago.com/859-410/000-029



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

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	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
	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

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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

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
www.wago.com/793-5501

Interface module

Interface adapter



Item no.: 857-980
Interface adapter; 16-pole; analog
www.wago.com/857-980

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

Mounting

Mounting accessories

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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



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

Downloads

Documentation

Bid Text

857-420 X81 - Datei	2019. 2. 19.	xml 5.5 kB	Download
857-420 docx - Datei	2019. 2. 20.	docx 17.1 kB	Download

Instruction Leaflet

Messumformer und Trennverstärker Speisetrenner, konfigurierbar Strom und Spannungsausgang		pdf 1.4 MB	Download

Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download

CAD/CAE-Data

CAD data

2D/3D Models 857-420	URL	Download

CAE data

EPLAN Data Portal 857-420	URL	Download
ZUKEN Portal 857-420	URL	Download

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WSCAD Universe 857-420	URL	Download

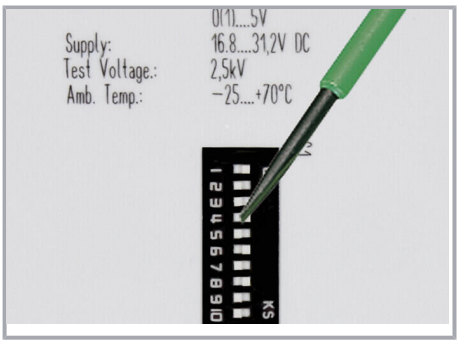
Environmental Product Compliance

Compliance Search

Environmental Product Compliance 857-420 Isolation amplifier; Current input signal; Current and voltage output signal; Supply voltage: 24 VDC; 6 mm module width; 2,50 mm²	URL	Download

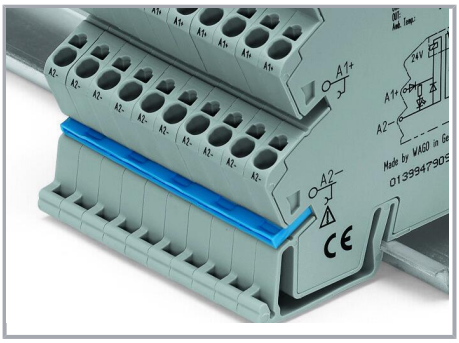
Installation Notes

Configuration



Configuration via DIP switch

Commoning



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

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