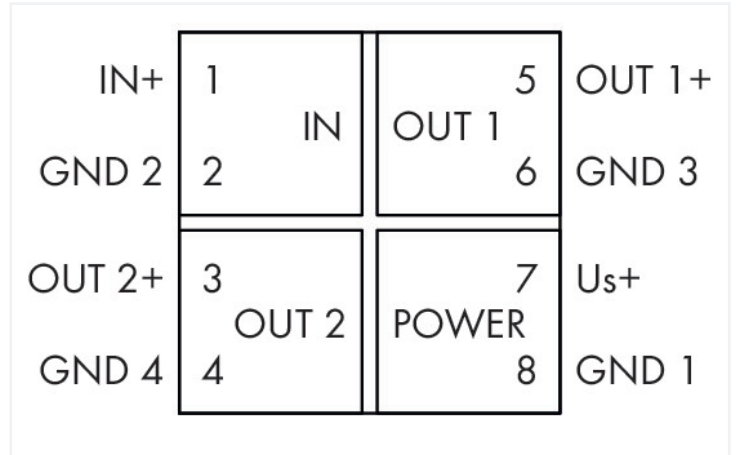


Data Sheet | Item Number: 857-424

Isolation amplifier; Current and voltage input signal; Supply voltage: 24 VDC; 6 mm module width

<https://www.wago.com/857-424>

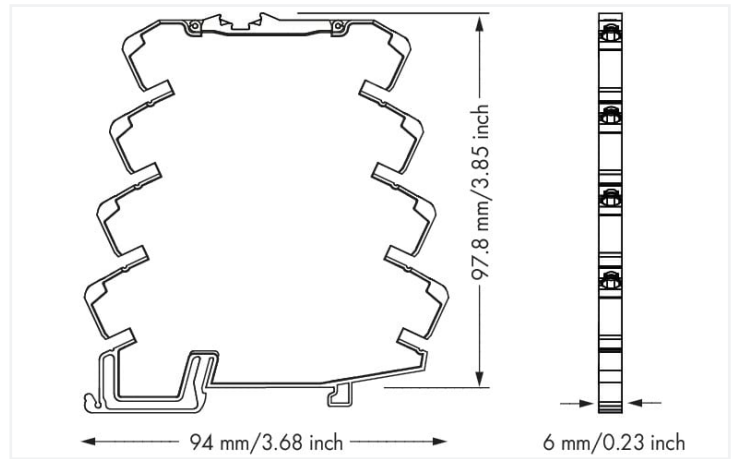


857-424
DIP Switch Adjustability

● = ON Default

DIP Switch S1 (4 positions)			
Input Signal			Max. Operating Frequency
1	2	3	4
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●

DIP Switch S2 (2 positions)		DIP Switch S3 (2 positions)	
Output Signal 1		Output Signal 2	
1	2	1	2
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●



Dimensions in mm

Short description:

WAGO's signal splitter converts, amplifies, filters and electrically isolates standard analog signals. In addition, the input signal is split into two separate outputs.

Features:

- Two configurable voltage/current outputs
- Switchable limit frequency
- 3-way electrical isolation with 2.5 kV test voltage

Notes	
Note	Use shielded signal lines! Only use shielded signal lines for analog input and output signals. Only then can you ensure that the accuracy and interference immunity specified for the device can be achieved, even in the presence of interference acting on the signal cable.

Technical data

Configuration		Input	
Configuration options	DIP switch	Input signal type	Voltage Current
		Input signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
		Input signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
		Input resistance (current input)	≤ 50 Ω
		Input resistance (voltage input)	≥ 100 kΩ

Input

Input current (max.)	50 mA
Input voltage (max.)	30 V

Output (analog)

Output signal type	Voltage Current
Output signal (voltage)	0 ... 10 V; 2 ... 10 V (calibrated, switchable)
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA (calibrated switching)
Load impedance (voltage output)	$\geq 2 \text{ k}\Omega$ (per channel)
Load impedance (current output)	$\leq 600 \Omega$ per channel

Signal processing

Limit frequency	100 Hz / 1 kHz (configurable via DIP switch)
Step response (typ.)	5.2 ms (100 Hz); 650 μ s (1 kHz)

Measurement error

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

Power supply

Power supply type	24 VDC (SELV)
Nominal supply voltage U_s	DC 24 V
Supply voltage range	-60 ... +30 %
Current consumption (default)	< 27 mA
Current consumption (max.)	< 250 mA ($2 \times I_{out} 20 \text{ mA}$; Load impedance: 600Ω ; U_s : 9.6 V)

Safety and protection

Rated Voltage	300 V
Measurement category per EN/UL 61010-2-030	CAT II (input)
Protection type	IP20

Test voltage

Test voltage (input/analog output 1/analog output 2/supply)	3 kVAC; 50 ... 60 Hz; 1 min
-------------------------------------------------------------	-----------------------------

Insulation coordination (UL)

Overtoltage category	II
Pollution degree	2
Insulation type (input/analog output 1/ analog output 2/supply)	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
---------------	-------------

Material data

Insulation material (main housing)	Polyamide (PA66)
Flammability class per UL94	V0
Fire load	0.013 MJ
Weight	42 g

Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C (Individual arrangement; -40 ... +50 °C (block arrangement))
Ambient temperature (storage)	-40 ... +85 °C
Processing temperature	-25 ... +50 °C
Temperature range of connection cable	$\geq (T_{\text{ambient}} + 10 \text{ K})$
Temperature range of connection cable (UL)	75 °C
Relative humidity	5 ... 95 % (non-condensing)
Operating altitude (max.)	2000 m

Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-1; EN 50121-3-2
EMC emission of interference	EN 61000-6-3; EN 61326-1; EN 50121-3-2
Standards/specifications	EN 61010-1 EN 50121-3-2

Commercial data

eCl@ss 10.0	27-21-01-20
eCl@ss 9.0	27-21-01-20
ETIM 9.0	EC002653
ETIM 8.0	EC002653
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4055143595476
Customs tariff number	85437090300

Environmental Product Compliance

CAS-No.	1303-86-2 1317-36-8 7439-92-1 75980-60-8
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide Phosphine oxide, diphenyl(2,4,6-trimethylbenzoyl)-
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II

Environmental Product Compliance

SCIP notification number (Austria)	20ff4e13-c0c9-4a74-b2cf-15a295ca8e56
SCIP notification number (Belgium)	3ba48a62-5e30-4a87-8bab-6ef1cc940417
SCIP notification number (Bulgaria)	cc19b314-8dc8-4533-a619-bb5d1675c55d
SCIP notification number (Czech Republic)	8c5e008b-53c5-482f-a3af-caacba45ef35
SCIP notification number (Denmark)	975066ac-f476-426b-9150-59f316b9a26a
SCIP notification number (Finland)	c19ee770-a5c7-4a8a-aa92-286b93a6362d
SCIP notification number (France)	689b2ee7-0a3e-4f20-ad2c-38c625e92875
SCIP notification number (Germany)	a9b66183-4d24-4f12-9fe9-cacbf2b0dc9a
SCIP notification number (Hungary)	e1a182d3-453d-46fa-8dde-fca3c8f3c06b
SCIP notification number (Italy)	68f65705-4017-4052-af20-4a8ab72a31ee
SCIP notification number (Netherlands)	626ace7d-afda-43d4-8eea-41c485284027
SCIP notification number (Poland)	5e15599a-8f67-4492-8627-517d77c7f6a2
SCIP notification number (Romania)	8f949544-768f-44a9-a4e6-e617d0f0b22b
SCIP notification number (Sweden)	444692de-f7c7-4ea3-bd3d-de5a8e18617e

Approvals / Certificates

General approvals			Declarations of conformity and manufacturer's declarations		
Approval	Standard	Certificate Name	Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081	EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
UL Underwriters Laboratories Inc. (ORDINARY LOCATI- ONS)	UL 61010-2-201	E175199	UK-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-

Downloads

Environmental Product Compliance

Compliance Search	
Environmental Product Compliance 857-424	↓

Documentation

Manual		Bid Text		
WAGO Isolating Amplifiers	↓	857-424	01.07.2019	xml 5.84 KB ↓
		857-424	01.07.2019	docx 17.15 KB ↓

Instruction Leaflet			
Isolation amplifier; Current and voltage input signal; Supply voltage: 24 VDC	V 2.1.0 04.08.2021	pdf 2199.86 KB	

CAD/CAE-Data	
CAD data 2D/3D Models 857-424	CAE data EPLAN Data Portal 857-424 WSCAD Universe 857-424 ZUKEN Portal 857-424

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 Jumper

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

1.1.3.1 Jumper

 <p>Item No.: 859-403/000-029 Jumper; for jumper slot; 3-way; insulated; yellow</p>	 <p>Item No.: 859-404/000-006 Jumper; for jumper slot; 4-way; insulated; blue</p>	 <p>Item No.: 859-404 Jumper; for jumper slot; 4-way; insulated; light gray</p>	 <p>Item No.: 859-404/000-005 Jumper; for jumper slot; 4-way; insulated; red</p>
 <p>Item No.: 859-404/000-029 Jumper; for jumper slot; 4-way; insulated; yellow</p>	 <p>Item No.: 859-405/000-006 Jumper; for jumper slot; 5-way; insulated; blue</p>	 <p>Item No.: 859-405 Jumper; for jumper slot; 5-way; insulated; light gray</p>	 <p>Item No.: 859-405/000-005 Jumper; for jumper slot; 5-way; insulated; red</p>
 <p>Item No.: 859-405/000-029 Jumper; for jumper slot; 5-way; insulated; yellow</p>	 <p>Item No.: 859-406/000-006 Jumper; for jumper slot; 6-way; insulated; blue</p>	 <p>Item No.: 859-406 Jumper; for jumper slot; 6-way; insulated; light gray</p>	 <p>Item No.: 859-406/000-005 Jumper; for jumper slot; 6-way; insulated; red</p>
 <p>Item No.: 859-406/000-029 Jumper; for jumper slot; 6-way; insulated; signal yellow</p>	 <p>Item No.: 859-407/000-006 Jumper; for jumper slot; 7-way; insulated; blue</p>	 <p>Item No.: 859-407 Jumper; for jumper slot; 7-way; insulated; light gray</p>	 <p>Item No.: 859-407/000-005 Jumper; for jumper slot; 7-way; insulated; red</p>
 <p>Item No.: 859-407/000-029 Jumper; for jumper slot; 7-way; insulated; yellow</p>	 <p>Item No.: 859-408/000-006 Jumper; for jumper slot; 8-way; insulated; blue</p>	 <p>Item No.: 859-408 Jumper; for jumper slot; 8-way; insulated; light gray</p>	 <p>Item No.: 859-408/000-005 Jumper; for jumper slot; 8-way; insulated; red</p>
 <p>Item No.: 859-408/000-029 Jumper; for jumper slot; 8-way; insulated; yellow</p>	 <p>Item No.: 859-409/000-006 Jumper; for jumper slot; 9-way; insulated; blue</p>	 <p>Item No.: 859-409 Jumper; for jumper slot; 9-way; insulated; light gray</p>	 <p>Item No.: 859-409/000-005 Jumper; for jumper slot; 9-way; insulated; red</p>
 <p>Item No.: 859-409/000-029 Jumper; for jumper slot; 9-way; insulated; yellow</p>			

1.1.4 Marking

1.1.4.1 Marker

 <p>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</p>	 <p>Item No.: 793-502 WMB marking card; as card; MARKED; 1 ... 10 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-566 WMB marking card; as card; MARKED; 1 ... 50 (2x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-503 WMB marking card; as card; MARKED; 11 ... 20 (10x); not stretchable; Horizontal marking; snap-on type; white</p>
 <p>Item No.: 793-504 WMB marking card; as card; MARKED; 21 ... 30 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-505 WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-506 WMB marking card; as card; MARKED; 41 ... 50 (10x); not stretchable; Horizontal marking; snap-on type; white</p>	 <p>Item No.: 793-501 WMB marking card; as card; not stretchable; plain; snap-on type; white</p>
 <p>Item No.: 2009-115 WMB-Inline; for Smart Printer; 1500 pieces on roll; stretchable 5 - 5.2 mm; plain; snap-on type; white</p>			

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



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

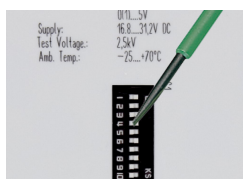


Item No.: [210-720](#)

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

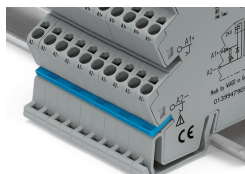
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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