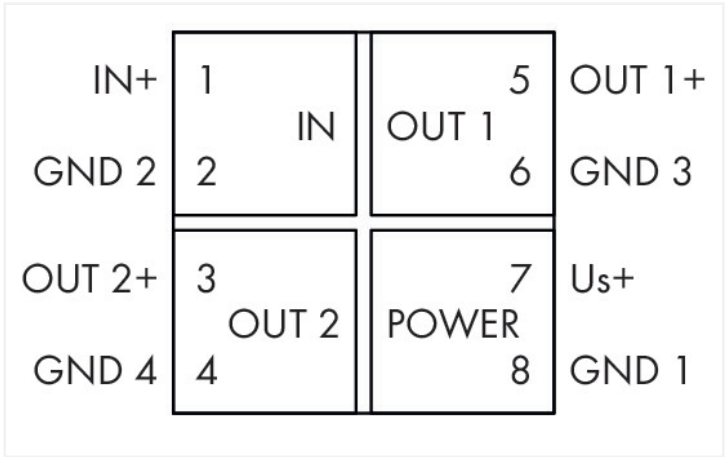


Data Sheet | Item Number: 857-424

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

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

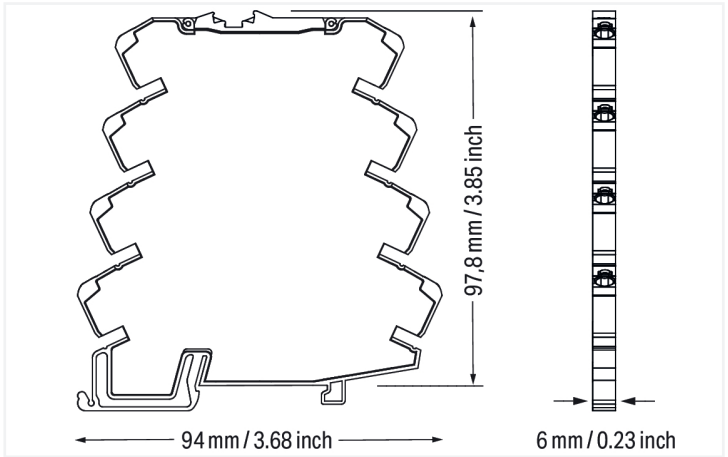


857-424
DIP Switch Adjustability

• = ON Default

DIP Switch S1 (4 positions)			
Input Signal			Max. Operating Frequency
1	2	3	4
•	•	0 ... 20 mA	> 1 kHz
•	•	4 ... 20 mA	100 Hz
•	•	0 ... 10 mA	
•	•	2 ... 10 mA	
	•	0 ... 10 V	
	•	2 ... 10 V	
	•	0 ... 5 V	
	•	1 ... 5 V	

DIP Switch S2 (2 positions)		DIP Switch S3 (2 positions)	
Output Signal 1		Output Signal 2	
1	2	1	2
•	0 ... 10 V	•	0 ... 10 V
•	2 ... 10 V	•	2 ... 10 V
•	0 ... 20 mA	•	0 ... 20 mA
•	4 ... 20 mA	•	4 ... 20 mA



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 cables! Only use shielded signal cables for analog input and output signals. This ensures the device maintains its specified accuracy and immunity to interference, even when external disturbances affect the signal cable.

Technical data	
Configuration	
Configuration options	DIP switch
Input	
Input signal type	Voltage Current
Input signal (voltage)	0 ... 5 V 1 ... 5 V 0 ... 10 V 2 ... 10 V



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

Signal processing	
Limit frequency	100 Hz / 1 kHz (configurable via DIP switch)
Step response (typ.)	5.2 ms (100 Hz) 650 μs (1 kHz)

Power supply	
Power supply type	24 VDC (SELV)
Nominal supply voltage U _S	24 VDC
Supply voltage range	-60 ... +30 %
Current consumption (default)	< 27 mA
Current consumption (max.)	< 250 mA (2 x I _{out} 20 mA; Load impedance: 600 Ω; U _S : 9.6 V)

Safety and protection		
Rated Voltage	300 V	Test voltage
Measurement category per EN/UL 61010-2-030	CAT II (input)	
Protection type	IP20	
		Test voltage (input/analog output 1/ana-log output 2/supply)
		3 kVAC; 50 ... 60 Hz; 1 min

Insulation coordination (UL)	
Overvoltage category	II
Pollution degree	2
Insulation type (input/analog output1/ analog output 2/supply)	Reinforced insulation (safe isolation)

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 inches
Cable type	Shielded cable

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, switchable)
Load impedance (voltage output)	≥ 2 kΩ (per channel)
Load impedance (current output)	≤ 600 Ω Per channel

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



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		≥ (T _{ambient} + 10 K)
Temperature range of the 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		
PU (SPU)		1 pcs
Packaging type		Bag
Country of origin		DE
GTIN		4055143595476
Customs tariff number		85437090300

Product Classification		
UNSPSC		32101502
eCl@ss 10.0		27-21-01-20
eCl@ss 9.0		27-21-01-20
ETIM 9.0		EC002653
ETIM 8.0		EC002653
ECCN		NO US CLASSIFICATION



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
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
EAC UL		
Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03081
UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199
Approval	Standard	Certificate Name
EU-Declaration of Confor- mity WAGO GmbH & Co. KG	-	-
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	CAE data
2D/3D Models 857-424	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
 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; 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
 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



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

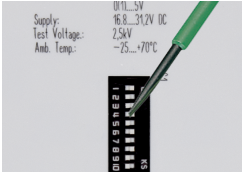
1.1.7.1 Operating tool



Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

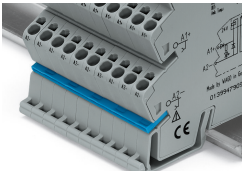
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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