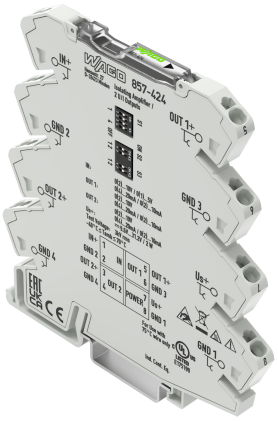
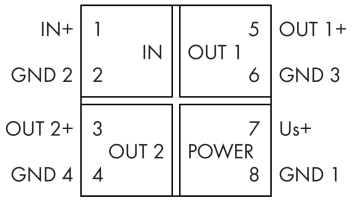
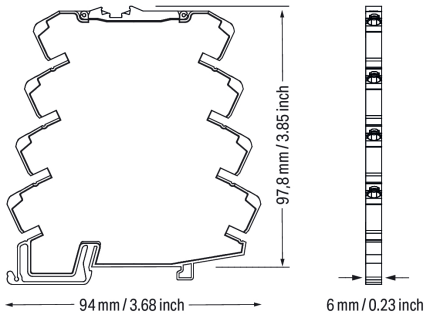
Data Sheet | Item Number: 857-424

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)

1	2	3	Input Signal	4	Max. Operating Frequency
●			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)

1	2	Output Signal 1
		0 … 10 V
●		2 … 10 V
	●	0 … 20 mA
●	●	4 … 20 mA

DIP Switch S3 (2 positions)

1	2	Output Signal 2
		0 … 10 V
●		2 … 10 V
	●	0 … 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 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

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

Signal Processing

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

Measurement Error

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

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
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)

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

Continued on next page

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

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	0.529 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

Continued on next page

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 10.0	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

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

Declarations of conformity and manufacturer's declarations

Approval	Standard	Certificate Name
EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-
UK-Declaration of Conformity WAGO GmbH & Co. KG	-	-

Continued on next page

Downloads

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 857-424

Documentation

Manual

WAGO Isolating Amplifiers

Bid Text

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

Continued on next page

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

Continued on next page

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 and through module



Item No.: 857-979
Supply and through module

1.1.7 Tool

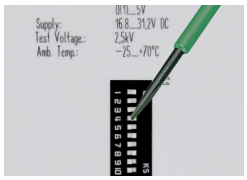
1.1.7.1 Operating tool



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

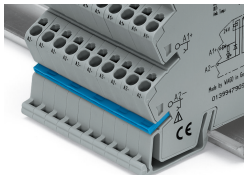
Installation Notes

Configuring



Configuration via DIP switch

Commoning



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