Data sheet | Item number: 857-424

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

www.wago.com/857-424

IN+	1	IN	OUT 1	5	OUT 1+
GND 2	2			6	GND 3
OUT 2+	3	OUT 2	POWER	7	Us+
GND 4	4			8	GND 1

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)

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

DIP Switch S3 (2 positions)

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

Item description

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:

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

Do you have any questions about our products?
We are always happy to take your call at +49 (571) 887-44222.

- Two configurable voltage/current outputs
- Switchable limit frequency
- Safe 4-way isolation with 3 kV test voltage per EN 61010-1

Data

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

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 switching)
Output signal (current)	0 … 10 mA; 2 … 10 mA; 0 … 20 mA; 4 … 20 mA (calibrated switching)
Load impedance (voltage output)	≥ 2 kΩ (per channel)
Load impedance (current output)	≤ 600 Ωper channel

Signal Processing

Limit frequency	100 Hz / 1 kHz (configurable via DIP switch)

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

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

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 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 parameters(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

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

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	0.013 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	$\geq (T_{ambient} + 10\,K)$
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 50121-3-2 EN 61010-1

Commercial data

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

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

Packaging type	bag
Country of origin	DE
GTIN	4055143595476
Customs tariff number	85437090300

Environmental Product Compliance

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

Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C-DE.AM02.B.00115_19
	UL Underwriters Laboratories Inc. (ORDINARY LOCATIONS)	UL 61010-2-201	E175199

Declarations of conformity and manufacturer's declarations

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

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

Optional accessories

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

Terminal blocks

Supply module

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

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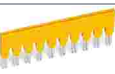
Subject to changes. Please also observe the further product documentation!

	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

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; 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

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

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

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

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

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

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

Interface module

Interface adapters

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

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

	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

857-424 docx - Datei	2019 Jul 1	docx 17.6 kB	Download
857-424 X81 - Datei	2019 Jul 1	xml 6.0 kB	Download

Instruction Leaflet

Isolation amplifier; Current and voltage input signal; Supply voltage: 24 VDC	V 2.1.0 2021 Aug 4	pdf 2.3 MB	Download

Additional Information

Disposal and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 Aug 18	pdf 2.2 MB	Download

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

CAD/CAE-Data

CAD data

2D/3D Models 857-424	URL	Download

CAE data

EPLAN Data Portal 857-424	URL	Download
ZUKEN Portal 857-424	URL	Download
WSCAD Universe 857-424	URL	Download

Environmental Product Compliance

Compliance Search

Environmental Product Compliance 857-424	URL	Download

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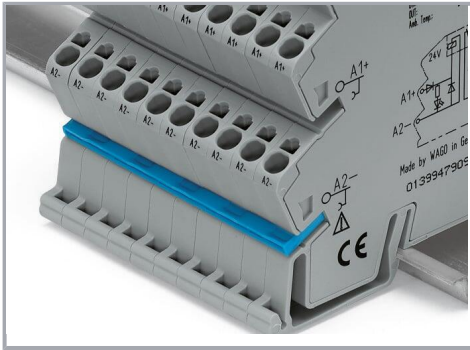module width

Installation Notes

Configuring
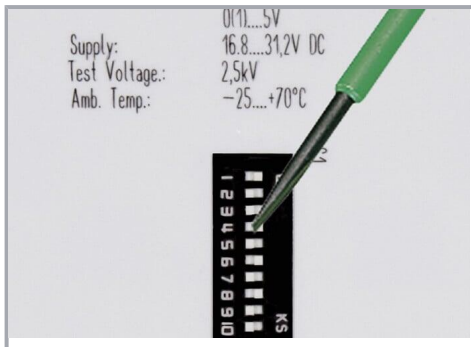
Configuration via DIP switch

Commoning

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

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!

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