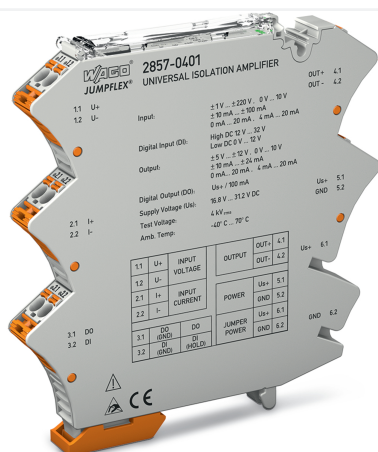


Isolation amplifier; Bipolar current and voltage input signal; Bipolar current and voltage output signal; Digital output; Supply voltage: 24 VDC; 12.5 mm module width

<https://www.wago.com/2857-401>



1.1	U+	INPUT VOLTAGE	OUTPUT	OUT+	4.1
1.2	U-			OUT-	4.2
2.1	I+	INPUT CURRENT	POWER	Us+	5.1
2.2	I-			GND	5.2
				JUMPER POWER	Us+
3.1	DO (GND)	DO	GND		6.2
3.2	DI (GND)	DI (HOLD)			

067-401

DIP Switch Adjustability

● = ON

Default

DIP Switch S1

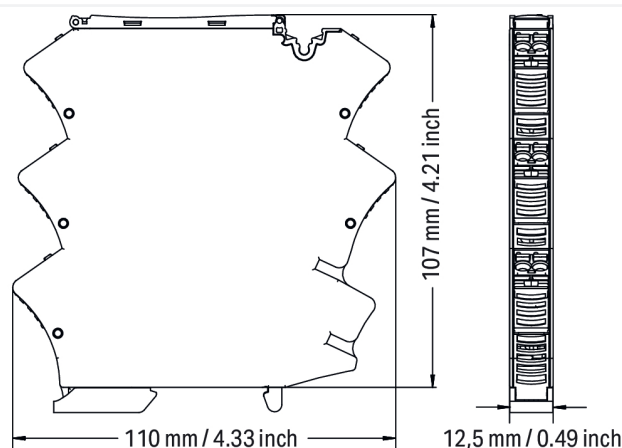
Input													
1	Signal	2	Polarity	3	4	5	Range / mA	Range / V	6	Inverted Characteristic	7	8	Limit Frequency
	Current		Unipolar				0 ... 20	0 ... 10		Not inverted			10kHz
●	Voltage	●	Bipolar *	●	●	●	0 ... 5	0 ... 1	●	Inverted	●	●	5kHz
				●	●	●	0 ... 10	1 ... 5			●	●	100 Hz
				●	●	●	2 ... 10	2 ... 10					
				●	●	●	4 ... 20	0 ... 30					
				●	●	●	0 ... 50	0 ... 100					
				●	●	●	0 ... 100	0 ... 220					

DIP Switch S2

Output				Output			
9	Signal	10	Polarity	1	2	Range / mA	Range / V
	Current		Unipolar			0 ... 20	0 ... 10
●	Voltage	●	Bipolar *	●	●	4 ... 20	2 ... 10
				●	●	0 ... 10	0 ... 5
				●	●	2 ... 10	1 ... 5

DIP Switch S2

Output				Digital Output (DO)			
3	4	Measuring Range Underflow	Measuring Range Overflow	5	6		
●	●	Lower limit of output range -8%..**	Upper limit of output range +2.5%..**	●	●	Off	
●	●	Lower limit of output range	Upper limit of output range +2.5%	●	●	DO1, switching	
●	●	Lower limit of output range	Upper limit of output range	●	●	DO GND, switching	
●	●	Lower limit of output range -5%	Upper limit of output range +5%	●	●	Off	



Short description:

WAGO's signal conditioner converts, amplifies, filters, and electrically isolates analog signals.

Features:

- Analog unipolar/bipolar signals at both input and output
- Digital signal output reacts to configured measurement range limits (configurable on/off switching delay and threshold value switch function with up to two threshold values).
- Digital HOLD input freezes the output signal.
- Clipping capability for analog signal limitation to output end values
- Adjustable software/hardware filter
- Safe 3-way isolation with 4 kV test voltage per EN 61140

Notes

Note

This product is powered by 24 VDC, which can be bridged using lateral push-in type jumper bars: (6.1) $U_S + (BR)$ and (6.2) GND 2 (BR). With this variant, it is necessary to ensure that the maximum permissible total current of 6 A is not exceeded.

Additional setting options via the WAGO Interface Configuration Software



Technical data

Configuration	
Configuration options	DIP switch WAGO Interface Configuration Software

Input	
Input signal type	Voltage (DC) Current (DC)
Input signal (voltage)	±1 V 0 ... 1 V ±5 V 0 ... 5 V 1 ... 5 V ±10 V 0 ... 10 V 2 ... 10 V ±30 V 0 ... 30 V ±100 V 0 ... 100 V ±200 V 0 ... 220 V
Input signal (current)	±1 mA 0 ... 1 mA ±10 mA 0 ... 10 mA 2 ... 10 mA ±20 mA 0 ... 20 mA 4 ... 20 mA ±100 mA 0 ... 100 mA
Input resistance (current input)	≤ 50 Ω
Input resistance (voltage input)	≥ 1 MΩ
Input current (max.)	±120 mA
Input voltage (max.)	±250 V

Input (digital)	
Hold signal	11.8 V ... U _S

Output (analog)	
Output signal type	Voltage Current
Output signal (voltage)	±5 V 0 ... 5 V 1 ... 5 V ±10 V 0 ... 10 V 2 ... 10 V
Output signal (current)	±10 mA 0 ... 10 mA 2 ... 10 mA ±20 mA 0 ... 20 mA 4 ... 20 mA
Load impedance (voltage output)	≥ 1 kΩ
Load impedance (current output)	≤ 600 Ω

Output (digital)	
Switching voltage (DO) max.	Applied supply voltage – 0.3 V
Continuous current (DO) max.	100 mA (no internal restriction)
Number of switching thresholds (DO)	1 or 2 (adjustable)
Configurable rise/fall delay time (DO)	0 ... 60 s (via software)
Setting range (frequency generator)	0.3 ... 100 Hz

Signal processing	
Limit frequency	10 kHz / 5 kHz / 100 Hz / 30 Hz (configurable via DIP switch or software)
Software filter (adjustable)	Moving average value (filter level: 30)
Step response (typ.)	1 ms



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

Power supply	
Power supply type	24 VDC
Nominal supply voltage U _S	24 VDC
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 70 mA (+ I _{DO})

Safety and protection	
Rated Voltage	300 V
Protection type	IP20
Test voltage	
Test voltage (input/output/supply)	4 kVAC; 50 Hz; 1 min

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

Connection data	
Connection technology	Push-in CAGE CLAMP®
WAGO connector	picoMAX® 5.0
Solid conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Fine-stranded conductor	0.2 ... 2.5 mm² / 24 ... 12 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inches

Physical data	
Width	12.5 mm / 0.492 inches
Height	110 mm / 4.331 inches
Depth from upper-edge of DIN-rail	107 mm / 4.213 inches

Mechanical data	
Mounting type	DIN-35 rail

Material data	
Fire load	1.573 MJ
Weight	85.4 g

Environmental requirements	
Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Temperature range of connection cable	≥ (T _{ambient} + 25 K)



Standards and specifications	
Conformity marking	CE
EMC immunity to interference	EN 61000-6-2; EN 61326-2-3; EN 50121-3-2
EMC emission of interference	EN 61000-6-4; EN 61326-2-3; EN 50121-3-2
Standards/specifications	EN 60664-1 EN 61373 EN 50121-3-2

Commercial data	
Product Group	6 (INTERFACE ELECTRONIC)
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4050821676966
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.	11120-22-2 1303-86-2 1317-36-8 7439-92-1 75980-60-8
REACH Candidate List Substance	Diboron trioxide Lead Lead monoxide Lead silicate Perfluorobutane sulfonic acid (PFBS) and its salts 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)	8eea55dc-b68f-431d-8ad6-71ab4685f8b7
SCIP notification number (Belgium)	cf65c928-b2ea-4b3a-9b99-3229eef5e8e5
SCIP notification number (Bulgaria)	54c1dd6b-7733-4b35-aa2c-d8a6e507aed1
SCIP notification number (Czech Republic)	b108bfe2-9898-4c87-ac03-4b07a6ae954b
SCIP notification number (Denmark)	5c819246-3d20-4f9e-a125-75caf6a910bd
SCIP notification number (Finland)	f21f8be5-efc4-4fe2-9317-1552603d7eb4
SCIP notification number (France)	7aa52ffe-9f09-44c5-a16e-15be89049f27
SCIP notification number (Germany)	b822b5ae-0257-4887-8a8b-2476207d28c9
SCIP notification number (Hungary)	f9e92535-69dc-449b-873d-f7eea3763dd6
SCIP notification number (Italy)	f22243c1-b45b-4045-9b6d-40040a0915a3
SCIP notification number (Netherlands)	3021d9c8-bb88-47d3-96b3-e0cf0f1775f0
SCIP notification number (Poland)	2681b81f-35e4-41ce-afc5-8e2ecbb312b4
SCIP notification number (Romania)	f9b8acf4-0d8d-48ce-9dd8-5079f9c063df
SCIP notification number (Sweden)	67b47a6d-1ea9-4395-a0db-912d3f2342c2



Approvals / Certificates

General approvals



Approval	Standard	Certificate Name
EAC GZO Almaty Standart	TP TC 020/2011	EAC CoC 03083

Declarations of conformity and manufacturer's declarations

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 2857-401



Documentation

Manual
WAGO Isolating Ampli- fiers



Bid Text			
2857-401	20.02.2019	docx 17.46 KB	
2857-401	19.02.2019	xml 6.62 KB	
2857-401	20.02.2019	pdf 81.07 KB	

Instruction Leaflet		
Messumformer, Univer- sal-Trennverstärker	pdf 2273.28 KB	

CAD/CAE-Data

CAD data
2D/3D Models 2857-401



CAE data	
EPLAN Data Portal 2857-401	
WSCAD Universe 2857-401	
ZUKEN Portal 2857-401	



Runtime Software

Firmware			
2857-0401, Trennver- stärker	V 03 24.04.2023	zip 486.45 KB	

1 Compatible Products

1.1 Optional Accessories

1.1.1 Communication

1.1.1.1 Bluetooth



[Item No.: 750-921](#)
Bluetooth® Adapter

1.1.1.2 Communication cable



[Item No.: 750-923](#)
Configuration cable; USB connector;
Length: 2.5 m



[Item No.: 750-923/000-001](#)
Configuration cable; USB connector;
Length: 5 m

1.1.2 Installation

1.1.2.1 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

1.1.3 Jumper

1.1.3.1 Jumper



[Item No.: 281-482](#)
Jumper; 2-way; insulated; gray



[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



1.1.4 Marking

1.1.4.1 Marker



Item No.: 2009-141
Micro-USB-Inline; 2000 pieces on roll; plain; snap-on type; white



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 Relay module

1.1.6.1 Relay module



Item No.: 857-304
Relay module; Nominal input voltage: 24 VDC; 1 changeover contact; Limiting continuous current: 6 A; Yellow status indicator; Module width: 6 mm; gray

1.1.7 Terminal blocks

1.1.7.1 Supply module



Item No.: 857-979
Supply and through module

1.1.7.2 Through terminal block



Item No.: 857-979
Supply and through module

1.1.8 Test and measurement

1.1.8.1 Testing accessories



Item No.: 735-500
WAGO Test pin; 1 mm Ø; 30 V AC / 60 V DC; CAT0; 1 A; 6 mm uninsulated; Test lead for soldering up to 0,5mm²

1.1.9 Tool

1.1.9.1 Operating tool



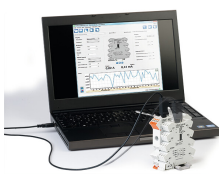
Item No.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

Installation Notes

Configuring

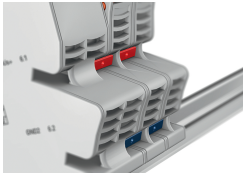


Configuration via DIP switch



Configuration via WAGO Interface Configuration Software

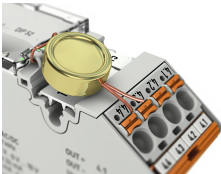
Conductor termination



Pluggable connection technology

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

Security



Lock-out seal option