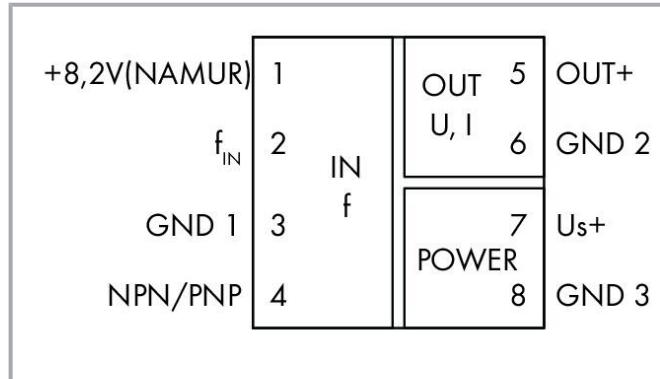
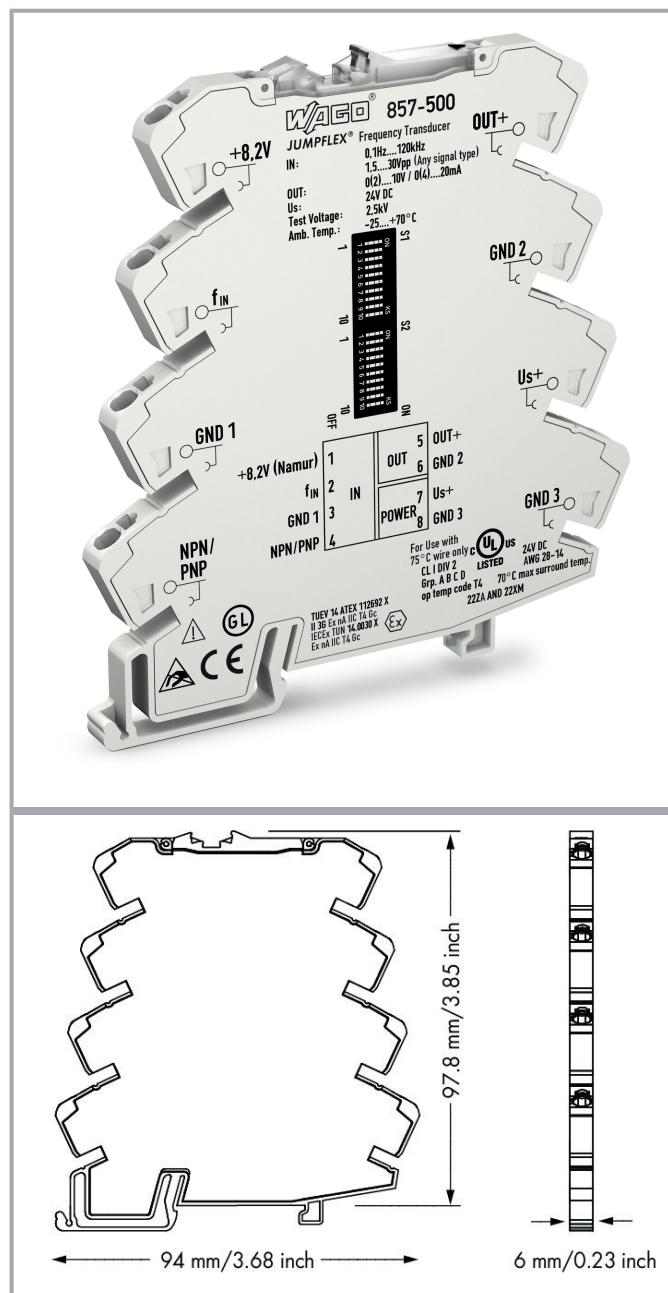


# Data sheet | Item number: 857-500

Frequency signal conditioner; Current and voltage output signal;  
Configuration via software; Supply voltage: 24 VDC; 6 mm module width

[www.wago.com/857-500](http://www.wago.com/857-500)



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

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



## Configuration

Configuration options	DIP switch WAGO Interface Configuration Software WAGO Interface Configuration App
-----------------------	---

## Input

Input signal type	Frequency generators NAMUR sensors NPN/PNP transistor outputs Mechanical contact (dry contact)
-------------------	---

### Input (sensor type 1)

Sensor type 1	frequency generator NPN/PNP transistor output with pull-up or pull-down resistor
Measurement range (frequency) 1	0.1 Hz ... 120 kHz
Measurement span 1 (min.)	10 Hz
Signal level	1.5 V; 10 V; 20 V (switchable)
Input voltage (max.)	± DC 31.2 V
Signal form	Any
Coupling	AC/DC (adjustable; AC above 10 Hz)
Input resistance	10 kΩ

### Input (sensor type 2)

Sensor type 2	NAMUR sensor (DIN EN 50227)
Measurement range (frequency) 2	0.1 Hz ... 1 kHz
Pulse length 2	≥ 500 µs
Measurement span 2 (min.)	10 Hz
Sensor supply	DC 8.2 V
Signal current (0)	≤ 1.2 mA
Signal current (1)	≥ 2.1 mA
Hysteresis	0.45 mA
Short circuit monitoring	≥ 4.7 mA
Wire break monitoring	≤ 0.2 mA
Input resistance 2	≤ 600 Ω

### Input (sensor type 3)

Sensor type 3	NPN/PNP transistor output without pull-up or pull-down resistor mechanical contact (dry contact)
---------------	---

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

Measurement range (frequency) 3	0.1 Hz ... 20 kHz
Pulse length 3	$\geq 25 \mu\text{s}$
Measurement span 3 (min.)	100 Hz
Open-circuit voltage	DC 5 V
NPN residual voltage	$\leq 1.5 \text{ V}$
PNP switching voltage	$\geq 7.5 \text{ V} (+ \text{residual voltage } U_{CE} \text{ sat})$

## Output (analog)

Output signal type	Current Voltage
Output signal (voltage)	0 ... 5 V; 1 ... 5 V; 0 ... 10 V; 2 ... 10 V
Output signal (current)	0 ... 10 mA; 2 ... 10 mA; 0 ... 20 mA; 4 ... 20 mA
Load impedance (voltage output)	$\geq 2 \text{ k}\Omega$
Load impedance (current output)	$\leq 600 \Omega$

## Signal Processing

Conversion time	Peak-time measurement method (> 400 Hz): < 20 ms; Pulse time measurement method (< 400 Hz): < 200 $\mu\text{s}$ + $T_{\text{Cycle duration}}$
-----------------	---

## Measurement Error

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

## Supply

Power supply type	24 VDC
Nominal supply voltage $U_S$	DC 24 V
Supply voltage range	$\pm 30 \%$
Current consumption at nominal supply voltage	$\leq 40 \text{ mA}$

## Safety and protection

Protection type	IP20
-----------------	------

## Test voltage

Test voltage (input/output/supply)	AC 2.5 kV; 50 Hz; 1 min
------------------------------------	-------------------------

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

## 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

## 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	0.418 MJ
Weight	36.2 g

## Environmental requirements

Ambient temperature (operation)	-25 ... +70 °C
Ambient temperature (storage)	-40 ... +85 °C
Relative humidity	5 ... 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

## Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Standards/specifications	EN 61373

## Commercial data

Product Group	6 (INTERFACE ELECTRONIC)
eCl@ss 10.0	27-21-01-28
eCl@ss 9.0	27-21-01-28
ETIM 8.0	EC002918

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

ETIM 7.0	EC002918
PU (SPU)	1 pcs
Packaging type	bag
Country of origin	DE
GTIN	4050821226741
Customs tariff number	85437090300

## Environmental Product Compliance

CAS-No.	11120-22-2 7439-92-1 79-94-7
REACH Candidate List Substance	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol Lead Lead silicate
RoHS Compliance Status	Compliant,With Exemption
RoHS Exemption	6(c) 7(a) 7(c)-I 7(c)-II
SCIP notification number (Austria)	6d73a011-84c6-4de8-9203-d6ba0a4a08c8
SCIP notification number (Belgium)	6cd3b3c9-9745-4390-aa1a-ac93ba1da332
SCIP notification number (Bulgaria)	b01c1302-d9c2-438c-9217-730bfdfae0f7
SCIP notification number (Czech Republic)	e8fd4d44-e267-4bd8-b97b-1fcb8247f4fd
SCIP notification number (Denmark)	4da2ee18-6d67-44d0-9743-ad112597583e
SCIP notification number (Finland)	d0fa661d-f8f9-44c9-878c-daf953ee7c3a
SCIP notification number (France)	b6021de5-253c-45e8-9fd6fea69eda5701
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SCIP notification number (Italy)	6fc50000-c684-468e-973f-e70a3fb7bf3b
SCIP notification number (Netherlands)	0de14568-55e9-47a7-877e-b1bb752ffa03
SCIP notification number (Poland)	37c59afc-3304-41ef-b57e-b4af0981cd37
SCIP notification number (Romania)	b23ce25d-4008-47ae-b458-9cacfbfae760
SCIP notification number (Sweden)	721e6b08-10d7-4ada-96af-c2849dd874af

## Approvals / Certificates

### General approvals

Logo	Approval	Additional Approval Text	Certificate name
CCC		CNCA-C23-01	2020312310000210
CNEX			(Ex ec IIC T4 Gc)

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



**EAC**  
Brjansker Zertifizierungsstelle

TP TC 020/2011

EAC\_Certificate\_RU\_C-  
DE.AM02.B.00115\_19

## Declarations of conformity and manufacturer's declarations

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

## Approvals for marine applications

Logo	Approval	Additional Approval Text	Certificate name
	PRS Polski Rejestr Statków	-	TE/2186 /880590 /18

## Approvals for hazardous areas

Logo	Approval	Additional Approval Text	Certificate name
	ATEX TUEV Nord Cert GmbH	EN 60079-0	TÜV_14_ATEX_112692_X (II 3 G Ex nA IIC T4 Gc)
	CCC CNEX	CNCA-C23-01	2020312310000210 (Ex ec IIC T4 Gc)
	EAC Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02.B. 00144/19 (2 Ex nA IIC T4 Gc X)
	IECEx TUEV Nord Cert GmbH	IEC 60079-0	IECEX_TUN_14.0030_X
	UKEx	EN 60079-0	WAGO22UKEX004X

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

DEKRA 8505 WAGO GmbH &amp; Co. KG



UL

Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)

ANSI/ISA 12.12.01

E198726

## Optional accessories

### Cables and pluggable connectors

Communication cable



Item no.: 750-923/000-001

Configuration cable; USB connector; Length: 5 m

[www.wago.com/750-923/000-001](http://www.wago.com/750-923/000-001)

### 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](http://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](http://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](http://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](http://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](http://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](http://www.wago.com/793-504)

Item no.: 793-505

WMB marking card; as card; MARKED; 31 ... 40 (10x); not stretchable; Horizontal marking; snap-on type; white

[www.wago.com/793-505](http://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](http://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;

[www.wago.com/793-566](http://www.wago.com/793-566)

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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 [www.wago.com/793-5501](http://www.wago.com/793-5501)  
type; white

## 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](http://www.wago.com/210-720)

## Jumpers

Jumper



**Item no.: 859-408**

Jumper; for jumper slot; 8-way; insulated; light gray

[www.wago.com/859-408](http://www.wago.com/859-408)



**Item no.: 281-482**

Jumper; 2-way; insulated; gray

[www.wago.com/281-482](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://www.wago.com/859-406)



**Item no.: 859-405/000-006**

Jumper; for jumper slot; 5-way; insulated; blue

[www.wago.com/859-405  
/000-006](http://www.wago.com/859-405/000-006)

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

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	<b>Item no.: 859-406/000-005</b> Jumper; for jumper slot; 6-way; insulated; red	<a href="http://www.wago.com/859-406/000-005">www.wago.com/859-406/000-005</a>
	<b>Item no.: 859-409/000-029</b> Jumper; for jumper slot; 9-way; insulated; yellow	<a href="http://www.wago.com/859-409/000-029">www.wago.com/859-409/000-029</a>
	<b>Item no.: 859-410/000-005</b> Jumper; for jumper slot; 10-way; insulated; red	<a href="http://www.wago.com/859-410/000-005">www.wago.com/859-410/000-005</a>
	<b>Item no.: 859-410/000-029</b> Jumper; for jumper slot; 10-way; insulated; yellow	<a href="http://www.wago.com/859-410/000-029">www.wago.com/859-410/000-029</a>
	<b>Item no.: 859-410</b> Jumper; for jumper slot; 10-way; insulated; light gray	<a href="http://www.wago.com/859-410">www.wago.com/859-410</a>
	<b>Item no.: 859-410/000-006</b> Jumper; for jumper slot; 10-way; insulated; blue	<a href="http://www.wago.com/859-410/000-006">www.wago.com/859-410/000-006</a>
	<b>Item no.: 859-403/000-005</b> Jumper; for jumper slot; 3-way; insulated; red	<a href="http://www.wago.com/859-403/000-005">www.wago.com/859-403/000-005</a>
	<b>Item no.: 859-402/000-029</b> Jumper; for jumper slot; 2-way; insulated; yellow	<a href="http://www.wago.com/859-402/000-029">www.wago.com/859-402/000-029</a>
	<b>Item no.: 859-403/000-029</b> Jumper; for jumper slot; 3-way; insulated; yellow	<a href="http://www.wago.com/859-403/000-029">www.wago.com/859-403/000-029</a>
	<b>Item no.: 859-403/000-006</b> Jumper; for jumper slot; 3-way; insulated; blue	<a href="http://www.wago.com/859-403/000-006">www.wago.com/859-403/000-006</a>
	<b>Item no.: 859-408/000-005</b> Jumper; for jumper slot; 8-way; insulated; red	<a href="http://www.wago.com/859-408/000-005">www.wago.com/859-408/000-005</a>
	<b>Item no.: 859-408/000-029</b> Jumper; for jumper slot; 8-way; insulated; yellow	<a href="http://www.wago.com/859-408/000-029">www.wago.com/859-408/000-029</a>
	<b>Item no.: 859-409</b> Jumper; for jumper slot; 9-way; insulated; light gray	<a href="http://www.wago.com/859-409">www.wago.com/859-409</a>
	<b>Item no.: 859-408/000-006</b> Jumper; for jumper slot; 8-way; insulated; blue	<a href="http://www.wago.com/859-408/000-006">www.wago.com/859-408/000-006</a>

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

	<b>Item no.: 859-403</b> Jumper; for jumper slot; 3-way; insulated; light gray	<a href="http://www.wago.com/859-403">www.wago.com/859-403</a>
	<b>Item no.: 859-409/000-005</b> Jumper; for jumper slot; 9-way; insulated; red	<a href="http://www.wago.com/859-409/000-005">www.wago.com/859-409/000-005</a>
	<b>Item no.: 859-404</b> Jumper; for jumper slot; 4-way; insulated; light gray	<a href="http://www.wago.com/859-404">www.wago.com/859-404</a>
	<b>Item no.: 859-409/000-006</b> Jumper; for jumper slot; 9-way; insulated; blue	<a href="http://www.wago.com/859-409/000-006">www.wago.com/859-409/000-006</a>
	<b>Item no.: 859-402/000-006</b> Jumper; for jumper slot; 2-way; insulated; blue	<a href="http://www.wago.com/859-402/000-006">www.wago.com/859-402/000-006</a>
	<b>Item no.: 859-402</b> Jumper; for jumper slot; 2-way; insulated; light gray	<a href="http://www.wago.com/859-402">www.wago.com/859-402</a>
	<b>Item no.: 859-402/000-005</b> Jumper; for jumper slot; 2-way; insulated; red	<a href="http://www.wago.com/859-402/000-005">www.wago.com/859-402/000-005</a>
	<b>Item no.: 859-406/000-006</b> Jumper; for jumper slot; 6-way; insulated; blue	<a href="http://www.wago.com/859-406/000-006">www.wago.com/859-406/000-006</a>
	<b>Item no.: 859-406/000-029</b> Jumper; for jumper slot; 6-way; insulated; signal yellow	<a href="http://www.wago.com/859-406/000-029">www.wago.com/859-406/000-029</a>
	<b>Item no.: 859-407/000-006</b> Jumper; for jumper slot; 7-way; insulated; blue	<a href="http://www.wago.com/859-407/000-006">www.wago.com/859-407/000-006</a>
	<b>Item no.: 859-407/000-005</b> Jumper; for jumper slot; 7-way; insulated; red	<a href="http://www.wago.com/859-407/000-005">www.wago.com/859-407/000-005</a>
	<b>Item no.: 859-407/000-029</b> Jumper; for jumper slot; 7-way; insulated; yellow	<a href="http://www.wago.com/859-407/000-029">www.wago.com/859-407/000-029</a>
	<b>Item no.: 859-407</b> Jumper; for jumper slot; 7-way; insulated; light gray	<a href="http://www.wago.com/859-407">www.wago.com/859-407</a>
<b>Terminal blocks</b>		
Supply module		
	<b>Item no.: 857-979</b>	<a href="http://www.wago.com/857-979">www.wago.com/857-979</a>

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

Supply and through module

#### 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](http://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](http://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](http://www.wago.com/249-197)

#### 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](http://www.wago.com/787-2852)

#### Interface module

Interface adapters



**Item no.: 857-980**

Interface adapter; 16-pole; analog

[www.wago.com/857-980](http://www.wago.com/857-980)

#### Communication

Bluetooth



**Item no.: 750-921**

Bluetooth® Adapter

[www.wago.com/750-921](http://www.wago.com/750-921)

Communication cable



**Item no.: 750-923**

Configuration cable; USB connector; Length: 2.5 m

[www.wago.com/750-923](http://www.wago.com/750-923)

#### Downloads

##### Documentation

##### Bid Text

857-500

2019 Jan 9

docx

Download

docx - Datei

19.2 kB

##### Instruction Leaflet

CCC Ex (Additional information)

2023 Apr 26

pdf

Download

857-\*\*\*

144.4 kB

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Messumformer und Trennverstärker	pdf 2.7 MB	Download
Frequenzmessumformer Namur, NPN oder PNP DIP-Schalter / FDT/DTM Software		

#### Additional Information

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

#### Engineering-Software

##### Configuration and Commissioning Software

WAGO Interface Configuration Software G2 SMALL	1.00.10.01	exe	Download
The full setup only includes the WAGO Interface Configuration Software G2.	2022 Jan 20	31.0 MB	

WAGO Interface Configuration Software G2 FULL	1.00.10.01	exe	Download
The full setup, in addition to the WAGO Interface Configuration Software G2, includes the installation for the Microsoft .NET Framework.	2022 Jan 20	114.9 MB	

#### CAD/CAE-Data

##### CAD data

2D/3D Models 857-500	URL	Download
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##### CAE data

WSCAD Universe 857-500	URL	Download
ZUKEN Portal 857-500	URL	Download
EPLAN Data Portal 857-500	URL	Download

#### Environmental Product Compliance

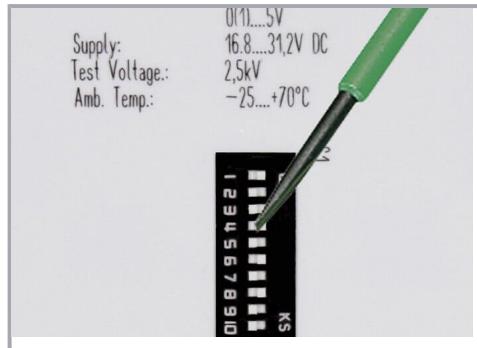
##### Compliance Search

Environmental Product Compliance 857-500	URL	Download
Frequency signal conditioner; Current and voltage output signal; Configuration via software; Supply voltage: 24 VDC; 6 mm module width		

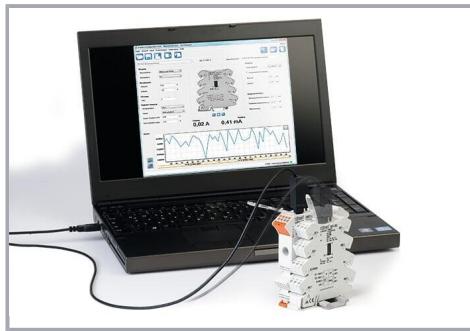
Subject to changes. Please also observe the further product documentation!

## Installation Notes

### Configuring

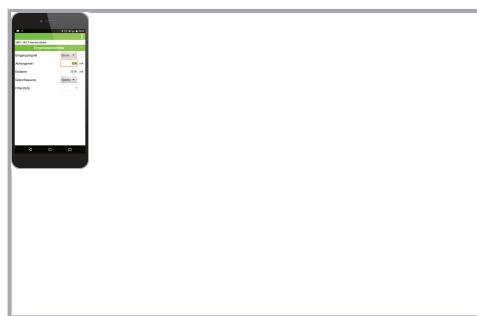


Configuration via DIP switch



Configuration via WAGO Interface

Configuration Software



Configuration via WAGO Interface

Configuration App

### Commoning



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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32423 Minden

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