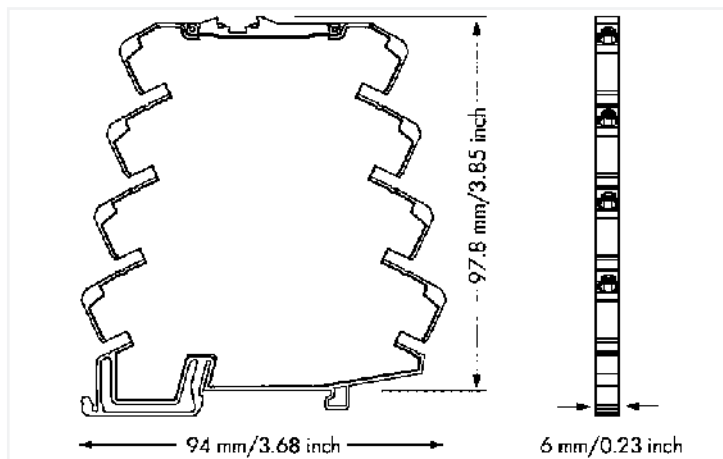
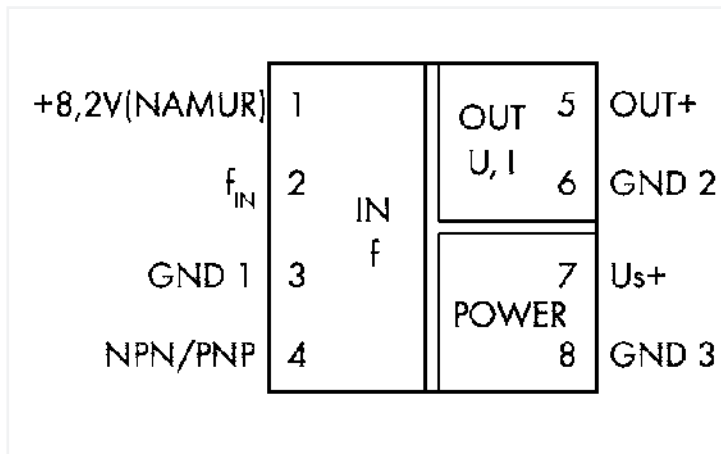
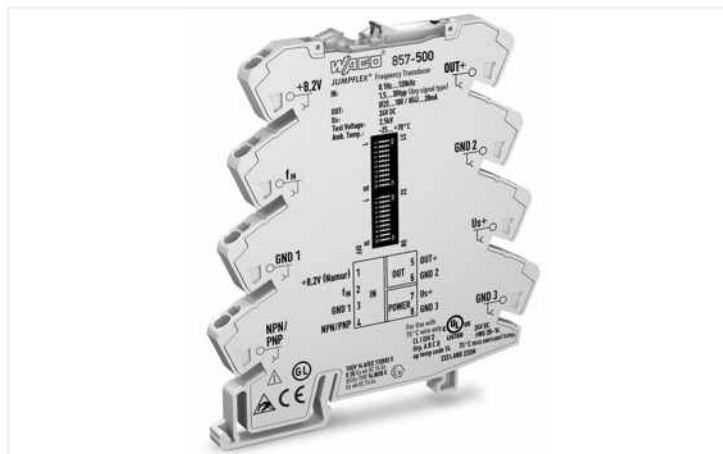


Data Sheet | Item Number: 857-500

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

<https://www.wago.com/857-500>



Dimensions in mm

Short description:

WAGO's frequency signal conditioner collects 0.1–120 kHz signals from NAMUR, NPN or PNP sensors and converts them into a standard analog signal.

Features:

- PC configuration interface
- Signal acquisition from NAMUR, NPN or PNP sensors
- Calibrated measurement range switching
- 3-way electrical isolation with 2.5 kV test voltage

Technical data

Configuration

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

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

Input – sensor type 1

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

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)	≥ 2 kΩ
Load impedance (current output)	≤ 600 Ω

Signal Processing

Conversion time	Peak-time measurement method (> 400 Hz): < 20 ms; Pulse time measurement method (< 400 Hz): < 200 μs + T _{Cycle duration}
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Supply

Power supply type	24 VDC
Nominal supply voltage U _s	DC 24 V
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 40 mA

Safety and protection

Protection type	IP20
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Input – sensor type 3

Sensor type 3	NPN/PNP transistor output without pull-up or pull-down resistor Mechanical contact (dry contact)
Measurement range (frequency) 3	0.1 Hz ... 20 kHz
Pulse length 3	≥ 25 μs
Measurement span 3 (min.)	100 Hz
Open-circuit voltage	DC 5 V
NPN residual voltage	≤ 1.5 V
PNP switching voltage	≥ 7.5 V (+ residual voltage U _{CE sat})

Signaling and Communication

Configuration options	WAGO Interface Configuration App WAGO Interface Configuration Software DIP switch
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Measurement Error

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

Test voltage

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

Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.34 ... 2.5 mm ² / 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
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Material Data

Fire load	0.405 MJ
Weight	36.2 g

Environmental requirements

Ambient temperature (operation at U _N)	-25 ... +70 °C
Surrounding air 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
ETIM 7.0	EC002918
PU (SPU)	1 pcs
Packaging type	Bag
Country of origin	DE
GTIN	4050821226741
Customs tariff number	85437090300