

**WAVESERIES
WAZ4 PRO FREQ****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com



Universal, electrically-isolated signal converters for measuring frequencies with auxiliary power supply and optional limit-value monitoring.

Similar frequency signals from 2-/3-wire PNP/NPN- or Namur initiators can be processed on the input side.

Frequency converters can be used to measure speeds for drives and motors. They can also be used for counting and checking the flow of incoming goods in industrial shipping and handling applications.

General ordering data

Delivery status	This article will no longer be available in the future.
Available until	2020-09-30
Type	WAZ4 PRO FREQ
Order No.	8581190000
Version	Signal converter/insulator, Tension-clamp connection
GTIN (EAN)	4032248234493
Qty.	1 pc(s).

Creation date April 21, 2020 6:26:50 PM CEST

Catalogue status 17.04.2020 / We reserve the right to make technical changes.

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Technical data
Dimensions and weights

Length	92.4 mm	Length (inches)	3.638 inch
Width	12.5 mm	Width (inches)	0.492 inch
Depth	112.4 mm	Depth (inches)	4.425 inch
Net weight	127 g		

Temperatures

Operating temperature, max.	55 °C	Operating temperature, min.	0 °C
Storage temperature, max.	85 °C	Storage temperature, min.	-20 °C
Operating temperature	0 °C...55 °C	Storage temperature	-20 °C...85 °C

Probability of failure

MTTF	458 Jahre
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Input

Number of inputs	1	Sensor	2-, 3-wire PNP/NPN, Namur initiator, push-pull step, Frequency
Sensor supply	16 V DC @ max. 15 mA	Rated input level	Threshold/hysteresis: Namur: approx. 1.7 mA/ approx. 0.2 mA; NPN: approx. 6.5 V/ approx. 0.2 V; PNP: approx. 6.7 V/ approx. 0.5 V
Input frequency	0...100kHz, adjustable		

Output

Number of outputs	1	Output voltage, note	0...5 V, 0...10 V, Adjustable
Output current	0...20 mA, 4...20 mA, Adjustable	load impedance voltage	≥ 1 kΩ
Load impedance current	≤ 600 Ω	Offset voltage	max. 0.05 V
Offset current	max. 100 µA	Status indicator	Green LED

General data

Accuracy	< 0.2% of output range	Configuration	DIP switch (measurement range 0...15900 Hz), Frequency generator (measurement range 0...100 kHz)
Current-carrying capacity of cross-connect.	≤ 2 A	Galvanic isolation	3-way isolator
Input/Output	configurable	Power consumption	max. 1.6 W at I _{OUT} = 20 mA
Rail	TS 35	Step response time	360 ms + 2 times the period time of input frequency
Temperature coefficient	max. 200 ppm/K of output range	Voltage supply	24 V DC ± 25 %

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Technical data**Insulation coordination**

Clearance & creepage distances	$\geq 5.5 \text{ mm}$	EMC standards	EN 55011, EN 61000-6, EN 61326
Galvanic isolation	3-way isolator	Impulse withstand voltage	6 kV
Insulation voltage	4 kV _{eff} / 5 s	Insulation voltage input or output/rail	4 kV _{eff} / 1 min.
Insulation voltage input or output/supply	4 kV _{eff} / 5 s	Pollution severity	2
Rated voltage	300 V	Surge voltage category	III

Connection data

Type of connection	Tension-clamp connection	Stripping length, rated connection	7 mm
Clamping range, rated connection	1.5 mm ²	Clamping range, min.	0.5 mm ²
Clamping range, max.	2.5 mm ²		

Classifications

ETIM 6.0	EC002918	ETIM 7.0	EC002918
eClass 9.0	27-21-01-28	eClass 9.1	27-21-01-28
eClass 10.0	27-21-01-28		

Product information

Product information	This product will soon be replaced by a new product. Please do not use with new systems. Please contact our technical support.
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Approvals

Approvals



ROHS	Conform
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Downloads

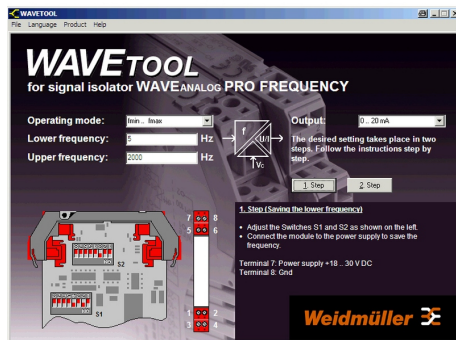
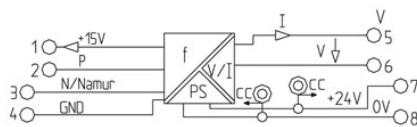
Approval/Certificate/Document of Conformity	Declaration of Conformity
Brochure/Catalogue	CAT 4.1 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD
Software	WaveTool.zip
User Documentation	Instruction sheet

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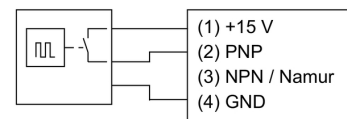
Drawings

Connection diagram

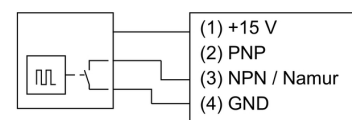


Screenshot example, Wave tool software

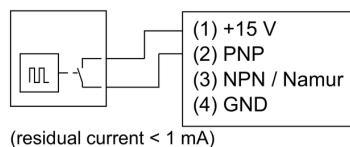
3-wire initiator with PNP-Output



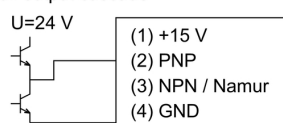
3-wire initiator with NPN-Output



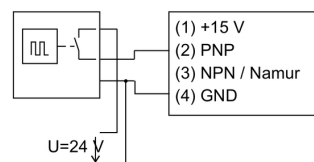
2-wire initiator



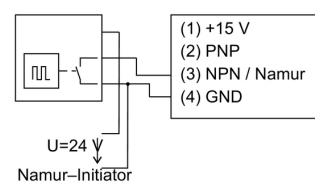
Push pull output cascade



3-wire initiator with PNP output and external supply



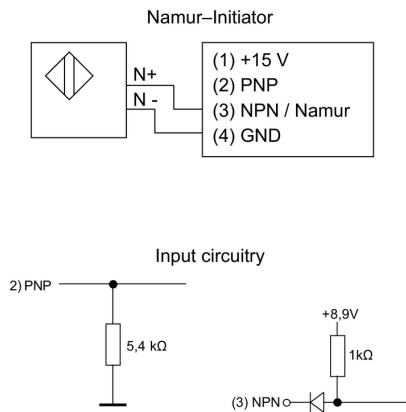
3-wire initiator with NPN output and external supply



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Drawings



Selecting the operating mode			
Switch 2		3	4
Operating mode		☐	☐
0 ... fmax		☐	☐
fmin ... fmax		☐	☐
saving fmin		☐	☐

$$f = (A+B) \times C$$

Selecting the frequency			
Switch 1		Switch 1	
A	1	B	5
0	☐	0	☐
1	☐	0.1	☐
2	☐	0.2	☐
3	☐	0.3	☐
4	☐	0.4	☐
5	☐	0.5	☐
6	☐	0.6	☐
7	☐	0.7	☐
8	☐	0.8	☐
9	☐	0.9	☐
10	☐		☐
11	☐		☐
12	☐		☐
13	☐		☐
14	☐		☐
15	☐		☐

Selecting the frequency		
Switch 2		1
C		2
x1	☐	☐
x10	☐	☐
x100	☐	☐
x1000	☐	☐

Selecting the output

Output	Switch 2			
	5	6	7	8
0...10 V	☒	☐	☒	☒
0...20 mA	☐	☐	☐	☐
4...20 mA	☐	☒	☐	☐
0...5 V	☒	☒	☒	☒

Special range (frequency generator is required)

Function	Switch 2			
	1	2	3	4
save min. frequency	☐	☒	☒	☒
save max. frequency	☒	☐	☒	☒
select special range	☒	☒	☒	☒

☒ = on

☐ = off

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Drawings

Application

