

Ziegler

Redefine Innovative Metering

Technical Datasheet

ZOT IO33

ELECTRICAL SIGNAL CONVERTER - STATIC (3 INPUT AND 3 OUTPUT)

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ZOT IO33 is used to measure and convert 3 \emptyset AC voltage or current input to 3 isolated DC analog output.

Product Features

- Accuracy Class – 0.5% (As per IEC 60688)
- Wide auxiliary Power Supply - 85...230VAC/DC or 24...60VAC/DC
- Input
 - Current : 0...0.01 to 0...10A
 - Voltage: 0... 10 to 0 ... 750 V
- Output
 - Current : 0...1 / 0...5 / 0...10 / 0...20 / 4...20 mA
 - Voltage : 0...10 / 1...5V
- Output Burden – 15V for Current output & 20mA for voltage output
- Electric isolation between input / output and power supply (3.7 kV)
- Output Response Time : <300ms
- DIN Rail / Wall mounting



Technical Specifications

Input Data – Voltage Converter	
Nominal Input Voltage	57.7 / 63.5 / 100 / 110/ 116.66 / 120 / 125 / 133.33 / 150 / 250 / 400 or 500 V AC
Nominal Frequency	50 or 60 Hz
Burden	< 1 mA per Voltage Circuit
Overload Capacity	1.5 x U_N continuously 2 x U_N for 10 second, repeated 10 times at 10 second intervals 4 x U_N for 2 second
Input Data – Current Converter	
Nominal Input Current	1 / 1.2 / 5 or 6A AC
Nominal Frequency	50 or 60 Hz
Burden	< 0.2 VA per Current Circuit
Overload Capacity	2 x I_N continuously 10 x I_N for 15 second, repeated 5 times at 5 minute intervals, 20 x I_N for 1 second, repeated 5 times at 5 minute intervals, 40 x I_N for 1 second.

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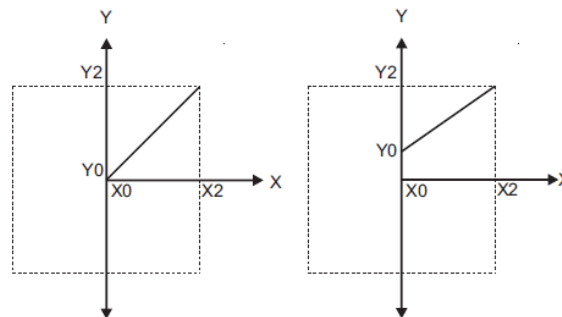
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Output Data - Output type: Load independent DC Voltage/Current	
DC Current output	0...1 / 0...5 / 0...10 / 0...20 / 4...20 mA
Burden	15V
DC Voltage output	0...10 / 1...5V
Burden	20 mA
Residual Ripple in Output signal	≤ 1% pk-pk
Response Time	< 300 ms

Power Supply	
Auxiliary Supply	85...230V AC/DC AUX 24...60V AC/DC AUX
Tolerance	For DC AUX : -15% / +33% For AC AUX : ±15%
Burden	9VA (DC) and 10VA (AC)
Frequency (AC)	50/60Hz

Accuracy	
Reference Value	Output Span
Accuracy class	0.5%
Reference conditions for Accuracy	
Ambient temperature	23°C , +/- 5K
Pre-conditioning	30 min acc. to IEC/EN 60 688
Input signal frequency	2% of nominal Frequency
Input Variable	Rated Voltage Range / Rated Current Range
Input waveform	Sinusoidal
Output Load	R _N = 7.5 V / Y ₂ ± 1% With DC Current output signal. R _N = Y ₂ / 10 mA ± 1% With DC Voltage output signal.

Output characteristics



X0 = Start value of input	Y0 = Start value of output
X2 = End value of input=UN/IN	Y2 = End value of output
UN = Nominal input voltage	IN = Nominal input current

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Safety	
Protection	IP 40, housing according to EN 60 529 IP 20 ,terminal according to EN 60 529
Pollution degree	2
Installation Category	III
Insulation Voltage	50Hz,1min. (EN 61 010-1)
	3.7 kV / 50 Hz / 1min. Between electrically insulated circuits. 0.5 kV, 50Hz, 1 min. Between any two channels.

Installation Data	
Mechanical Housing	Lexan 940 (polycarbonate) Flammability Class V-0 acc. To UL 94, self extinguishing, non dripping, free of halogen.
Mounting position	For snapping onto top - hat rail (35 x 15 mm or 35 x 7.5 mm) acc. to EN 50 022 or Directly onto a wall or panel using the pull-out screw hole brackets
Weight	Approx 0.9kG

Connection Terminal	
Connection Element	Conventional Screw type terminal with indirect wire pressure
Permissible cross section of the connection lead	≤ 6.0 mm ² single wire or 2 x 2.5 mm ² fine wire

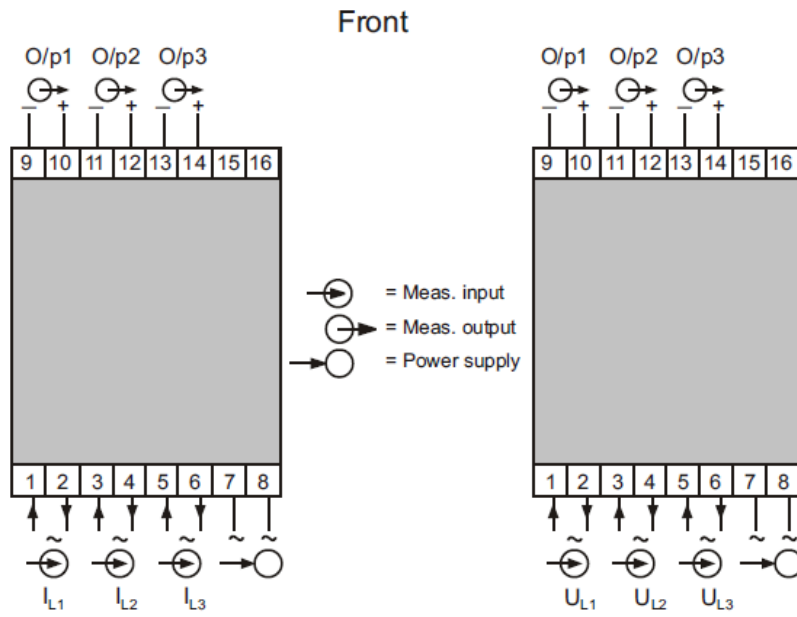
Environmental	
Nominal range of use	-25 °C... 55 °C (usage Group II)
Storage temperature	-40 °C to 70 °C
Relative humidity of annual mean	≤ 75%

Applicable Standards	
DIN /IEC 688- Part 1	Device for converting AC electrical quantities into DC electrical quantity.
DIN 57410	Electrical Standards
DIN 57110 b	Insulation Group: A (instrument), C (terminals)
EN 50022	For snapping into top hat rail.
Electromagnetic Compatibility Standards Acc. to EN 50081-2 And EN 50082-2	
EN 55011	Conducted interference from the instrument HF radiation from the complete instrument Group 1, Class A
IEC 801-2	Electrostatic Discharge on instruments
IEC 801-3	HF field influence on instruments
IEC 801-4	Electrical Fast Transients/burst influence power, supply lines
IEC 801-5	Surge immunity requirements coupled under power supply lines

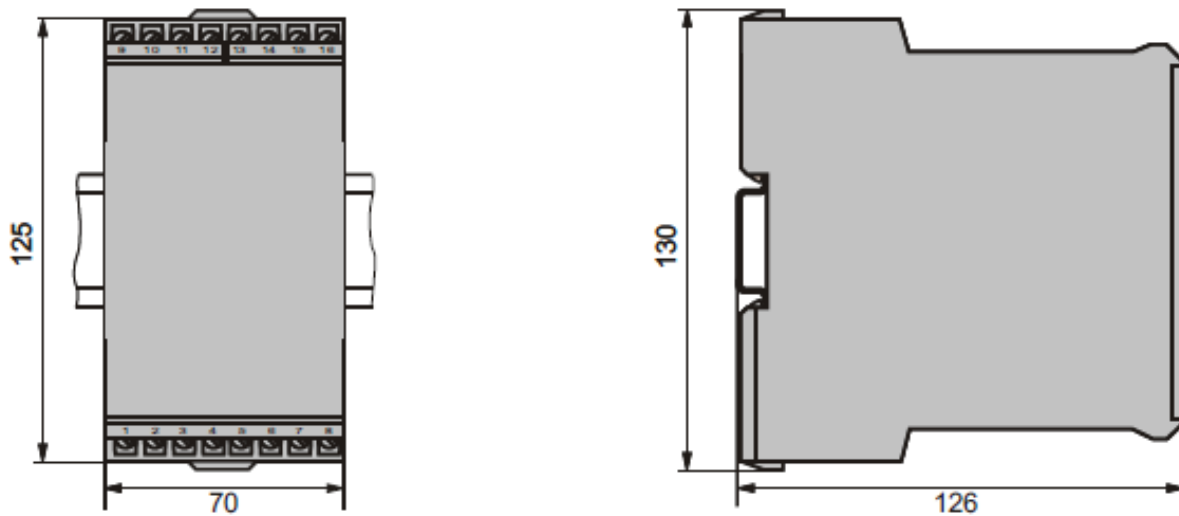
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Electrical Connections



Dimensional Drawings



DIN Mounting - Clipped onto a top hat rail (35 x 15 mm or 35 x 7.5 mm) acc. to EN 50022

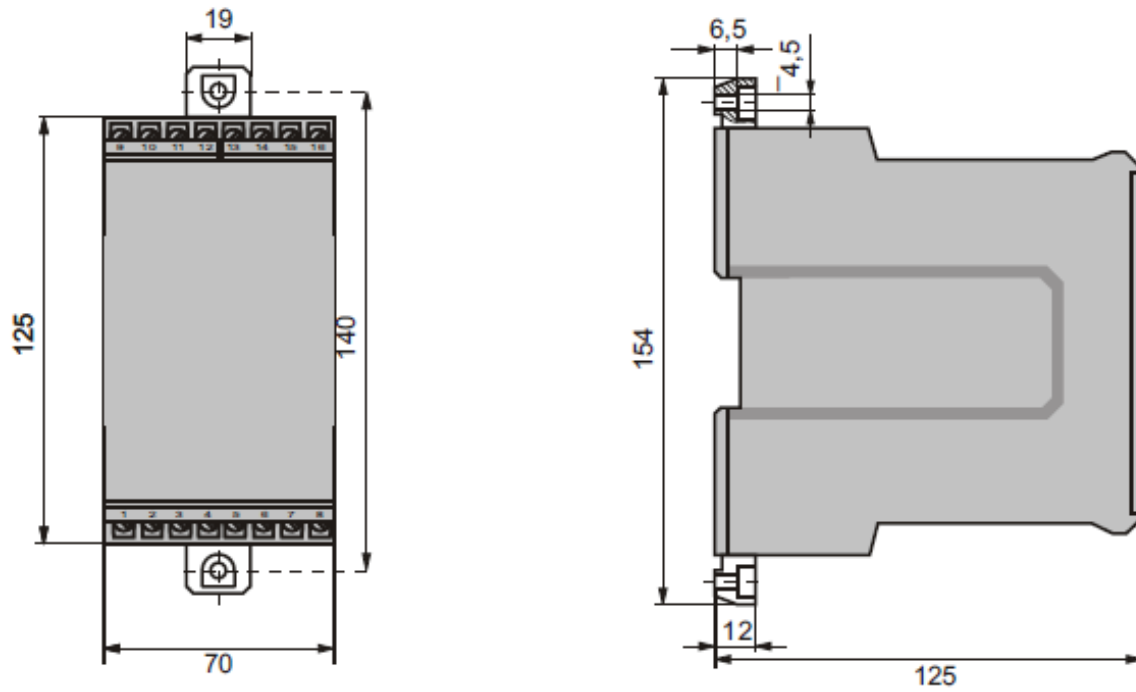
Dimensions

Note : All Dimensions are in mm.

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Dimensional Drawings



Wall Mounting - with the screw hole brackets pulled out for wall mounting.

Dimensions

Note : All Dimensions are in mm.

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Ordering Information

Ordering Information	(√)		
Voltage Converter			
0-57.7V			
0-63.5V			
0-100V			
0- 116.66 V			
0-120V			
0-125V			
0- 133.33V			
0-150 V			
0-250V			
0-400V			
0-500V			
Current Converter			
0-1A			
0-1.2A			
0-5A			
Input Frequency 50 / 60Hz			
Output Signal	Output 1	Output 2	Output 3
0...10V			
0...5V			
0...20mA			
2...10mA			
4...20mA			
0...10mA			
0...1mA			
0...5mA			
Power Supply			
85...230 V AC/DC			
24...60 V AC/DC			

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