Ziegler

Redefine Innovative Metering

Technical Datasheet

ZOT ZI11 | ZI12

SIGNAL TRANSMITTER - ZIXX STATIC (FIXED INPUT)

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SIGNAL TRANSMITTER - ZIXX STATIC (FIXED INPUT)

Product Features

- **Electric Isolation :**
  - Electrically isolated analog output prevents interference voltage and current. Solves grounding problem in meshed signal networks

  ZOT ZI11
  - High electric isolation between input and output 3.2 kV, and power supply versus all other circuits 5.2 kV

  ZOT ZI12
  - High electric isolation between input and outputs – 2.3 kV, and power supply versus all other circuits – 3.0 kV

Technical Specifications

ZOT ZI11	
Measuring inputs	
DC current standard ranges	1) 0...20mA 2) 4...20mA 3)1...5mA
DC voltage standard ranges	1) 0...10V 2) 2...10V 3) 1...5V 4) 0...300V
Measuring outputs	
DC current standard ranges	1) 0...20mA 2) 4...20mA
Burden voltage	12V
External Resistance	Rext max. [k Ohm] = 12V/ IAN [mA] I AN =Output circuit full scale value
DC voltage standard ranges	1) 0...10V 2) 2...10V
Burden	Rext min. [kOhm] = UAN [V]/ 5 mA UAN =Output circuit full scale value
Current limiter at R_{ext} =0	< 30mA for voltage output
Voltage limiter at R_{ext} =∞	< 17V for current output
Residual ripple in Output current	< 0.4% p.p
Response time	< 50 ms
Common mode voltage	100v
Pollution degree	2
Power Supply	
Rated operating voltage	60 ... 230.....300 V AC/DC 24...48 60 V AC/DC
Rated operating frequency	45...50 or 60 400 Hz
Power input	< 1.6 W resp. < 3.4 VA
Accuracy data (Acc to IEC 60688)	
Accuracy class	0.2 %
Reference Conditions	
Ambient temperature	23°C + 2°C

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Output burden	Current: 0.5 * Rext max. Voltage : 2* Rext min.
Nominal value of Aux supply voltage:	230V 50Hz or 60 Hz AC/DC 48V 50Hz or 60 Hz AC/DC
Influence Factors	
Temperature	± 0.15% per 10 °C
Burden influence	< ± 0.1 % for current output < ± 0.1 % for voltage output
Magnetic field	< ±0.2 % (400 A/T)
Regulations	
Electromagnetic Compatibility	Acc. to IEC 61326 – 1
Protection	For Housing : IP40 Terminals : IP20
Electrical standards	Acc. to IEC 61010 -1 / EN 61 010 -1
Pollution degree	2
Over voltage category	III for power supply; II for measuring input and measuring output.
Double Insulation	- Power supply versus all other circuit. - Measuring input versus measuring output.
Test Voltage	Power supply versus : All 5.2 kV, DC 1 min Measuring inputs versus : Measuring output 3.2 kV, DC 1 min
Ambient temperature	
Climatic rating	Climate case 3Z acc. to VDI /VDE 3540
Nominal Range of use	0 ºC to 45 ºC (Usage Group II)
Storage temperature	-40 ºC to 70 ºC
Annual mean relative humidity	< 75% standard Climatic rating.
Installation data	
Mechanical Housing	Lexan 940 (polycarbonate) Flammability Class V-0 acc. to UL 94 self extinguishing, non dripping, free of halogen.
Mounting position	Rail mounting / wall mounting
Weight	Approx. 0.15kg
Connection Terminal	
Connection Element	Conventional Screw type terminal with indirect wire pressure
Permissible Vibrations	2 G acc. to EN 60 068-2-6
Permissible cross section of the connection lead	4.0mm^2 single wire or 2 x 2.5 mm . Fine wire
Shocks	3 x 50 g 2 shocks each in 6 directions

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	Acc. to EN 60 068-2-27

ZOT ZI12	
Measuring Inputs	
DC current standard ranges	1) 0...20mA 2) 4...20mA 3) 1...5mA
Input resistance	≤ 15.5 Ω
DC voltage standard ranges	1) 0...10V 2) 2...10V 3) 1...5V
Input resistance	≥ 100 kΩ
Measuring output 1 and output 2	
DC current standard ranges	1) 0...20mA 2) 4...20mA
Burden voltage	<13V
External Resistance	Rext max. [kΩ] = 12V/ IAN [mA] I AN =Output circuit full scale value
DC voltage standard ranges	1) 0...10V 2) 2...10V
Burden	Rext min. [kΩ] = UAN [V]/ 5 mA UAN =Output circuit full scale value
Current limiter at Rext =0	< 42mA for voltage output
Voltage limiter at Rext =∞	< 20 V for current output
Residual ripple in Output	< 0.4% p.p.
Response time	< 50 ms
Common mode voltage	100V
Pollution degree	2
Power supply	
Rated operating voltage	60 ... 230... 300 V DC/AC OR 20 ...30... 40V AC / 20 ...30... 60V DC
Rated operating frequency	40 ... 50-60 ... 400 Hz
Power input	< 2W resp < 4 VA
Accuracy data (Acc. To IEC 60688)	
Basic Accuracy	Limit error < ± 0.2 % including linearity and reproducibility errors
Reference conditions	
Ambient temperature	23°C ± 2°C
Output burden	Current: 0.5 * Rext max. Voltage: 2 * Rext min
Nominal value of Aux supply voltage:	230V 50Hz or 60 Hz AC/DC 30V 50Hz or 60 Hz AC/DC
Influence factors	
Temperature	± 0.01% per °C
Burden influence	< ± 0.1 % for current output < ± 0.1 % for voltage output
Switch-on drift	< ± 0.2%
Longtime drift	< ± 0.3% / 12 months
Magnetic field	Magnetic field
Regulations	
Electromagnetic Compatibility	Acc. to IEC 61326 – 1
Protection	For Housing : IP40 Terminals : IP20

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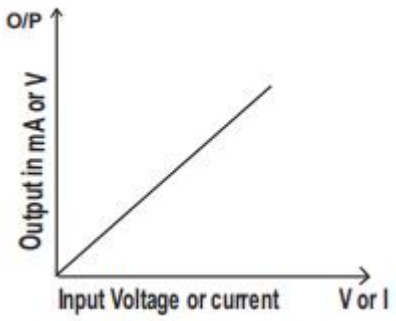
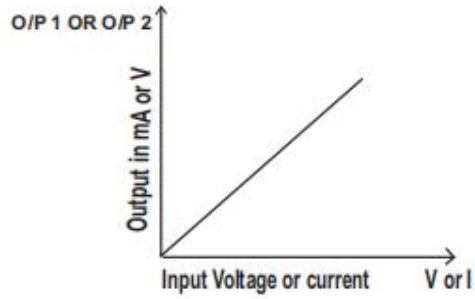
Electrical standards	Acc. to IEC 61010 -1 / EN 61 010 -1
Pollution degree	2
Over voltage category	III for power supply.II for measuring input and measuring output.
Test Voltage	Power supply versus : -All 3 kV, 50 Hz 1 min Measuring inputs versus : -Measuring outputs 2.3 kV, 50 Hz 1min & O/P1 to O/P 2: 500 V ,50 Hz ,1 min
Environmental Conditions	
Climatic rating	Climate class 3 acc. to VDI /VDE 3540
Nominal Range of Use	0 ºC to 45 ºC (Usage group II)
Operating Temperature	-10 ºC to 55 ºC
Storage temperature	-40 ºC to 70 ºC
Annual mean relative humidity	< 75% standard Climatic rating.
Installation data	
Mechanical Housing	Lexan 940 (polycarbonate) Flammability Class V-0 acc. to UL 94 self extinguishing, non dripping, free of halogen
Mounting position	Rail mounting / wall mounting
Weight	Approx. 0.2kg
Connection terminal	
Connection Element	Conventional Screw type terminal with indirect wire pressure
Permissible cross section of the connection lead	4.0mm² single wire or 2 x 2.5mm² Fine wire
Permissible Vibrations	2 g acc. to EN 60 068-2-6
Shocks	3 x 50 g 2 shocks each in 6 directions ,Acc. to EN 60 068-2-27

Output Characteristics



For ZOT ZI11



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Connection Diagram and Installation

ZOT ZI11

Connection	Terminal details	
Measuring input	+	1
	-	2
Measuring output	+	3
	-	4
Auxiliary Supply	~ , +	5
	~ , -	6

ZOT ZI12

Connection	Terminal details	
Measuring input	+	3
	-	4
Measuring output 1	+	5
	-	6
Measuring output 2	+	7
	-	8
Auxiliary Supply	~ , +	1
	~ , -	2

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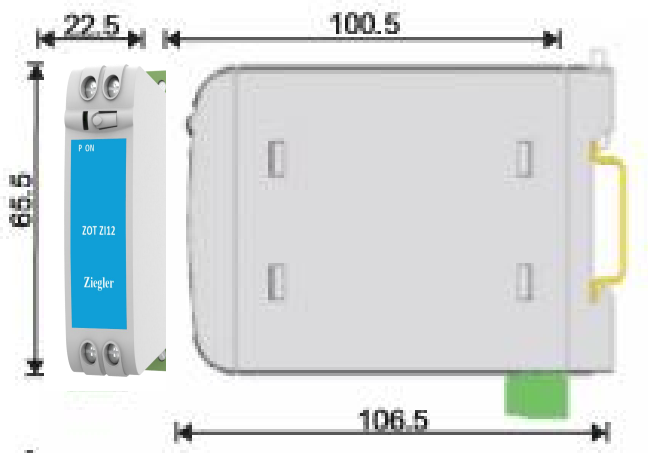
Dimensions



ZOT ZI12 & ZOT ZI11

Ordering Information

FOR ZOT ZI11

INPUT RANGE CODE

Current (mA)	Ordering Code	Voltage (V)	(√)
Standard input ranges			
0...20	1	0...10	
1...5	2	2...10	
4...20	3	1...5	
Non- standard input ranges			
0....0.1	7	0....0.06	
0....0.2	8	0.....0.1	
0....0.5	9	0.....0.2	
0.....1	10	0.....0.5	
0.....2	11	0.....1	
0.....5	12	0.....2	
0.....10	13	0.....5	

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0.....40	14	0.....20	
0.....80	15	0.....40	
0....100	16	0.2.....1	
0.2....1	17	1.....5	
1.....5	18	4.....20	
2.....10	19	0.....48	

STANDARD OUTPUT RANGE CODES

Current (mA)	Ordering Code	Voltage (V)	(√)
0...20	1	0...10	
4...20	2	2...10	

AUXILIARY SUPPLY VOLTAGE

Auxiliary supply	(√)
60 ...300V AC/DC	
24...60V AC/DC	

Example : To order model of 0 to 20 mA input & 0 to 10V output and auxiliary supply 24 to 60 V AC DC

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FOR ZOT ZI12

INPUT RANGE CODE

Current (mA)	Ordering Code	Voltage (V)	(√)
0...20	1	0...10	
1...5	2	2...10	
4...20	3	1...5	

STANDARD OUTPUT RANGE CODES

Current (mA)	Ordering Code	Voltage (V)	(√)
0...20	1	0...10	
4...20	2	2...10	

AUXILIARY SUPPLY VOLTAGE

Auxiliary supply voltage	(√)
60.. 300V AC/DC	
20....40V AC / 20...60V DC	

Example: To order model with 0 to 20 mA input, 0 to 10V output 1 & 4 to 20mA output 2 and lower aux specification

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