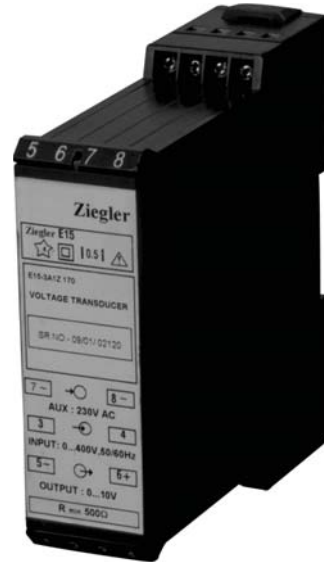


Transducers for AC current / AC Voltage

IXX/ E15 Current	AC current transducer
VXX/ E15 Voltage	AC voltage transducer
E1D	AC voltage & current transducer with dual output
E13	3 channel AC current & voltage transducer

Ziegler IXX / VXX / E1X measuring transducers are used to convert a sine wave or distorted AC current and AC voltage into an impressed load independent output signal. The output signal is proportional to the root mean square value of the input current and voltage.



GENERAL FEATURES:

APPLICABLE STANDARDS

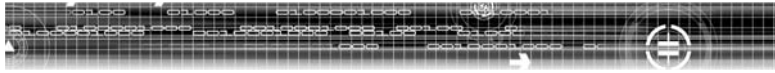
Product Performance	Acc. to IEC 60688
Housing Protection	IP 40 acc. to EN 60 529 Terminal IP 20
Rated Insulation Voltage	Measuring input AC 300 V Power supply AC 300 V, DC 230V Measuring output DC 40V
Contamination level	2
Over voltage category	III
Protection class	II
Safe isolation	Acc. to IEC 61010 and DIN/DE 106, part 101
Impulse withstand voltage acc. to IEC 255-4Cl. III	5kV, 1.2/50ms, 0.5Ws Common-mode and differential mode between any terminals
Test voltage	3.7kV/50Hz/1min. between electrically isolated circuits Measuring output versus housing 0.5kV/50kV/1min measuring 2:0.5kV/50Hz/1min Measuring output 1 versus

ENVIRONMENTAL CONDITIONS

Climatic rating	Climate class 3Z acc. to VDI/VDE 3540
Operating temperature	-25 to +55°C
Storage temperature	-40 to +70°C
Relative humidity	75% (STD), 90% (Enhanced)
Permissible vibration	2g acc. to EN 60 068-2-6
Shock	3x50g (3 shocks each in 6 directions)

FACT SHEET:

Mechanical Design	Moulded case housing 35mm width
Case Material	Glass filled polycarbonate, Flame retardant & drip proof as per UL 94 V0
Position of use	Any
Higher load capacity	750Ω at 20mA
Mounting	DIN rail mounting (35x15/7.5mm) acc. to EN 50 022 or directly onto wall or panel mounting. Easy "onsite" conversion possible
Protection type	Output short circuit and open circuit proof
Terminal connection	Screw-type terminals with indirect wire pressure 2 for max. 2x2.5mm ² or 1x6mm ² Electricians delight. Even suitable for multistrand or solid wire connection. Large space for looping of wires

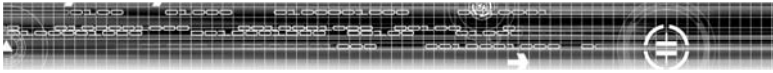


Ziegler

Redefine Innovative Metering

VOLTAGE CURRENT & FREQUENCY TRANSDUCERS

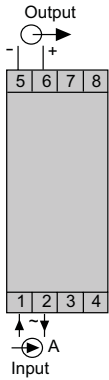
Models	I11/V11	I12	E15	E1D	E13	I21/V21	I22/V22	
Measuring quantity	AC Current/Voltage	AC Current	AC Current/Voltage					
Nominal Input	Current: 1A or 5A Voltage: 110V/ 3/ 110/150/240/415/ 440V	1A or 5A site configurable.	Current: 1/1.2/5 or 6A Voltage: 100/3/110 3/120/ 3/ 100/110/116.66/120/1 25/133.33/150/250/40 0 or 500V	Current: 1/1.2/5 or 6A Voltage: 100/ 3/110 3/120/ 3/ 100/110/116.66/120/1 25/133.33/150/250/40 0 or 500V	Current: 0-1A to 0-7.5A Voltage: 0-100V to 0-500V			
Nominal Frequency	50, 60Hz			50, 60 or 400Hz			50, 60Hz	
Output Quantity	Load Independent DC Current or DC Voltage							
Output Range	0-1/0-5/0-10 or 0-20mA 4-20mA-wire connection 0-10V	0-5/0-10/0-20mA 0-10V	0-10V/1-5V 0-1//5/10/20mA or 4-20mA Option: Dual Output.	0-1,0-5,0-10, 0-20 or 4-20mA 0-10V, 1-5V	Dual output	3 channel	0-1mA to 0-20mA,4-20mA 0-1V to 0-10V Option: Dual Output.	
Ripple	<1% P-P					<0.5% P-P		
Output Burden	Current Output: $R_{ext}=15V/I$ {Full Scale} [750Ω @ 20mA or 1500 Ω @ 10mA] Voltage Output: $R_{ext}= \text{Output Voltage}/20\text{mA}$.							
Auxiliary Supply	Self Powered OR 12V-30V (Only for 2 wire connection with output 4-20mA)	Self Powered	AC 24/115/120/230/240/2 50V + 15% 50/60Hz DC 24,48,60 or 110V - 15% +33%.	AC 24/115/120/230/240/2 50V + 15% 50/60Hz DC 24,48,60 or 110V - 15% +33%.	AC 110 or 230V	AC 24/110/230/400V AC/DC 24-60V AC/DC 85-230V		
Power Consumption	---	1 VA	< 0.2 VA in Current < 1 VA in Voltage	<0.2VA <2VA	<0.2VA <1VA	<4VA		
Response Time	<300ms	<2s	<300ms			<300 ms (< 50ms option)		
High Insulation Level	4kV	3.7kV	4kV	4kV	3.7kV	3.7kV		
Impulse Withstand Voltage	5kV, 1.2/50μsec,0.5 Ws							
Accuracy as per IEC 688	Class 0.5					Class 0.2		
Operating Temperature	-25 to 55° C							
Weight	Approx. 0.4kg	Approx. 0.5kg		Approx. 0.7kg	Approx. 0.9kg	Approx. 0.5kg		



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Redefine Innovative Metering

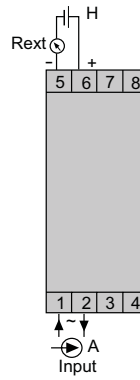
ELECTRICAL CONNECTION



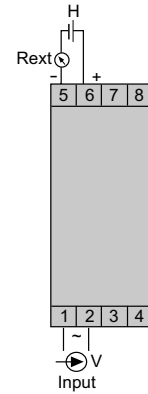
Ziegler Transducer I11
for measuring AC Current



Ziegler Transducer V11
for measuring AC Voltage



Ziegler Transducer I11
as 2-wire converter
with 4.. 20 mA output.



Ziegler Transducer V11,
as 2-wire converter
with 4.. 20 mA output.

I11,V11

Connection	Connecting terminals
Measuring input E \rightarrow 1A~	1 and 3
Measuring input E \rightarrow 5A~	1 and 2
Measuring output A \rightarrow	5 - and 6 +

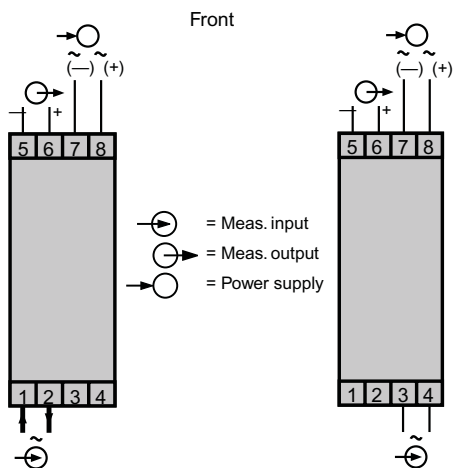
I12

Connection	Terminals
Measuring input \rightarrow	~ 1 ~ 3
Measuring Output \rightarrow	+ 13 - 14
Power supply \rightarrow	~,+ 21 ~, - 22

I11,V11/ I21 / I22

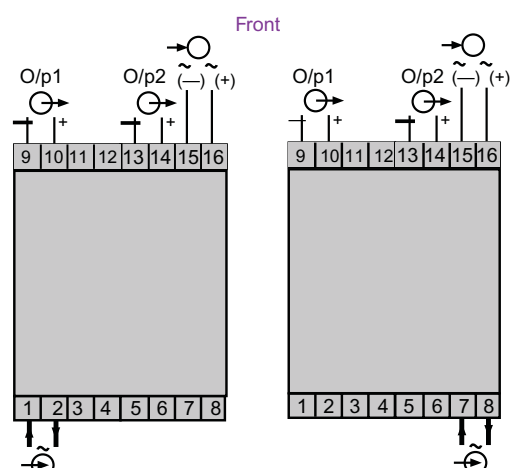
Connection	Terminals
Measuring input \rightarrow	~ 2 ~ 5
Measuring Output \rightarrow	+ 13 - 14
Power supply \rightarrow	~,+ 21 ~, - 22

V21 / V22



Ziegler Transducer E15 one output
for AC current measurement.

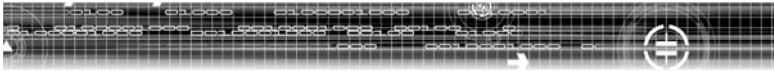
Ziegler Transducer E15 one
output for AC voltage
measurement.



Ziegler Transducer E15 two
output for AC current
measurement.

Ziegler Transducer E15 two
output for AC voltage
measurement.

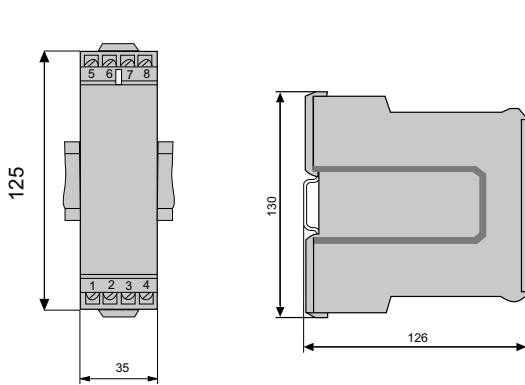
- = Meas. input
- = Meas. output
- = Power supply



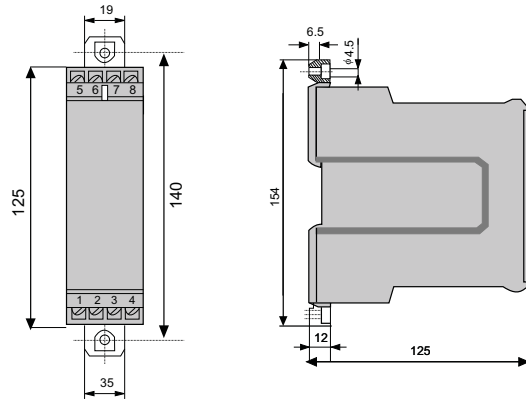
Ziegler

Redefine Innovative Metering

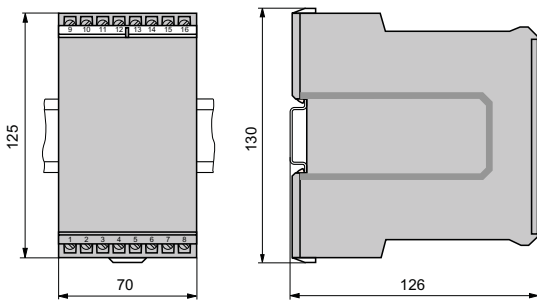
DIMENSIONAL DRAWING



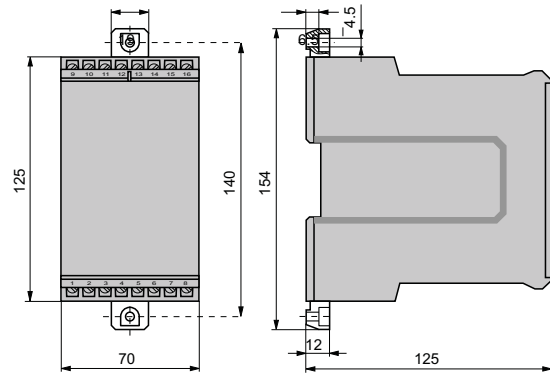
Transducer in housing E8 clipped onto a top-hat rail (35 x 15 mm or 35 x 7.5 mm acc. to EN 50 022).



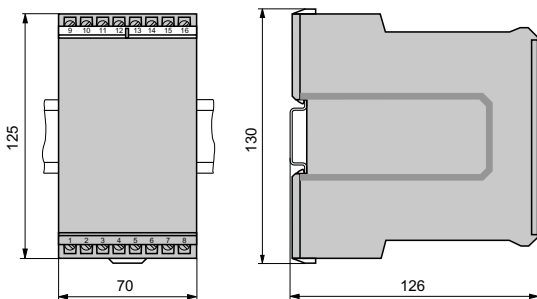
Transducer in housing E8 with the screw hole brackets pulled out for wall mounting.



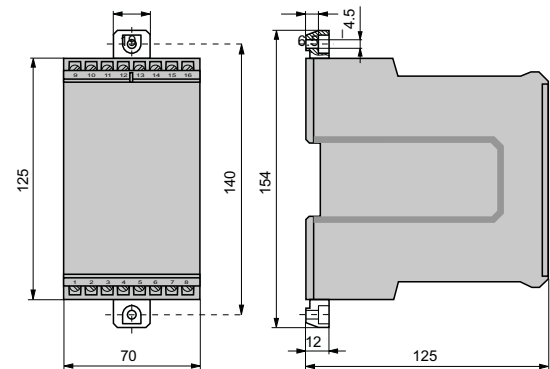
Transducer E15 two output in housing E16 clipped onto a top hat rail (35 X 15 mm or 35 7.5 mm) acc. to EN 50022.



Transducer E15 two output in housing E16 with the screw hole brackets pulled out for wall mounting.



Transducer E1D two output in housing E16 clipped onto a top hat rail (35 X 15 mm or 35 7.5 mm) acc. to EN 50022.



Transducer E1D two output in housing E16 with the screw hole brackets pulled out for wall mounting.

ORDERING INFORMATION:

Please specify ordering information as given below,

Type	Measuring qty.	Measuring Range/Input	Output	Aux supply
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ORDER EXAMPLE:

E15	Voltage	400V	4... 20mA	230VAC
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