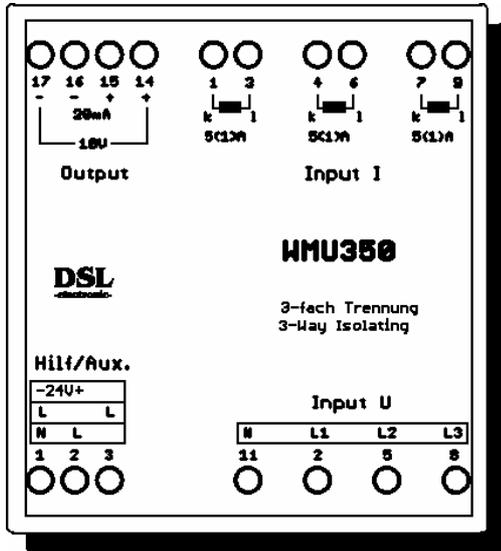


Active Power Transducer WMU350 (5A) Class 0,5

"3/4-Wire asymmetrical" 3-Way Separation Output +/-20mA and +/-10V



Application for 5A Current Transformers

The measuring transformer is used in power supply units, emergency power supplies and interconnected networks for measuring, displaying or monitoring the active power in a 3- or 4-conductor AC current network. The input values come from power or current transformers as required.

With independent auxiliary supply voltage (231VAC or 24VDC) the power output will be correctly measured also under extreme undervoltages.

Because depend on various applications and current transformers different settings are needed, the customer can change the settings by himself and storekeeping of units is lower.

Below the flap of the WMU350-Case are 4 turnswitches to be placed for setting the maximum power of unit i.e. **3 0 0 0** (W). So you can set every power from 1000W to 3900W (for 231VAC). With common current- and voltage transformers for analog meters and measuring transducers the power of application will be set by request. The scale factors of transformers then defines the power

for the measuring transducer unit. A voltage transformer will only be needed in middle voltage plants. With another setting the customer can change the output from +/-20mA (+/-10V) to 4-20mA (2-10V). A small adjuster is available for trimming the 4mA (2V) value.

Function

The WMU350 measuring transducers have three 4-quadrant multipliers which records the active power of the three-phase network connected with high precision. The active power is evaluated precisely, even with strongly distorted sine waves and failing half-sine waves. The total power is output at the 20mA output. Negative power (reverse power) is output at the output with negative current (-20mA). Two loads on the outputs (20mA and 10V) are possible by simultaneous operation (minus outputs from 20mA and 10V must be potentially separated).

Technical Data

Type	Active Power Transducer WMU350
Design	Plastic housing on 35mm DIN bar according to DIN EN 50022 / DIN 46277
Housing material	ABS with fire protected equipment UL 94 V-0
Dimensions, Weight	70 x 75 x 109,5 mm (WxHxD), appr. 350 g
Auxiliary voltage	231V AC 2,5 VA, other values on request, option 24VDC
Input Voltage	3 x 231V (L-N) , 50/60Hz, Other values on request
Input Current	3 x 5A AC , maximum Current until 120%, 200% up to 30 sec.
Measuring Delay	100 ms
Output	+/- 20mA , 4-20mA with 500 Ohm (max.); +/-10V , 2-10V (10mA max)
Class of accuracy	0,5 % from final value
Potential separation	Voltage separation between Auxiliary Supply – Input Voltage – Input Current – Output each to the other 3,75 kV
On period	100 %
Terminals	Strand 2,5 qmm, Rigid 4 qmm, Torque 0,5 N, Screw size M3
Type of Protection	Housing IP 40 (EN 60529) , Terminals IP 20
Environmentals	-10 °C bis +55°C, 95% Hum
Mains isolation	EN 60 742 (Safety transformers)
General Regulations	EN 50 178 (Electrical resources in power installations)
Noise suppressions	EN 55 022/B
EMV nach	EN 61000 und EN V 50 140
Installation position	Any
Maintenance	Maintenancefree

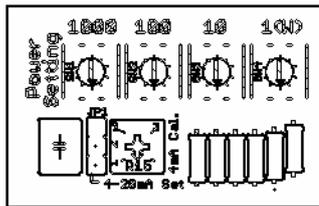
Adjustments

Adjusting or new configuration will be performed by opening the flap on top of the cabinet. On the four turn switches standing side by side the final power value at 20mA output signal will be set, i.e. 3000W, by turning the switches to the value, at present the 1000 switch to 3 and all other switches to 0. 3000W corresponds to a AC current of 4.33A per phase with 231V mains voltage against N in an 3 / 4 wire net. ($4,33A \times 3 \times 231V = 3000W$) With a Current Transformer ratio of 1000/5A a genset output power of $3000 \times 1000/5 = 600kW$ will be achieved. For the configuration of output 4-20mA the jumper JP1 must be put to the lower place, see picture. In this position the output current of 4mA can be varied with the nearby trimming potentiometer for trimming of the 0-value on-site.

Current Transformer

For configuration of power transducer WMU350 the maximum Power (by rated voltage) of all 3 phases must be calculated at the input of power transducer. Depending on the specification of genset there is an information of 3-phase power output in kW, the rated voltage and the ratio of current transformer and, when exist, the ratio of voltage transformer. For the calculation of power there must be calculated with the rated voltages L to N.

Settings behind flap



Test circuit

