# Analog Transducer

### Analog Power Transducer

## **Technical Datasheet**



#### **FEATURES**

- The **Analog Power Transducers** are instruments conceived to measure power in AC systems and retransmit a proportional value by means of an analog output
- Applicable either on low, mid or high voltage, single-phase or three-phase systems, since it is possible to connect them to potential and/or current transformers and choose the intended connection diagram during the ordering process
- Available in three different versions: W30/WA, for active power measurement (Watt), W31/RA, for reactive power measurement (Var) and W32/WR, for both active and reactive power measurements, two distinct and isolated outputs

#### APPLICATIONS

- Conversion of measured power values into analog DC signals, using automation standards accepted by PLC's, digital indicators, controllers and other related instruments
- Signal Isolation
- Protection of general electrical machinery

#### PRODUCT INFO

#### MULTIPLE END APPLICATIONS

- Several options for inputs and outputs, suited for the most varied applications in automation systems
- Three distinct models: active power, reactive power or active and reactive power, including the possibility of bidirectional measurements (upon consultation)

#### INSTALLATION AND ENCLOSURE

- Panel's Background, Side Screws Fastening
- Connection Lug terminals
- Robust enclosure (IP -40)

#### ISOLATION

• 2kV between inputs and outputs (60Hz, 1 minute)

#### ANALOG OUTPUT

- Response time: < 400ms
- Output Ripple: < 0.5%
- Output values and maximum (current output) or minimum (voltage output) admittable resistances:

010mAdc (01kΩ)
01Vdc (1kΩ - minimum value)
05Vdc (1kΩ - minimum value)
010Vdc (2kΩ - minimum value)

#### **GAUGE FACTOR**

• The power transducers, by default, are produce using full-scale values matching the maximum active or reactive power admitted to the intended measured system. Optionally, the user can specify a gauge factor, ranging from 0,5 to 1,2, so that the full scale output can match a different value from the maximum calculated



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	Connections Diagrams	Three-Phase (Star or Delta) or Single-Phase
MEASUREMENTS	Voltage Input – Working Range	Up to 380Vac / 80 to 120% of nominal value
AND INPUT INFO	Current Input – Working Range	1Aac or 5Aac / 10 to 110% of nominal value
	Continuous Overload (Voltage / Current)	1,2 x Nominal Voltage / 1,5 x Nominal Current
	Connection	Lug Terminal (IP-00)
	Maximum Cable to be Used	Measurement inputs and power supply: 4mm <sup>2</sup> (Recommended 2.5mm <sup>2</sup> ) Output: depends on the distance and impedance of the instruments that will be connected to it, check admittable resistances info for each case
	Frequency	50 or 60Hz
	Internal Consumption	< 0.5VA for both inputs
ACCURACY at 25°C (77 °F), referred to the full scale	Power	0.25%
POWER SUPPLY	Voltage	12Vdc (90 to 120% of nominal value) 24, 48 or 125Vdc (80 to 120% of nominal value) 110 or 220Vac (85 to 115% of nominal value)
	Internal Consumption	< 5VA
CASE	Material	High-resistance extruded aluminum enclosure
	Mass	0.5kg
	Protection Degree	IP-40
ENVIRONMENTAL	Operation/Storage Temperature	-10 to 60°C (14 to 140 °F) -25 to 60°C (-31.667 to 140 °F)
CONDITIONS	Relative Air Humidity	Maximum of 95% (without-condensation)
	Temperature Coefficient	0.01%/°C

#### **DIMENSIONS**





Dimensions in millimeters





#### NOTE:

\* Always inform Phase-to-phase Voltage. The only exception are single-phase (1 element – 2 wires) models.

\*\* Please consult technical support to check availability for a particular value/signal.

Standard Model (Example):

## W02 <u>30 4 38 5 3 5 3 1</u>

Transducer {WA - Active Power} {Star - 3 elements 4 wires} {380Vac} {5Aac} {50Hz} {Output 4...20mAdc} {Power Supply 125Vdc} {Class 0.25%}

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