

## ATS - PANEL MOUNTED TRANSDUCERS

### DC SIGNAL CONDITIONERS

#### FEATURES

- designed to International Standards
- proven reliability – over 27 years of experience
- high accuracy and stability
- IEC688 specification compliant
- 2kV isolation
- fire retardant, DIN rail and panel mount housing
- ac and dc auxiliary supplies
- simplified connection details on label
- extensive input and output combinations
- non-standard inputs and outputs available
- removable cover for quick inspection
- technical and after-sales support

#### APPLICATION

A dc signal conditioner, as the name implies, is a device which will convert a dc input signal into a dc output signal which is proportional to, and galvanically isolated from the input signal.

These transducers are particularly suited for use with measuring transducers with forced milliamp outputs to achieve a galvanic isolation between the two signals permitting combining of signal conductors as may be required by certain data acquisition or transmission equipment, as well as range changing or summing to a required signal.

Also, dc current shunt voltages (50mV) can be converted to standardized mA signals (0-1mA or 4-20mA) which are galvanically isolated from the shunt circuit.

As with the range of Measurlogic power measurement transducers, the dc signal conditioners embody components which are liberally rated to ensure high accuracy, long life and stability.

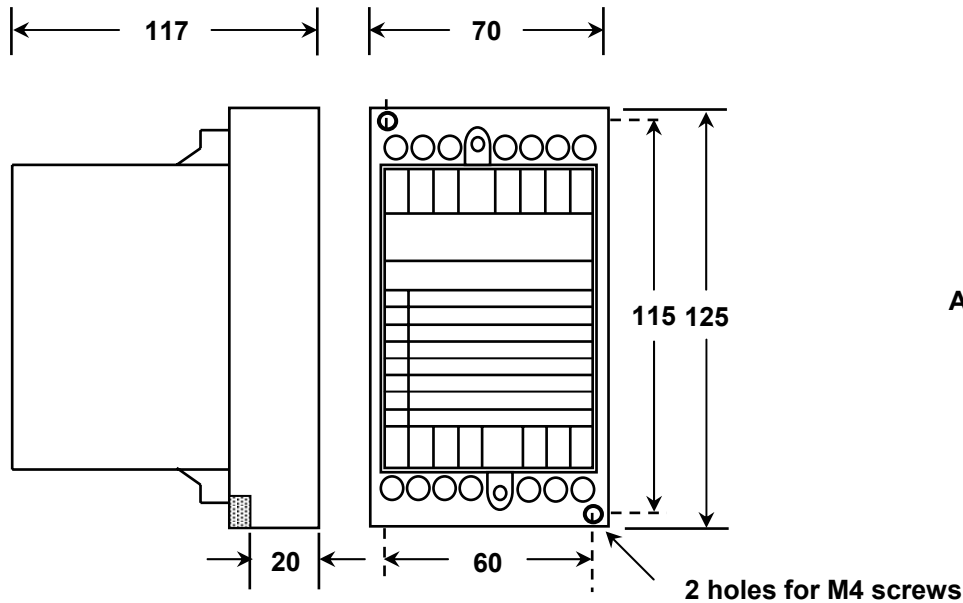
#### ORDERING INFORMATION

(Specific combinations to be confirmed on ordering. Other input/output values available.)

Model : K    -          -          -        -   



| Transducer Type<br>( group 2 ) |            | Input Data<br>(for voltage)<br>( group 3 ) |        | Input Data<br>(for current)<br>( group 3 ) |        | Output Data<br>( group 4 ) |        | Class Accuracy<br>( group 5 ) |     | Auxiliary Supply<br>(group 6) |              |
|--------------------------------|------------|--|--------|--|--------|----------------------------|--------|-------------------------------|-----|-------------------------------|--------------|
| Z1                             | Voltage In | V50M                                       | 50mV   | A5M  | 5mA    | A5M                        | 5mA    | C5                            | 0,5 | 3                             | 18-70Vac/dc  |
| Z2                             | Current In | V10  | <10V   | A4M  | 4-20mA | A20M                       | 20mA   |                               |     | 4                             | 90-260Vac/dc |
|                                |            | V400                                       | <400V  | A20M                                       | 20mA   | A4M                        | 4-20mA |                               |     | 5                             | 115/230Vac   |
|                                |            | V500                                       | <500V  | A500M                                      | 500mA  | V10                        | 10V    |                               |     |                               |              |
|                                |            | Vx   | other  | A2   | 2A     | V4                         | 1-5V   |                               |     |                               |              |
| Z3                             | Resistance | R140                                       | 0-140Ω | Ax   | other  |                            |        |                               |     |                               |              |



All Dimensions in Millimeters

| Model                   | KZ1  | KZ2   | KZ3   |
|-------------------------|--|---|---|
| <b>Input</b>            | DC voltage   | DC current  | Resistance ( $\Omega$ )   |
| <b>No. of channels</b>  | 1  | 1   | 1   |
| <b>Signal</b>           | 0...50mV / 900Vdc<br>bi-directional  | 0...1 / 5 / 10 / 20 / 500mA &<br>1 / 2 A bi-directional             | 0...140 ohms (other ranges on request)                              |
| <b>Burden</b>           | > 1M ohm   | 500mV nominal   | > 1M ohm  |
| <b>Output</b>           | DC current or DC voltage   | DC current or DC voltage  | DC current or DC voltage  |
| <b>Current</b>          | 0...1/5/10/20mA bi-directional<br>or 4-20mA  | 0...1/5/10/20mA bi-directional<br>or 4-20mA                         | 0...1/5/10/20mA bi-directional<br>or 4-20mA                         |
| <b>Voltage</b>          | 0...10Vdc bi-directional   | 0...10Vdc bi-directional  | 0...10Vdc bi-directional  |
| <b>Burden</b>           | 0...10V  | 0...10V   | 0...10V   |
| <b>Burden influence</b> | <0,1%  | <0,1%   | <0,1%   |
| <b>Ripple content</b>   | <2% ptp  | <2% ptp   | <2% ptp   |
| <b>Summation</b>        | Galvanically coupled   | Galvanically coupled  | Galvanically coupled  |
| <b>Isolation</b>        | 2kV, 50Hz, 1 minute  | 2kV, 50Hz, 1 minute   | 2kV, 50Hz, 1 minute   |
| <b>Accuracy</b>         | 0,5% of span   | 0,5% of span  | 0,5% of span  |
| <b>Ambient temp.</b>    | -10... +55°C   | -10... +55°C  | -10... +55°C  |
| <b>Temp Influence</b>   | <0,2% / 10°C   | <0,2% / 10°C  | <0,2% / 10°C  |
| <b>auxiliary supply</b> |  |   |   |
| <b>Input</b>            | 115/230Vac $\pm$ 20% 50/60Hz $\pm$ 10%<br>or 18-70 and 90-260Vac/dc  | 115/230Vac $\pm$ 20% 50/60Hz $\pm$ 10%<br>or 18-70 and 90-260Vac/dc | 115/230Vac $\pm$ 20% 50/60Hz $\pm$ 10%<br>or 18-70 and 90-260Vac/dc |
| <b>Influence</b>        | <0,1% for 20% change   | <0,1% for 20% change  | <0,1% for 20% change  |
| <b>Burden</b>           | <4VA   | <4VA  | <4VA  |
| <b>Housing</b>          | Surface or optional DIN Rail mounted hard plastic base with protected screws for 2,5mm <sup>2</sup> (12 AWG) conductors, and fire retardant removable cover. |   |   |

## CONNECTIONS

| TRANSDUCER TYPE            | TERMINALS |          |    |   |          |   |   |   |   |    |     |     |    |    |
|----------------------------|-----------|----------|----|---|----------|---|---|---|---|----|-----|-----|----|----|
|                            | 1         | 2        | 3  | 4 | 5        | 6 | 7 | 8 | 9 | 10 | 11  | 12  | 13 | 14 |
| <b>KZ1 – Voltage Input</b> |           | V-       |    |   | V+       |   |   |   |   | 0  | 115 | 230 | O- | O+ |
| <b>KZ2 – Current Input</b> | I-        |          | I+ |   |          |   |   |   |   | 0  | 115 | 230 | O- | O+ |
| <b>KZ3 - Resistance</b>    |           | $\Omega$ |    |   | $\Omega$ |   |   |   |   | 0  | 115 | 230 | O- | O+ |

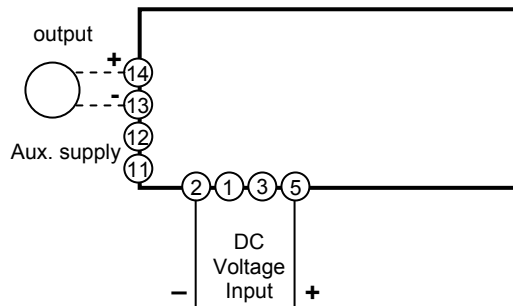
Also available with a SMPS with 18-70Vac/dc or 90-260Vac/dc and terminal connections 11(-ve) & 12(+ve)

## TERMINAL DESIGNATION

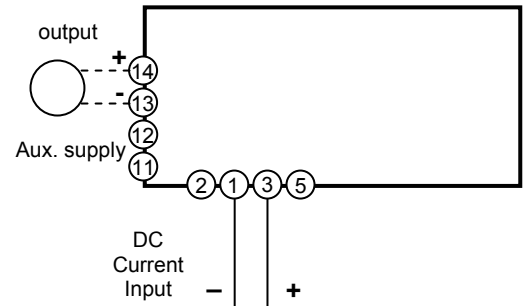
|                            |                   |            |                          |
|----------------------------|-------------------|------------|--------------------------|
| <b>I+</b>                  | INPUT CURRENT (+) | <b>O+</b>  | OUTPUT POSITIVE          |
| <b>I-</b>                  | INPUT CURRENT (-) | <b>O-</b>  | OUTPUT NEGATIVE          |
| <b>V-</b>                  | INPUT VOLTAGE (+) | <b>115</b> | AUXILIARY SUPPLY 115V    |
| <b>V+</b>                  | INPUT VOLTAGE (-) | <b>230</b> | AUXILIARY SUPPLY 230V    |
| <b><math>\Omega</math></b> | RESISTANCE        | <b>0</b>   | AUXILIARY SUPPLY NEUTRAL |

## CONNECTION DIAGRAMS

DC Voltage Input : Type KZ1



DC Current Input : Type KZ2



Resistance Input : Type KZ3

