



AC CURRENT TRANSDUCER

TYPE HC-FPA

FUNCTION

HC units are designed to accept an AC current and provide a proportional DC analogue signal output.

APPLICATION

For monitoring high current in control and measurement applications. eg mains supply current drawn by an electric motor.

DESCRIPTION

AC to DC conversion is performed by a hybrid ASIC designed module. 1 amp and 5amp units have integral current transformers.

The unit is housed in a steel case with end mounted terminations. Access points are provided for trimming span and zero settings.

INSTALLATION

The unit may be mounted to any dry flat surface using the four 5 mm fixing positions. Alternatively, an optional DIN mounting adapter is available.

Shrouded terminations are provided which will accept 4mm insulated ring or spade crimp terminations.



Features

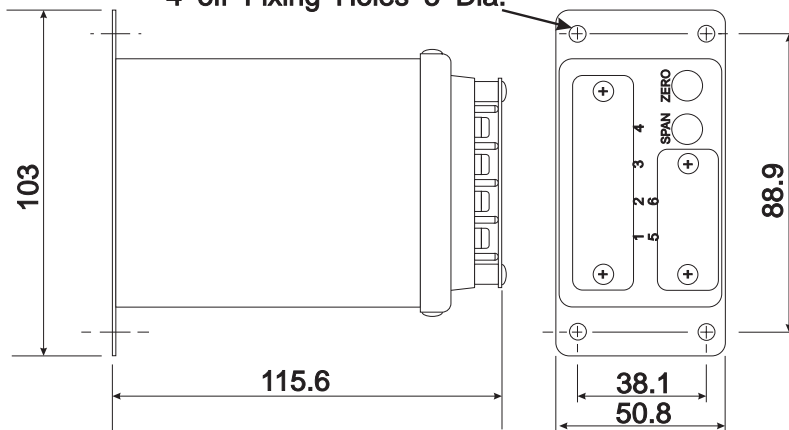
- High accuracy
- Excellent long term stability
- Wide selection of ranges
- Outstanding over range capability and temperature performance

Information required when ordering

- Input Signal
- Output Signal (see specification overleaf)
- Supply Voltage and Frequency

Dimensions in mm

4 off Fixing Holes 5 Dia.



SPECIFICATION

INPUTS

Current: 0-1A, 0-5A
Input Signal Frequency: 45 - 400Hz

OUTPUTS

Voltage: From 0-1V up to 0-10V,
1-5V and 2-10V raised zero
Current: From 0-1mA up to 0-20mA,
1-5mA, 2-10mA and 4-20mA
raised zero

OUTPUT LOAD

0 - 1mA into $\leq 10k$ ohm
0 - 10mA into $\leq 1k$ ohm
0 - 20mA into ≤ 500 ohm
4 - 20mA into ≤ 500 ohm
0 - 1V into ≥ 200 ohm
0 - 5V into $\geq 1k$ ohm
0 - 10V into $\geq 2k$ ohm
2 - 10V into $\geq 2k$ ohm

INPUT LOAD

$< 0.2VA$

INPUT OVER-RANGE CAPABILITY

4 x rated input continuous.
50 x rated input for 1 second.

RESPONSE TIME

Typically $\leq 400ms$ for step input change.

DIELECTRIC STRENGTH

4kV RMS 50/60Hz 1 minute

IMPULSE AND SURGE PROTECTION

1.2 x 50 μs 6kV, 0.5 μs - 100kHz 3kV or 1MHz - 0.25 μs
2.5kV. 8 x 20 μs 3ka.

CALIBRATED ACCURACY

0.4% of Span

OUTPUT RIPPLE

0.5% FSD peak to peak

STABILITY

$< 0.006\%$ drift per $^{\circ}C$ Change
 $< 0.2\%$ drift per year, non-cumulative

INTERFERENCE REJECTION

Filtering is incorporated to reject R.F. and other industrial noise.

SUPPLY VOLTAGE

115 / 230 V $\pm 20\%$, 50 - 400Hz

ENVIRONMENTAL CONDITIONS

Temperature: Operating: $-10^{\circ}C$ to $+60^{\circ}C$
Storage: $-25^{\circ}C$ to $+70^{\circ}C$
Relative Humidity: 20-90% non-condensing

ISOLATION

The input and output are isolated from each other, and are isolated from the power supply.
Maximum voltage 1000V RMS or 1500V DC.

WEIGHT

Approximately 0.7kg

TERMINAL CONNECTIONS

| | | | |
|----------|---|-----------------------|----------------|
| Terminal | | | |
| 1 | } | AC Input Signal | |
| 2 | | | |
| 3 | } | AC Mains Supply | |
| 4 | | | Neutral |
| | | | Line Earth* |
| 5 | } | Output Signal | |
| 6 | | | + |
| | | -- | |

*NB The case of the unit must be earthed.



THIS UNIT CAN BE MAINS POWERED, AND ALL INPUTS TO IT MUST BE ISOLATED FROM DANGEROUS VOLTAGES BEFORE UNDERTAKING ANY WORK ON THE UNIT.

Continuous development may necessitate changes in these details without notice

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