

AC Input Self Powered Transmitters ACT-SI ACT-SV

Function: Self powered isolating transmitters which will convert AC Current and Voltage inputs into proportional, linear and highly accurate current or voltage output signals. An internal transformer isolates the input from the output enabling the transmitter to withstand large momentary inputs. The input to output isolation also provides a high output signal-to-noise ratio which makes the transmitters highly immune to ground loop signals and RFI problems. Calibration is performed by means of one internal coarse range resistor and a multiturn potentiometer brought out to the front panel for fine tuning. The ACT-SI and ACT-SV are housed in polycarbonate plastic enclosures suitable for mounting on DIN rail.

SPECIFICATIONS

Please note that the following are typical ranges. We will manufacture instruments to cater for other ranges within limitations detailed below. All instruments come with span and zero potentiometers for fine tuning on site.

INPUTS:

For self powered instruments all inputs are zero based.

AC Current

0 to 1 Amp AC
0 to 5 Amp AC
Minimum Span: 1 Amp AC
Maximum Span: 5 Amp AC

Over Range

6 Amp AC for full accuracy

Over Load

10 Amp AC continuous

Peak Over Load

40 Amp AC for 5 seconds every 10 minutes

Input Power Consumption

0.6VA @ 5 Amp AC input

INPUTS:

For self powered instruments all inputs are zero based.

AC Voltage

(factory set)
0 to between 90 and 150 Volt AC RMS
e.g. 0 to 115 Volt AC RMS
0 to between 180 and 300 Volt AC RMS
e.g. 0 to 230 Volt AC RMS

Option:

0 to between 300 to 440 Volts AC RMS
e.g. 0 to 400 Volt AC RMS

Over Range

+20% of span for full accuracy

Over Load

+40% of span continuous

Input Power Consumption

0.9VA @ 300 Volts AC input

AC Current and Voltage

Frequency Range

40 to 440 Hz

Frequency Variation Effect

< ±0.02% / Hz

OUTPUTS:

For self powered instruments all outputs are zero based.

DC Current

Between 0 and 20mA
Minimum span 1mA

DC Volts

Between 0 and 10 Volts
Minimum span 1 Volt

Output Impedance

R_L maximum = $(16/I_{O\text{MAX}}) * 1000$

i.e. $I_{O\text{MAX}}$	$R_{L\text{MAX}}$
20 mA	800 ohms
10 mA	1600 ohms
1 mA	16000 ohms

Output Ripple

< ±0.1% of output span

Isolation

4000 Volts RMS / 1 minute

SUPPLY:

Power Supply Voltage

Self Powered from input signal

GENERAL:

Accuracy (for 25 to 120% of Input)

Better than ±0.1% of span

Linearity (for 25 to 120% of Input)

Better than ±0.1% of span

Temperature Coefficient

Better than ±0.1% of span/ Δ 10°C

Response Time

< 240ms (10 to 90%)

Operating Temperature Range

-20 to +70°C

Option:

-30 to +80°C

Storage Temperature Range

-40 to +90°C

Operating/Storage Humidity Range

5 to 95% RH non-condensing

Mounting

Standard 35mm DIN rail

Protection Level

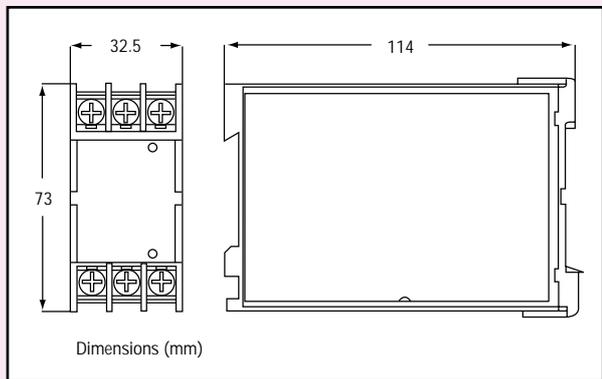
Box to IP50 DIN40050

Terminals to IP10 DIN40050

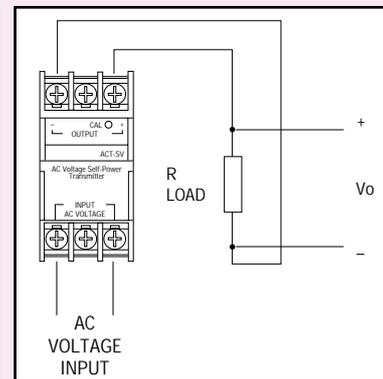
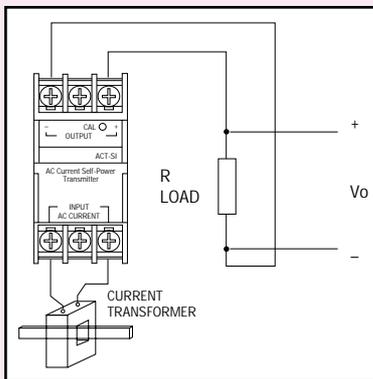
Weight

ACT-SI 250 gms

MECHANICAL DETAILS



TERMINATION DETAILS



ORDERING DETAILS

- Give identification code, i.e. ACT-SI
- Give details of input range, i.e. 0 to 1 Amp AC
- Give details of frequency range, i.e. 60 Hz
- Give details of output type and range, i.e. 0 to 20mA
- Please specify if optional Operating Temperature Range required