

ac Current Transducer v5 ACT241

DESCRIPTION

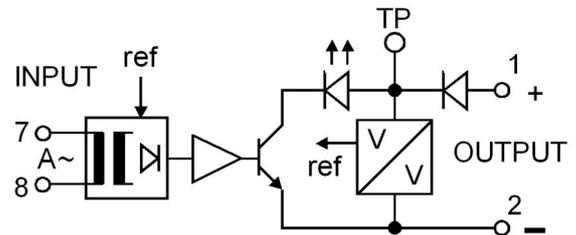
The ACT241 accepts AC current from current transformer or direct load current ranging from 0.5A up to 10A. Standard output is 4 - 20mA with a minimum supply voltage of 7.5V. This enables the ACT241 to be used in 12V battery systems. Other factory set output configurations are 10 - 50mA loop powered and 0 - 10mA, 0 - 20mA or voltage output in 3-wire connection. Double surge protection is standard with all Series 200 loop powered transmitters to prevent failure due to spikes induced by DC switched inductive loads. Input output relation can be direct or reverse acting. Input output isolation up to 2kV is achieved through the use of an internal current transformer. Base calibration is set with 2 metal film resistors and removable coding plugs on the main board. These links provide a convenient and user-friendly means of changing the input range in the field from 0 - 1 Amp to 0 - 5 Amps. Any other 2 ranges are available upon request. Final calibration is trimmed using the front accessible zero and span 15-turn trim adjustments. A front mounted L.E.D. and a test socket verifies module function and assist in calibration checks without disconnection of output wires.



General Specifications

Size:	23.5W x 71.5H x 109D (mm).
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	ABS.
Connection:	Screw terminals.
Weight:	0.106 kg.
Accuracy class as per AS-1384-1973:	Class 0.2.
Response time:	< 500mS.
Input range:	0.5A up to 10A. 1A or 5A standard, (50, 60 or 400Hz Sine).
Protection class:	IP40 (IP65 use additional enclosure).
Calibration Accuracy:	<0.2% from 10% up to 100% of range.
Linearity:	<0.2% from 10% up to 100% of range.
Frequency dependence:	<0.01%/Hz from 40 to 400Hz.
Ambient operating range:	-20...+70°C.
Temperature drift error:	<0.5% within operating range.
Supply voltage:	7.5 - 40V continuous (50V 30 seconds).
Load for 4 - 20mA output:	$RL_{max} = \frac{\text{SupplyVoltage} - 7.5V}{0.02A} \Omega$
Load change effect:	< 0.1% up to RL max.
Front zero adjust:	+ 20% / -10% typical.
Front span adjust:	± 25% typical.
Overload continuous:	150% of rated input.
Short term (2 sec):	20 times rated input.
Input/output isolation:	2kV rms continuous.
Electromagnetic compatibility:	Complies with AS/NZS 4251.1 (EN 50081.1)

Block Diagram



For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

