



T-ILE LOOP POWERED CURRENT TRANSDUCER

WITH INTEGRAL CT



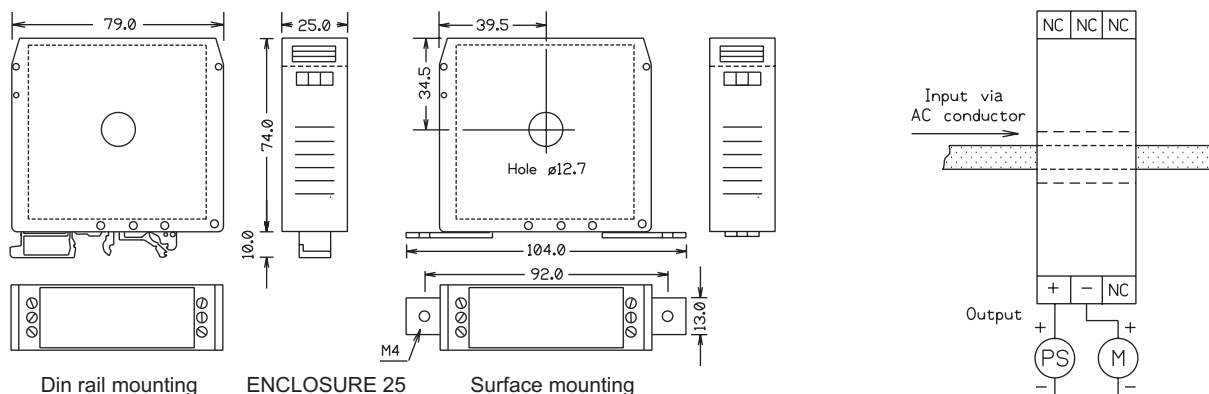
The Carrel Electrade T-ILE current transducer converts a sinusoidal ac current into a load independent dc current signal capable of driving a number of independent instruments. The transducer has a built in ring type current transformer (CT). The input is achieved by passing the current carrying conductor through the central hole in the housing. Low voltage dc power for the unit is fed from the remote measuring instrument via the two wire signal line. The output signal is calibrated to rms, based on an arithmetic mean measurement of the rectified input signal, and hence the transducer should be used with undistorted sine waveforms (<1% distortion). The power supply for the unit, which is derived from the loop circuit, permits high linearity.

The unit conforms to IEC 60688. In addition it meets the insulation requirements of IEC 60255-5, clauses 5, 6 and 8 as well as the high frequency disturbance test of IEC 60255-22-1 for Class III test voltage.

Specifications

Input	Sinusoidal alternating current	
	Standard nominal range $0 - I_{nom}$: 0 - 5A, 0 - 10A, 0 - 15A, (others on request) 0 - 25A, 0 - 50A, 0 - 100A
	Maximum through-hole conductor size	: <12.5mm dia.
	Accurate range	: 0 - 120% I_{nom}
	Frequency range	: 45 - 50 - 55 - 60 - 65Hz
	Overload capacity	: $2 \times I_{nom}$ continuous
Output	Standard nominal output	: 4 - 20mA dc <750Ω load
	(others on request)	
	Maximum load(voltage drop)	: <Supply voltage - 10V dc
	Specified accurate range	: 0 - 120%
	Ripple	: <1% pk to pk
	Response time	: <250ms 0 - 90% <500ms 0 - 99%
Aux. Supply		: 10V to 30V dc injected at any point in the loop. Supply voltage must include provision for voltage drop across loads. A supply voltage of 25V is recommended
Accuracy		: Class 0.5 to IEC 60688 ±0.5% of nominal output for specified range
Isolation	Galvanic isolation between input and output circuits	
	Test voltage	: 4kV rms 50Hz for 1 minute
	Impulse	: 5kV 1.2/50μsec waveform
Temperature	Operating	: -10°C to +20°C to +50°C
	Storage	: -20°C to +70°C
EMC Compliance		: AS/NZS 61000.6.3:2012

Housing & Connection Diagrams



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