T-IP SEPARATELY POWERED CURRENT TRANSDUCER



The Carrel Electrade T-IP current transducer converts a sinusoidal ac current into a load independent dc current or voltage signal capable of driving a number of independent instruments. Power for the unit is derived from an auxiliary supply. 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 provision of an auxiliary power supply allows low input burdens, high sensitivity, coupled with the ability to provide a live zero (eg 4-20mA) output.

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 - 1A, 0 - 5A (others on request, window version available, e.g. 3-5A) Accurate range : 0 - 120% I_{nom}	
	Frequency range	: 45 - <u>50</u> - 55 - <u>60</u> - 65Hz
	Burden of Input at Inom	: <0.1VA
		$20 \times I_{nom} \text{ for 3 seconds}$
Output	Linear voltage or current proportional to input	
	Standard nominal outputs	: 0-10mA dc <1500Ω load
	(others on request)	: 0-20mA dc <750Ω load
		: $4-20$ mA dc $<750\Omega$ load
		$: 0.50 \text{ dc} > 2\text{K}\Omega$ load
	Ripple	$\sim <1\%$ pk to pk of full span
	Response time	: <250ms 0-90%
		: <500ms 0-99%
Auxiliary Power		: 24V, 110V, 230/240V, 400/415V ac <u>+</u> 20% 2VA : 24V dc <u>+</u> 20% or 110V/125V dc (88V-138V) 2W
Accuracy		· Class 0.5 to IEC 60688
,,		$\pm 0.5\%$ of nominal output for specified range
Isolation	Galvanic isolation between input and output and the auxiliary supply circuits	
	Test voltage	: 4kV rms 50Hz for 1 minute
	Impulse	: 5kV 1.2/50µsec waveform
Temperature	Operating	: -10°C to <u>+20°C</u> to +50°C
	Storage	: -20°C to +70°C
EMC Compliance		: AS/NZS 61000.6.3:2012
Housing	Self extinguishing grey polycarbonate to IP40 snap mounting on top hat rail DIN EN 50022-35	

Terminals Tinned steel pozi-drive M3 screws with captive square washers suitable for 2 x 2.5mm² conductors (max). Optional terminal covers raise rating from IP10 to IP20

Housing & Connection Diagrams



CARREL ELECTRADE LTD

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