



# T-TRL Pt100 LOOP POWERED TEMPERATURE TRANSDUCER

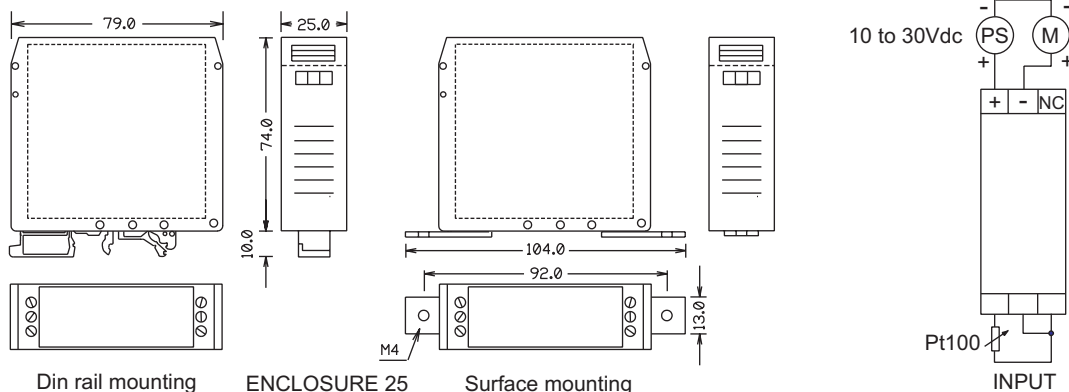
The Carrel Electrade T-TRL Pt100 loop powered temperature transducer converts the resistance value of a platinum resistance element into a load independent dc current signal capable of driving a number of independent instruments. Low voltage dc power for the unit is fed from the remote measuring instrument via the two wire signal line. The three wire method of measurement employed ensures that reasonable cable resistance values can be accommodated without affecting the accuracy of the reading. The circuitry employed corrects the non-linear response of the Pt100 to yield a signal proportional to temperature.



## Specifications

<b>Input</b>	Pt100 platinum resistance sensor Class A (other sensors on request)	
	Standard ranges	: -50 to +50°C, 0 - 50°C, 0 - 100°C, 0 - 200°C
	(others on request)	: 0 - 400°C, 0 - 600°C, 0 - 800°C
	Accurate range	: 0 - 120%
	Sensing current	: 1.25mA
	Maximum cable resistance	: (matched) <100Ohms
<b>Output</b>	Standard nominal output	: 4 - 20mA dc < 750Ω load
	Maximum load (voltage drop)	: <Supply voltage - 10V dc
	Specified accurate range	: 0 - 100%
	Ripple	: Nil
	Response time	: <250ms 0 - 90%
		: <500ms 0 - 99%
	Clamped output on open circuit sensor	: <32mA
<b>Aux. Supply</b>		: 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
<b>Accuracy</b>	Class B to DIN 43760	: i.e. $\pm(0.3 + 0.005)^\circ\text{C}$ i.e. Approximately class 0.5 to IEC 60688
<b>Linearisation</b>	Range	: -50 to 850°C
	Deviation from ideal	: <0.1% of range
<b>Errors</b>	Referred to full range as defined by IEC 60688	
	Influence of output load	: < $\pm 0.1\%$ from min. To max.
	Temperature	: < $\pm 0.2\%$ on range from -10°C to +50°C
	Long term drift	: < $\pm 0.2\%$ per annum
<b>Isolation</b>	No galvanic isolation from sensor to output. (Use LP-CDU, T-CDU or T-CDL to isolate)	
<b>Temperature</b>	Operating	: -10°C to +20°C to +50°C
	Storage	: -20°C to +70°C
<b>EMC Compliance</b>		: AS/NZS 61000.6.3:2012
<b>Housing</b>	Enclosure 25	: Fire retardant module to IP40 in green polyamide. Suitable for surface mounting or DIN EN 50022-35 top hat and EN 50035-G32 G-profile mounting rail.

### Housing & Connection Diagrams



### CARREL ELECTRADE LTD

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