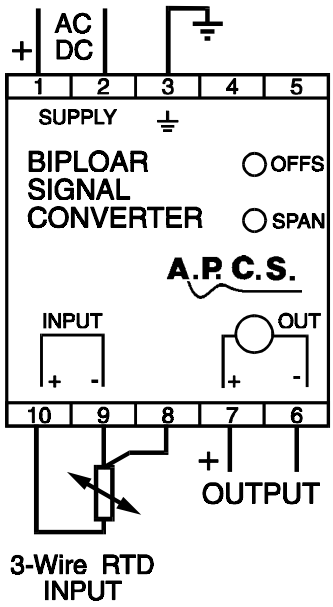
Input Opts 01,02,03: RTD, mV, Thermocouple BSC133

Input OPTION 01 - RTD Input

The standard RTD (resistance temperature detector) is Platinum 100 (100 Ω at 0°C), however any user specified type of RTD can be accommodated as long as there is no substantial non-linearity. There is no additional linearisation circuit. The RTD is part of an input bridge circuit and should be wired in 3-wire fashion to avoid errors caused by lead resistance changes. 3-wire connection can be used where a short lead length under constant temperature condition will not generate a resistance change. Lead calibration resistors are not required as the front accessible span and zero trimmers can be used for final system calibration. Sensor excitation current is as low as 0.6mA, preventing self-heating of the sensor. Lead breakage will cause the output to increase to maximum (30mA).

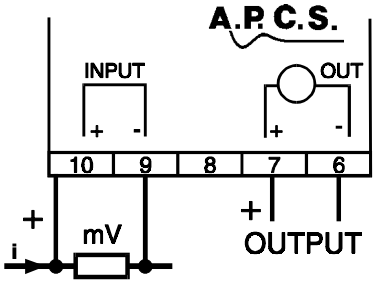


Combined linearity and drift error:	0.5% of span
Temperature effect:	0.01% per °C
Input span:	3.9 Ω up to 112.0 Ω

(20°C...300°C Pt100, 10°C range available with reduced accuracy).

OPTION 02 - Bipolar (mV) Input

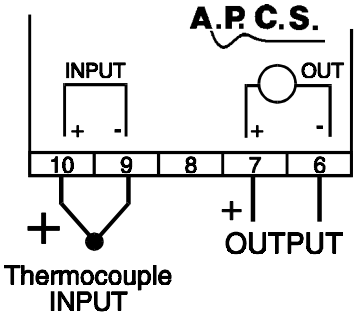
Low level millivolt or bipolar input signals require an additional input conditioning circuit to be fitted. This circuit provides both a high input impedance and a wide front-end offset.



Input range:	±0.5 up to ±50mV (1 to 100mV span) bipolar or unipolar
Input impedance:	>1M Ω (100M Ω optional)
Offset:	up to 500% of range (int. adjustment)
Temperature drift:	Typically 0.02% of span/°C

OPTION 03 - Thermocouple Input

Thermocouple types can be E, J, K, N, R, S and T. Automatic cold junction compensation is standard. On request the circuit can be configured for up-or-down scale burn-out. The output of the converter follows the thermocouple curve with an accuracy of <0.5% (non linearised).



T/C input spans:	4mV up to 80mV
Input impedance:	>1M Ω
Cold junction compensation error:	0.02% per °C C/J change, over ambient range of 0 - 60°C with input range 100°C
Offset:	500% of range