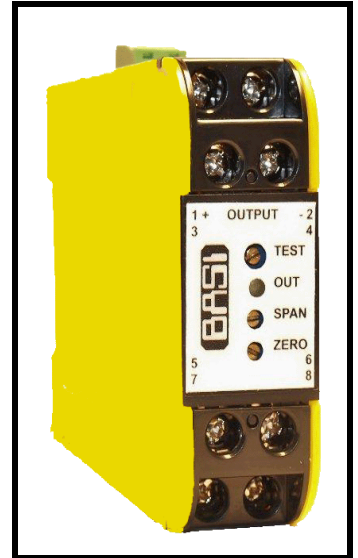


DESCRIPTION

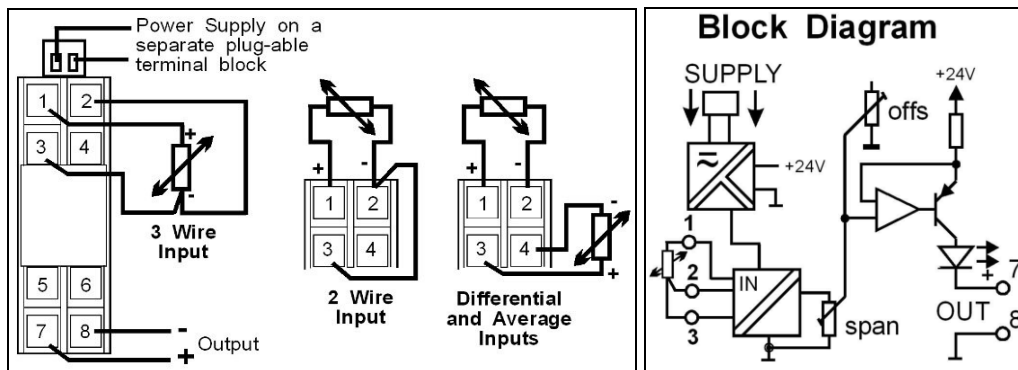
The BRTDT285 is a isolating transmitter that accepts inputs from any type of resistance bulb with a signal swing of 7Ω up to 230Ω . In the case of the popular industry standard Pt100 this would represent a temperature span from 15°C up to 650°C . The RTD is wired in 3-wire fashion to avoid errors caused by lead resistance changes. 2-wire connection can be used with a short lead length or under constant temperature conditions. Lead breakage will cause the output to increase to maximum. The BRTDT285 is linearised to within 0.5% for Pt100 inputs. Differential inputs from 2x Pt100 sensors can only be connected in 2-wire mode. Lead balance errors can be avoided by using approximately even cable run length and same type of cable. Bipolar temperature differences (example $\Delta t = -10\dots+10^{\circ}\text{C}$) are calibrated with the 0-point at mid-scale output (12mA). Final calibration is trimmed using the front accessible zero and span 15-turn trim adjustments and a link selectable output range. A wide range ac/dc supply powers the input and the output circuit with three way power/input/output isolation.

General Specifications

Size:	23.5W x 71.5H x 109D (mm).
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	ABS.
Connection:	Screw terminals.
Weight:	106 g.
Protection class:	IP40.
Front SPAN adjust:	$\pm 25\%$ typical.
Front ZERO adjust:	$+20/ -10\%$ typical.
Operating temperature:	$-20\dots+70^{\circ}\text{C}$.
Output:	Programmable - see table overleaf.
Output drive:	10mA into 0 - $2k\Omega$, 20mA into 0 - $1k\Omega$.
Response time:	Programmable - see table overleaf.
Calibration accuracy:	$<0.2\%$.
Linearity:	$<0.3\%$.
Temperature drift error:	$0.02\% / ^{\circ}\text{C}$ within operating range.
Lead length effect:	$\pm 0.3\% / 100\text{m}$ (3-wire).
Input range:	$7.8\ \Omega$ up to $290.3\ \Omega$ (20°C up to 850°C , Pt100). 10°C range available with reduced accuracy.
Input zero shift:	$-100^{\circ}\text{C}\dots+200^{\circ}\text{C}$ (Pt100).
Sensor excitation:	$350\mu\text{A}$.
Supply voltage:	$85\text{-}265\text{Vac}$ 50/60Hz ($90\text{-}280\text{Vdc}$) $16\text{-}42\text{Vac}$ 50/60Hz ($10\text{-}60\text{Vdc}$).
Supply/Input/Output Isolation:	$>2\text{kV}$ r.m.s.
Electromagnetic compatibility:	Complies with EN 50081-1, EN 50082-2, EN 61010-1



Connections



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

