Field-mounted Two-wire Signal Conditioners *6-UNIT*

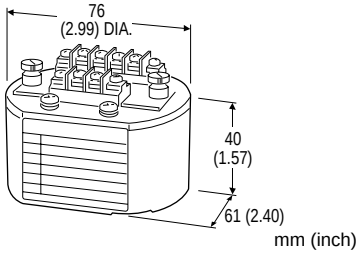
RTD TRANSMITTER
(field-selectable temp. range)

MODEL **6R**

MODEL & SUFFIX CODE SELECTION

6R–❑❑

MODEL
INPUT RTD (2- or 3-wire)
3 : Pt 100 (JIS '89)
4 : Pt 100 (JIS '97, DIN, IEC751)
OUTPUT
4 – 20mA DC
SUPPLY VOLTAGE
13 – 28V DC
OPTIONS
/BL : Downscale burnout



Functions & Features
• Accepting direct input from an RTD and providing a standard 4 – 20mA DC signal • Field selectable temperature range • Linearization • Burnout protection • Rugged enclosure
Typical Applications
• Converting into standard output

ORDERING INFORMATION

Specify code number and variables.
•**Code number** (e.g. 6R-4/BL)
•**Temperature range** (e.g. 0 – 500°C)

GENERAL SPECIFICATIONS

Connection: M3 screw terminals (nickel-plated steel; torque ≤0.6 N·m)
Housing material: die cast aluminium
Adjustments
Zero & span: 3-turn screwdrivers behind the access cover; approx. -3 – +15% for zero, approx. ±10% for span
Input range: rotary switches behind the covering
Output limit: approx. 120%
Burnout protection: upscale standard; downscale optional
Linearization: standard

INPUT & OUTPUT

■**INPUT**: 2- or 3-wire Pt 100Ω
Maximum leadwire resistance: 5Ω per wire (3-wire)
Sensing current: 1mA

•100°C or Wider Span

0% TEMP.		100% TEMP.		UNIT	
°C	°F	°C	°F	°C	°F
0 – 50	32 – 122	100 – 500	212 – 932	10	18
50 – 100	122 – 212	150 – 350	302 – 662	10	18
100 – 150	212 – 302	200 – 400	392 – 752	10	18
200 – 250	392 – 482	300 – 500	572 – 932	10	18
300	572	500	932	---	---
-50 – 0	-58 – 32	50 – 350	122 – 662	10	18
-100 – -50	-148 – -58	0 – 50	32 – 122	10	18

•50 – 100°C Span

0% TEMP.		100% TEMP.		UNIT	
°C	°F	°C	°F	°C	°F
0 – 50	32 – 122	50 – 100	122 – 212	5	9
50 – 100	122 – 212	100 – 150	212 – 302	5	9
100 – 150	212 – 302	150 – 200	302 – 392	5	9
-50 – 0	-58 – 32	0 – 50	32 – 122	5	9
-100 – -50	-148 – -58	-50 – 0	-58 – 32	5	9

How To Determine Range Availability ....

First check the span [100% temp. – 0% temp.] of your temperature range and choose one of the above tables.

Then find the 0% temperature value of your range in left column of the table and check that the 100% temperature value is within the available range in middle column.

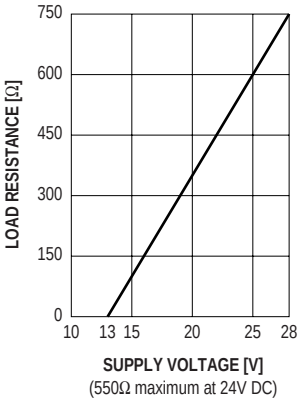
For example, in the first line of the upper table, available range is 0 – 100°C up to 500°C, or 50 – 150°C up to 500°C.

■**OUTPUT**: 4 – 20mA DC

Load resistance vs. supply voltage:

$$\text{Load Resistance } (\Omega) = \frac{\text{Supply Voltage (V)} - 13\text{ (V)}}{0.02\text{ (A)}}$$

(including leadwire resistance)



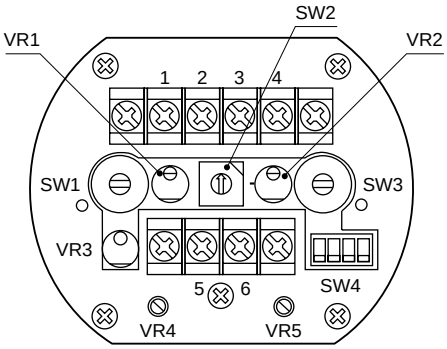
INSTALLATION

Supply voltage: 13 – 28V DC
Operating temperature: -5 to +70°C (23 to 158°F)
Operating humidity: 30 to 90% RH (non-condensing)
Mounting: DIN rail with mounting plate A-31;
surface mounting with adapter plate A-01;
spring clip A-02 for 3-inch hub
Dimensions: W76×H52.5×D61 mm (2.99"×2.07"×2.40")
See General Spec. Sheet Figure A-1.
Weight: 220 g (0.49 lbs)
Terminal assignment: See General Spec. Sheet Figure B-1.

PERFORMANCE in percentage of span

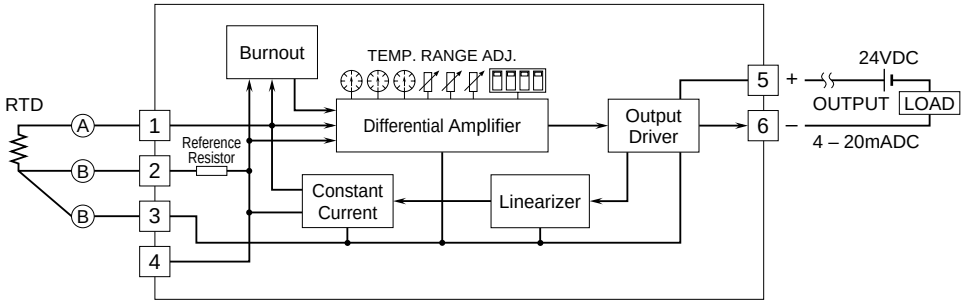
Accuracy: ±0.2%
Temp. coefficient: ±0.015%/°C (±0.008%/°F)
Response time: ≤0.5 seconds (0 – 90%)
Burnout response: approx. 1 second

TOP VIEW DIAGRAM



SW1 : 0% Input Adjustment
SW2 : 100% Input Adjustment (coarse)
SW3 : 100% Input Adjustment (fine)
SW4 : Span Selector
VR1 : Output Zero Adjustment
VR2 : Output Span Adjustment
VR3 : Cancelling RTD Resistance

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications subject to change without notice.