

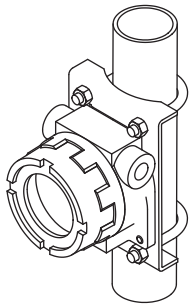
## Field-mounted Two-wire Signal Conditioners 6B-UNIT

### RTD TRANSMITTER

(field-selectable temp. range)

#### Functions & Features

- IP66 / IP67 housing enables field mounting
- Stainless steel field housing selectable
- Transmitter using each RTD as a probe
- Temperature range configurable with DIP switch
- With linearization, burnout protection



## MODEL: 6BR-0[1][2][3][4][5]

### ORDERING INFORMATION

- Code number: 6BR-0[1][2][3][4][5]

Specify a code from below for each of [1] through [5].

- (e.g. 6BR-040A1 / BL)
- Temperature range (e.g. 0 - 100 °C)

### SAFETY APPROVAL

0: None

### [1] INPUT RTD (2- or 3-wire)

3: Pt 100 (JIS '89)

4: Pt 100 (JIS '97, IEC)

Note: Consult M-System for 2-wire RTD

### [2] WIRING CONDUIT

0: G 1/2

1: 1/2 NPT

2: M20 × 1.5

3: PG 13.5

### [3] ENCLOSURE MATERIAL

A: Diecast aluminum

S: Stainless steel casting

### [4] MOUNTING BRACKET

0: Without

1: With

### [5] OPTIONS

#### Burnout

blank: Upscale burnout

/BL: Downscale burnout

### PACKAGE INCLUDES...

- Mounting screws

Bolt (M8 x 15): 4

Spring washer for M8: 4

**Material:** Stainless steel 304

- Mounting bracket assembly (option):

Mounting bracket: 1

M10 U-bolt: 2

Nut for M10: 4

Spring washer for M10: 4

**Material:** Stainless steel 304

**Applicable pipe:** 1 1/2" min.; 2" max.

### GENERAL SPECIFICATIONS

**Degree of protection:** NEMA 4X, IP66/IP67

**Wiring conduit:** See 'Ordering information.'

**Electrical connection:** M3 screw terminals

(torque 0.6 N·m)

#### Materials

- **Transmitter housing:** Diecast aluminum

**Screw terminals:** Nickel-plated steel

- **Enclosure:** Diecast aluminum or stainless steel casting (equivalent to type 316); silver color, epoxy resin coated

**Isolation:** Input or output to outdoor enclosure

**Output limit:** Approx. 120 %

**Zero adjustment:** -3 - +15 % (behind the access cover)

**Span adjustment:** 90 to 110 % (behind the access cover)

**Linearization:** Standard

## INPUT SPECIFICATIONS

Maximum leadwire resistance: 5 Ω per wire (3-wire)

Sensing current: 1 mA

### •100°C or Wider Span (180°F 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 (90 – 180°F 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

## PERFORMANCE in percentage of span

Accuracy: ±0.2 %

Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)

Response time: ≤ 0.5 sec. (0 – 90 %)

Burnout response: Approx. 1 sec.

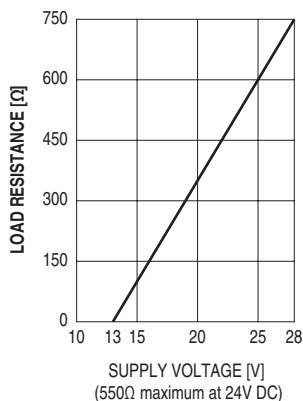
Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute  
(input or output to outdoor enclosure)

## OUTPUT SPECIFICATIONS

Output: 4 – 20 mA DC

Load resistance vs. supply voltage: Load Resistance (Ω) =  
(Supply Voltage (V) – 13 (V)) ÷ 0.02 (A)  
(including leadwire resistance)



## INSTALLATION

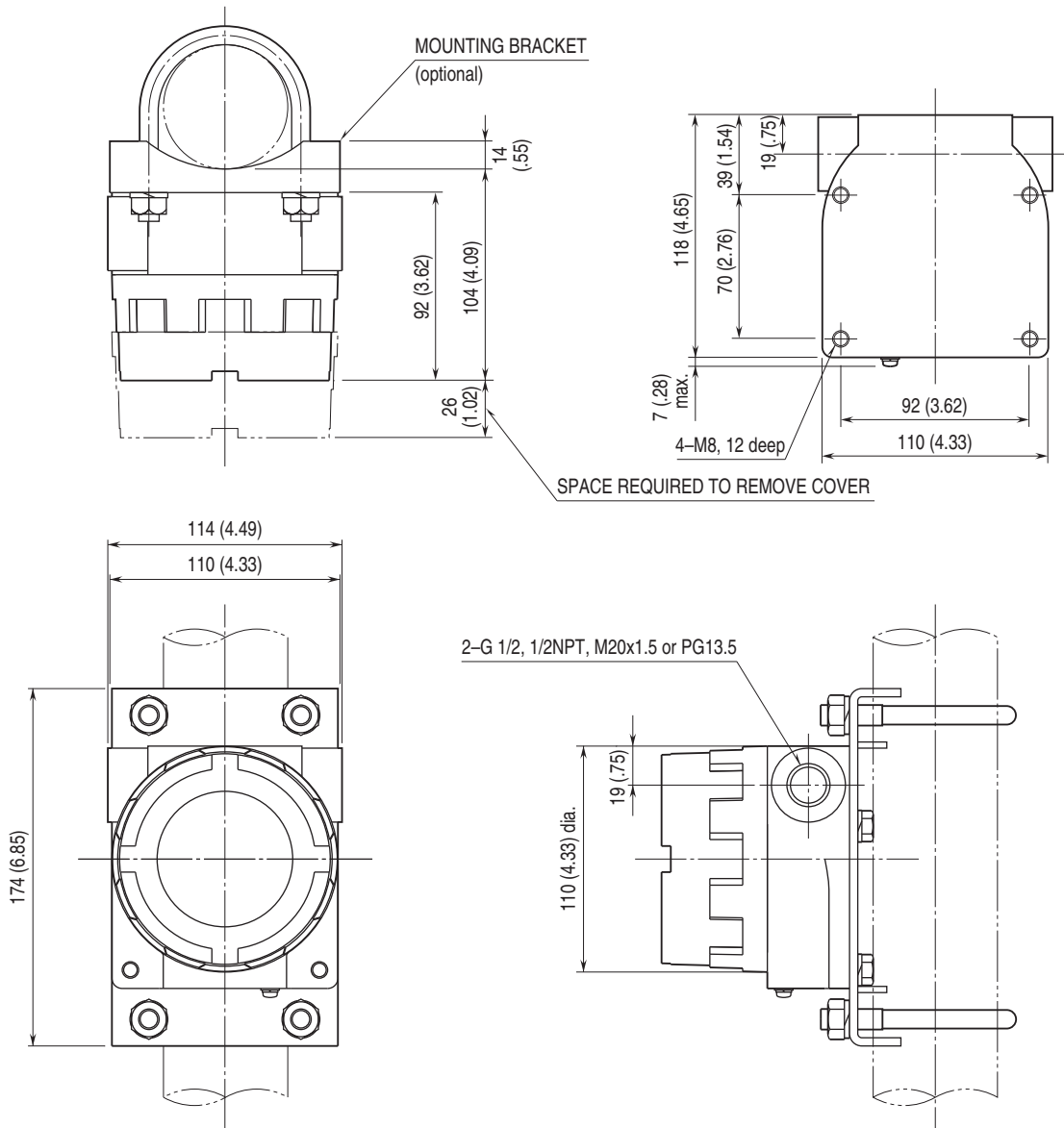
Supply voltage: 13 – 28 V DC

Operating temperature: -5 to +70°C (23 to 158°F)

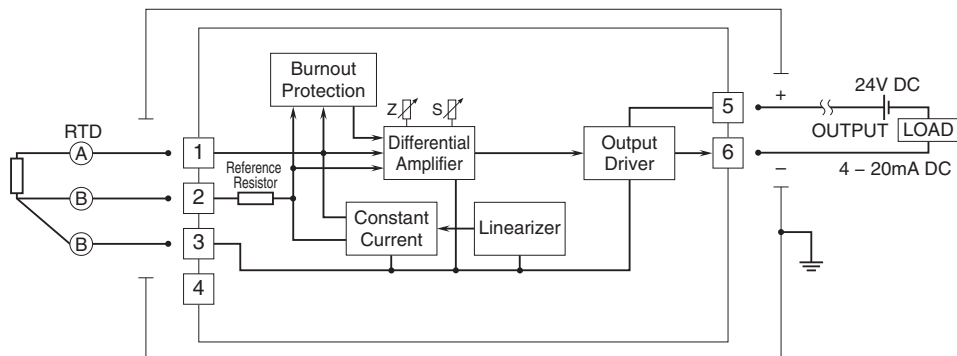
Weight:

- Unit
  - Approx. 1.5 kg (2.9 lb), aluminium
  - Approx. 4.2 kg (8.8 lb), stainless steel
- Mounting bracket assembly (option)
  - Approx. 0.78 kg (1.72 lb)

## EXTERNAL DIMENSIONS unit: mm (inch)



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM





Specifications are subject to change without notice.