

## Space-saving Plug-in Signal Conditioners F-UNIT

### HIGH/LOW SELECTOR

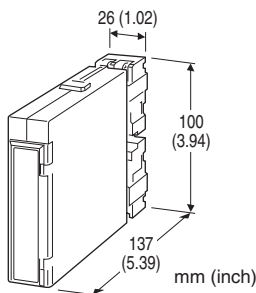
(non-isolated)

#### Functions & Features

- Monitoring two DC input signals and transmitting an output signal proportional to the higher or lower input
- High-density mounting

#### Typical Applications

- Selecting greater flow, pressure, etc. for control
- Heating control based on the highest temperature among several T/C's on a furnace



### MODEL: FSE-[1][2][3]-[4]

#### ORDERING INFORMATION

- Code number: FSE-[1][2][3]-[4]
- Specify a code from below for each [1] through [4] (e.g. FSE-1AA-K)
- Special output range (For codes Z & 0)

#### [1] SELECTING FUNCTION

- 1: Low input
- 2: High input

#### [2] INPUT

##### Current

A: 4 - 20 mA DC (Input resistance 250 Ω)

##### Voltage

6: 1 - 5 V DC (Input resistance 1 MΩ min.)

#### [3] OUTPUT

##### Current

- A: 4 - 20 mA DC (Load resistance 750 Ω max.)
- B: 2 - 10 mA DC (Load resistance 1500 Ω max.)
- C: 1 - 5 mA DC (Load resistance 3000 Ω max.)
- D: 0 - 20 mA DC (Load resistance 750 Ω max.)
- E: 0 - 16 mA DC (Load resistance 900 Ω max.)

F: 0 - 10 mA DC (Load resistance 1500 Ω max.)

G: 0 - 1 mA DC (Load resistance 15 kΩ max.)

Z: Specify current (See OUTPUT SPECIFICATIONS)

##### Voltage

1: 0 - 10 mV DC (Load resistance 10 kΩ min.)

2: 0 - 100 mV DC (Load resistance 100 kΩ min.)

3: 0 - 1 V DC (Load resistance 1000 Ω min.)

4: 0 - 10 V DC (Load resistance 10 kΩ min.)

5: 0 - 5 V DC (Load resistance 5000 Ω min.)

6: 1 - 5 V DC (Load resistance 5000 Ω min.)

4W: -10 - +10 V DC (Load resistance 10 kΩ min.)

5W: -5 - +5 V DC (Load resistance 5000 Ω min.)

0: Specify voltage (See OUTPUT SPECIFICATIONS)

#### [4] POWER INPUT

##### AC Power

K: 85 - 132 V AC

(Operational voltage range 85 - 132 V, 47 - 66 Hz)

L: 170 - 264 V AC

(Operational voltage range 170 - 264 V, 47 - 66 Hz)

##### DC Power

R: 24 V DC

(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

P: 110 V DC

(Operational voltage range 85 - 150 V, ripple 10 %p-p max.)

#### GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (black)

Isolation: Input or output to power

Overrange output: Approx. -10 to +120 % at 1 - 5 V

Selecting operation: Automatic

#### INPUT SPECIFICATIONS

- DC Current: Input resistor incorporated

#### OUTPUT SPECIFICATIONS

- DC Current: 0 - 20 mA DC

Minimum span: 1 mA

Offset: Max. 1.5 times span

Load resistance: Output drive 15 V max.

- DC Voltage: -10 - +12 V DC

Minimum span: 5 mV

Offset: Max. 1.5 times span

Load resistance: Output drive 1 mA max.; at ≥ 0.5 V



## INSTALLATION

### Power input

- AC: Approx. 4.5 VA
- DC: 24 V approx. 70 mA
- 110 V approx. 20 mA

**Operating temperature:** -5 to +55°C (23 to 131°F)

**Operating humidity:** 30 to 90 %RH (non-condensing)

**Mounting:** Surface or DIN rail; Standard Rack Mounting

Frame BX-16H available

**Weight:** 200 g (0.44 lbs)

## PERFORMANCE in percentage of span

**Accuracy:**  $\pm 0.2\%$

**Selecting sensitivity:** 0.5%

**Temp. coefficient:**  $\pm 0.015\%/^{\circ}\text{C}$  ( $\pm 0.008\%/^{\circ}\text{F}$ )

**Response time:**  $\leq 0.5$  sec. (0 - 90 %)

**Line voltage effect:**  $\pm 0.1\%$  over voltage range

**Insulation resistance:**  $\geq 100\ \text{M}\Omega$  with 500 V DC

**Dielectric strength**

**Power input code R:**

2000 V AC @ 1 minute (input or output or power to ground)

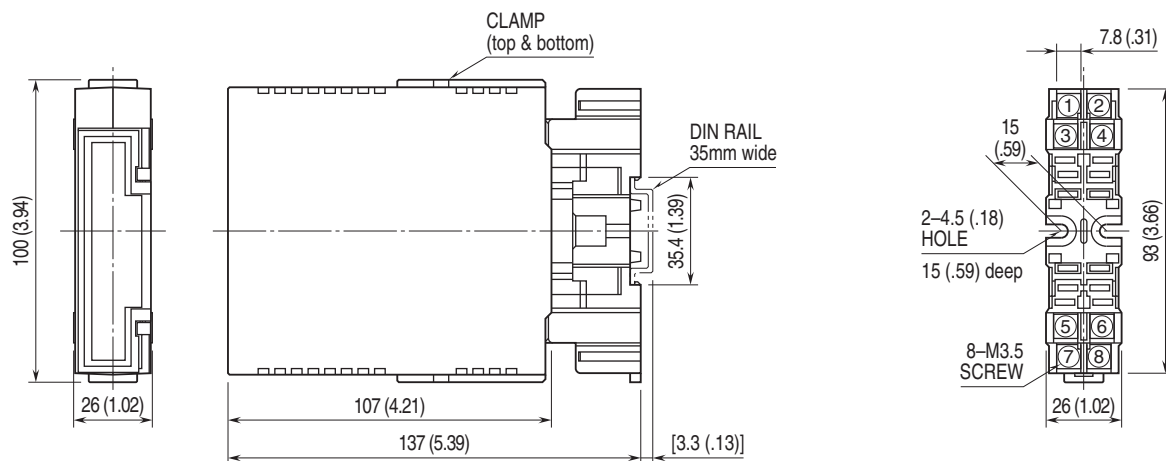
500 V AC @ 1 minute (I/O to power)

**Power input code K, L, P:**

2000 V AC @ 1 minute (input or output or power to ground)

1500 V AC @ 1 minute (I/O to power)

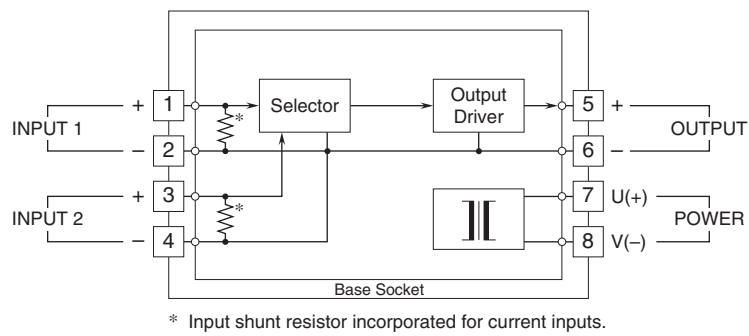
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



•When mounting, no extra space is needed between units.



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.

