

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

### CURRENT LOOP SUPPLY

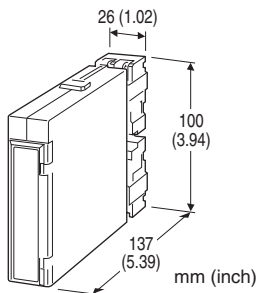
(non-isolated)

#### Functions & Features

- Powering a 4 – 20 mA DC current loop
- Electrically isolating output signal from power input
- Shortcircuit protection
- Applicable to smart transmitters
- High-density mounting

#### Typical Applications

- Various 2-wire transmitters



### MODEL: FD-24-[1]

#### ORDERING INFORMATION

- Code number: FD-24-[1]

Specify a code from below for [1]  
(e.g. FD-24-L)

#### SUPPLY OUTPUT

24: 24 V DC

#### INPUT

##### Current

4 – 20 mA DC (Input resistance 250 Ω)

#### OUTPUT

##### Voltage

1 – 5 V DC (Load resistance 250 kΩ min.)

#### [1] 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

#### SUPPLY OUTPUT

**Output voltage:** 24 – 28 V DC with no load

**Current rating:** ≤ 22 mA DC

- Shortcircuit Protection

**Current limited:** 35 mA max.

**Protected time duration:** No limit

#### INPUT SPECIFICATIONS

- DC Current: Input resistor incorporated

#### 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:** ±0.1 % (accuracy of the receiving resistor)

**Temp. coefficient:** ±0.003 %/°C (±0.002 %/°F) (temp. coefficient of the receiving resistor)

**Line voltage effect to supply output:** ±3 % over voltage range

**Insulation resistance:** ≥ 100 MΩ 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)

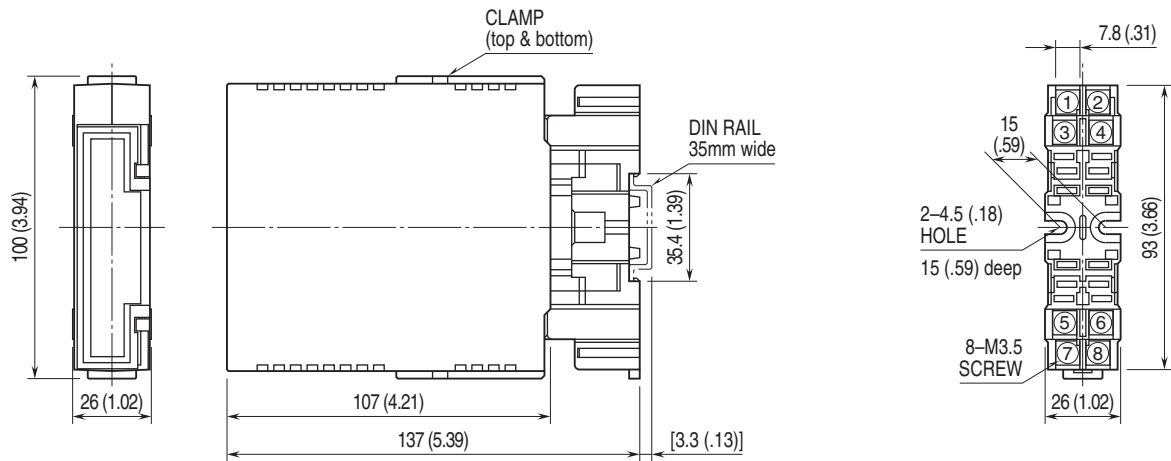
**Power input code K, L, P:**

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

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

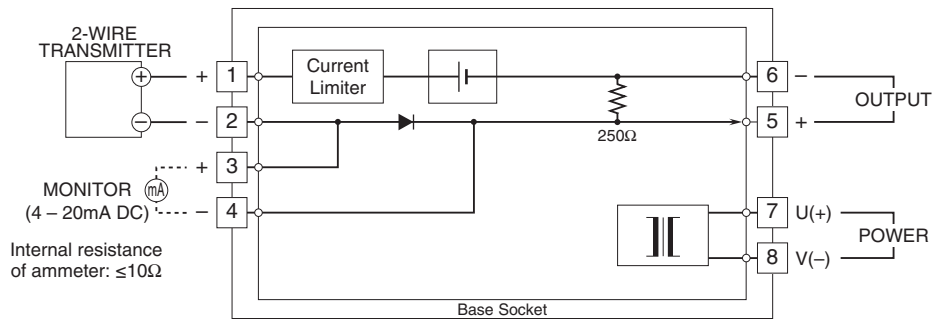


## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.