

Space-saving Plug-in Signal Conditioners F-UNIT

CURRENT LOOP SUPPLY

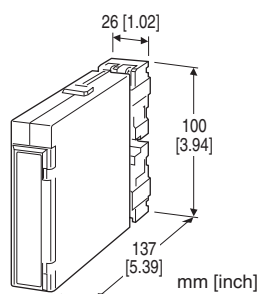
(non-isolated)

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][2]

ORDERING INFORMATION

- Code number: FD-24-[1][2]

Specify a code from below for each of [1] and [2].
(e.g. FD-24-L/Q)

- Specify the specification for option code /Q
(e.g. /C01/S01)

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.)

[2] OPTIONS

blank: none

/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to our web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

TERMINAL SCREW MATERIAL

/S01: Stainless steel

GENERAL SPECIFICATIONS

Construction: Plug-in

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

Screw terminal: Nickel-plated steel (standard) or stainless 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 lb)

PERFORMANCE in percentage of span

Accuracy: $\pm 0.1\%$ (accuracy of the receiving resistor)

Temp. coefficient: $\pm 0.003\%/^{\circ}\text{C}$ ($\pm 0.002\%/^{\circ}\text{F}$) (temp. coefficient of the receiving resistor)

Line voltage effect to supply output: $\pm 3\%$ 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)

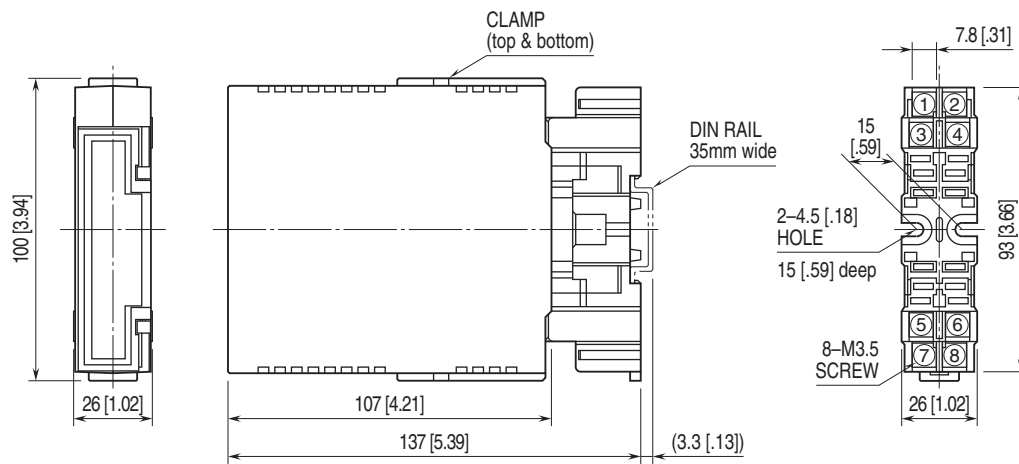
500 V AC @ 1 minute (I/O to power)

Power input code K, L, P:

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

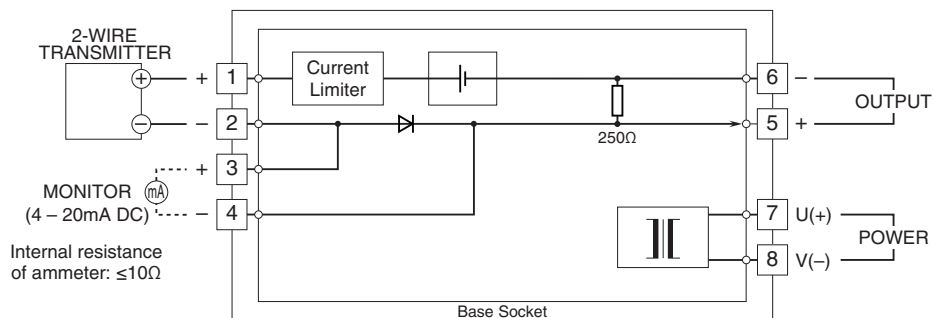
1500 V AC @ 1 minute (I/O to power)

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.