

Space-saving Plug-in Signal Conditioners F-UNIT

CURRENT LOOP SUPPLY

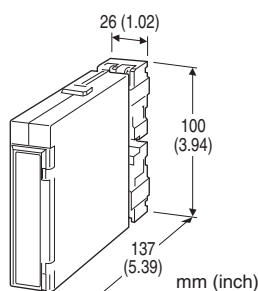
(isolated)

Functions & Features

- Powering a 4 – 20 mA DC current loop
- Shortcircuit protection
- Applicable to smart transmitters
- High-density mounting

Typical Applications

- Various 2-wire transmitters



MODEL: FDY2-24[1]-[2][3]

ORDERING INFORMATION

- Code number: FDY2-24[1]-[2][3]

Specify a code from below for each of [1] through [3].

- (e.g. FDY2-246-K/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 300 Ω)

[1] 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.)

Voltage

- 1: 0 – 10 mV DC (Load resistance 10 k Ω min.)
- 2: 0 – 100 mV DC (Load resistance 100 k Ω min.)
- 3: 0 – 1 V DC (Load resistance 1000 Ω min.)
- 4: 0 – 10 V DC (Load resistance 10 k Ω min.)

5: 0 – 5 V DC (Load resistance 5000 Ω min.)6: 1 – 5 V DC (Load resistance 5000 Ω min.)

[2] 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 $\pm$ 10 %, ripple 10 %p-p max.)

P: 110 V DC

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

[3] OPTIONS

blank: none

/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to M-System's 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 to output to power

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

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

SUPPLY OUTPUT

(across the terminals 1 – 2)

Output voltage:

24 – 28 V DC with no load

18 V DC min. at 20 mA

Current rating: $\leq$ 22 mA DC

• Shortcircuit Protection

Current limited: 30 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. 90 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)

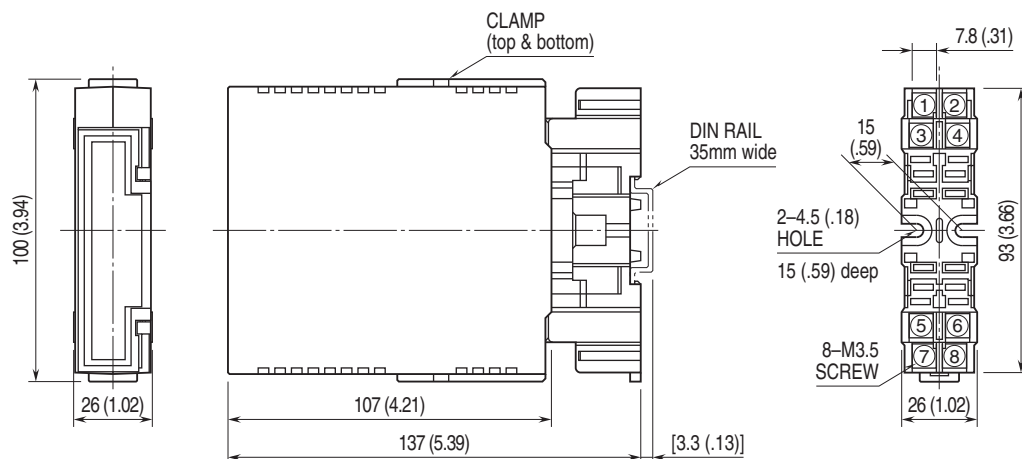
PERFORMANCE in percentage of span

- Accuracy:** $\pm 0.1\%$
- Temp. coefficient:** $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)
- Response time:** ≤ 0.5 sec. (0 - 90 %)
- Line voltage effect**
 - Supply output:** $\pm 3\%$ over voltage range
 - Output signal:** $\pm 0.1\%$ over voltage range
- Insulation resistance:** $\geq 100\text{ M}\Omega$ with 500 V DC
- Dielectric strength**
- Power input code R:**

- 1000 V AC @ 1 minute (input to output)
- 2000 V AC @ 1 minute (input or output or power to ground)
- 500 V AC @ 1 minute (I/O to power)

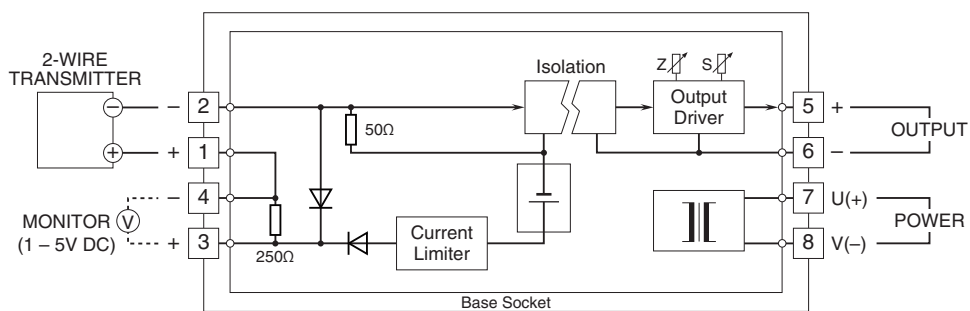
Power input code K, L, P:

- 1000 V AC @ 1 minute (input to output)
- 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.