

Space-saving Plug-in Signal Conditioners F-UNIT

CURRENT LOOP SUPPLY

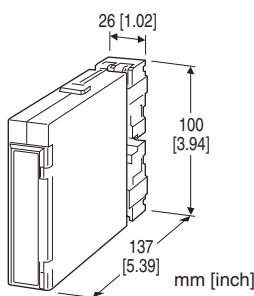
(10 – 50 mA loop)

Functions & Features

- Powering a 10 – 50 mA DC current loop
- Isolation
- Shortcircuit protection
- Applicable to smart transmitters
- High-density mounting

Typical Applications

- Various 2-wire transmitters



MODEL: FDU-24-[1][2]

ORDERING INFORMATION

- Code number: FDU-24-[1][2]
- Specify a code from below for each of [1] and [2].
(e.g. FDU-24-K/Q)
- Specify the specification for option code /Q
(e.g. /C01/S01)

SUPPLY OUTPUT

24: 24 V DC

INPUT

Current
10 – 50 mA DC

OUTPUT

Voltage
1-5 V DC (Load resistance 50 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 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

Output voltage: 24 – 28 V DC with no load

Current rating: ≤ 55mA DC

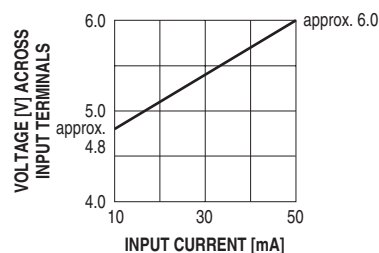
- Shortcircuit Protection

Current limited: Approx. 65 mA

Protected time duration: No limit

INPUT SPECIFICATIONS

Equivalent input impedance: Approx. 100 Ω at 50 mA



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: ±0.1 %

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

Response time: ≤ 0.5 sec. (0 - 90 %)

Line voltage effect

Supply output: ±3 % over voltage range

Output signal: ±0.1 % over voltage range

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength

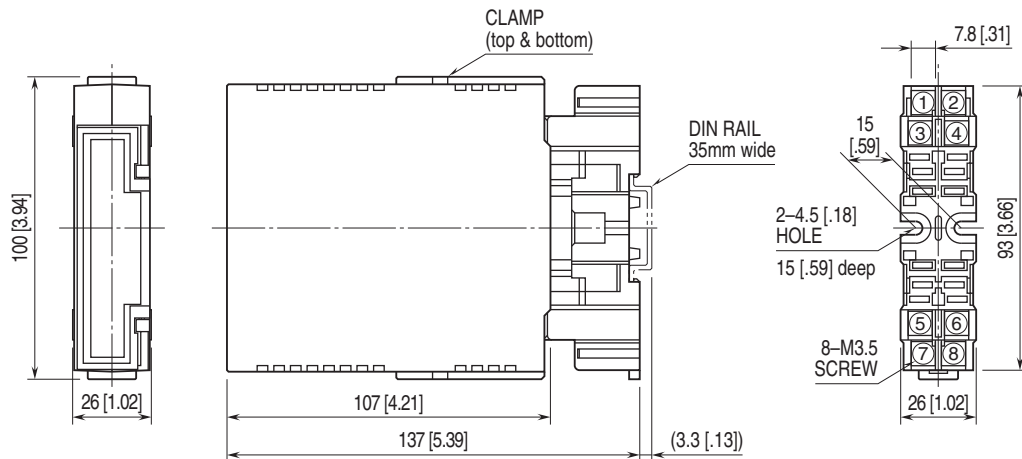
Power input code R:

- 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:

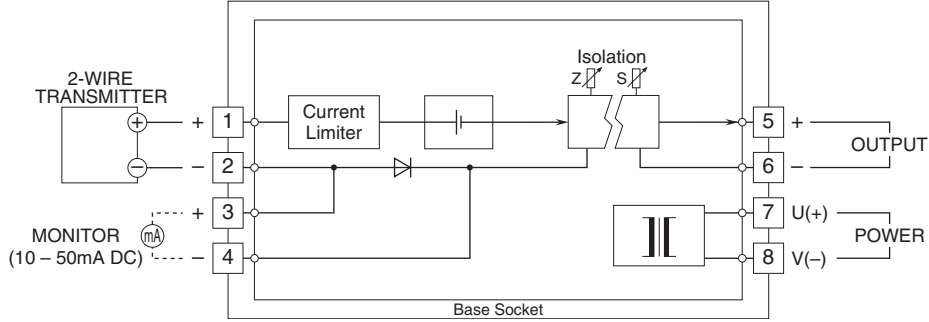
- 1000 V AC @ 1 minute (input to output)
- 2000 V AC @ 1 minute (input or output or power to ground)
- 1500 V AC @ 1 minute (I/O to power)

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.