

## Super-mini Signal Conditioners F2 Series

### CURRENT LOOP SUPPLY

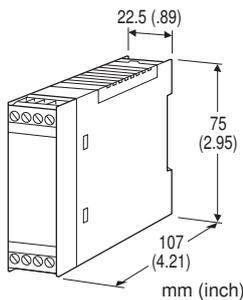
(non-isolated)

#### Functions & Features

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

#### Typical Applications

- Various 2-wire transmitters



### MODEL: F2D-24-R[1]

#### ORDERING INFORMATION

- Code number: F2D-24-R[1]
- Specify a code from below for [1].  
(e.g. F2D-24-R/CE/Q)
- Specify the specification for option code /Q  
(e.g. /C01)

#### SUPPLY OUTPUT

24: 24 V DC

#### INPUT

Current

4 – 20 mA DC (Input resistance 250 Ω)

#### OUTPUT 1

Voltage

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

#### OUTPUT 2

Current

4 – 20 mA DC

#### POWER INPUT

DC Power

R: 24 V DC

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

#### [1] OPTIONS (multiple selections)

Standards & Approvals (must be specified)

/N: Without CE

/CE: CE marking

Other Options

blank: none

/Q: With options (specify the specification)

#### SPECIFICATIONS OF OPTION: Q

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

/C01: Silicone coating

/C02: Polyurethane coating

#### GENERAL SPECIFICATIONS

**Construction:** Stand-alone; terminal access at the front

**Connection:** Euro type connector terminal

(applicable wire size: 0.2 to 2.5 mm<sup>2</sup>, stripped length 7 mm)

**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

**Current consumption**

•DC: Approx. 80 mA

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

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

**Mounting:** DIN rail

**Weight:** 150 g (0.33 lb)

#### 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)

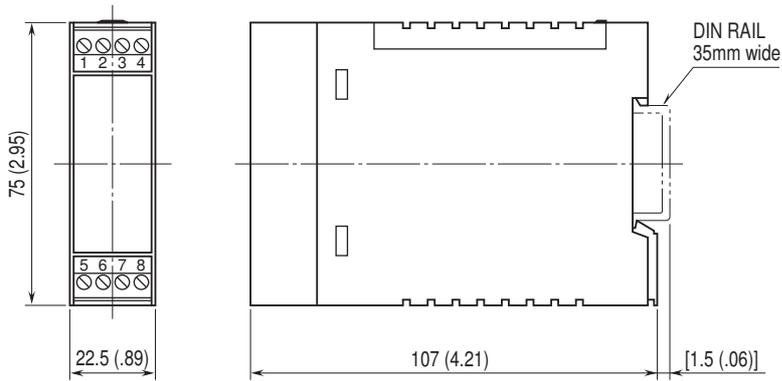
**Line voltage effect to supply output:** ±3 % over voltage range

**Insulation resistance:**  $\geq 100 \text{ M}\Omega$  with 500 V DC  
**Dielectric strength:** 2000 V AC @1 minute (input or output to power to ground)

## STANDARDS & APPROVALS

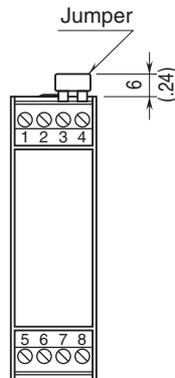
**EU conformity:**  
 EMC Directive  
 EMI EN 61000-6-4  
 EMS EN 61000-6-2  
 RoHS Directive

## EXTERNAL DIMENSIONS unit: mm [inch]

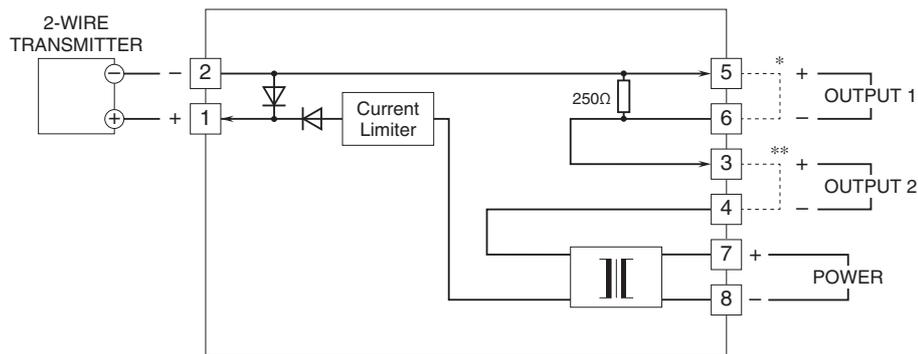


• When mounting, no extra space is needed between units.

## TERMINAL ASSIGNMENTS unit: mm [inch]



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



- \* Short across these terminals using the attached jumper (or leadwire) for large voltage allowance at Output 2. Be sure to match specifications of smart transmitter. Do not connect a capacitive load to Output 1.
- \*\*Be sure to short across these terminals using the attached jumper (or leadwire) when not using Output 2.



Specifications are subject to change without notice.