

## Super-mini Signal Conditioners F2 Series

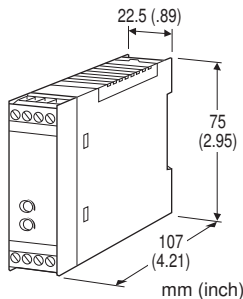
### POTENTIOMETER TRANSMITTER

#### Functions & Features

- Providing a DC output proportional to a potentiometer or slidewire position input
- Constant voltage excitation allows use with pots with total resistances from 100 Ω - 10 kΩ without affecting accuracy
- 50 % zero/span adjustments with minimal interaction
- Fast response type available
- High-density mounting

#### Typical Applications

- Tank levels
- Positions



### MODEL: F2MS-[1]-R[2]

#### ORDERING INFORMATION

- Code number: F2MS-[1]-R[2]
- Specify a code from below for each of [1] and [2].  
(e.g. F2MS-A-R/K/CE/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q  
(e.g. /C01)

#### INPUT

Total resistance 100 Ω - 10 kΩ

#### [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.)
- D:** 0 - 20 mA DC (Load resistance 750 Ω max.)
- E:** 0 - 16 mA DC (Load resistance 900 Ω max.)
- F:** 0 - 10 mA DC (Load resistance 1500 Ω max.)
- G:** 0 - 1 mA DC (Load resistance 15 kΩ max.)
- Z:** Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 1:** 0 - 10 mV DC (Load resistance 10 kΩ min.)
- 2:** 0 - 100 mV DC (Load resistance 100 kΩ min.)
- 3:** 0 - 1 V DC (Load resistance 1000 Ω min.)
- 4:** 0 - 10 V DC (Load resistance 10 kΩ min.)
- 5:** 0 - 5 V DC (Load resistance 5000 Ω min.)
- 6:** 1 - 5 V DC (Load resistance 5000 Ω min.)
- 4W:** -10 - +10 V DC (Load resistance 10 kΩ min.)
- 5W:** -5 - +5 V DC (Load resistance 5000 Ω min.)
- 0:** Specify voltage (See OUTPUT SPECIFICATIONS)

#### POWER INPUT

DC Power

R: 24 V DC

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

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

Response Time (0 - 90 %)

**blank:** Standard (≤ 0.5 sec.)

**/K:** Fast Response (Approx. 25 msec.)

Standards & Approvals (must be specified)

**/N:** Without CE

**/CE:** CE marking

Other Options

**blank:** none

**/Q:** Option other than the above (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 to output to power

**Zero adjustment:** 0 - 50 % of total resistance (front)

**Span adjustment:** 50 - 100 % of total resistance (front)

#### INPUT SPECIFICATIONS

**Minimum span:** 50 % of total resistance

**Excitation:** 0.5 V DC

## OUTPUT SPECIFICATIONS

- **DC Current:** 0 – 20 mA DC
- Minimum span:** 1 mA
- Offset:** Max. 1.5 times span
- Load resistance:** Output drive 15 V max.
- **DC Voltage:** -10 – +12 V DC
- Minimum span:** 5 mV
- Offset:** Max. 1.5 times span
- Load resistance:** Output drive 1 mA max.; at  $\geq 0.5$  V

## 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)

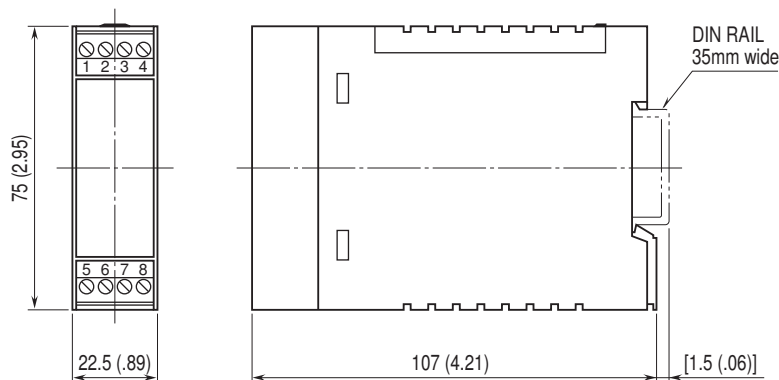
## PERFORMANCE in percentage of span

- Accuracy:**  $\pm 0.1$  %
- Temp. coefficient:**  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°F)
- Line voltage effect:**  $\pm 0.1$  % over voltage range
- Insulation resistance:**  $\geq 100$  M $\Omega$  with 500 V DC
- Dielectric strength:** 2000 V AC @1 minute (input to output to power to ground)

## STANDARDS & APPROVALS

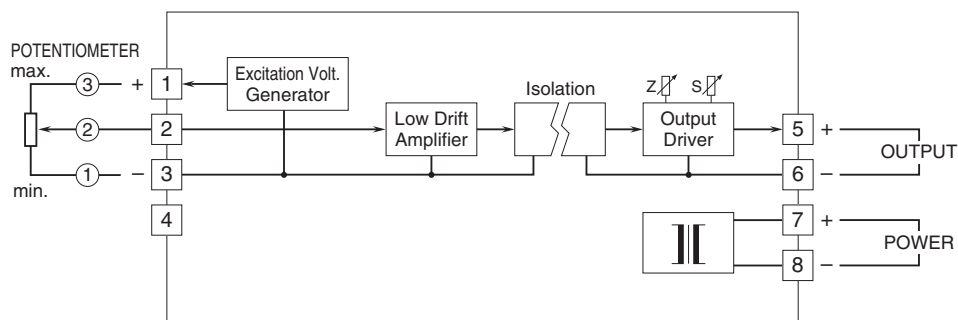
- EU conformity:**
- EMC Directive
- EMI EN 61000-6-4
- EMS EN 61000-6-2
- RoHS Directive

## EXTERNAL DIMENSIONS & 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.