

Super-mini Signal Conditioners F2 Series

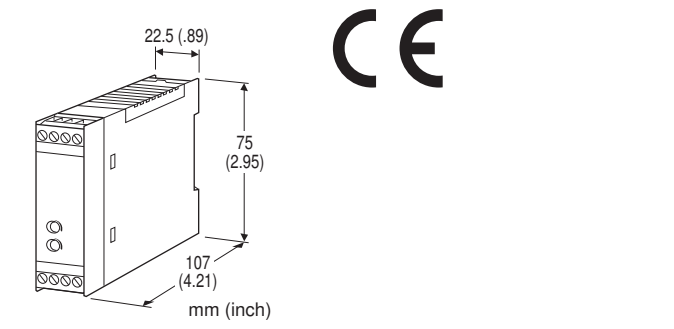
SIGNAL TRANSMITTER

Functions & Features

- Converts DC input from a sensor into a standard process signal
- Fast response type available

Typical Applications

- Isolation between control room and field instrumentation



MODEL: F2VS-[1][2]-R[3]

ORDERING INFORMATION

- Code number: F2VS-[1][2]-R[3]
- Specify a code from below for each of [1] through [3].
(e.g. F2VS-6A-R/K/CE/Q)
- Special input and output ranges (For codes Z & O)
 - Specify the specification for option code /Q
(e.g. /C01)

[1] INPUT

Current

- A:** 4 - 20 mA DC (Input resistance 250 Ω)
- A1:** 4 - 20 mA DC (Input resistance 50 Ω)
- B:** 2 - 10 mA DC (Input resistance 500 Ω)
- C:** 1 - 5 mA DC (Input resistance 1000 Ω)
- D:** 0 - 20 mA DC (Input resistance 50 Ω)
- E:** 0 - 16 mA DC (Input resistance 62.5 Ω)
- F:** 0 - 10 mA DC (Input resistance 100 Ω)
- G:** 0 - 1 mA DC (Input resistance 1000 Ω)
- H:** 10 - 50 mA DC (Input resistance 100 Ω)
- J:** 0 - 10 μA DC (Input resistance 1000 Ω)
- K:** 0 - 100 μA DC (Input resistance 1000 Ω)
- GW:** -1 - +1 mA DC (Input resistance 1000 Ω)
- FW:** -10 - +10 mA DC (Input resistance 100 Ω)
- Z:** Specify current (See INPUT SPECIFICATIONS)

Voltage

- 1:** 0 - 10 mV DC (Input resistance 10 kΩ min.)
- 15:** 0 - 50 mV DC (Input resistance 10 kΩ min.)

- 16:** 0 - 60 mV DC (Input resistance 10 kΩ min.)
- 2:** 0 - 100 mV DC (Input resistance 100 kΩ min.)
- 3:** 0 - 1 V DC (Input resistance 1 MΩ min.)
- 4:** 0 - 10 V DC (Input resistance 1 MΩ min.)
- 5:** 0 - 5 V DC (Input resistance 1 MΩ min.)
- 6:** 1 - 5 V DC (Input resistance 1 MΩ min.)
- 4W:** -10 - +10 V DC (Input resistance 1 MΩ min.)
- 5W:** -5 - +5 V DC (Input resistance 1 MΩ min.)
- 0:** Specify voltage (See INPUT SPECIFICATIONS)

[2] 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.)

[3] 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

STANDARDS & APPROVALS**EU conformity:**

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

GENERAL SPECIFICATIONS**Construction:** Stand-alone; terminal access at the front**Connection:** Euro type connector terminal(applicable wire size: 0.2 to 2.5 mm², stripped length 7 mm)**Housing material:** Flame-resistant resin (black)**Isolation:** Input to output to power**Zero adjustment:** -5 to +5 % (front)**Span adjustment:** 95 to 105 % (front)**INPUT SPECIFICATIONS**■ **DC Current:** Input resistor incorporated

Specify input resistance value for code Z.

(R ≤ 0.5 W ÷ [F.S. Current]²)■ **DC Voltage:** -30 - +30 V DC**Span:** Min. 3 mV, max. 30 V**Offset:** Max. 1.5 times span**Input resistance**

Span 3 - 10 mV : ≥ 10 kΩ

Span 10 - 100 mV : ≥ 10 kΩ

Span 0.1 - 1 V : ≥ 100 kΩ

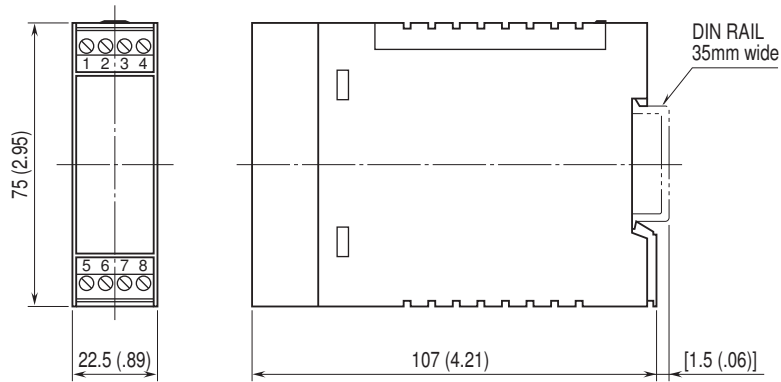
Span ≥ 1 V : ≥ 1 MΩ

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 ≥ 0.5 V**INSTALLATION****Current consumption**

•DC: Approx. 80 mA

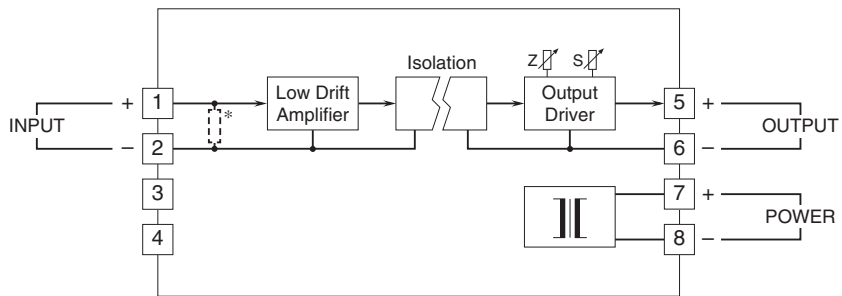
Operating temperature: -5 to +55°C (23 to 131°F)**Operating humidity:** 30 to 90 %RH (non-condensing)**Mounting:** DIN rail**Weight:** 150 g (0.33 lb)**PERFORMANCE in percentage of span****Accuracy:** ±0.1 %**Temp. coefficient:** ±0.015 %/°C (±0.008 %/°F)**Line voltage effect:** ±0.1 % over voltage range**Insulation resistance:** ≥ 100 MΩ with 500 V DC**Dielectric strength:** 2000 V AC @1 minute (input to output to power to ground)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Input shunt resistor incorporated for current input.



Specifications are subject to change without notice.