

Super-mini Signal Conditioners Mini-M Series

SIGNAL TRANSMITTER

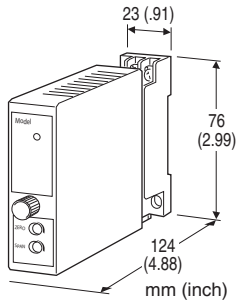
(field-configurable)

Functions & Features

- Converts DC input from a sensor into a standard process signal
- DIP switch configurable input & output range and response time
- High-density mounting
- Power indicator LED

Typical Applications

- Isolation between control room and field instrumentation



MODEL: M2FV-[1][2]

ORDERING INFORMATION

- Code number: M2FV-[1][2]

Specify a code from below for each of [1] and [2].
(e.g. M2FV-M2/CE/Q)

- Specify the specification for option code /Q
(e.g. /C01/S01)

Orders will be shipped at default factory settings for Input (4 - 20mA) and Output (4 - 20mA) and Response time (Standard response).

INPUT - Field-selectable

Current

- 4 - 20 mA DC (Input resistance 50 Ω)
- 0 - 20 mA DC (Input resistance 50 Ω)

Voltage

- 0 - 10 V DC (Input resistance 100 kΩ min.)
- 2 - 10 V DC (Input resistance 100 kΩ min.)
- 0 - 5 V DC (Input resistance 100 kΩ min.)
- 1 - 5 V DC (Input resistance 100 kΩ min.)

OUTPUT - Field-selectable

Current

- 4 - 20 mA DC (Load resistance 750 Ω max.)
- 0 - 20 mA DC (Load resistance 750 Ω max.)

Voltage

- 0 - 10 V DC (Load resistance 10 kΩ min.)
- 2 - 10 V DC (Load resistance 10 kΩ min.)
- 0 - 5 V DC (Load resistance 5000 Ω min.)
- 1 - 5 V DC (Load resistance 5000 Ω min.)

[1] POWER INPUT

AC Power

- M:** 85 - 264 V AC (Operational voltage range 85 - 264 V, 47 - 66 Hz)

(Select '/N' for 'Standards & Approvals' code.)

- M2:** 100 - 240 V AC (Operational voltage range 85 - 264 V, 47 - 66 Hz)

DC Power

- R:** 24 V DC

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

- R2:** 11 - 27 V DC

(Operational voltage range 11 - 27 V, ripple 10 %p-p max.)

(Select '/N' for 'Standards & Approvals' code.)

- P:** 110 V DC

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

[2] OPTIONS (multiple selections)

Standards & Approvals (must be specified)

/N: Without CE or UKCA

/CE: CE marking

/UK: CE, UKCA marking

Other Options

blank: none

/Q: Option other than the above (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

/C04: Polyolefin coating

TERMINAL SCREW MATERIAL

/S01: Stainless steel

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3 screw terminals (torque 0.8 N·m)

Screw terminal: Chromated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Isolation: Input to output to power
Overrange output: Approx. -10 to +120 %
Zero adjustment: -2 to +2 % (front)
Span adjustment: 98 to 102 % (front)
Power indicator LED: Green LED turns on when the power is supplied.

legislations and designated standards.)

INPUT SPECIFICATIONS

■ **DC Current:** Input resistor incorporated

INSTALLATION

Power Consumption

•AC:

Approx. 3 VA at 100 V

Approx. 4 VA at 200 V

Approx. 5 VA at 264 V

•DC: Approx. 3 W

Operating temperature: -30 to +60°C (-22 to +140°F)

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

Mounting: Surface or DIN rail

Weight: 150 g (0.33 lb)

PERFORMANCE in percentage of span

Accuracy: ± 0.1 %

I/O setting accuracy: ± 0.2 %

Temp. coefficient: $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

Response time:

Standard response ≤ 0.5 sec. (0 - 90 %)

Fast response ≤ 30 msec. (0 - 90 %)

Line voltage effect: ± 0.1 % over voltage range

Insulation resistance: ≥ 100 M Ω 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

Low Voltage Directive

EN 61010-1

Measurement Category II

Pollution Degree 2

Input or output to power: Reinforced insulation (300 V)

Input to output: Basic insulation (300 V)

RoHS Directive

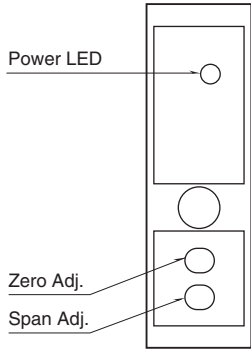
UK conformity (UKCA):

The UK legislations and designated standards are equivalent to the applicable EU directives.

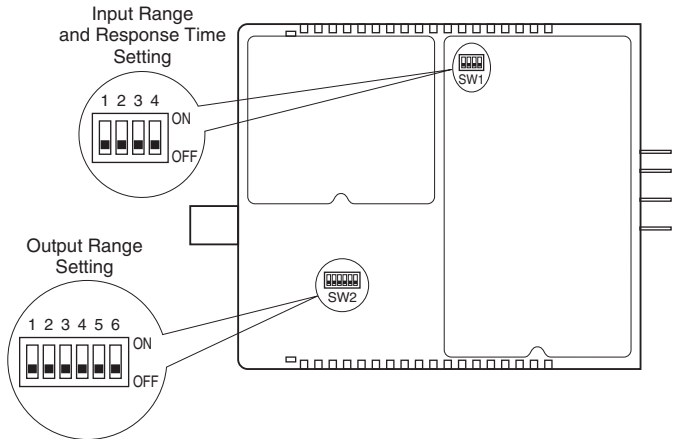
(Refer to our website for more information about the

EXTERNAL VIEW

■ FRONT VIEW

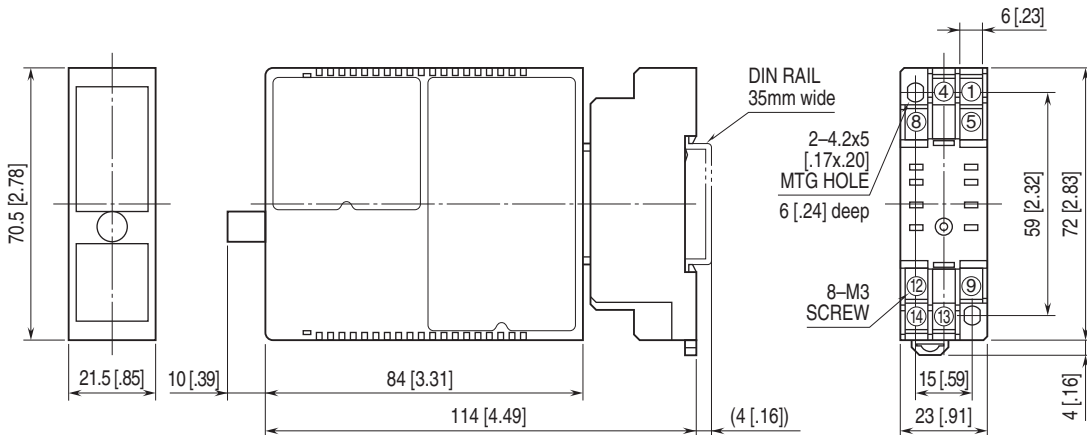


■ SIDE VIEW

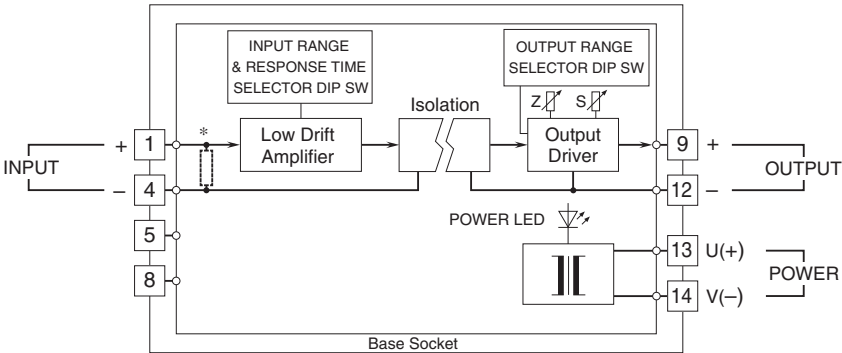


Refer to the instruction manual for detailed procedures.

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM





Specifications are subject to change without notice.