

Plug-in Signal Conditioners M-UNIT

SIGNAL TRANSMITTER

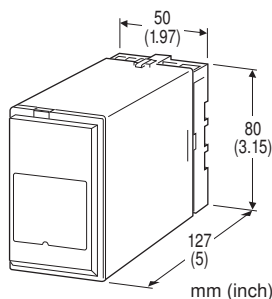
(field-programmable)

Functions & Features

- Converting a DC input into a standard process signal
- Micro-processor based
- Field-programmable input range
- Isolation up to 2000 V AC
- Loop testing via hand-held programmer PU-2x
- Highdensity mounting

Typical Applications

- Isolation between control room and field instrumentation
- Ideal for quick spare part



MODEL: JV-[1][2]-[3][4]

ORDERING INFORMATION

- Code number: JV-[1][2]-[3][4]
- Specify a code from below for each of [1] through [4].
(e.g. JV-6A-B/Q)
- Special input and output ranges (For codes U1, U2, U3, Z & 0)
- Specify the specification for option code /Q
(e.g. /C01/S01)

[1] INPUT

Current

- A: 4 - 20 mA DC (Input resistance 250 Ω)
H: 10 - 50 mA DC (Input resistance 100 Ω)

Voltage

- 6: 1 - 5 V DC (Input resistance 1 M Ω min.)
U1: Range ± 100 mV;
(Minimum span 3 mV, Input resistance 20 k Ω min.)
U2: Range ± 1000 mV;
(Minimum span 30 mV, Input resistance 20 k Ω min.)
U3: Range ± 10 V;
(Minimum span 0.3 V, Input resistance 1 M Ω min.)

[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 k Ω max.)
Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

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

[3] POWER INPUT

AC Power

- B: 100 V AC
C: 110 V AC
D: 115 V AC
F: 120 V AC
G: 200 V AC
H: 220 V AC
J: 240 V AC

DC Power

- S: 12 V DC
R: 24 V DC
V: 48 V DC

[4] OPTIONS

blank: none

/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to M-System's web site.)

- /C01: Silicone coating
/C02: Polyurethane coating
/C03: Rubber coating

TERMINAL SCREW MATERIAL

- /S01: Stainless steel

RELATED PRODUCTS

- Programming Unit (model: PU-2x)
- PC configurator software (model: JXCON)

Downloadable at M-System's web site.

A dedicated cable is required to connect the module to the PC. Please refer to the internet software download site or the users manual for the PC configurator for applicable cable types.

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals

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 % at 1 - 5 V

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

Adjustments: Programming Unit (model: PU-2x); Input range, zero and span, simulating output, etc.

(Input range can be changed with Codes U1, U2 or U3 and limited within ranges of each code type.)

(Refer to the users manual of JXCON for the adjustments configurable with JXCON.)

INPUT SPECIFICATIONS

■ **DC Current:**

Shunt resistor attached to the input terminals (0.5 W)

■ **DC Voltage:** -10 - +10 V DC

Minimum span: 3 mV

Offset: Max. 3 times span

Input resistance (Input Range: Input Resistance)

U1: ±100 mV

U2: ±1000 mV

U3: ±10 V

Default setting will be used if not otherwise specified.

U1: 0 - 100 mV DC

U2: 0 - 1 V DC

U3: 0 - 10 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 - +20 V DC

Span: Min. 5 mV, max. 20 V

Offset: Max. 1.5 times span

Load resistance: Output drive 1 mA max.; at ≥ 0.5 V

INSTALLATION

Power input

• **AC:** Operational voltage range: rating ±10 %, 50/60 ±2 Hz, approx. 3 VA

• **DC:** Operational voltage range: rating ±10 %, ripple 10 %p-p max., approx. 2 W (90 mA at 24 V)

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

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

Mounting: Surface or DIN rail

Weight: 350 g (0.77 lb)

PERFORMANCE in percentage of span

Accuracy: ±0.1 %

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

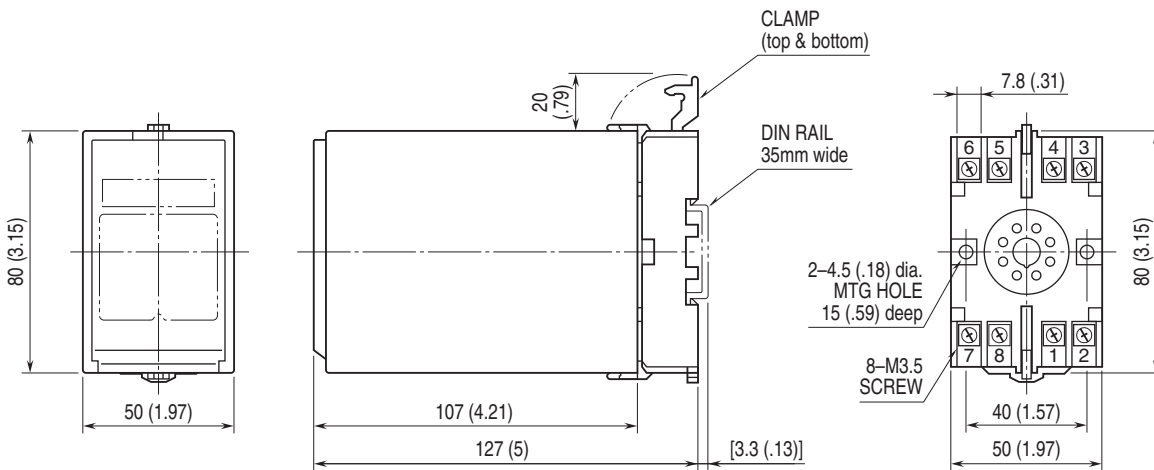
Response time: ≤ 0.5 sec. (0 - 90 %)

Line voltage effect: ±0.1 % over voltage range

Insulation resistance: ≥ 100 MΩ with 500 V DC

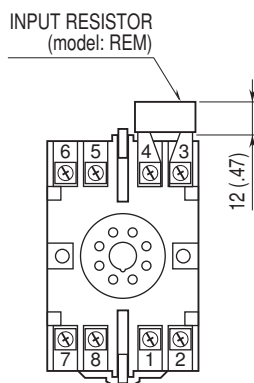
Dielectric strength: 2000 V AC @1 minute (input to output to power to ground)

EXTERNAL DIMENSIONS unit: mm (inch)



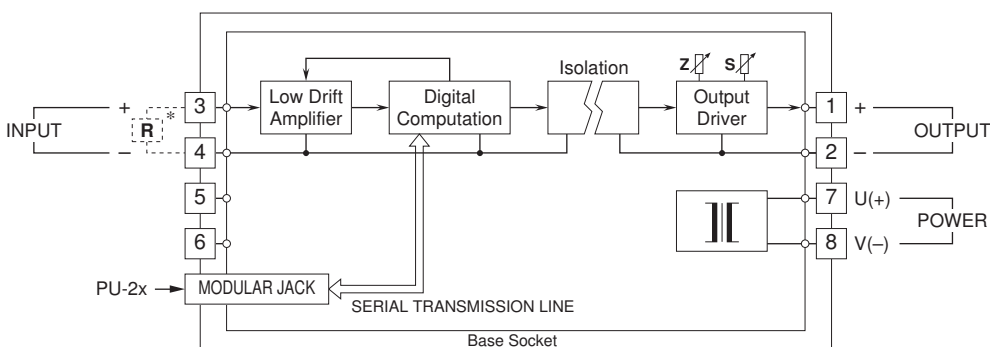
• When mounting, no extra space is needed between units.

TERMINAL ASSIGNMENTS unit: mm (inch)



Input shunt resistor attached for current input.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Input shunt resistor attached for current input.



Specifications are subject to change without notice.