Screw Terminal Ultra-Slim Signal Conditioners M6N Series

SIGNAL TRANSMITTER

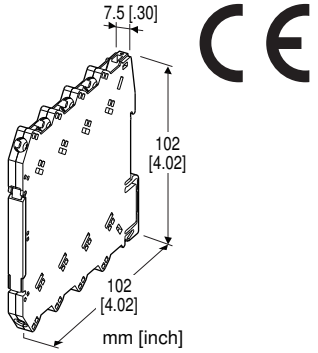
(high-accuracy, ultra-high speed response 30 µsec.)

Functions & Features

- 7.5-mm wide ultra-slim design
- Low profile allows the M6N module mounted in a 120-mm deep panel
- Galvanically isolates process instrumentation signals
- 30-microsecond response
- Frequency characteristics 12 kHz (-3 dB)
- High-density mounting
- Power indicator LED

Typical Applications

- Isolation for a vibration analyzing system
- Isolation for Discharge/Charge tester



MODEL: M6NVF–[1]4W–R[2]

ORDERING INFORMATION

- Code number: M6NVF-[1]4W-R[2]

Specify a code from below for each of [1] and [2].
(e.g. M6NVF-04W-R/Q)

- Special input range (For code 0: e.g. -164 – +164 mV DC)
- Specify the specification for option code /Q
(e.g. /C01)

[1] INPUT

Voltage

2W: -100 – +100 mV 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.)
8W: -20 – +20 V DC (Input resistance 1 MΩ min.)
0: Specify voltage
(Select input range as indicated below. Input resistance 1 MΩ min.)
-20 – +20 mV DC
-24 – +24 mV DC
-40 – +40 mV DC
-85 – +85 mV DC
-164 – +164 mV DC
-200 – +200 mV DC
-15 – +15 V DC
-25 – +25 V DC
-55 – +55 V DC
-60 – +60 V DC

OUTPUT

Voltage

4W: -10 – +10 V DC (Load resistance 2000 Ω min.)

POWER INPUT

DC Power

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

[2] OPTIONS

blank: none
/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q

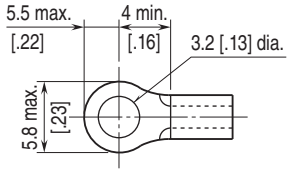
COATING (For the detail, refer to M-System's web site.)

/C01: Silicone coating
/C02: Polyurethane coating

GENERAL SPECIFICATIONS

Connection
Input and output: M3 screw terminal (torque 0.5 N·m)
Power input: Via the Installation Base (model: M6NBS)
or M3 screw terminal (torque 0.5 N·m)
Recommended solderless terminal: Max. 5.8 mm (0.23") wide; Ones with insulation sleeve do not fit.
Applicable wire size: 0.2 – 2.5 mm^2
Housing material: Flame-resistant resin (black)
Isolation: Input to output to power
Overrange input: -5 to +105 %
Zero adjustment: -1 to +1 % (front)
Span adjustment: 99 to 101 % (front)
Power indicator LED: Green LED turns on when the power is supplied.

■**Recommended solderless terminal (unit: mm [inch])**



INPUT SPECIFICATIONS

Input resistance: 1 MΩ min. (3 kΩ min. at power loss)

OUTPUT SPECIFICATIONS

Parallel load capacitance: Max. 2000 pF

INSTALLATION

Power consumption: Approx. 0.6 W
Operating temperature: -20 to +55°C (-4 to +131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Installation Base (model: M6NBS) or DIN rail
Weight: 60 g (2.1 oz)

PERFORMANCE in percentage of span

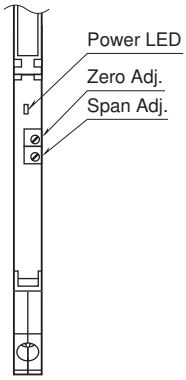
Accuracy: ±0.01 %
Temp. coefficient: ±0.005 %/°C (±0.003 %/°F)
Frequency characteristics: 12 kHz, -3 dB
Response time: ≤ 30 µsec. (0 – 90 %)
Line voltage effect: ±0.01 % over voltage range
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 2000 V AC @1 minute (input to output to power to ground)

STANDARDS & APPROVALS

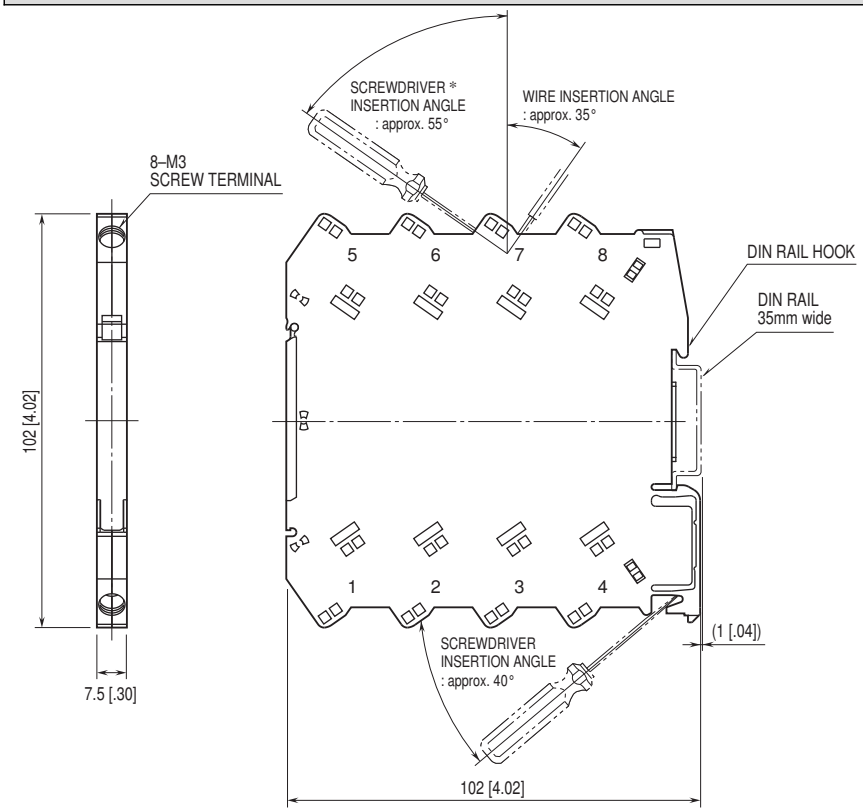
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

EXTERNAL VIEW

(With the cover open)

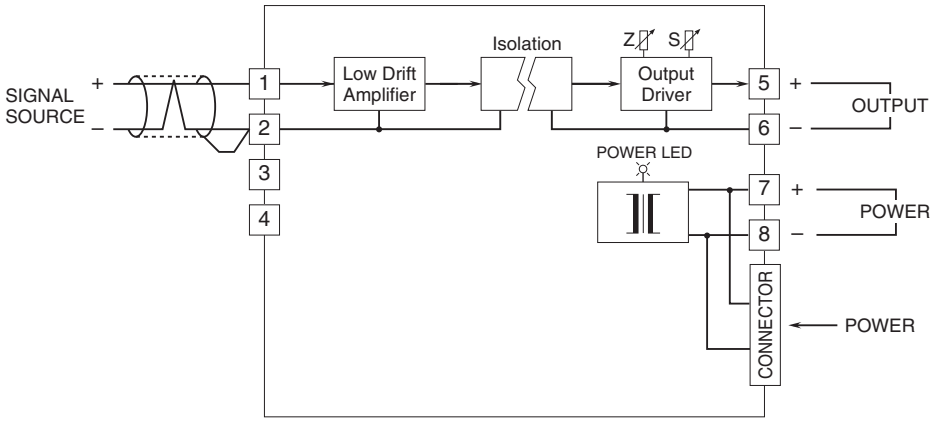


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



*Screwdriver stem diameter: 6 mm [.24"] or less • When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



This unit, by its fast-response feature, is not designed to eliminate noise present in the input signal.
Use a shielded twisted-pair cable to prevent noise from entering through the input wiring.

⚠ Specifications are subject to change without notice.