

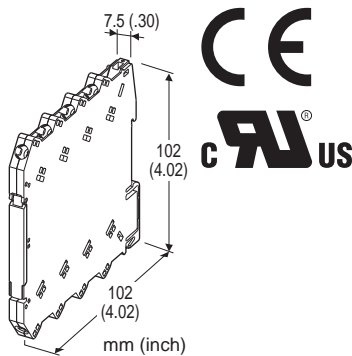
Screw Terminal Ultra-Slim Signal Conditioners M6N Series

0: Specify voltage (See INPUT SPECIFICATIONS)

SIGNAL TRANSMITTER

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
- High-density mounting
- Power indicator LED
- UL approval



MODEL: M6NVS-[1][2]-[3][4]

ORDERING INFORMATION

- Code number: M6NVS-[1][2]-[3][4]
Specify a code from below for each [1] through [4].
(e.g. M6NVS-4W4W-R/K/UL)
- Special input and output ranges (For codes Z & 0)

[1] INPUT

Current

- A: 4 - 20 mA DC (Input resistance 50 Ω)
- B: 2 - 10 mA DC (Input resistance 100 Ω)
- C: 1 - 5 mA DC (Input resistance 200 Ω)
- D: 0 - 20 mA DC (Input resistance 50 Ω)
- E: 0 - 16 mA DC (Input resistance 50 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 20 Ω)
- Z: Specify current (See INPUT SPECIFICATIONS)

Voltage

- 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.)

[2] OUTPUT

Current

- A: 4 - 20 mA DC (Load resistance 550 Ω max.)
- D: 0 - 20 mA DC (Load resistance 550 Ω max.)
- G: 0 - 1 mA DC (Load resistance 11 kΩ max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)

Voltage

- 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 20 kΩ min.)
- 5W: -5 - +5 V DC (Load resistance 10 kΩ min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

[3] POWER INPUT

AC Power

- M2: 100 - 240 V AC (Operational voltage range 90 - 264 V, 47 - 66 Hz)
(UL not available)

DC Power

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

[4] OPTIONS (multiple selections)

RESPONSE TIME (0 - 90 %)

- blank: Standard (≤ 0.5 sec.)
- /K: Fast Response (Approx. 3.5 msec. voltage output; Approx. 25 msec. current output)

STANDARDS & APPROVALS

- blank: CE marking
- /UL: UL approval (CE marking)

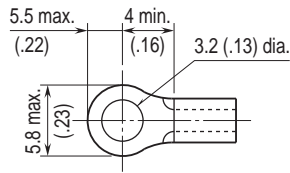
GENERAL SPECIFICATIONS

Connection

- Input and output:** M3 screw terminal (torque 0.5 N·m)
- Power input:** Via the Installation Base (model: M6NBS) (not available for AC power input)
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 mm²
- Housing material:** Flame-resistant resin (black)
- Isolation:** Input to output to power
- Zero adjustment:** -2 to +2% (front)
(Output code 4W, 5W: Adjustable at 0V. No output below 0mA for the code D.)
- Span adjustment:** 98 to 102 % (front)

Power LED: Green light turns on when the power is supplied.

Recommended solderless terminal



Low Voltage Directive (2006/95/EC)
 EN 61010-1
 Installation Category II
 Pollution Degree 2
 Max. operating voltage 300 V
 Input or output to power: Reinforced insulation
 Input to output: Basic insulation

INPUT SPECIFICATIONS

- **DC Current:** Input resistor incorporated
 Specify input resistance value for code Z.
 $(R \leq 0.125 \text{ W} \div [\text{F.S. Current}]^2)$
- **DC Voltage:** -30 – +30 V DC
- Minimum span:** 100 mV
- Offset:** Max. 1.5 times span
- Input resistance:** 1 MΩ min. (10 kΩ min. with no power supplied)

Approval:
 UL/C-UL nonincendive Class I, Division 2,
 Groups A, B, C, and D hazardous locations
 (ANSI/ISA-12.12.01, CAN/CSA-C22.2 No.213)
 UL/C-UL general safety requirements
 (UL 61010-1, CAN/CSA-C22.2 No.61010-1)

OUTPUT SPECIFICATIONS

- **DC Current:** 0 – 20 mA DC
Minimum span: 1 mA
Offset: Max. 1.5 times span
Load resistance: Output drive 11 V max.
- **DC Voltage:** 0 – 10 V DC
Minimum span: 1 V
Offset: Max. 1.5 times span
Load resistance: Output drive 1 mA max.; at $\geq 1 \text{ V}$

INSTALLATION

- Power Consumption**
- **AC Power input:** Max. 2 VA
 - **DC Power input:** Approx. 0.5 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

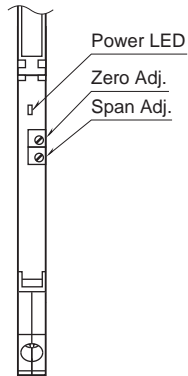
- Accuracy:** $\pm 0.1 \%$
Temp. coefficient: $\pm 0.01 \%/^{\circ}\text{C}$ ($\pm 0.006 \%/^{\circ}\text{F}$)
Line voltage effect: $\pm 0.1 \%$ over voltage range
Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC
Dielectric strength: 2000 V AC @1 minute (input to output to power to ground)

STANDARDS & APPROVALS

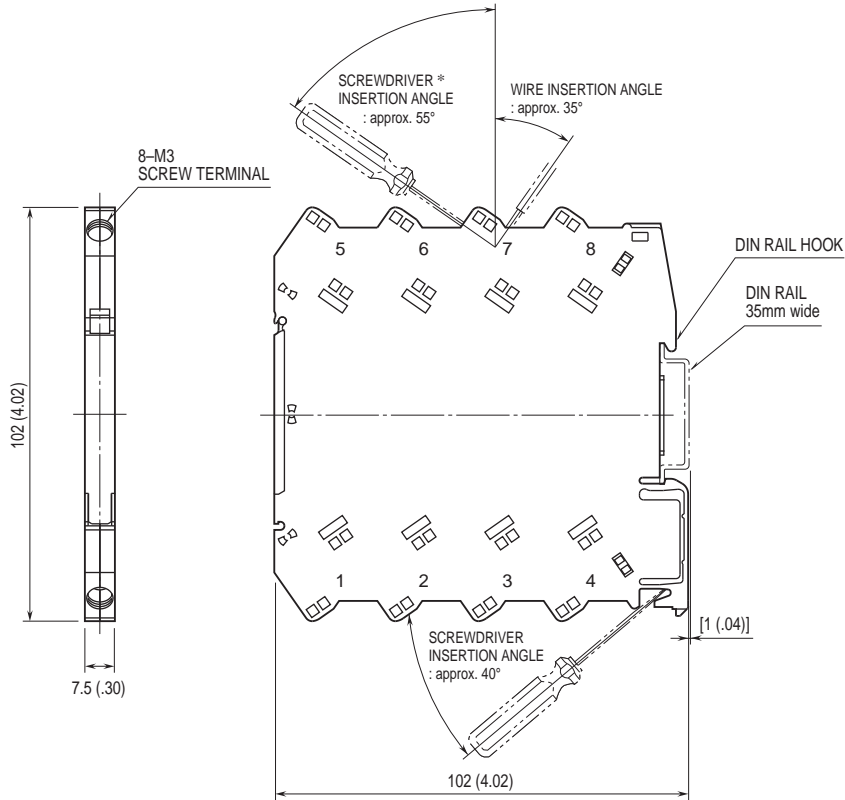
- CE conformity:**
 EMC Directive (2004/108/EC)
 EN 61000-6-4 (EMI)
 EN 61000-6-2 (EMS)

EXTERNAL VIEW

(With the cover open)



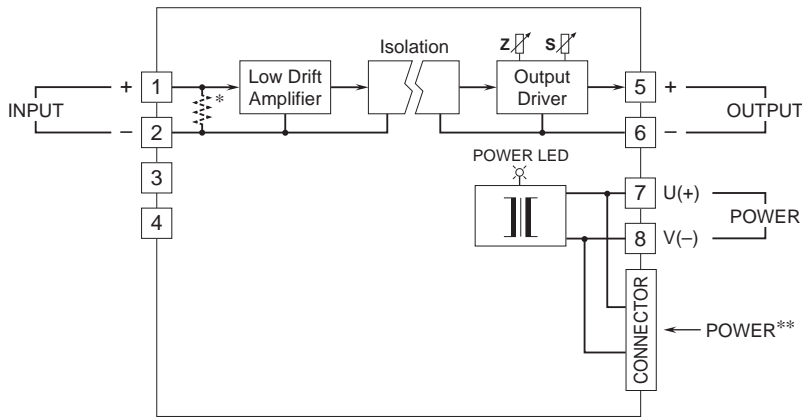
DIMENSIONS unit: mm (inch)



*Screwdriver stem diameter: 6 mm (.24") or less

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

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Input shunt resistor incorporated for current input.
 **Available only for DC power input type



Specifications are subject to change without notice.