

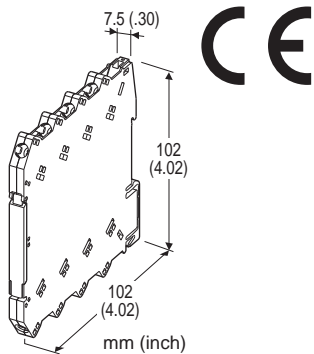
Screw Terminal Ultra-Slim Signal Conditioners M6N Series

DC ALARM

(PC programmable)

Functions & Features

- 7.5-mm wide ultra-slim design
- Low profile allows the M6N module mounted in a 120-mm deep panel
- Provides a relay contact output at preset DC input levels
- PC programmable
- High-density mounting
- Power and status indicator LEDs



MODEL: M6NXAS-[1]-R

ORDERING INFORMATION

- Code number: M6NXAS-[1]-R
Specify a code from below for [1].
(e.g. M6NXAS-Z1-R)
- Input range (e.g. 4 - 20 mA DC)

[1] INPUT

Current

Z1: Range 0 - 50 mA DC (Input resistance 24.9 Ω)

Voltage

S1: Range -1000 - +1000 mV DC (Input resistance 1 MΩ min.)

S2: Range -10 - +10 V DC (Input resistance 1 MΩ min.)

(Configurator software is used to change input over the described range of the selected suffix code.

For changing between suffix codes, set the Input Range Selector on the side of unit before software adjustment.)

OUTPUT

Relay; SPDT or transfer contact

POWER INPUT

DC Power

R: 24 V DC

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

RELATED PRODUCTS

- PC configurator software (model: M6CFG)

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

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 mm²

Housing material: Flame-resistant resin (black)

Isolation: Input to output to power

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

Status indicator LED: Orange LED; Flashing patterns indicate different operating status of the transmitter.

Alarm monitor LED: Red LED turns on when the alarm is tripped.

Programming: Downloaded from PC

Input type and range

Input fine adjustments

Alarm setpoint (input %)

Trip action (High or Low)

Relay coil (energized or de-energized)

Power ON delay time (0 to 999 sec.)

Alarm ON delay time (0 to 999 sec.)

Hysteresis (deadband) (input %)

Alarm test, and others

For detailed information, refer to the users manual for the PC configurator.

Configurator connection: 2.5 dia. miniature jack;

RS-232C level

Factory default setting

Alarm setpoint: 80 %

Trip action: High

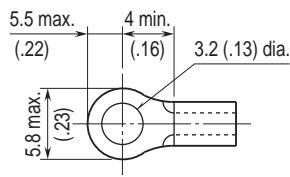
Relay coil at alarm: Energized

Power ON delay time: 5 sec.

Alarm ON delay time: 0 sec.

Hysteresis (deadband) : 1.0 %

Recommended solderless terminal



INPUT SPECIFICATIONS

- **DC Current:** Input resistor incorporated (If not specified, the input range is 4 - 20 mA DC.)
- Input range:** 0 - 50 mA DC
- Minimum span:** 2 mA
- Offset:** Lower range can be any specific value within the input range provided that the minimum span is maintained.

• DC Voltage

Code S1 (narrow spans)

Input range: -1000 - +1000 mV DC

Minimum span: 100 mV

Code S2 (wide spans)

Input range: -10 - +10 V DC

Minimum span: 1 V

Offset: Lower range can be any specific value within the input range provided that the minimum span is maintained. If not specified, the input range is shown below.

S1: 0 - 100 mV DC

S2: 1 - 5 V DC

OUTPUT SPECIFICATIONS

• RELAY OUTPUT

Relay rating:

250 V AC @2 A ($\cos \phi = 1$)

30 V DC @2 A (resistive load)

Maximum switching voltage: 250 V AC or 125 V DC

Maximum switching power: 500 VA or 60 W

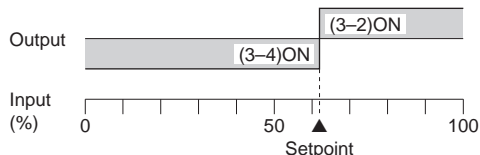
Minimum load: 5 V DC @100 mA

Mechanical life: 5×10^5 cycles (rate 180/min.)

Alarm Trip Operation Terminal No. in parentheses

• Setting Example

Hi alarm (coil energized at alarm) or
Lo alarm (coil de-energized at alarm)



Trip operation in power failure: Terminals 3 - 4 turn ON.

INSTALLATION

Power consumption: 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: 65 g (2.3 oz)

PERFORMANCE in percentage of span

Setpoint accuracy (trip point accuracy) : ± 0.05 %

Setpoint accuracy is inversely proportional to the input span.

[Example] Input type 0 - 50 mA, Input range 4 - 20 mA

Max. Input Range (50 mA) / Span (16 mA) \times 0.05 %
= ± 0.16 %

Temp. coefficient: ± 0.01 %/°C (± 0.006 %/°F) of max. span

Response time: ≤ 0.2 sec. (0 - 100 % at 90 % setpoint)

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

CE conformity:

EMC Directive (2004/108/EC)

EN 61000-6-4 (EMI)

EN 61000-6-2 (EMS)

Low Voltage Directive (2006/95/EC)

EN 61010-1

Overvoltage Category II

Pollution Degree 2

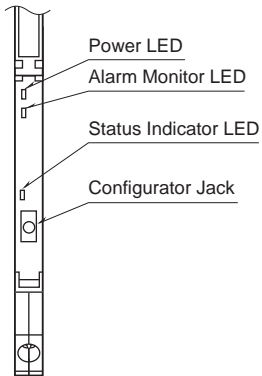
Max. operating voltage 250 V (relay output circuit)

Input or power to output: Reinforced insulation

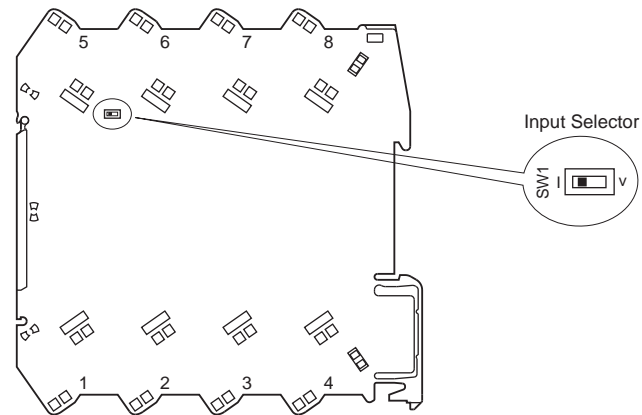
Input to power: Basic insulation

EXTERNAL VIEW

■ FRONT VIEW (with the cover open)

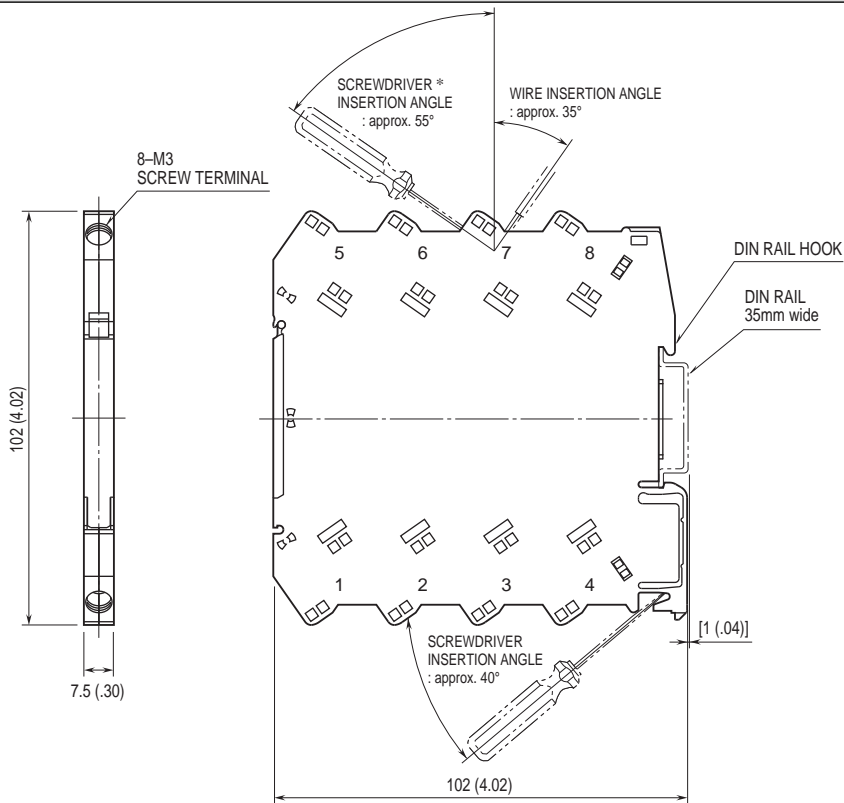


■ SIDE VIEW



The DIP switch setting is required to select input types before setting a precise input range using PC Configurator Software (model: M6CFG). Refer to the instruction manual for detailed procedures.

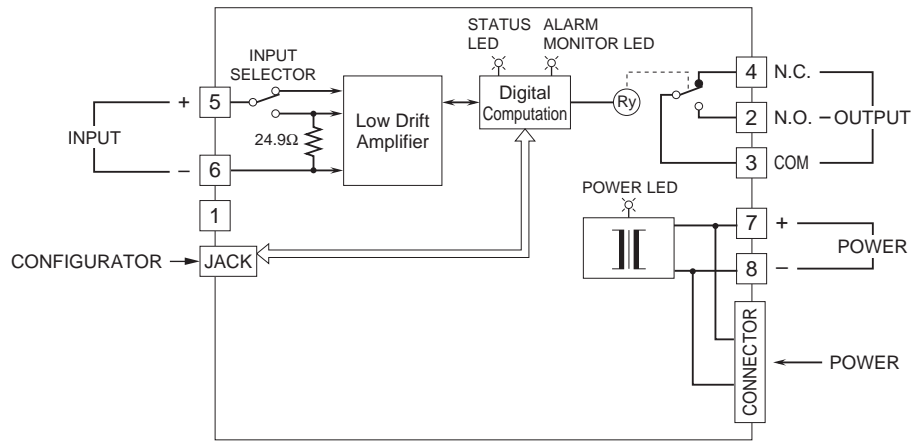
DIMENSIONS unit: mm (inch)



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

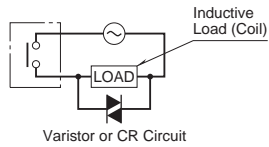
• When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

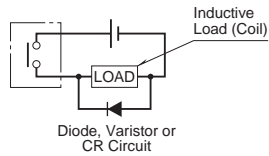


■ Relay Protection

• AC Powered



• DC Powered



Specifications are subject to change without notice.