

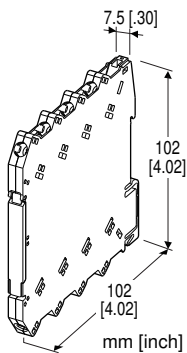
## Screw Terminal Ultra-Slim Signal Conditioners M6N Series

### CT TRANSMITTER

(clamp-on current sensor)

#### Functions & Features

- Converts AC current signal into a low-ripple standard process signal suitable to be handled for computer inputs
- 7.5-mm wide ultra-slim design
- Low profile allows the M6N module mounted in a 120-mm deep panel
- High-density mounting
- Power indicator LED



### MODEL: M6NCTC-[1][2]-R[3]

#### ORDERING INFORMATION

- Code number: M6NCTC-[1][2]-R[3]

Specify a code from below for each of [1] through [3].

(e.g. M6NCTC-56004W-R/Q)

- Special output range (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01)

Order Clamp-on current sensor separately.

#### [1] INPUT

Sensor CLSE

**5R5:** 0 - 5 A AC

**550:** 0 - 50 A AC

**5100:** 0 - 100 A AC

**5200:** 0 - 200 A AC

**5400:** 0 - 400 A AC

**5600:** 0 - 600 A AC

Sensor CLSB (CE not available)

**210:** 0 - 10 A AC

**215:** 0 - 15 A AC

**220:** 0 - 20 A AC

**230:** 0 - 30 A AC

**240:** 0 - 40 A AC

**250:** 0 - 50 A AC

**260:** 0 - 60 A AC

**275:** 0 - 75 A AC

**2100:** 0 - 100 A AC

**2125:** 0 - 125 A AC

**2150:** 0 - 150 A AC

**2175:** 0 - 175 A AC

**2200:** 0 - 200 A AC

**2225:** 0 - 225 A AC

**2250:** 0 - 250 A AC

**2300:** 0 - 300 A AC

**2350:** 0 - 350 A AC

**2400:** 0 - 400 A AC

**2500:** 0 - 500 A AC

**2600:** 0 - 600 A AC

#### [2] OUTPUT

Current

**A:** 4 - 20 mA DC (Load resistance 550  $\Omega$  max.)

**D:** 0 - 20 mA DC (Load resistance 550  $\Omega$  max.)

**G:** 0 - 1 mA DC (Load resistance 11 k $\Omega$  max.)

**Z:** Specify current (See OUTPUT SPECIFICATIONS)

Voltage

**3:** 0 - 1 V DC (Load resistance 1000  $\Omega$  min.)

**4:** 0 - 10 V DC (Load resistance 10 k $\Omega$  min.)

**5:** 0 - 5 V DC (Load resistance 5000  $\Omega$  min.)

**6:** 1 - 5 V DC (Load resistance 5000  $\Omega$  min.)

**4W:** -10 - +10 V DC (Load resistance 20 k $\Omega$  min.)

**5W:** -5 - +5 V DC (Load resistance 10 k $\Omega$  min.)

**0:** Specify voltage (See OUTPUT SPECIFICATIONS)

#### POWER INPUT

DC Power

**R:** 24 V DC

(Operational voltage range 24 V  $\pm$ 10 %, ripple 10 %p-p max.)

#### [3] OPTIONS

**blank:** none

**/Q:** With options (specify the specification)

#### SPECIFICATIONS OF OPTION: Q

**COATING** (For the detail, refer to our web site.)

**/C01:** Silicone coating

**/C02:** Polyurethane coating

#### RELATED PRODUCTS

- Clamp-on current sensor (model: CLSB)
  - Clamp-on current sensor (model: CLSE)
- (Select "CLSE-x/CE" to comply with CE for the combination with the sensor.)

## 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<sup>2</sup>

**Housing material:** Flame-resistant resin (black)

**Isolation:** Input to output to power

### Input waveform

**RMS sensing:** Up to 15 % of 3rd harmonic content

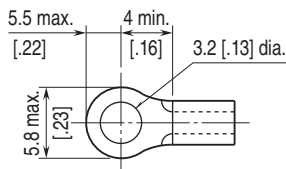
**Zero adjustment:** -2 to +2 % (front)

(Output code 4W, 5W: Adjustable at 0V. No output below 0 mA for the code D.)

**Span adjustment:** 98 to 102 % (front)

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

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



## INPUT SPECIFICATIONS

### ■ Clamp-on current sensor CLSE

(Sensor model No.: AC input)

**CLSE-R5:** 0 - 5 A

**CLSE-05:** 0 - 50 A

**CLSE-10:** 0 - 100 A

**CLSE-20:** 0 - 200 A

**CLSE-40:** 0 - 400 A

**CLSE-60:** 0 - 600 A

Frequency: 50 / 60 Hz

Operational range: 5 - 120 % of rating

### Overload capacity:

**CLSE-R5:** 10 A continuous

**CLSE-05:** 60 A continuous

**CLSE-10:** 120 A continuous

**CLSE-20:** 240 A continuous

**CLSE-40:** 480 A continuous

**CLSE-60:** 720 A continuous

Be sure that the input voltage is of 480 V or less.

### ■ Clamp-on current sensor CLSB

(Sensor model No.: AC input)

**CLSB-05:**

0 - 10 A, 0 - 15 A, 0 - 20 A

0 - 30 A, 0 - 40 A, 0 - 50 A

**CLSB-10:**

0 - 60 A, 0 - 75 A, 0 - 100 A

### CLSB-20:

0 - 125 A, 0 - 150 A, 0 - 175 A

0 - 200 A, 0 - 225 A, 0 - 250 A

### CLSB-40:

0 - 300 A, 0 - 350 A, 0 - 400 A

### CLSB-60:

0 - 500 A, 0 - 600 A

Frequency: 50 / 60 Hz

Operational range: 5 - 120 % of rating

### Overload capacity:

**CLSB-05:** 100 A continuous

**CLSB-10:** 200 A continuous

**CLSB-20:** 300 A continuous

**CLSB-40:** 600 A continuous

**CLSB-60:** 720 A continuous

Be sure that the input voltage is of 440 V or less.

## 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  $\geq 1$  V

## 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: 60 g (2.1 oz)

## PERFORMANCE in percentage of span

Accuracy:  $\pm 0.5$  % with input 5 - 100 %

Temp. coefficient:  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°F)

Response time:  $\leq 1$  sec. (0 - 90 %)

Line voltage effect:  $\pm 0.1$  % over voltage range

Insulation resistance:  $\geq 100$  M $\Omega$  with 500 V DC

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

## STANDARDS & APPROVALS

EU conformity:

EMC Directive

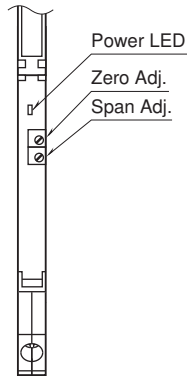
EMI EN 61000-6-4

EMS EN 61000-6-2

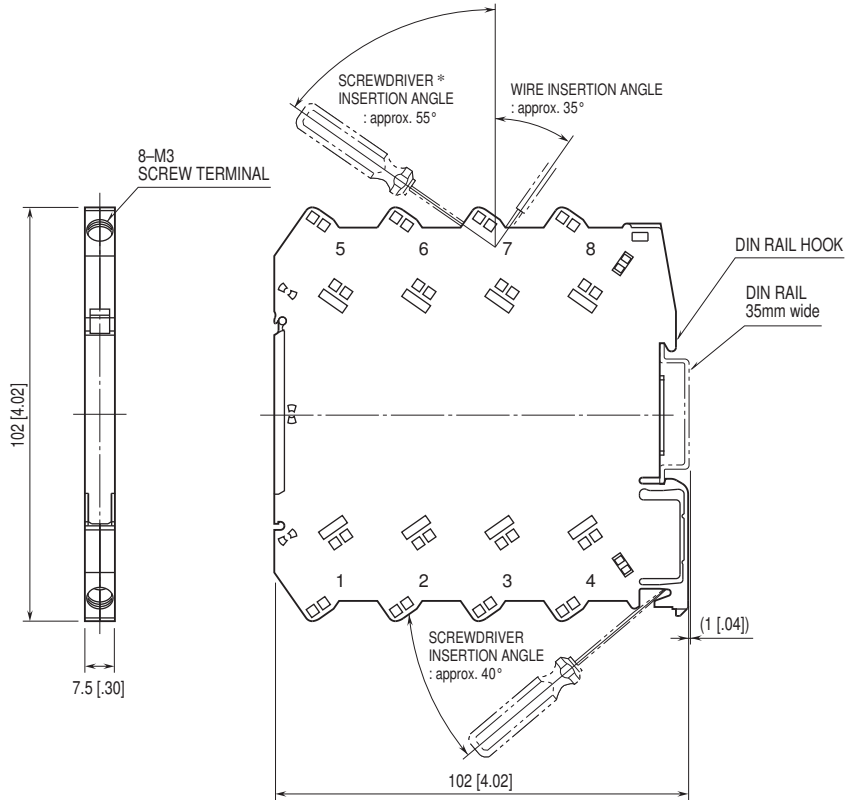
RoHS Directive

## EXTERNAL VIEW

(With the cover open)



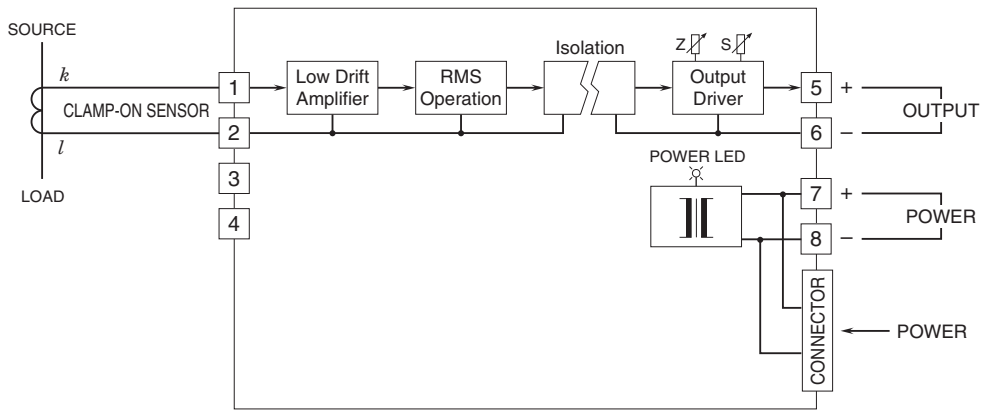
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



\*Screwdriver stem diameter: 6 mm [.24"] or less

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

**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.