

Plug-in Signal Conditioners M-UNIT

B : 0 - 3000 A AC (300, 600, 1500 or 3000 A selectable)

HIGH AC CURRENT TRANSMITTER

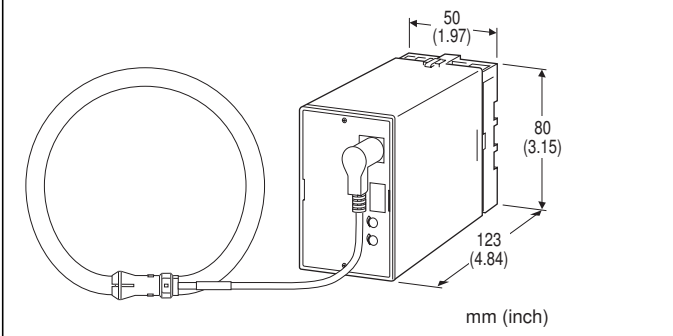
(wide bandwidth)

Functions & Features

- Detecting high current at the flexible current probe and providing a proportional low-ripple standard signal appropriate for computer use
- Wide frequency band can be accepted
- Clipped around a conductor without disconnecting the conductor
- Rogowski coil type
- Isolation up to 2000 V AC
- High-density mounting

Typical Applications

- Measurement in tight places as never before possible
- Monitoring load current of motors employing inverters
- Detecting failures of a pump or other device by monitoring abnormal load current of motors
- Monitoring current of electric welding machine



MODEL: CTS2-[1][2]-[3][4]

ORDERING INFORMATION

• Code number: CTS2-[1][2]-[3][4]

Specify a code from below for each [1] through [4].

(e.g. CTS2-AA-B/Q)

- Special output range (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01/S01)

Default Setting for input range:

30 A for 300 A rating

300 A for 3000 A rating

[1] INPUT

Current

A : 0 - 300 A AC (30, 60, 150 or 300 A selectable)

[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 100 Ω min.)

4: 0 - 10 V DC (Load resistance 1000 Ω min.)

5: 0 - 5 V DC (Load resistance 500 Ω min.)

6: 1 - 5 V DC (Load resistance 500 Ω min.)

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

5W: -5 - +5 V DC (Load resistance 1000 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

P: 110 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.)

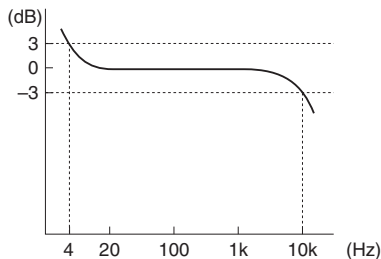
/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

TERMINAL SCREW MATERIAL

/S01: Stainless steel

GENERAL SPECIFICATIONS**Construction****Probe:** Clip-around type**Transmitter:** Plug-in**Connection****Output & power:** M3.5 screw terminals**Input:** Connector**Screw terminal:** Chromated steel (standard) or stainless steel**Housing material****Probe:** TPE rubber, Polypropylene**Transmitter:** Flame-resistant resin (black)**Isolation:** Current input to sensor output or transmitter input or transmitter output to power**Input waveform****RMS sensing:** Up to 15 % of 3rd harmonic content**Overrange output:** 0 to 120 % at 1 - 5 V**Zero adjustment:** -5 to +5 % (front)**Span adjustment:** 95 to 105 % (front)**Input range:** Selectable with the front DIP switch among 30, 60, 150 or 300 A, or 300, 600, 1500 or 3000 A**INPUT SPECIFICATIONS****Frequency:** 4 Hz - 10 kHz (± 3 dB)**Max. operating voltage:** 1000 V AC (primary side)**Overload capacity:** 1000 % of rating for 3 seconds, 200 % for 10 seconds, 120 % continuous**Operational range:** 0 - 120 % of rating

Frequency Characteristics

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 - +12 V DC**Minimum span:** 5 mV**Offset:** Max. 1.5 times span**Load resistance:** Output drive 10 mA max.; 5 mA for negative voltage output; at ≥ 0.5 V**INSTALLATION****Power input**

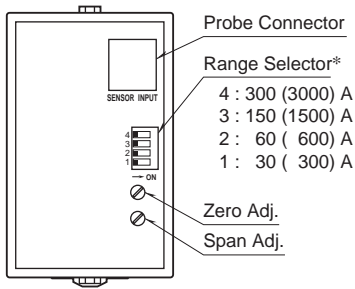
- AC:** Operational voltage range: rating ± 10 %, 50/60 ± 2 Hz, approx. 2 VA

- DC:** Operational voltage range: rating ± 10 %, or 85 - 150 V for 110 V rating (ripple 10 % p-p max.) approx. 2 W (80 mA at 24 V)

Operating temperature**Probe:** -10 to +55°C (14 to 131°F)**Transmitter:** -5 to +60°C (23 to 140°F)**Operating humidity:****Probe:** 15 to 85 % RH (non-condensing)**Transmitter:** 30 to 90 % RH (non-condensing)**Mounting:** Surface or DIN rail**Weight****Probe:** 370 g (0.82 lb)**Transmitter:** 300 g (0.66 lb)**PERFORMANCE in percentage of span****Accuracy:** ± 1.5 % at 20 Hz - 1 kHz**Repeatability:** ± 0.1 %**Position sensitivity:** ± 1 % (In recommended mounting; otherwise the sensitivity may increase. Refer to the instruction manual.)**Temp. coefficient:** ± 0.15 %/°C (± 0.08 %/°F)**Response time:** Approx. 1.5 sec. (0 - 90 %)**Ripple:** 0.5 % p-p max.**Line voltage effect:** ± 0.1 % over voltage range**Insulation resistance:** ≥ 100 M Ω with 500 V DC**Dielectric strength:** 2000 V AC @ 1 minute

(Current input to sensor output or transmitter input or transmitter output to power to ground)

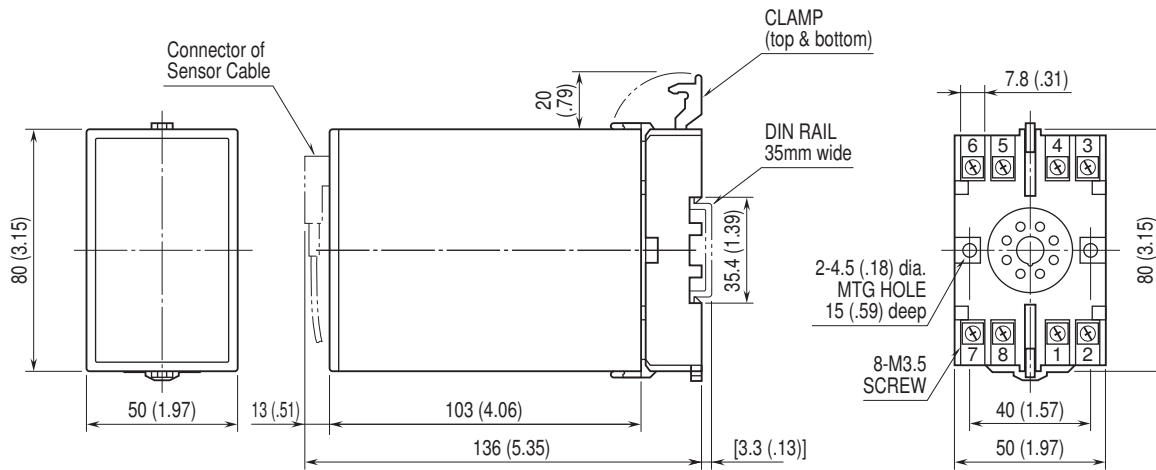
EXTERNAL VIEW



*() for input 3000A type.

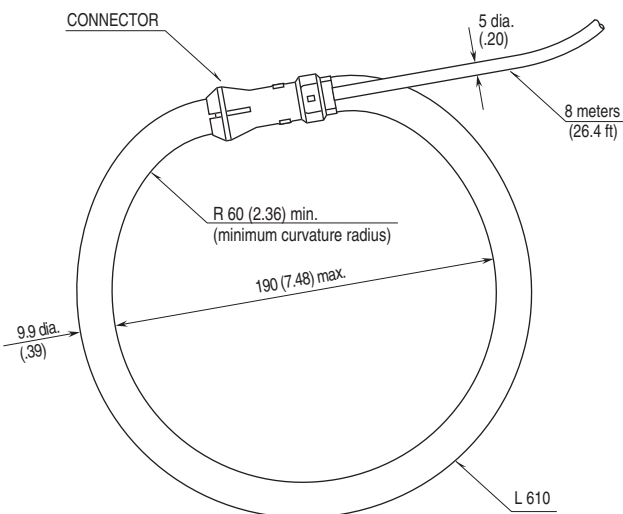
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

■ TRANSMITTER

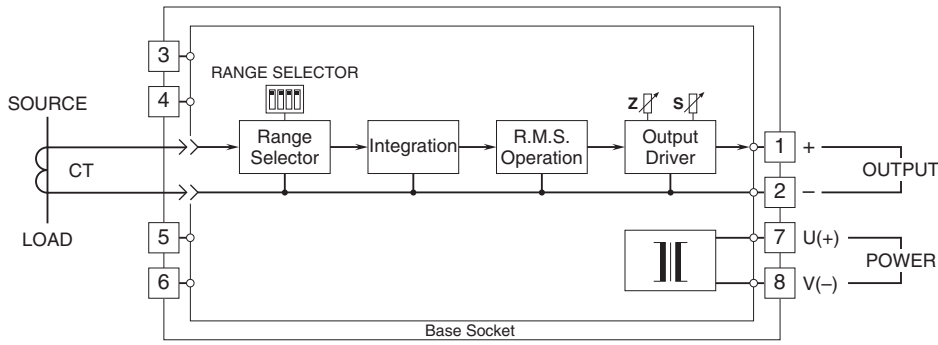


▪ When mounting, no extra space is needed between units.

■ SENSOR



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.