

**Plug-in Signal Conditioners K-UNIT**

**CT TRANSMITTER**

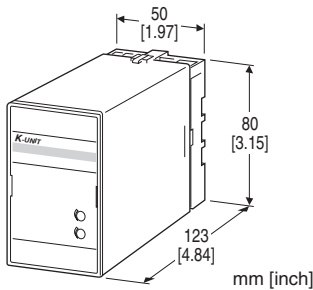
(Average sensing, RMS calibrated)

**Functions & Features**

- Converting an alternating current from a current transformer into a standard process signal
- Minimum ripple
- CT Protector provided for open-circuit protection
- Isolation up to 2000 V AC
- High-density mounting

**Typical Applications**

- Centralized monitoring and control of motors, pumps or heaters by DCS
- Monitoring power line and power supply current



**MODEL: KC-[1][2]-[3][4]**

**ORDERING INFORMATION**

- Code number: KC-[1][2]-[3][4]
- Specify a code from below for each of [1] through [4]. (e.g. KC-1A-B/Q)
- Special output range (For codes Z & 0)
- Specify the specification for option code /Q (e.g. /C01/S01)

**[1] INPUT**

Current

- 1: 0 - 1 A AC
- 5: 0 - 5 A AC

**[2] OUTPUT**

Current

- A: 4 - 20 mA DC (Load resistance 600 Ω max.)
- B: 2 - 10 mA DC (Load resistance 1200 Ω max.)
- C: 1 - 5 mA DC (Load resistance 2400 Ω max.)
- D: 0 - 20 mA DC (Load resistance 600 Ω max.)
- E: 0 - 16 mA DC (Load resistance 750 Ω max.)
- F: 0 - 10 mA DC (Load resistance 1200 Ω max.)

- G: 0 - 1 mA DC (Load resistance 12 kΩ max.)
- Z: Specify current (See OUTPUT SPECIFICATIONS)
- Voltage
- 1: 0 - 10 mV DC (Load resistance 10 kΩ min.)
- 2: 0 - 100 mV DC (Load resistance 100 kΩ 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.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

**[3] AUXILIARY POWER SUPPLY**

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
- 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 our web site.)
- /C01: Silicone coating
- /C02: Polyurethane coating
- /C03: Rubber coating
- TERMINAL SCREW MATERIAL
- /S01: Stainless steel

**GENERAL SPECIFICATIONS**

- Construction: Plug-in
- Connection: M3.5 screw terminals
- Screw terminal: Chromated steel (standard) or stainless steel
- Housing material: Flame-resistant resin (black)
- Isolation: Input to output to auxiliary power
- Input waveform: Sine wave
- Overrange output: 0 to 120 % at 1 - 5 V
- Zero adjustment: -5 to +5 % (front)
- Span adjustment: 95 to 105 % (front)

**INPUT SPECIFICATIONS**

**Operational range:** 0 - 120 % of rating

**Frequency:** 50 or 60 Hz

**Input burden:** 0.1 VA (input 0 - 1 A)

0.5 VA (input 0 - 5 A)

**Overload capacity:** 1000 % of rating for 3 sec.,

200 % for 10 sec., 120 % continuous

**OUTPUT SPECIFICATIONS**

■ **DC Current:** 0 - 20 mA DC

**Minimum span:** 1 mA

**Offset:** Max. 1.5 times span

**Load resistance:** Output drive 12 V max.

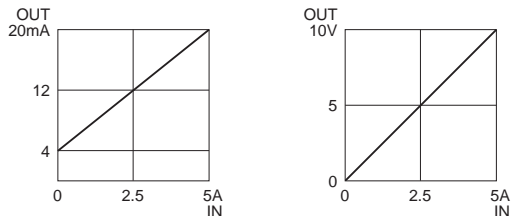
■ **DC Voltage:** -10 - +12 V DC

**Minimum span:** 5 mV

**Offset:** Max. 1.5 times span

**Load resistance:** Output drive 10 mA max.; 5 mA for negative voltage output; at  $\geq 0.5$  V

■ **OPERATION DIAGRAM (example)**

**INSTALLATION**

**Auxiliary power supply**

• **AC:** Operational voltage range: rating  $-15/+10$  %, 50/60 Hz, approx. 2 VA

• **DC:** Operational voltage range: rating  $\pm 10$  %, or 85 - 150 V for 110 V rating, ripple 10 %p-p max., approx. 2 W (18 mA at 110 V)

**Operating temperature:** -10 to +55°C (14 to 131°F)

**Operating humidity:** 30 to 85 %RH (non-condensing)

**Mounting:** Surface or DIN rail

**Weight:** 350 g (0.77 lb)

**PERFORMANCE in percentage of span**

**Accuracy:**  $\pm 0.3$  % (at 23°C  $\pm 10$ °C or 73.4°F  $\pm 18$ °F, 45 - 65 Hz)

**Response time:**  $\leq 1$  sec. (0 - 100 %  $\pm 1$  %)

**Ripple:** 0.5 %p-p max.

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

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

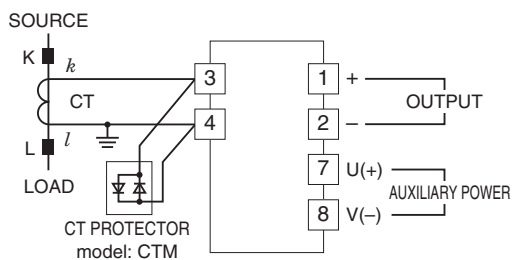
**Dielectric strength:** 2000 V AC @1 minute

(input to output to auxiliary power to ground)

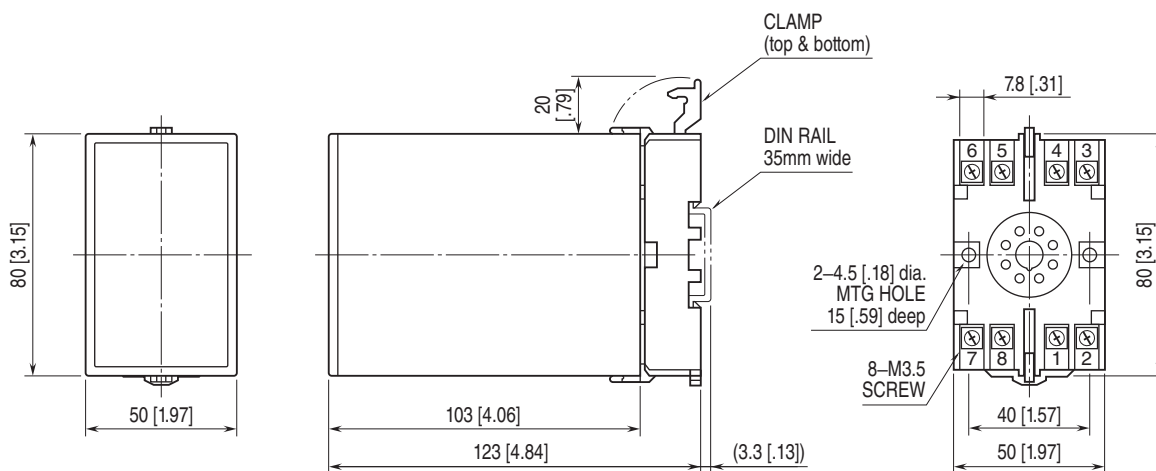
**Impulse withstand voltage:** 1.2 / 50  $\mu$ sec.,  $\pm 5$  kV

(input to output or ground)

## CONNECTION DIAGRAM

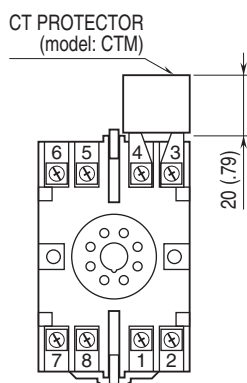


## EXTERNAL DIMENSIONS unit: mm [inch]



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

## TERMINAL ASSIGNMENTS unit: mm [inch]



Specifications are subject to change without notice.