

## Plug-in Signal Conditioners K-UNIT

### CT TRANSMITTER

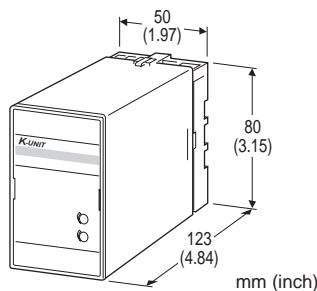
(Average sensing, RMS calibrated)

#### Functions & Features

- Converting an alternating current from a current transformer into a standard process signal
- Minimum ripple
- Average sensing
- 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]

#### ORDERING INFORMATION

- Code number: KC-[1][2]-[3]  
Specify a code from below for each [1] through [3].  
(e.g. KC-1A-B)
- Special output range (For codes Z & 0)

#### [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] 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

- R: 24 V DC
- V: 48 V DC
- P: 110 V DC

#### GENERAL SPECIFICATIONS

**Construction:** Plug-in

**Connection:** M3.5 screw terminals

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

**Isolation:** Input to output to 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.

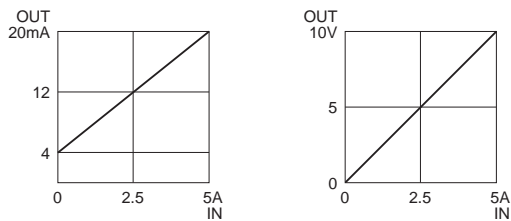
• **DC Voltage:** -10 - +12 V DC

**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

**Power input**

**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 lbs)

## 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

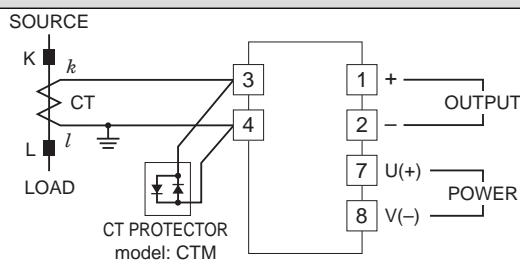
**Dielectric strength:** 2000 V AC @1 minute

(input to output to power to ground)

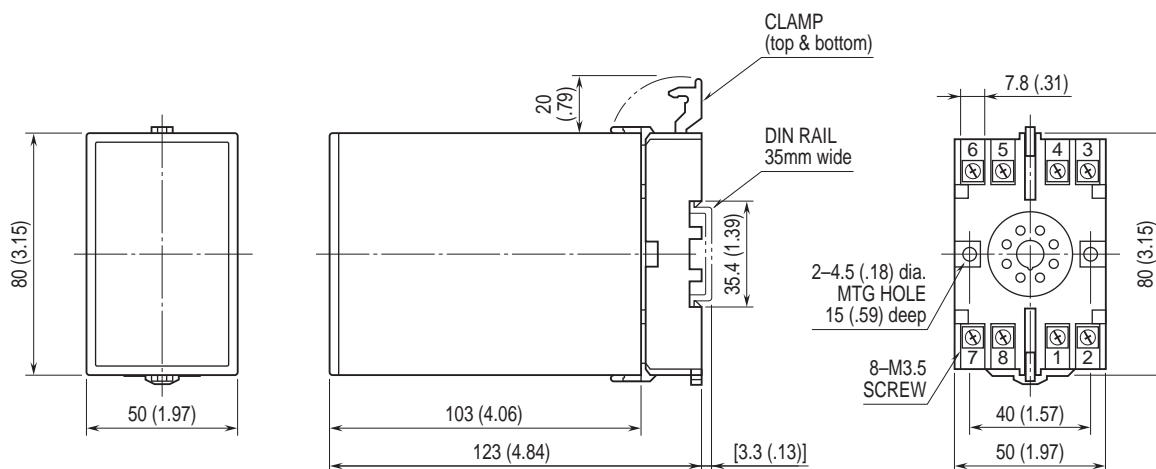
**Impulse withstand voltage:** 1.2 / 50  $\mu$ sec.,  $\pm 5$  kV

(input to output or ground)

## CONNECTION DIAGRAM

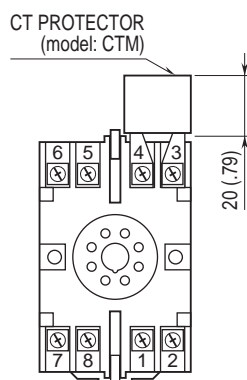


**DIMENSIONS unit: mm (inch)**



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

**TERMINAL ASSIGNMENTS unit: mm (inch)**



Specifications are subject to change without notice.