

Plug-in Signal Conditioners K-UNIT

CT TRANSMITTER

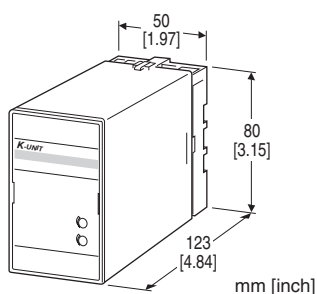
(CE, Average sensing, RMS calibrated)

Functions & Features

- Converting an alternating current from a current transformer into a standard process signal
- Minimum ripple
- CT Protector provided for open-circuit protection
- Signal isolation
- 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]/CE

ORDERING INFORMATION

- Code number: KC-[1][2]-[3]/CE
- Specify a code from below for each of [1] through [3]. (e.g. KC-1A-H/CE)
- 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 3000 Ω min.)
- 4: 0 - 10 V DC (Load resistance 10 kΩ min.)
- 5: 0 - 5 V DC (Load resistance 5000 Ω min.)
- 6: 1 - 5 V DC (Load resistance 5000 Ω min.)
- 4W: -10 - +10 V DC (Load resistance 20 kΩ min.)
- 0: Specify voltage (See OUTPUT SPECIFICATIONS)

[3] AUXILIARY POWER SUPPLY

AC Power

- G: 200 V AC
- H: 220 V AC
- J: 240 V AC

DC Power

- R: 24 V DC
- V: 48 V DC

OPTIONS

Standards & Approvals (must be specified)

/CE: CE marking

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals

Screw terminal: Chromated 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.

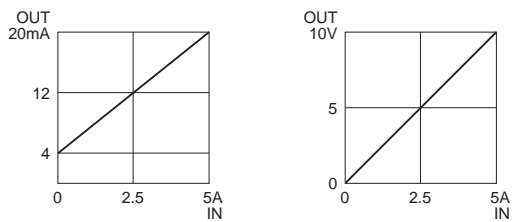
■ **DC Voltage:** -10 - +12 V DC

Minimum span: 5 mV

Offset: Max. 1.5 times span

Load resistance: Output drive 1 mA max. at ≥ 3 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 ± 10 %, ripple 10 %p-p max., approx. 2 W (85 mA at 24 V)

Operating temperature: -10 to $+55^{\circ}\text{C}$ (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: ± 0.3 % (at $23^{\circ}\text{C} \pm 10^{\circ}\text{C}$ or $73.4^{\circ}\text{F} \pm 18^{\circ}\text{F}$, 45 - 65 Hz)

Response time: ≤ 1 sec. (0 - 100 % ± 1 %)

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: 2300 V AC @1 minute (input to output to auxiliary power to ground)

Impulse withstand voltage: 1.2 / 50 $\mu\text{sec.}$, ± 5 kV (input to output or ground)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive

EN 61010-1

Installation Category II

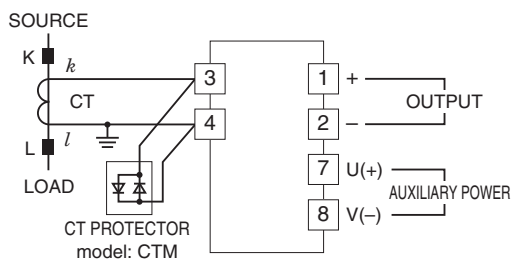
Pollution Degree 2

Input or output to auxiliary power: Reinforced insulation (300 V)

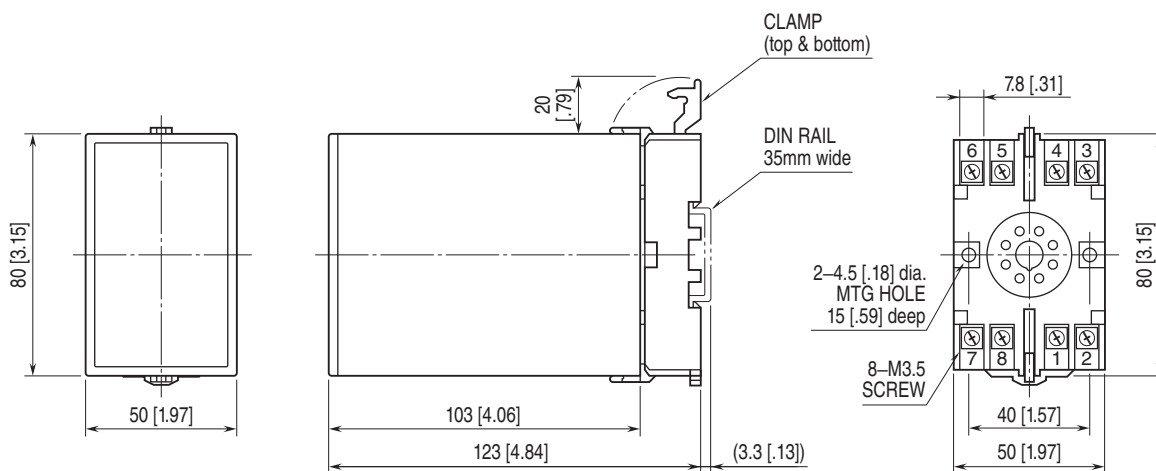
Input to output: Basic insulation (300 V)

RoHS Directive

CONNECTION DIAGRAM

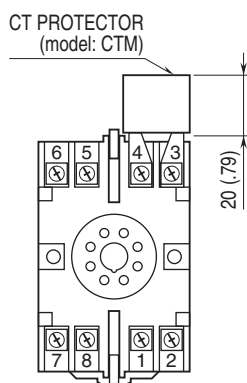


EXTERNAL DIMENSIONS unit: mm [inch]



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

TERMINAL ASSIGNMENTS unit: mm [inch]



Specifications are subject to change without notice.