

## Plug-in Signal Conditioners K-UNIT

### ZCT TRANSMITTER

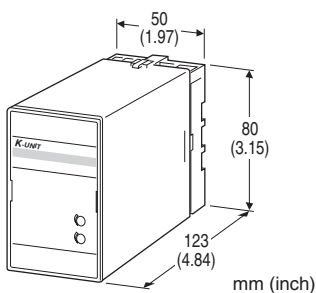
(zero-phase current transformer input)

#### Functions & Features

- Converts an alternating current from a zero-phase current transformer into a standard process signal
- Input filter
- Isolation up to 2000 V AC
- High-density mounting

#### Typical Applications

- Continuous monitoring of leakage current



## MODEL: KCEZ-[1][2]-[3][4]

### ORDERING INFORMATION

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

#### [1] INPUT

##### Current

- A: 0 - 0.1 mA AC (Input resistance 10 Ω)
- B: 0 - 1.5 mA AC (Input resistance 10 Ω)
- Z: Specify current (See INPUT SPECIFICATIONS)  
(0 % input must be 0 mA.)

#### [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 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.)
- 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

### [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:** 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 power
- Overrange output:** 0 to 120 % at 1 - 5 V
- Zero adjustment:** -5 to +5 % (front)
- Span adjustment:** 95 to 105 % (front)

**INPUT SPECIFICATIONS**

■ **AC Current:** 0 – 100 mA AC

**Input resistance:** 10 Ω incorporated

**Minimum span:** 0.1 mA

Note: The primary current depends upon the number of windings (winding ratio) of the zero-phase current transformer.

[Examples]

Winding ratio: 2000 : 1, Transmitter input 0.1 mA

$0.1 \times 2000 = 200$  (mA)

Winding ratio: 133 : 1, Transmitter input 1.5mA

$1.5 \times 133 = 200$  (mA)

**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  $\geq 0.5$  V

**INSTALLATION**

**Power input**

•**AC:** Operational voltage range: rating  $\pm 10$  %, 50/60  $\pm 2$  Hz, approx. 3 VA

•**DC:** Operational voltage range: rating  $\pm 10$  %, ripple 10 %p-p max., approx. 2 W (80 mA at 24 V)

**Operating temperature:** -5 to +55°C (23 to 131°F)

**Operating humidity:** 30 to 90 %RH (non-condensing)

**Mounting:** Surface or DIN rail

**Weight:** 400 g (0.88 lb)

**PERFORMANCE in percentage of span**

**Accuracy:**  $\pm 1$  %

**Temp. coefficient:**  $\pm 0.05$  %/°C ( $\pm 0.03$  %/°F)

**Response time:**  $\leq 0.7$  sec. (0 – 90 %)

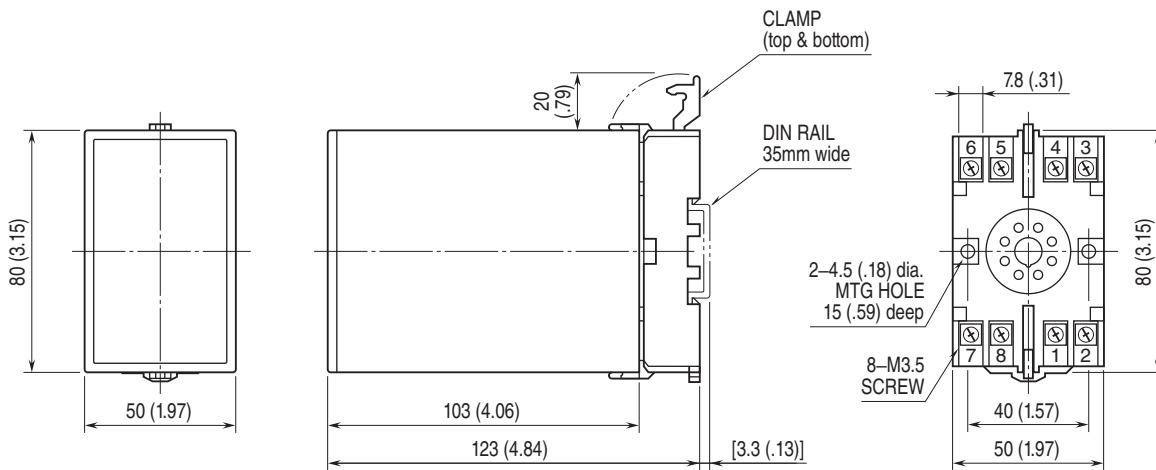
**Ripple:** 0.5 %p-p max.

**Line voltage effect:**  $\pm 0.1$  % over voltage range ( $\pm 1$  % for the input spans narrower than 1 mA (input codes A, Z))

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

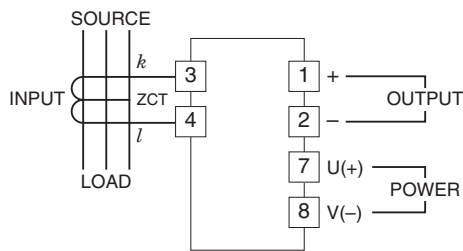
**Dielectric strength:** 2000 V AC @1 minute (input to output to power to ground)

**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)**



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

**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.