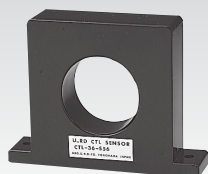


# Precision Purpose CTL-Z series

## Large size standard AC current sensor for precise measurement with large aperture and terminal type

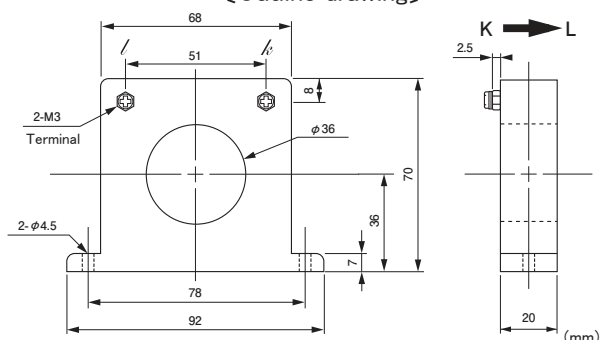


Model CTL-36-S50-10Z

### [Features]

- Standard sensor of large aperture of  $\phi 36$  aperture diameter for precise measurement
- Covering the wide range of  $1\text{mA} \sim 180\text{A}$  with adoption of permalloy core of high magnetic permeability
- Possible to interface to electrical circuit directly by small secondary current with high current ratio of 1000:1
- Output: M3-screw terminal, Mounting holes: 2- $\phi 4.5$ , robust structure suitable for installation into large panel

### [Outline drawing]



### [Specification] $T_a=25^\circ\text{C}$

|                               |   |
|-------------------------------|---|
| Model                         | CTL-36-S50-10Z  |
| Primary current               | $1\text{mA} \sim 180\text{Arms}$ (50 / 60Hz), $R_L \leq 10\Omega$   |
| Maximum primary current       | 300Arms continuous  |
| Output characteristics        | Refer "Output voltage characteristics"  |
| Linearity                     | Refer "Coupling efficiency [K] characteristics"<br>(Use the flat range of [K] characteristic in the application as the linear sensor) |
| Secondary windings (n)        | $1000 \pm 2$ turn   |
| Secondary windings resistance | $25\Omega$ (reference)  |
| Withstand voltage             | AC2000V(50/60Hz), 1min(between aperture and output terminal in a lump)  |
| Insulation resistance         | DC500V, $\geq 100\text{M}\Omega$ (between aperture and output terminal in a lump)   |
| Operating temperature         | $-20^\circ\text{C} \sim +75^\circ\text{C}$ , $\leq 80\%\text{RH}$ , no condensation   |
| Storage temperature           | $-30^\circ\text{C} \sim +90^\circ\text{C}$ , $\leq 80\%\text{RH}$ , no condensation   |
| Structure                     | ABS plastic case, potted by epoxy on one side   |
| Output terminal               | M3X5 $\phi$ (BS screw terminal)   |
| Screw torque                  | M4 : $0.7\text{N} \cdot \text{m}$ , M3 : $0.3\text{N} \cdot \text{m}$   |
| Mass                          | approximately 170g  |

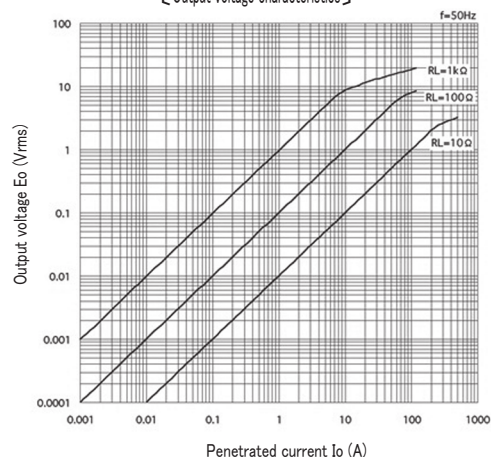
Remark (1) In the contents of product specification, inspection, and so on, it is based on the measurement in conditions of standard temperature, humidity, and no abnormality and no vibration, in the case of no special description. It is not guarantee all specifications in the operating temperature and all condition range.

(2) Impossible to use in outdoor exposure

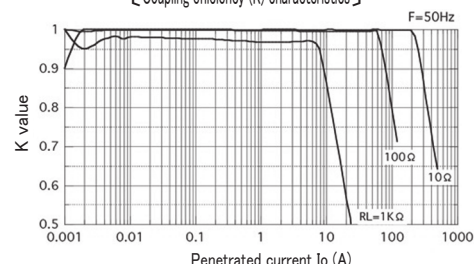
(3) Opening the secondary during turn ON is hazardous and the cause of failure, because of generating high voltage

(4) Please be careful of CT heating in case to use with high frequency, although this CT is basically used at 50/60Hz.

### [Output voltage characteristics]



### [Coupling efficiency (K) characteristics]



(Possible to calculate output voltage with reading (K) from load resistor and penetrated current)  
 $E_o = K \cdot I_o \cdot R_L / n$  (Vrms)

### [Frequency characteristics]

