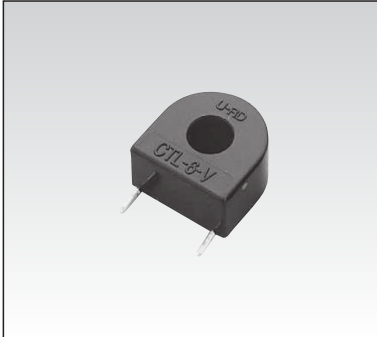


# Precision Purpose CTL-Z series

## Ultra small AC current sensor for precise measurement for PCB mounting vertically

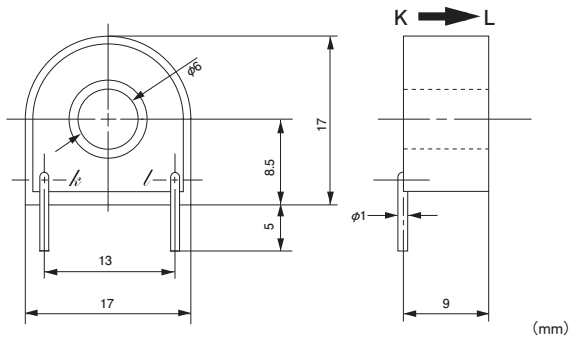


Model CTL-6-V-Z

### [Features]

- Right angle pins for PCB mounting vertically. The smallest model in CTL-Z series for precise measurement.
- Ensure aperture diameter ( $\phi 6$ ) in ultra small model. Mass approximately 5g, optimum for PCB mounting directly with the penetrated conductor.
- Covering the wide range of 1mA~15A with adoption of permalloy core of high magnetic permeability
- Possible to interface with electrical circuit directly by 800:1 high current ratio

### [Outline drawing]

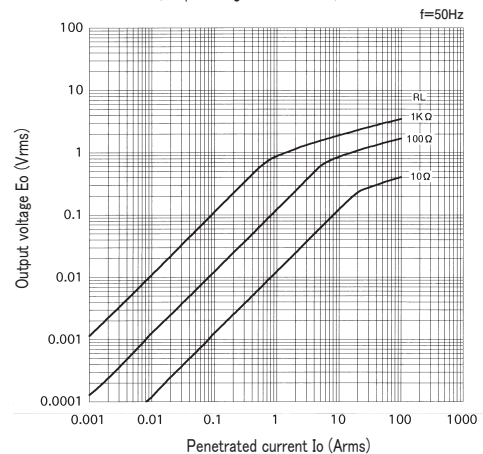


### [Specification] $T_a=25^\circ\text{C}$

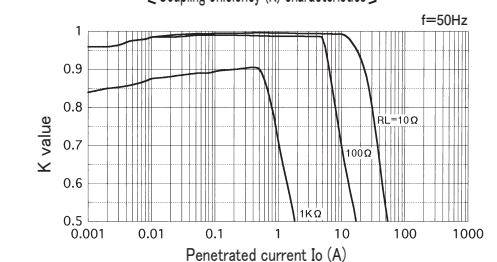
Model	CTL-6-V-Z
Primary current	1mA ~ 15Arms (50 / 60Hz)、 $R_L \leq 10 \Omega$
Maximum primary current	60Arms continuous
Saturation limited current	20Arms (50 / 60Hz)、 $R_L \leq 1 \Omega$
Output characteristics	Refer "Output voltage characteristics"
Linearity	Refer "Coupling efficiency [K] characteristics" (Use the flat range of [K] characteristic in the application as the linear sensor)
Secondary windings (n)	800 $\pm$ 2 turn
Secondary windings resistance	33 $\Omega$ (reference)
Withstand voltage	AC2000V(50/60Hz), 1min(between aperture and output terminal in a lump)
Insulation resistance	DC500V, $\geq 100M \Omega$ (between aperture and output terminal in a lump)
Operating temperature	-20°C ~ +75°C, $\leq 80\%RH$ , no condensation
Storage temperature	-30°C ~ +90°C, $\leq 80\%RH$ , no condensation
Structure	PBT plastic case, potted by epoxy on one side
Output terminal	$\phi 1.0 \times 5 \text{mm}$ (hard copper pins), gold plating
Mass	approximately 5g

- Remark (1) Output voltage is changed by the penetrated current/load resistor/[K] characteristic and so on. Please set up the condition for use with careful investigation of each characteristic
- (2) Please use with enough margin if the range of coupling efficiency  $[K] \leq 0.9$ , because it is the range to happen the individual difference.
- (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]

