

Wire clamp type AC current sensor for power measurement system

AC current sensor

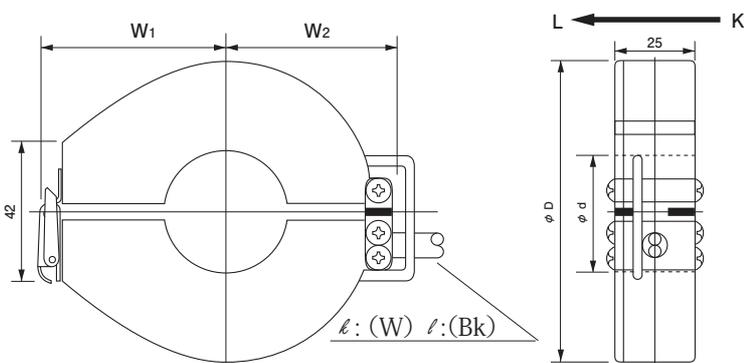


Model CTL-24CL、36CL、60CL、100CL

[Feature]

- For measurement of 1A, 5A input (Condition of nominal load and so on existing)
- Possible to mount to wire by one touch clamp, because of split structure
- Range above 100:1
- Corresponding to applied wire diameter of $\phi 24 \sim \phi 100$, current of 100A~1000A
- Built in over voltage clamped device
- Spring press contact system of cut core with counter surface method

[Outline drawing]



[Dimension matrix by flame number]

Flame number	Dimension (mm)			
	ϕd	ϕD	W1	W2
CTL-24CL	24	70	43	41
CTL-36CL	36	90	53	51
CTL-60CL	60	115	65	63
CTL-100CL	100	155	86	83

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

Model	CTL-24CL-100A / 1A-C2	CTL-24CL-200A / 1A-C2	CTL-36CL-500A / 5A-C3
Nominal primary current In	100Arms	200Arms	500Arms
Nominal secondary current In	1A		5A
Frequency	50Hz / 60Hz		
Over current strength	1.2In / continuous		
Ratio error	$\pm 1\% / In, \pm 1.5\% / 0.2In$		
Phase shift	$\pm 80\text{min} / In, \pm 100\text{min} / 0.2In$		
Nominal load	0.5VA ($R_L \leq 0.5 \Omega$)		2.5VA ($R_L \leq 0.1 \Omega$)
Open circuit protection	Built in 1.4Vp diode clamp		Built in 6.5Vp triac clamp
Withstand voltage	AC2000V(50/60Hz)、1min(between aperture and output wire end in a lump)		
Insulation resistance	DC500V、 $\geq 100M \Omega$ (between aperture and output wire in a lump)		
Operating temperature	$-20^\circ\text{C} \sim +75^\circ\text{C}$ 、 $\leq 80\%RH$ · No condensation For built in to panel, mounting direction free		$-20^\circ\text{C} \sim +60^\circ\text{C}$ 、 $\leq 80\%RH$ · No condensation For built in to panel, mounting direction free
Structure	PBT case Spring press contact system of cut core with counter surface method		
Output wire	VCTF-0.75m ² -2C-300mm		
Mass	approximately 230g		approximately 350g

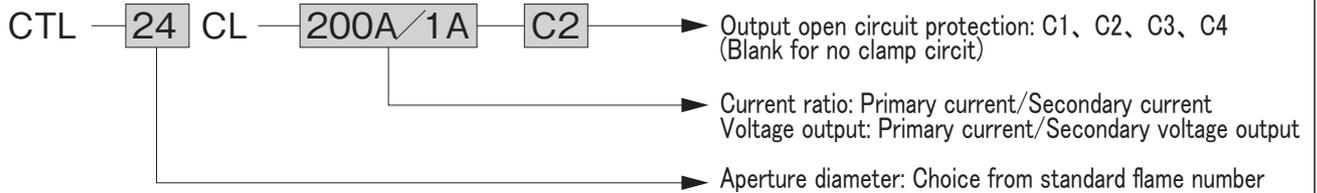
Remark

- (1) Fixation method should be fixed inserted wire and one side case by plastic band
- (2) Possible to fix by fastening with winding inflammable sponge tape included glue (optional) around inserted wire
- (3) Possible to earn better characteristic with less value for secondary load resistance of CT
- (4) Please be careful of CT heating in case to use with high frequency, although this CT is basically used at 50/60Hz.

Wire clamp type AC current sensor application edition, easy order system

[Description rule and function explanation]

It is possible to correspond to any specification almost same characteristic in the range of matrix below as basic type in the case of primary current below 2000A and secondary current below 5A with standard parts of basic type. Dimension for each flame number is common.



[Applied flame number with corresponding nominal current range]

Standard flame number CT output spec.	CTL-24CL	CTL-36CL	CTL-60CL	CTL-100CL	Recommended voltage clamp for output open circuit protection (Optional)
	Inner : ϕ 24 Outer : ϕ 70	Inner : ϕ 36 Outer : ϕ 90	Inner : ϕ 60 Outer : ϕ 115	Inner : ϕ 100 Outer : ϕ 155	
5A output	500A	500 ~ 1000A	500 ~ 2000A	500 ~ 2000A	C3: 6.5Vp. Triac
1A output	100 ~ 250A	100 ~ 500A	100 ~ 1000A	100 ~ 2000A	C2: 1.4Vp. Diode
0.1A output	50 ~ 250A	50 ~ 500A	50 ~ 500A	50 ~ 500A	C4: 6.5Vp. Varistor

(Limiting condition on setting of nominal current)

- Upper limit of nominal current : Maximum AT of secondary winding in winding space of each flame number. Less than 5000:1
- Lower limit of nominal current : Minimum current ratio more than 100:1 (More than 500:1 for 0.1A output)
- In the case of including output open circuit protection, not over the clamp voltage for peak voltage of output
- Please ask for other output specification

[Specification]

Output specification of CT	Recommended condition to use
5A Output	For 5A input instrument (Impossible to produce less than current ratio 100:1) Allowed nominal load 2.5VA (Load resistance 0.1 Ω)
1A Output	For 1A input instrument (Impossible to produce less than current ratio 100:1) Allowed nominal load 0.5VA (Load resistance 0.5 Ω)
0.1A Output	For electrical circuit direct interface Earning better performance with high current ratio and small output current because of light load of secondary For minimizing and low loss of load resistance
High current ratio • High output	For long wiring of secondary of CT Possible to enlarge allowed load with higher current ratio (Example) 1000A/0.5A (2000:1), allowed load 10VA

[Other special corresponding example]

Large aperture size, clamp current sensor: Possible to correspond for aperture diameter until ϕ 260
 Customizing output wire: Possible to correspond for requested wire length, terminal treatment, and terminal installation