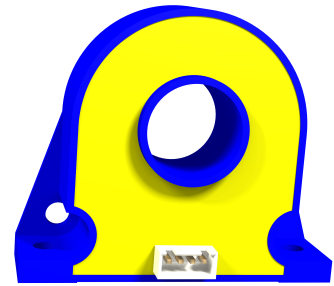


FCT300AB15CY



Main characteristics:

- Nominal current measurement: from $\pm 300\text{A}$ DC, AC
- Excellent linearity: 15 ppm
- High resolution
- Very low offset drift
- Overall accuracy at I_{PN} @ $+25^\circ\text{C}$: $\leq \pm 0.01\%$
- Wide frequency bandwidth up to 200 kHz (-3 dB)
- ROHS Compliant

Features:

- DC, AC pulse currents' measurements with galvanic isolation
- Nano Crystal Fluxgate technology
- Electrostatic shield between primary and secondary circuit
- Bipolar Power supply ± 15 Volt
- Operating temperature range from -40 to $+85^\circ\text{C}$
- Wire Connector Type
- Current output

Standard compliance:

- Typical applications:
- Feedback element in precision current regulated devices (power supplies...)
- Precise and high stability inverters
- Medical equipment
- Energy measurement
- Power analyzers

Remarks:

- Current overload capability
- Additional output indicating the transducer state

Specification

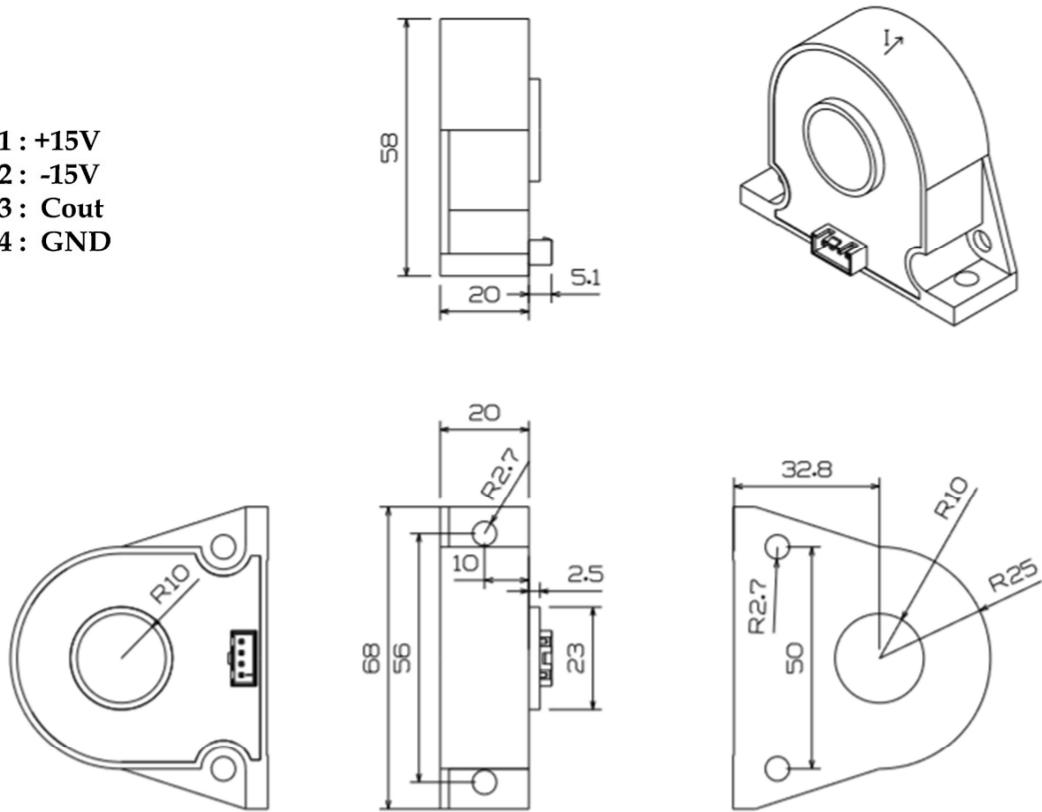
Nominal primary current (I_{PN})	$\pm 300A$	A r.m.s.
Measuring range @ $\pm 15V$ ($\pm 5\%$)	$\pm 350A$	A peak
Max. measuring resistance @ I_P max & $\pm 15V$ ($\pm 5\%$)	20	Ω
Min. measuring resistance @ I_{PN} & $\pm 15V$ ($\pm 5\%$)	0.1	Ω
Turn number	2000	Turn
Secondary current at I_{PN}	300/2000	A
Accuracy at I_{PN} @ $+25^\circ C$	$\leq \pm 0.01$	%
Linearity	$\leq \pm 0.005$	%
Thermal drift coefficient @ $-40 \sim +85^\circ C$	≤ 0.5	$\mu A/^\circ C$
Bandwidth @ -3dB	≤ 200	kHz
Max. no-load consumption current @ $\pm 15V$ ($\pm 5\%$)	≤ 30	mA
Secondary resistance @ $+85^\circ C$	≤ 20	Ω
Dielectric strength Primary/Secondary @ 50Hz, 1min	3	kV
Supply voltage @ $\pm 20\%$	$\pm 15V$	V dc
Voltage drop	≤ 1	V
Mass	0.739	kg
Operating temperature	$-40 \sim +85$	$^\circ C$
Storage temperature	$-45 \sim +125$	$^\circ C$

General data

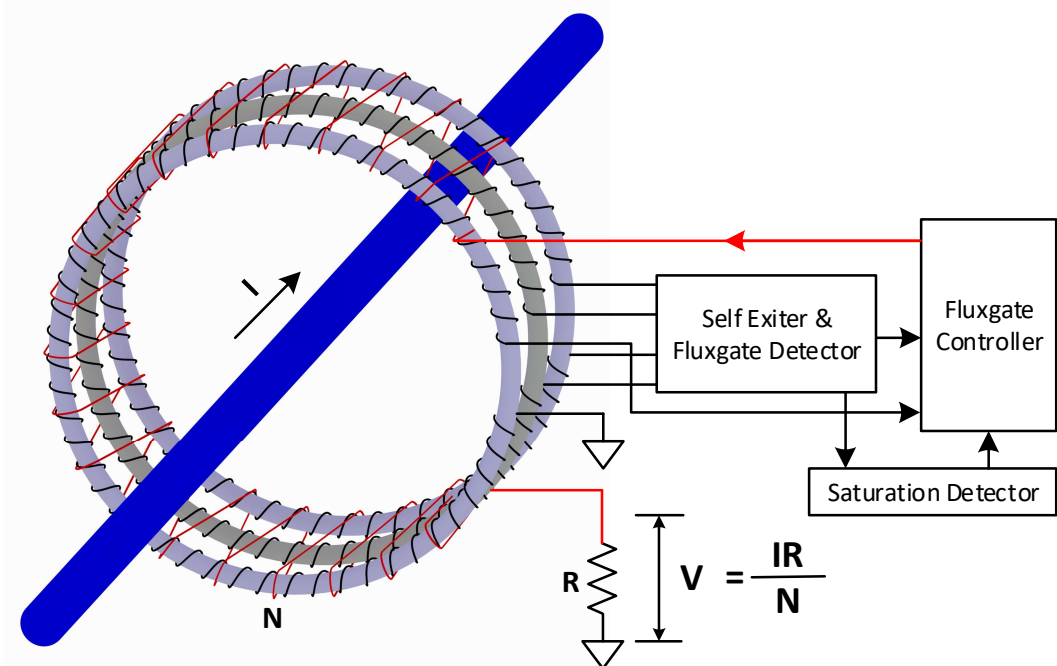
- Plastic case and insulating resin are self-extinguishing.
- Fixing holes in the case molding for two positions at right angles
- Direction of the current: A primary current flowing in the direction of the arrow results in a positive secondary output current from terminal C_{OUT} .

Dimensions

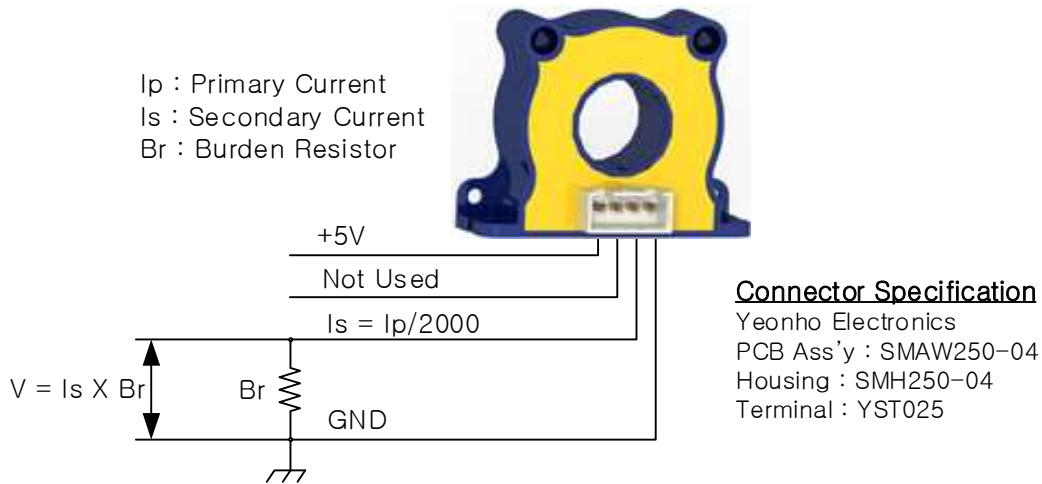
- 1 : +15V
- 2 : -15V
- 3 : Cout
- 4 : GND



Block diagram



Installation



* The positive direction of the current from the front to the rear of the head (the front of the contactor).

$$(\text{Secondary_Resistance} + \text{Measuring_Resistance}) \times \text{Max_Secondary_Current} + 5V = 15V$$

$$\text{Measuring_Resistance} = (15 - 5) / \text{Max_Secondary_Current} - \text{Secondary_Resistance}$$

$$\text{Therefore, Measuring_Resistance} = 10 / (350 / 2000) - 20 = 37 \Omega$$

Caution

Be careful not to operate under 0.1Ω burden resistor. The current sensor is damaged.