

NF500AB15FY2T0KBI



Main characteristics:

- Nominal current measurement: from $\pm 500\text{A}$ DC, AC
- Excellent linearity: 15 ppm
- High resolution
- Very low offset drift
- Overall accuracy at I_{PN} @ $+25^\circ\text{C}$: $\leq \pm 0.1\%$
- Wide frequency bandwidth up to 300 kHz (-1 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 $\pm 15\text{V}$
- Operating temperature range from -20 to $+85^\circ\text{C}$
- Wire Connector Type
- Current output
- Really quick response time ($< 300\text{ ns}$)

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

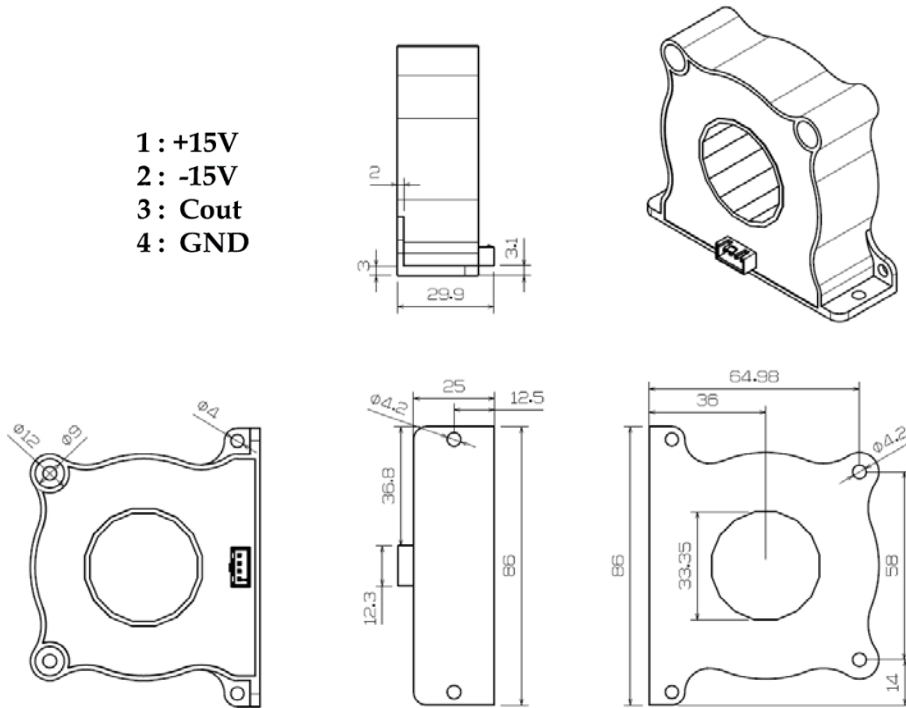
Nominal primary current (I_{PN})	± 500	A r.m.s.
Measuring range @ $\pm 15V$ ($\pm 5\%$)	± 650	A peak
Max. measuring resistance @ I_P max & $\pm 15V$ ($\pm 5\%$)	5	Ω
Min. measuring resistance @ I_{PN} & $\pm 15V$ ($\pm 5\%$)	0.1	Ω
Turn number	2000	Turn
Secondary current at I_{PN}	500/2000	A
Accuracy at I_{PN} @ $+25^\circ C$	$\leq \pm 0.1$	%
Accuracy at I_{PN} @ $-5 \sim +85^\circ C$	$\leq \pm 0.2$	%
Accuracy at I_{PN} @ $-20 \sim +85^\circ C$	$\leq \pm 0.5$	%
Offset current @ $+25^\circ C$	$\leq \pm 100$	μA
Linearity	$\leq \pm 0.05$	%
Thermal drift coefficient @ $-5 \sim +85^\circ C$	≤ 2	$\mu A/^\circ C$
Thermal drift coefficient @ $-20 \sim +85^\circ C$	≤ 5	$\mu A/^\circ C$
Delay time	≤ 0.5	μs
di/dt correctly followed	≤ 60	A/ μs
Bandwidth @ -1dB	≤ 300	kHz
Max. no-load consumption current @ $\pm 15V$ ($\pm 5\%$)	≤ 20	mA
Secondary resistance @ $+85^\circ C$	≤ 28	Ω
Dielectric strength Primary/Secondary @ 50Hz, 1min	3	kV
Supply voltage @ $\pm 20\%$	$\pm 15V$	V dc
Voltage drop	≤ 3	V
Mass	0.539	kg
Operating temperature	$-20 \sim +85$	$^\circ C$
Storage temperature	$-25 \sim +125$	$^\circ C$

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} .

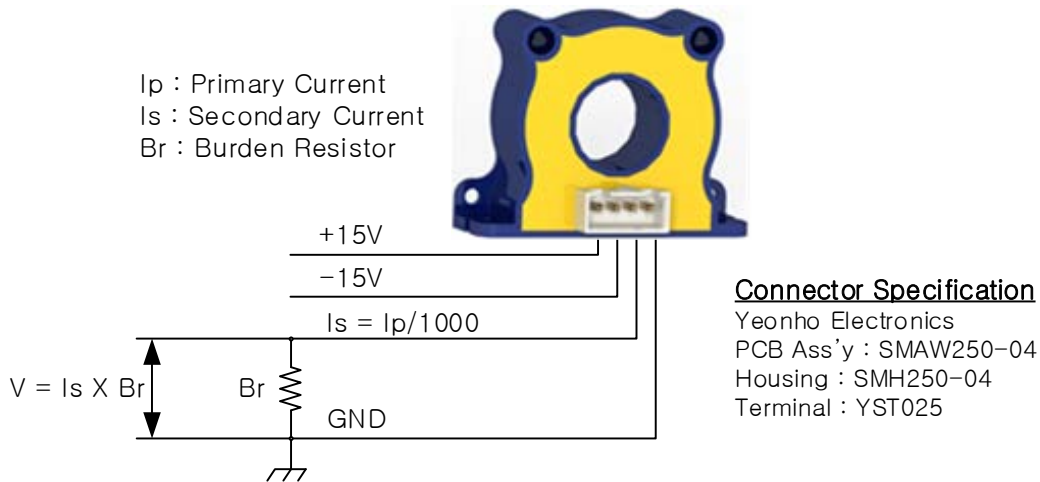
- 2/3 -

Dimensions



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

Installation



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

$$(Secondary_Resistance + Measuring_Resistance) \times Max_Secondary_Current + 1V = 12V$$

$$Measuring_Resistance = (12 - 1) / Max_Secondary_Current - Secondary_Resistance$$

$$\text{Therefore, Measuring_Resistance} = 11 / (650 / 2000) - 28 = 5.8 \Omega$$

Caution

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