

NF150AU05BY2T0KBI



Main characteristics:

- Nominal current measurement: from $\pm 150\text{A}$ 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
- Unipolar Power supply +5 Volt
- 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}) | ± 150 | A r.m.s. |
| Measuring range @ +5V ($\pm 5\%$) | ± 200 | A peak |
| Max. measuring resistance @ I_p max & +5V ($\pm 5\%$) | 5 | Ω |
| Min. measuring resistance @ I_{PN} & +5V ($\pm 5\%$) | 0.1 | Ω |
| Turn number | 2000 | Turn |
| Secondary current at I_{PN} | 150/2000 | A |
| Accuracy at I_{PN} @ +25°C | $\leq \pm 0.1$ | % |
| Accuracy at I_{PN} @ -5 ~ +85°C | $\leq \pm 0.2$ | % |
| Accuracy at I_{PN} @ -20 ~ +85°C | $\leq \pm 0.5$ | % |
| Offset current @ +25°C | $\leq \pm 100$ | μA |
| Linearity | $\leq \pm 0.05$ | % |
| Thermal drift coefficient @ -5 ~ +85°C | ≤ 2 | $\mu A/^\circ C$ |
| Thermal drift coefficient @ -20 ~ +85°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 @ +5V ($\pm 5\%$) | ≤ 20 | mA |
| Secondary resistance @ +85°C | ≤ 35 | Ω |
| Dielectric strength Primary/Secondary @ 50Hz, 1min | 3 | kV |
| Supply voltage @ $\pm 5\%$ | +5 | V dc |
| Voltage drop | ≤ 0.5 | V |
| Mass | 0.039 | kg |
| Operating temperature | -20 ~ +85 | $^\circ C$ |
| Storage temperature | -25 ~ +125 | $^\circ C$ |

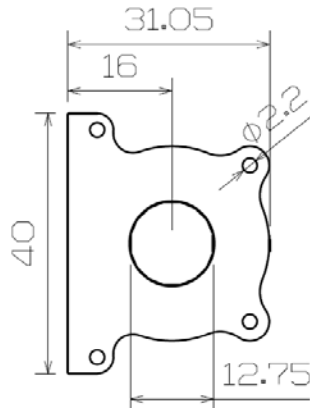
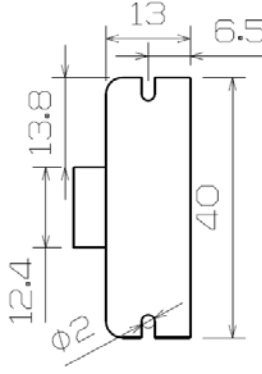
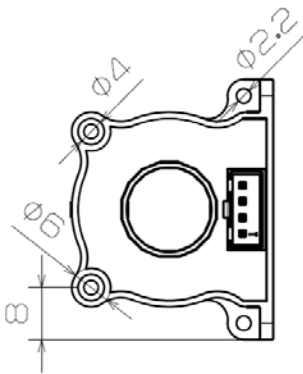
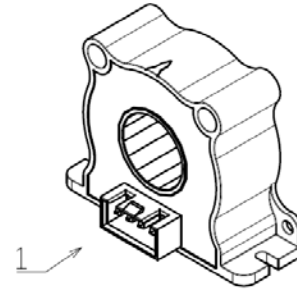
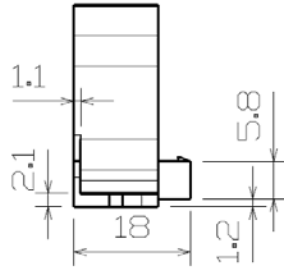
General data

- 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 -

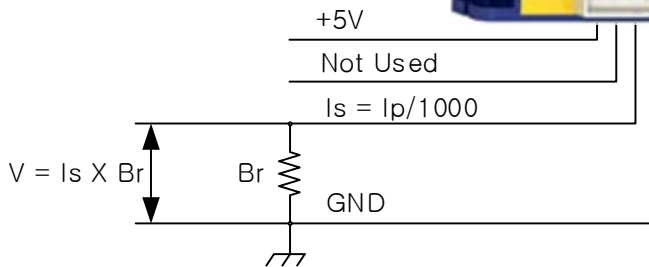
Dimensions

- 1 : +5V
- 2 : NC
- 3 : Cout
- 4 : GND



Installation

I_p : Primary Current
 I_s : Secondary Current
 Br : Burden Resistor



Connector Specification

Yeonho Electronics
 PCB Ass'y : SMAW250-04
 Housing : SMH250-04
 Terminal : YST025

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

$$(Secondary_Resistance + Measuring_Resistance) \times Max_Secondary_Current + 1V = 5V$$

$$Measuring_Resistance = (5 - 1) / Max_Secondary_Current - Secondary_Resistance$$

$$\text{Therefore, Measuring_Resistance} = 4 / (200 / 2000) - 35 = 5 \Omega$$

Caution

Be careful not to exceed 5.5V. The current sensor is damaged.