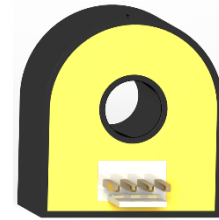


NF50A0U05AM1T0KBI



Main characteristics:

- Nominal current measurement: from $\pm 50\text{A}$ 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
- Single 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})	± 50	A r.m.s.
Measuring range @ +5V ($\pm 5\%$)	± 70	A peak
Max. measuring resistance @ I_P max & +5V ($\pm 5\%$)	5	Ω
Min. measuring resistance @ I_{PN} & +5V ($\pm 5\%$)	1	Ω
Turn number	1000	Turn
Secondary current at I_{PN}	50/1000	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	≤ 45	Ω
Dielectric strength Primary/Secondary @ 50Hz, 1min	3	kV
Supply voltage @ $\pm 5\%$	+5	V dc
Voltage drop	≤ 0.5	V
Mass	0.019	kg
Operating temperature	-20 ~ +85	°C
Storage temperature	-25 ~ +125	°C

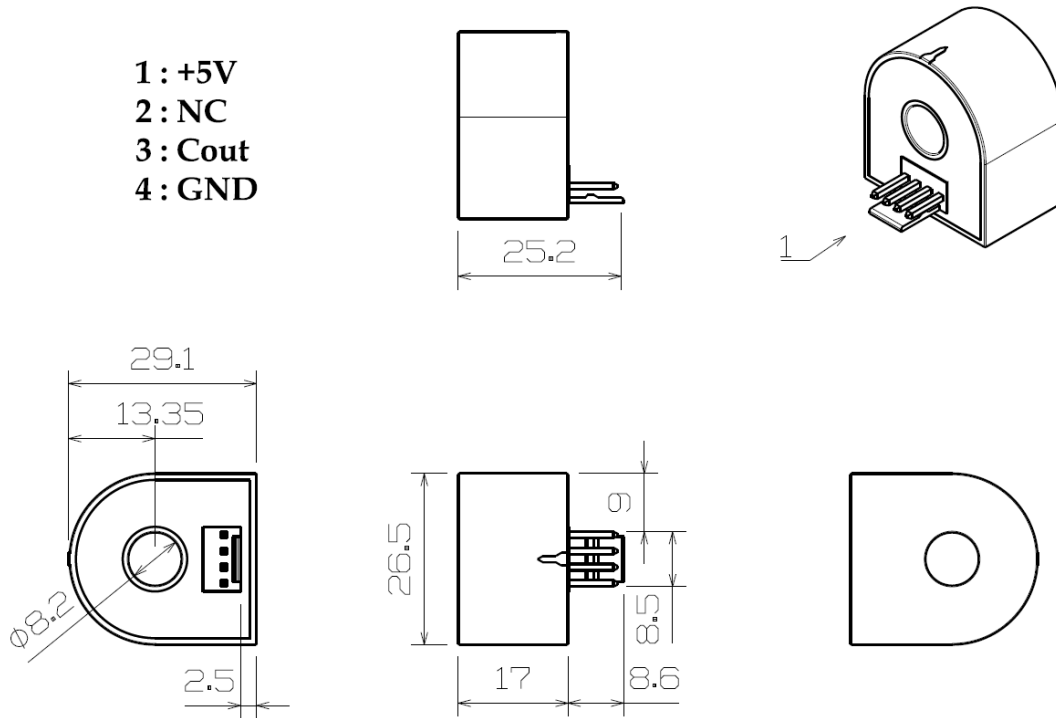
General data

- 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} .

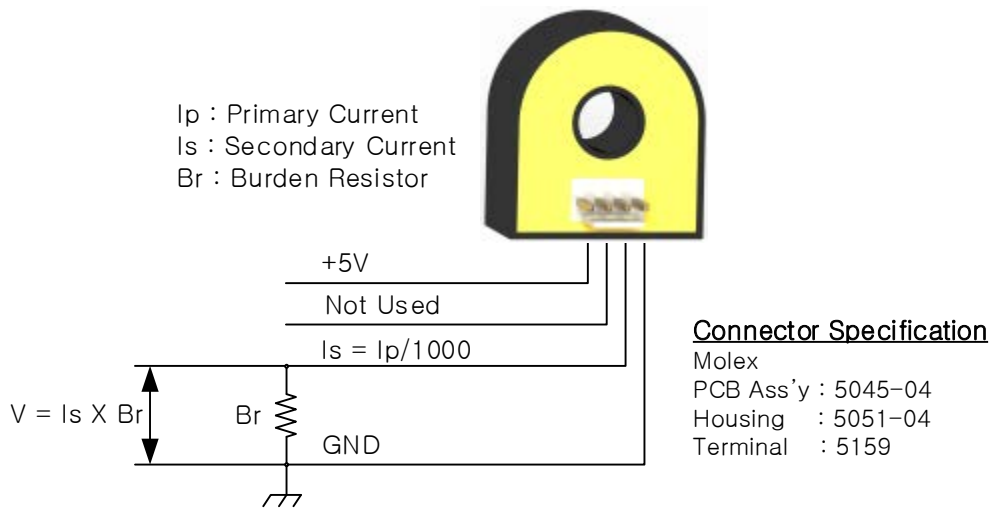
- 2/3 -

Dimensions

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



Installation



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

$(\text{Secondary_Resistance} + \text{Measuring_Resistance}) \times \text{Max_Secondary_Current} + 1V = 4.5V$

$\text{Measuring_Resistance} = (4.5 - 1) / \text{Max_Secondary_Current} - \text{Secondary_Resistance}$

Therefore, $\text{Measuring_Resistance} = 3.5 / (70/1000) - 45 = 5 \Omega$

Caution

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