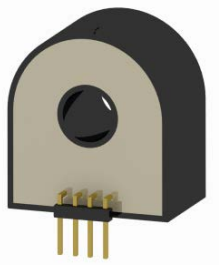
NF20A0U05AP500TBI



Main characteristics:

- Nominal current measurement: from ±20A DC, AC
- Excellent linearity: 15 ppm
- High resolution
- Very low offset drift
- Overall accuracy at I_{PN} @ +25°C: ≤±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°C
- Wire Connector Type
- Current output
- Really quick response time (<300 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

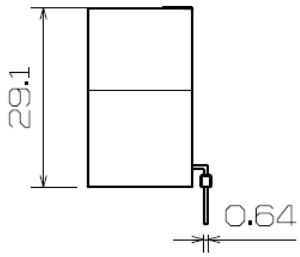
Nominal primary current (I_{PN})	±20	A r.m.s.
Measuring range @ +5V (±5%)	±40	A peak
Max. measuring resistance @ I_P max & +5V (±5%)	5	Ω
Min. measuring resistance @ I_{PN} & +5V (±5%)	1	Ω
Turn number	500	turn
Secondary current at I_{PN}	20/500	A
Accuracy at I_{PN} @ +25°C	≤±0.1	%
Accuracy at I_{PN} @ -5 ~ +85°C	≤±0.2	%
Accuracy at I_{PN} @ -20 ~ +85°C	≤±0.5	%
Offset current @ +25°C	≤±100	uA
Linearity	≤±0.05	%
Thermal drift coefficient @ -5 ~ +85°C	≤2	uA/°C
Thermal drift coefficient @ -20 ~ +85°C	≤5	uA/°C
Delay time	≤0.5	us
di/dt correctly followed	≤60	A/us
Bandwidth @ -1dB	≤300	kHz
Max. no-load consumption current @ +5V (±5%)	≤20	mA
Secondary resistance @ +85°C	≤35	Ω
Dielectric strength Primary/Secondary @ 50Hz, 1min	3	kV
Supply voltage @ ±5%	+5	V dc
Voltage drop	≤0.5	V
Mass	0.019	kg
Operating temperature	-20 ~ +85	°C
Storage temperature	-25 ~ +125	°C

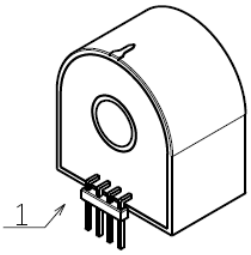
General data

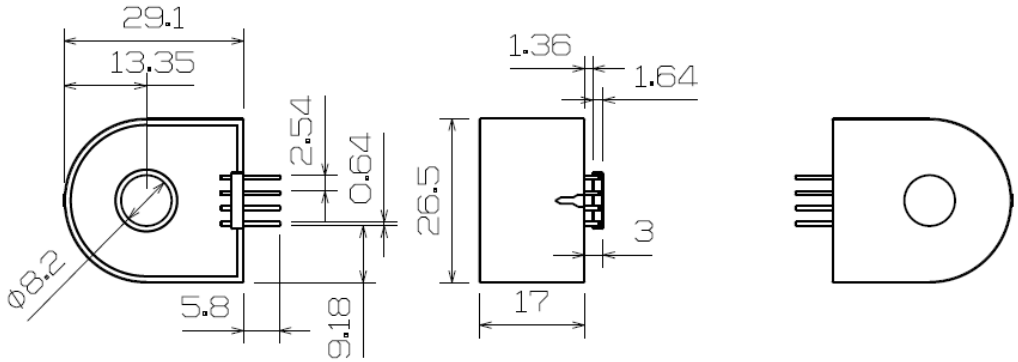
- Plastic case and insulating resin are self-extinguishing.
- Fixing holes in the case molding for two positions at right angles
- Direction of the current: A primary current flowing in the direction of the arrow results in a positive secondary output current from terminal C_{OUT} .

Dimensions

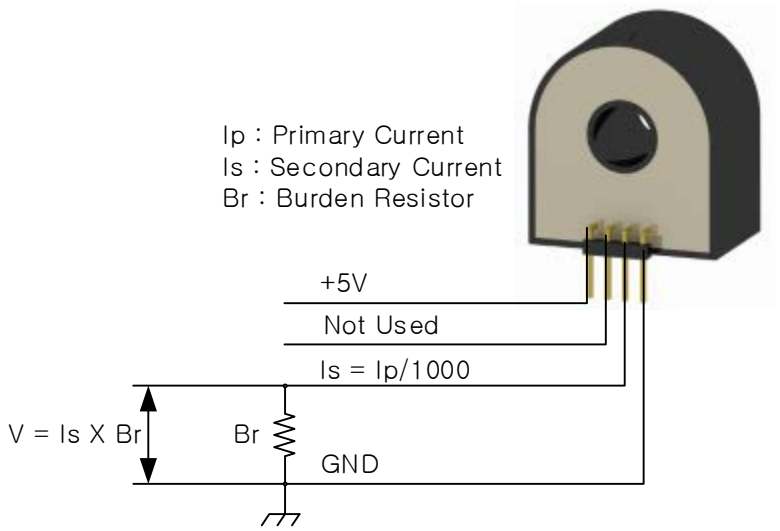
1 : +5V
2 : NC
3 : Cout
4 : GND







Installation



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

(Secondary_Resistance + Measuring_Resistance) x Max_Secondary_Current + 1V = 4.5V

Measuring_Resistance = (4.5 – 1) / Max_Secondary_Current – Secondary_Resistance

Therefore, Meauring_Resistance = 3.5/(40/500) – 35 = 8.75 Ω

Caution

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