

# NF300AB15DM2T0KBI



## 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  $I_{PN}$  @  $+25^\circ\text{C}$ :  $\leq \pm 0.1\%$
- 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  $\pm 15$  Volt
- Operating temperature range from  $-20$  to  $+85^\circ\text{C}$
- 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 ( $I_{PN}$ )	$\pm 300$	A r.m.s.
Measuring range @ $\pm 15V$ ( $\pm 5\%$ )	$\pm 450$	A peak
Max. measuring resistance @ $I_P$ max & $\pm 15V$ ( $\pm 5\%$ )	30	$\Omega$
Min. measuring resistance @ $I_{PN}$ & $\pm 15V$ ( $\pm 5\%$ )	0.1	$\Omega$
Turn number	2000	turn
Secondary current at $I_{PN}$	300/2000	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 @ $+25^\circ C$	$\leq \pm 100$	$\mu A$
Linearity	$\leq \pm 0.05$	%
Thermal drift coefficient @ $-5 \sim +85^\circ C$	$\leq 2$	$\mu A/^\circ C$
Thermal drift coefficient @ $-20 \sim +85^\circ C$	$\leq 5$	$\mu A/^\circ C$
Delay time	$\leq 0.5$	$\mu s$
di/dt correctly followed	$\leq 60$	A/ $\mu s$
Bandwidth @ -1dB	$\leq 300$	kHz
Max. no-load consumption current @ $\pm 15V$ ( $\pm 5\%$ )	$\leq 20$	mA
Secondary resistance @ $+85^\circ C$	$\leq 35$	$\Omega$
Dielectric strength Primary/Secondary @ 50Hz, 1min	3	kV
Supply voltage @ $\pm 20\%$	$\pm 15V$	V dc
Voltage drop	$\leq 3$	V
Mass	0.239	kg
Operating temperature	$-20 \sim +85$	$^\circ C$
Storage temperature	$-25 \sim +125$	$^\circ C$

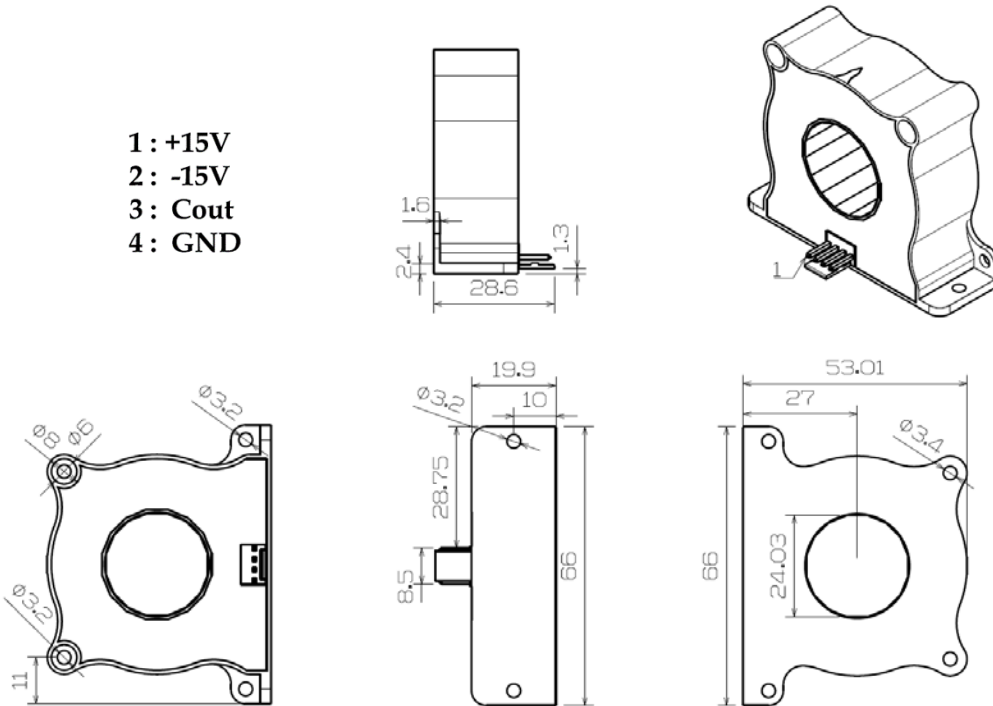
**General data**

- 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 -

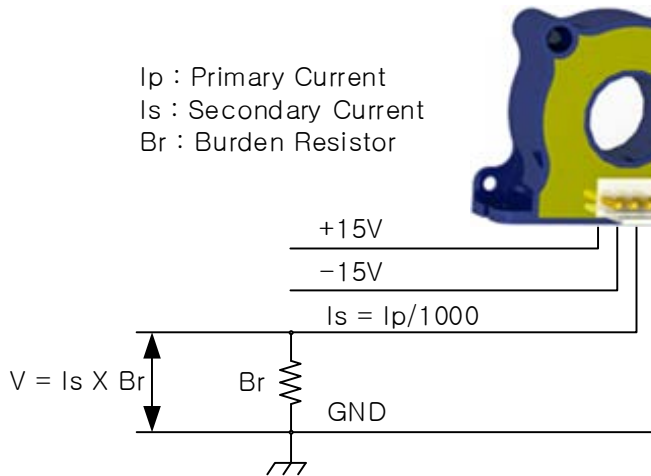
**Dimensions**

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



**Installation**

Ip : Primary Current  
 Is : Secondary Current  
 Br : Burden Resistor



**Connector Specification**

Molex  
 PCB Ass'y : 5045-04  
 Housing : 5051-04  
 Terminal : 5159

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

$$(Secondary\_Resistance + Measuring\_Resistance) \times Max\_Secondary\_Current + 1V = 12V$$

$$Measuring\_Resistance = (12 - 1) / Max\_Secondary\_Current - Secondary\_Resistance$$

Therefore, Measuring\\_Resistance =  $11 / (450 / 2000) - 15 = 33.9 \Omega$

**Caution**

Be careful not to operate under  $0.1\Omega$  burden resistor. The current sensor is damaged.