FCT0A25B15BY

Main characteristics:

- Nominal current measurement: from ±250mA DC, AC
- Excellent linearity: 15 ppm
- High resolution
- Very low offset drift
- Overall accuracy at I_{PN} @ +25°C: ≤±0.01 %
- Wide frequency bandwidth up to 200 kHz (- 3 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 ±15 Volt
- Operating temperature range from -40 to +85°C
- Wire Connector Type
- Current output

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

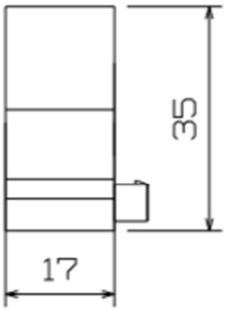
Nominal primary current (I_{PN})	±0.25	A r.m.s.
Measuring range @ ±15V (±5%)	±1	A peak
Max. measuring resistance @ I_P max & ±15V (±5%)	2K	Ω
Min. measuring resistance @ I_{PN} & ±15V (±5%)	1	Ω
Turn number	250	Turn
Secondary current at I_{PM}	0.25/250=0.001	A
Accuracy at I_{PN} @ +25°C	≤±0.01	%
Offset current @ +25°C	≤±50	uA
Linearity	≤±0.005	%
Thermal drift coefficient @ -45 ~ +105°C	≤0.5	uA/°C
Bandwidth @ -3dB	≤200	kHz
Max. no-load consumption current @ ±15V (±5%)	≤20	mA
Secondary resistance @ +105°C	≤100	Ω
Dielectric strength Primary/Secondary @ 50Hz, 1min	3	kV
Supply voltage @ ±20%	±15V	V dc
Mass	0.2	kg
Operating temperature	-40 ~ +85	°C
Storage temperature	-45 ~ +125	°C

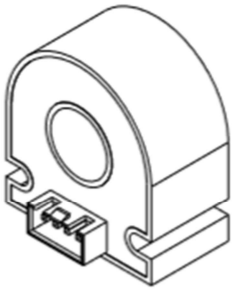
General data

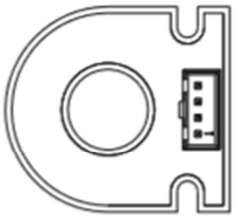
- Plastic case and insulating resin are self-extinguishing.
- Fixing holes in the case molding for two positions at right angles
- Direction of the current: A primary current flowing in the direction of the arrow results in a positive secondary output current from terminal C_{OUT} .

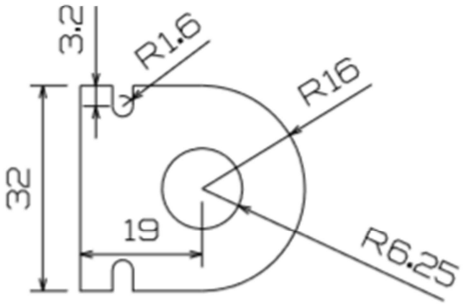
Dimensions

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

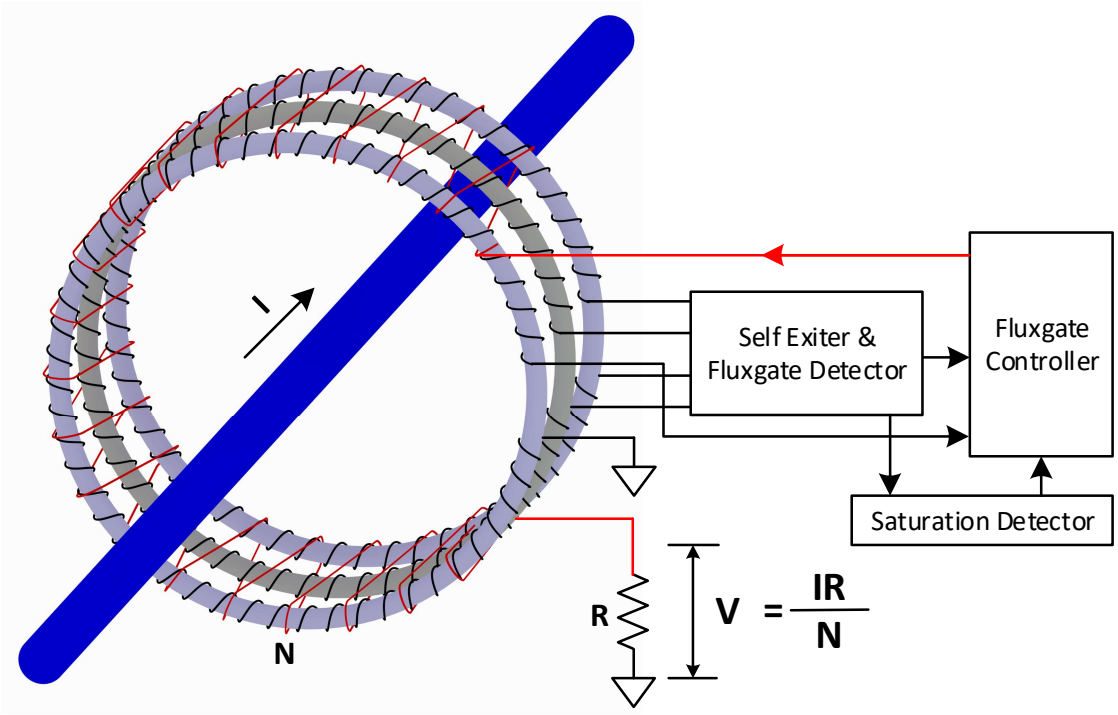






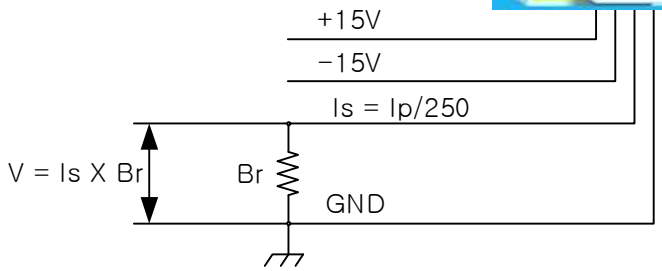


Block diagram



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) x Max_Secondary_Current + 3V = 15V
Measuring_Resistance = (15 – 3) / Max_Secondary_Current – Secondary_Resistance
Therefore, Meauring_Resistance = 12/(1/250) – 100 = 2900 Ω

Caution

Be careful not to operate under 1Ω burden resistor. The current sensor is damaged.

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