



Description

For the electronic measurement of currents : DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit and the secondary circuit.

Features

- ◆ Hall effect measuring principle
- ◆ Galvanic isolation between primary and secondary circuit
- ◆ Compact design for PCB mounting
- ◆ Low power consumption
- ◆ Extended measuring range ($3 * I_{PN}$)
- ◆ Insulated plastic case recognized according to UL 94-V0



$$I_{PN} = 50...600A$$

Advantages

- ◆ Easy installation
- ◆ Excellent accuracy
- ◆ No insertion losses
- ◆ Excellent performance and price
- ◆ Only one design for wide current ratings range
- ◆ High immunity against external Interference

$$V_{OUT} = \pm 4 V$$

Industrial applications

- ◆ AC variable speed drives
- ◆ Battery supplied applications
- ◆ Uninterruptible Power Supplies (UPS)
- ◆ Power supplies for welding applications
- ◆ Static converters for DC motor drives
- ◆ Switched-Mode Power Supplies (SMPS)

| TYPES OF PRODUCTS | | |
|-------------------|---|---|
| Type | Primary nominal current r. m. s I_{PN} (A) | Primary current measuring range I_{PM} (A) |
| BLY2 -50IOV2L | 50 | ±150 |
| BLY2 -75IOV2L | 75 | ±225 |
| BLY2-100IOV2L | 100 | ±300 |
| BLY2-150IOV2L | 150 | ±450 |
| BLY2-200IOV2L | 200 | ±600 |
| BLY2-300IOV2L | 300 | ±900 |
| BLY2-400IOV2L | 400 | ±900 |
| BLY2-500IOV2L | 500 | ±900 |
| BLY2-600IOV2L | 600 | ±900 |



Parameters Table

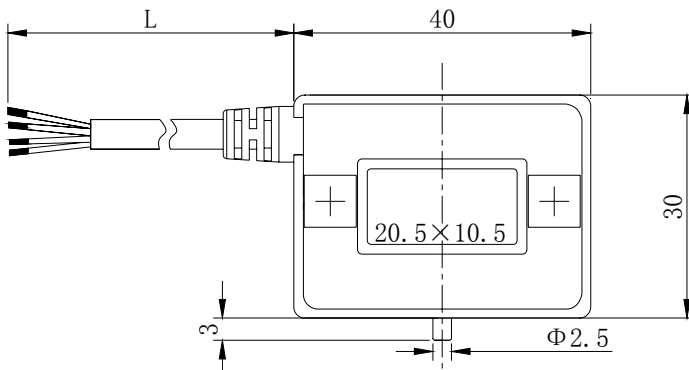
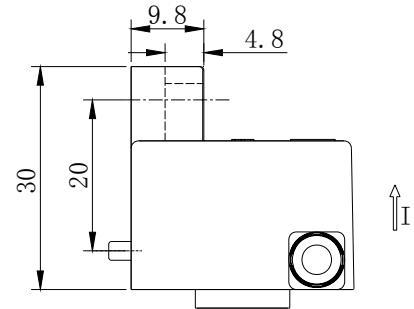
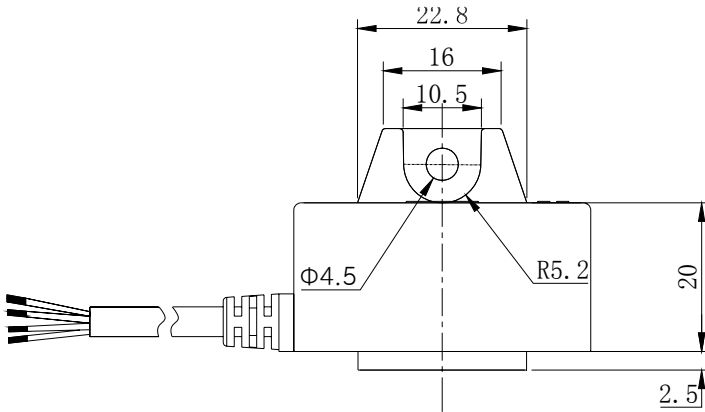
| PARAMETERS | SYMBOL | UNIT | VALUE | CONDITIONS |
|--|--------------------------------|---------------------|---------------------|---|
| Electrical data | | | | |
| Supply voltage($\pm 5\%$) ⁽¹⁾ | V _C | V | ± 15 | |
| Current consumption | I _C | mA | ± 15 | |
| Output voltage(Analog) | V _{OUT} | mV | $\pm 4V \pm 40$ | @ $\pm I_{PN}$, R _L = 10 k Ω , T _A = 25°C |
| Overload capability(1ms) | I _{PC} | At | 50* I _{PN} | |
| Isolation resistance | R _{IS} | M Ω | >1000 | @ 500 VDC |
| Output internal resistance | R _{OUT} | Ω | 100 | approx |
| Load resistance ⁽²⁾ | R _L | K Ω | >10 | |
| R. m. s voltage for AC isolation test | V _d | KV | 3 | @50Hz, 1 min |
| R. m. s rated voltage、 safe separation | V _b | V | 500 | |
| Accuracy - Dynamic performance data | | | | |
| Linearity ⁽³⁾ (0... $\pm I_{PN}$) | ϵ_L | %of I _{PN} | < ± 1 | |
| Accuracy | X | % | < ± 1 | @ I _{PN} , T _A = 25°C (without offset) |
| Electrical offset voltage | V _{OE} | mV | < ± 20 | @T _A = 25°C |
| Hysteresis offset voltage | V _{OH} | mV | < ± 20 | @ I _P = 0; after an excursion of 1* I _{PN} |
| Temperature coefficient of V _{OE} | TCV _{OE} | mV/K | < ± 2 | @BLY2 50--75IOV2L |
| | | | < ± 1 | @BLY2 100--600IOV2L |
| Temperature coefficient of V _{OUT} | TCV _{OUT} | %/K | < ± 0.1 | @% of reading |
| Response time | t _r | μ S | <3 | @ 90% of I _{PN} step |
| d _i /d _t accurately followed | d _i /d _t | A/ μ S | >50 | |
| Frequency bandwidth ⁽⁴⁾ | BW | kHz | DC~50 | @-3dB |
| General data | | | | |
| Ambient operating temperature | T _A | °C | -20....+85 | |
| Ambient storage temperature | T _S | °C | -40....+105 | |
| Mass | m | g | approx 60 | |

Notes:

- (1) Operating at $\pm 12V \leq V_C < \pm 15V$ will reduce the measuring range.
- (2) If the customer uses 1 K Ω of the load resistor, the primary current has to be limited as the nominal. To measure the full defined measuring range, the load resistor should be at minimum 10 K Ω .
- (3) Linearity data exclude the electrical offset.
- (4) Please refer to derating curves in the technical file to avoid excessive core heating at high frequency.



Dimensions BLY2-IOV2L (in mm. 1 mm = 0.0394 inch)



Pins Arrangement

- Red: +15V
- White: -15V
- Green: Output
- Black: Ground
- Wire Length:
L = 500 ± 15MM

◆ **Instructions of use**

1. When the test current passes through the sensors you can get the size of the output voltage.
(Warning: wrong connection may lead to sensors damage.)
2. Based on user needs, the sensors output range can be appropriately regulated.
3. According to user needs, different rated input currents and output voltages of the sensors can be customized.



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