

## Toroidal, AC Leakage Current Sensor

The Zibo Yuanxing Electronics **ALS12B** series of AC Leakage current sensors provide highly accurate non-contact AC leakage current measurement over a broad frequency range.

The ALS series uses a “zero flux” technique to measure AC currents at the micro ampere level. Shielding and primary to secondary isolation provide a “noise free” secondary output signal proportional to the primary AC current.



### Features:

Capable of micro ampere level measurements from 0.01mA to 100mA.

Panel mounted, suitable for harsh operating environments.

### Specifications:

- Frequency Range: 50 to 400 Hz.
- Output: 3.53 VAC @ rated primary current.  
Optional: any voltage between 0.10 to 7.07V @ rated current.
- Dielectric Resistance: 1,000 M ohms @ 500 VDC.
- Isolation Voltage: 2500 V<sub>RMS</sub> for 1 minute, 0.5mA.
- Surge withstand potential: 5,000V (1.2/50 $\mu$ s standard shock wave).
- Rated Load Resistance:  $\geq$  10k Ohms.
- Operating Temperature: -40°C to +85°C.
- Opening: 12.4mm (0.49”).
- Construction:
  - Metal case.
  - Water proof, suitable for outdoor installation.

- Power Supply Requirements:
  - $\pm$  12VDC to 15VDC.
  - < 10mA consumption.
- RoHS compliant



### Performance:

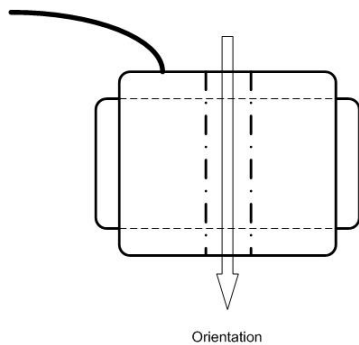
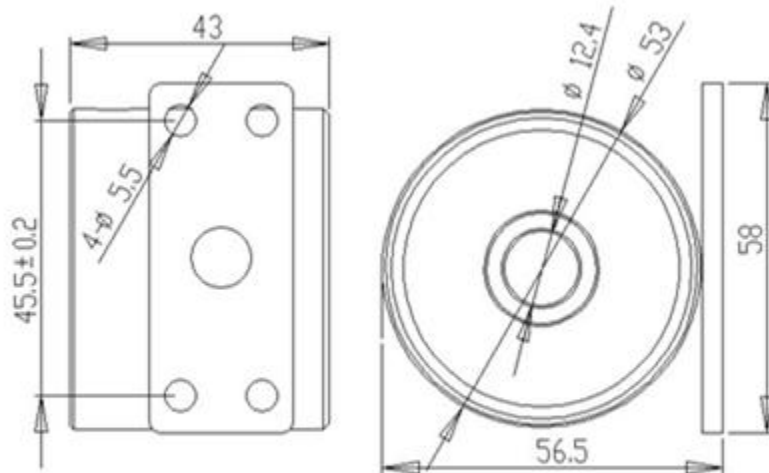
- Accuracy:  $\pm$  0.3% (@ 25°C) of rated primary current.
- Linearity: < 0.3% from 10% to 120% of Rated Current.
- Offset Voltage: <  $\pm$  1mV @ primary current = 0 (@ 25°C).
- Temperature Drift: 0.05% per °C of rated primary current (-40°C to +85°C).

**Custom AC Leakage current sensor designs** are available to meet the specific application requirements. For a no obligation technical evaluation, please provide the specific performance requirements to [engineering@tichenassociates.com](mailto:engineering@tichenassociates.com) or the address below.

**Models:**

Part Number	Rated Primary Current	Measurement Range
ALS12B-10mA/ 3.53V	10mA	0.010mA to 20mA
ALS12B-20mA/ 3.53V	20mA	0.010mA to 40mA
ALS12B-30mA/ 3.53V	30mA	0.010mA to 60mA
ALS12B-50mA/ 3.53V	50mA	0.010mA to 100mA

**Outline Drawing:**



**Connection:**

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RED – Power supply + input  
 GREEN - Power supply – input  
 BLACK – Ground/ Shield  
 YELLOW – Secondary voltage signal output.