

# Hall Current Sensor- TR102-OCS

**$I_{PN}=100..1000A$**

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



RoHS COMPLIANT



## ● Operating performance (AT =25°C)

| Performance   | Model             | TR101<br>OCS                              | TR201<br>OCS | TR301<br>OCS | TR401<br>OCS | TR501<br>OCS | TR601<br>OCS | TR102<br>OCS |
|---|-------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|
| Primary nominal r.m.s. current                          | $I_{PN}$ (A)      | 100                                       | 200          | 300          | 400          | 500          | 600          | 1000         |
| Primary current measuring range                         | $I_P$ (A)         | 0~±300                                    | 0~±600       | 0~±900       | 0~±1000      | 0~±1000      | 0~±1000      | 0~±1000      |
| Output voltage  | $V_{OUT}$         | ±4  |              |              |              |              |              | V            |
| Supply voltage  | $V_{CC}$          | ±15( ±5% )                                |              |              |              |              |              | V            |
| Current consumption                                     | $I_C$             | < 25                                      |              |              |              |              |              | mA           |
| Linearity   | $\epsilon_L$      | $\leq \pm 0.5 @ 0... \pm I_{PN}$          |              |              |              |              |              | %            |
| Accuracy @ $I_{PN}, V_C = \pm 15V, T_A = 25^\circ C, X$ |                   | ±1  |              |              |              |              |              | %            |
| Offset voltage @ $I_P = 0, T_A = 25^\circ C$            | $V_O$             | < ±10                                     |              |              |              |              |              | mV           |
| Thermal drift of $V_O$                                  | $V_{OT}$          | $\leq \pm 1$                              |              |              |              |              |              | mV/°C        |
| Thermal drift of $V_{OUT}$                              | $TC_{\epsilon G}$ | $\leq \pm 0.05$                           |              |              |              |              |              | %/°C         |
| Response time   | $t_r$             | < 3 @ 90% of $I_P$                        |              |              |              |              |              | µs           |
| di/dt accurately followed                               | di/dt             | 50  |              |              |              |              |              | A/µs         |
| Hysteresis offset current                               | $V_{OH}$          | $\leq \pm 10 @ \pm 3I_{PN} \rightarrow 0$ |              |              |              |              |              | mV           |
| Isolation voltage                                       | $V_d$             | 3 @ 50(60)Hz/1min                         |              |              |              |              |              | KV           |
| Isolation resistance                                    | $R_{IS}$          | 500                                       |              |              |              |              |              | MΩ           |
| Frequency bandwidth                                     | f                 | 0~50                                      |              |              |              |              |              | KHz          |

## ● General data

|                       |   |           |
|-----------------------|---|-----------|
| Operating temperature | $T_O$   | -25~+85°C |
| Storage temperature   | $T_S$   | -40~+85°C |
| Mass                  | m   | 230 g     |
| Note                  | Insulated plastic case recognized according to UL 94-V0 |           |

## ● Applications

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

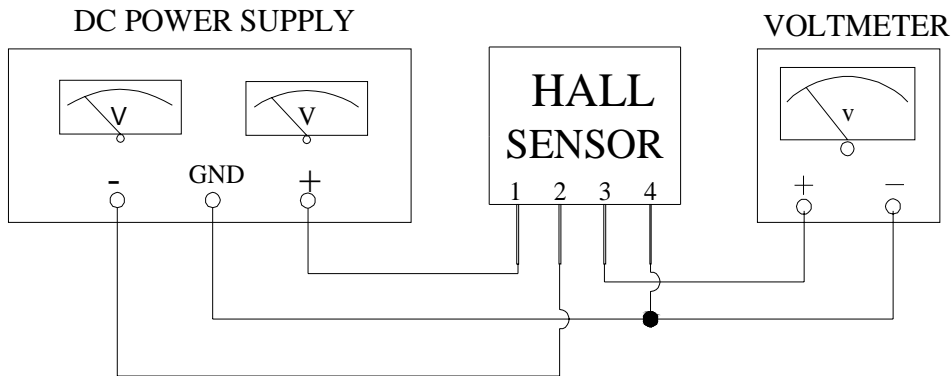
## ● Advantages

|                             |  |
|-----------------------------|--|
| ◆ Low temperature drift     | ◆ Only one design for wide current ratings range |
| ◆ Low power consumption     | ◆ High immunity to external interference         |
| ◆ Very low insertion losses | ◆ Current overload capability                    |

# Hall Current Sensor-TR102-OCS

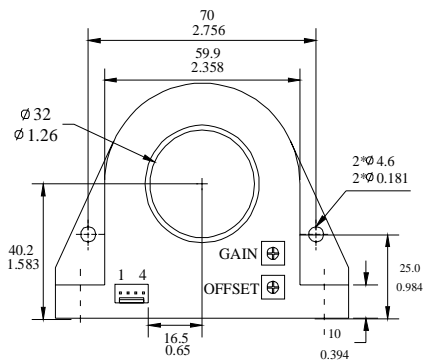
$I_{PN}=100..1000A$

## ● Connection

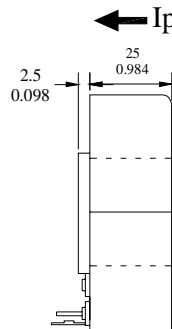


## ● Dimensions (Unit:mm/inch)

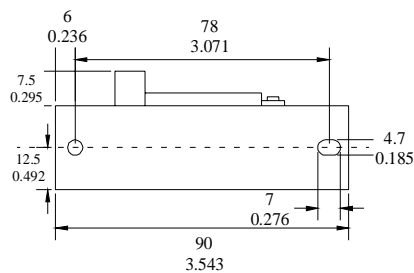
Front View



Right View



Bottom View



### Secondary terminals

|            |        |
|------------|--------|
| Terminal 1 | +15V   |
| Terminal 2 | -15V   |
| Terminal 3 | OUTPUT |
| Terminal 4 | GND    |

Tol :  $\pm 0.5\text{mm}/0.02\text{inch}$   
 Connection of secondary  
 Molex 22-01-1042

## ● Remarks

- ◆  $V_{OUT}$  is positive when  $I_p$  flows in the direction of the arrow.
- ◆ Temperature of the primary conductor should not exceed  $100^\circ\text{C}$ .
- ◆ These are standard models. For different versions (supply voltages, secondary connections, unidirectional measurements, operating temperatures, etc.) please contact us.