

# Hall Current Sensor -TM501-OCS

**$I_{PN}=50..500A$**

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          | TM500<br>OCS                         | TM101<br>OCS | TM201<br>OCS | TM301<br>OCS | TM401<br>OCS | TM501<br>OCS |
|---------------------------------|----------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Primary nominal r.m.s. current  | $I_{PN}$ (A)   | 50                                   | 100          | 200          | 300          | 400          | 500          |
| Primary current measuring range | $I_P$ (A)      | 0~±100                               | 0~±200       | 0~±400       | 0~±600       | 0~±800       | 0~±1000      |
| Supply voltage                  | $V_{CC}$       | ±15V ( ±5% )                         |              |              |              |              |              |
| Output voltage                  | $V_{OUT}$      | 4V ±1% @± $I_{PN}$ , $R_L=10K\Omega$ |              |              |              |              |              |
| Current consumption             | $I_C$          | ≤±18mA @ ± $I_{PN}$                  |              |              |              |              |              |
| Offset voltage                  | $V_O$          | < ±20mV @ $I_P=0, T_A=25^\circ C$    |              |              |              |              |              |
| Thermal drift of $V_O$          | $V_{OT}$       | < ±0.5mV/°C                          |              |              |              |              |              |
| Thermal drift of $V_{OUT}$      | $TC\epsilon_G$ | < ±0.04%/°C                          |              |              |              |              |              |
| Response time                   | $t_r$          | < 5µs                                |              |              |              |              |              |
| di/dt accurately followed       | di/dt          | > 50A/µs                             |              |              |              |              |              |
| Linearity                       | $\epsilon_L$   | ±1% @0~± $I_{PN}$                    |              |              |              |              |              |
| Accuracy                        | X              | ±1% @ $I_{PN}$                       |              |              |              |              |              |
| Isolation voltage               | $V_d$          | 2.5KV @50(60)HZ/1min                 |              |              |              |              |              |
| Isolation resistance            | $R_{IS}$       | 500MΩ @500VDC                        |              |              |              |              |              |
| Hysteresis offset voltage       | $V_{OH}$       | ≤±25mV @±3 $I_{PN} \rightarrow 0$    |              |              |              |              |              |
| Frequency bandwidth             | f              | 0~50KHz                              |              |              |              |              |              |

## ● General data

|                       |   |           |
|-----------------------|---|-----------|
| Operating temperature | $T_O$   | -25~+85°C |
| Storage temperature   | $T_S$   | -40~+85°C |
| Mass                  | m   | 75g       |
| 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 |

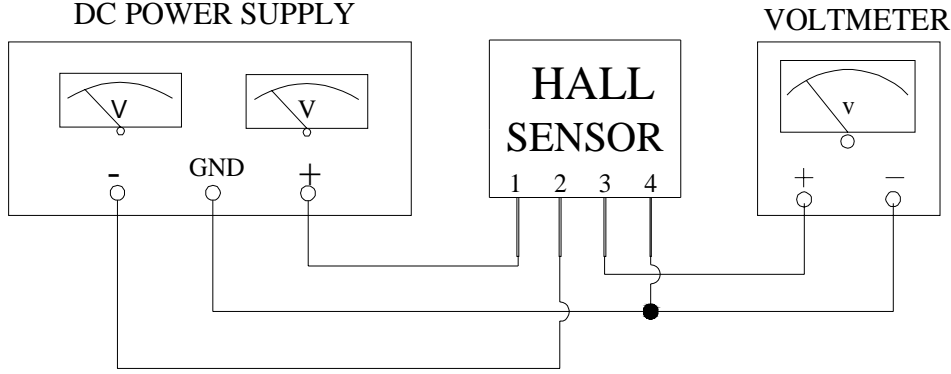
## ● Advantages

|                            |   |
|----------------------------|---|
| ◆Low temperature drift     | ◆Low power consumption                  |
| ◆Easy mouting              | ◆High immunity to external interference |
| ◆Very low insertion losses | ◆Current overload capability            |

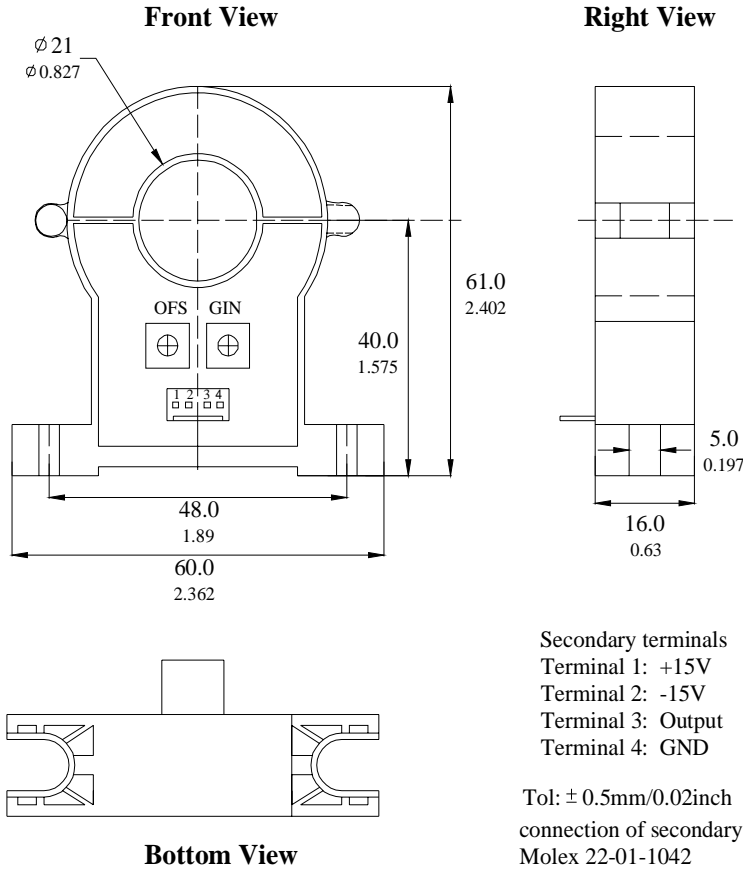
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## ● Connection



## ● Dimensions ( Unit:mm/inch )



## ● 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.