

Hall Current Sensor TK 100-CVS

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.

$I_{PN} = 10\text{m A}$

$V_{PN} = 10..500\text{V}$



RoHS COMPLIANT



● Operating performances ($T_A = 25^\circ\text{C}$)

| | | | |
|--|--------------|--|---|
| Primary nominal r.m.s. current | I_{PN} | 10 | mA |
| Primary current measuring range | I_P | 0 .. ± 14 | mA |
| Secondary nominal r.m.s. current | I_{SN} | 25 | mA |
| Measuring resistance | R_M | with $\pm 15\text{V}$ | $R_{M \text{ min}}$ $R_{M \text{ max}}$ |
| | | @ $\pm 10\text{mA}$ @ 14mA | 100 350 100 190 |
| Conversion ratio | K_N | 2500:1000 | |
| Supply voltage | V_{CC} | $\pm 12 \sim 15$ ($\pm 5\%$) | V |
| Current consumption | I_C | $10(@\pm 15\text{V}) + I_S$ | mA |
| Linearity | ϵ_L | $\leq \pm 0.2 @ 0 \sim \pm I_{PN}$ | % |
| Accuracy | X | $\pm 0.6 @ I_{PN}, V_C = \pm 15\text{V}, T_A = 25^\circ\text{C}$, | % |
| Offset current | I_O | $< \pm 0.15 @ I_P = 0, T_A = 25^\circ\text{C}$ | mA |
| Thermal drift of I_O | I_{OT} | $\pm 0.6\text{mA}$ (type ± 0.2) @ $-40 \sim 85^\circ\text{C}$ | |
| Response time | t_r | < 40 | μs |
| Primary coil resistance @ $T_A = 85^\circ\text{C}$ | | 260 | Ω |
| Secondary coil resistance @ $T_A = 85^\circ\text{C}$ | | 120 | Ω |
| Hysteresis offset current | I_{OH} | $\leq \pm 0.3 @ \pm 3 I_{PN} \rightarrow 0$ | mA |
| Isolation voltage | V_d | 2.5 @ 50(60)HZ/1min | KV |

● General data

| | | |
|-----------------------|-------|------------------------------|
| Operating temperature | T_O | $-25 \sim +85^\circ\text{C}$ |
| Storage temperature | T_S | $-40 \sim +85^\circ\text{C}$ |
| Mass | m | 20 g |

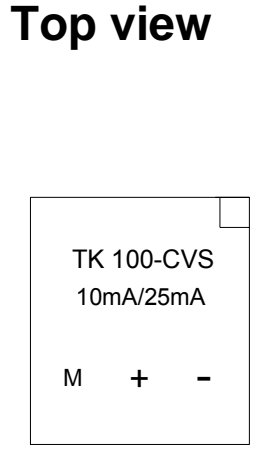
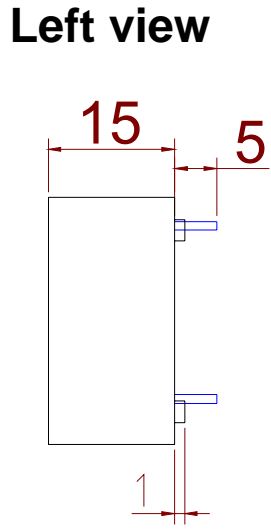
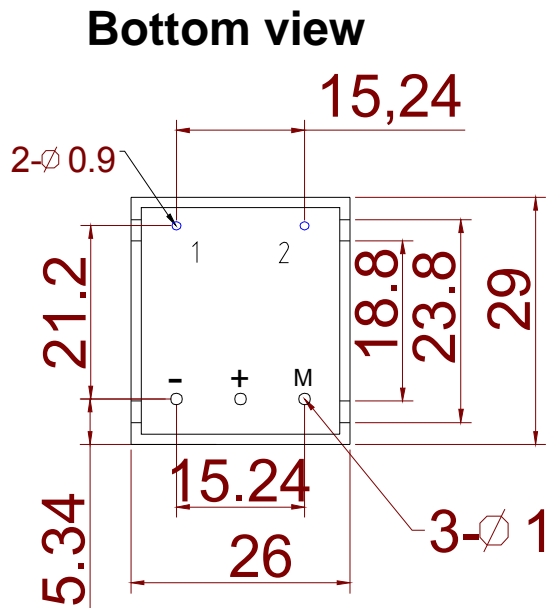
● Applications

- | | |
|---|--|
| <ul style="list-style-type: none"> ◆ AC variable speed drives and servo motor drives ◆ Battery supplied applications ◆ Uninterruptible Power Supplies(UPS) | <ul style="list-style-type: none"> ◆ Static converters for DC motor drives ◆ Switched Mode Power Supplies(SMPS) ◆ Power supplies for welding applications |
|---|--|

● Advantages

- | | |
|--|---|
| <ul style="list-style-type: none"> ◆ Excellent accuracy ◆ Low temperature drift ◆ Wide frequency bandwidth ◆ Very low insertion losses | <ul style="list-style-type: none"> ◆ Very good linearity ◆ Optimized response time ◆ High immunity to external interference ◆ Current overload capability |
|--|---|

● Dimensions (unit: mm)



Secondary terminals

- Terminal + : supply voltage + 15 V
- Terminal M: measure
- Terminal - : supply voltage - 15 V

Connection



Principle of use

For voltage measurements, a current proportional to the measured voltage must be passed through an external resistor R1 which is selected by the user and installed in series with the primary circuit of the transducer.

Mechanical characteristics

- General tolerance ± 0.2 mm
- Fastening & connection of primary 10 pins $\phi 0.9$ mm
- Fastening & connection of secondary 3 pins $\phi 1$ mm
- Recommended PCB hole 1.2 mm

Remarks

- Is is positive when Ip flows from terminals 1, 2, 3, 4, 5 to terminals 10, 9, 8, 7, 6
- This is a standard model. For different versions (supply voltages, turns ratios, unidirectional measurements...), please contact us.

Temperature of the primary conductor should not exceed 100°C.