



Hall Current Sensor TK 250-CCS

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.

 $I_{PN} = 5-6-8-12-25 \text{ A}$ 

RoHS COMPLIANT



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

Primary nominal r.m.s. current	I_{PN}	25 A	A
Primary current measuring range	I_P	0 .. $\pm 36 \text{ A}$	A
Secondary nominal r.m.s. current	I_{SN}	25	mA
Measuring resistance	R_M	with $\pm 15\text{V}$ @ $\pm 25\text{A}_{\text{max}}$ $R_{M \text{ min}}$ 100 @ $\pm 36\text{A}_{\text{max}}$ $R_{M \text{ max}}$ 260	Ω Ω
Conversion ratio	K_N	1:1000	
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	$\leq \pm 0.1$ @ $0 \sim \pm I_{PN}$	%
Accuracy	X	± 1 @ $I_{PN}, V_C = \pm 15\text{V}, T_A = 25^\circ\text{C}$,	%
Offset current	I_O	$< \pm 0.2$ @ $I_P = 0, T_A = 25^\circ\text{C}$	mA
Thermal drift of I_O	I_{OT}	$\leq \pm 0.6\text{mA}$ (type ± 0.2) @ $-40 \sim +85^\circ\text{C}$	
Response time	t_r	< 1	μs
di/dt accurately followed	di/dt	> 50	A/ μs
Hysteresis offset current	I_{OH}	$\leq \pm 0.3$ @ $\pm 3I_{PN} \rightarrow 0$	mA
Isolation voltage	V_d	2.5 @ 50(60)HZ/1min	KV
Frequency bandwidth	f	0~100	KHz

● General data

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

● Applications

- ◆ AC variable speed drives and servo motor drives
- ◆ Battery supplied applications
- ◆ Uninterruptible Power Supplies(UPS)

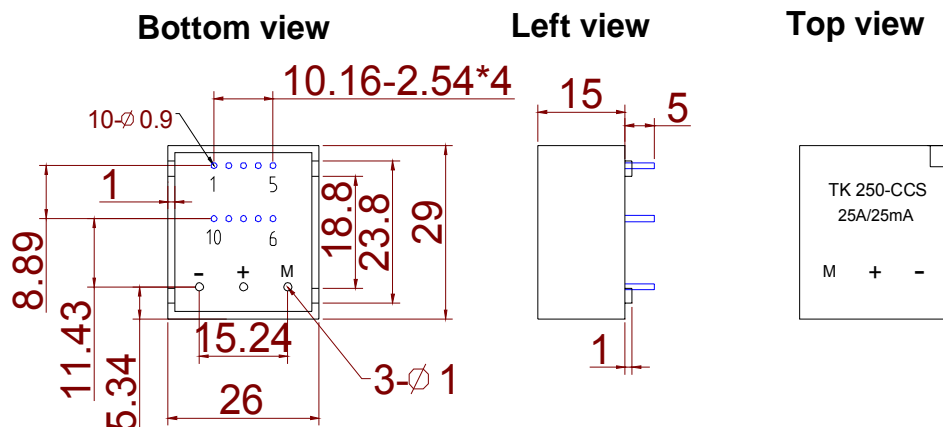
- ◆ Static converters for DC motor drives
- ◆ Switched Mode Power Supplies(SMPS)
- ◆ Power supplies for welding applications

● Advantages

- ◆ Excellent accuracy
- ◆ Low temperature drift
- ◆ Wide frequency bandwidth
- ◆ Very low insertion losses

- ◆ 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



Number of primary turns	Primary current		Nominal output current I_{SN} [mA]	Turns ratio K_N	Primary resistance R_p [m Ω]	Primary insertion inductance L_p [μ H]	Recommended connections
	nominal I_{PN} [A]	maximum I_p [A]					
1	25	36	25	1/1000	0.3	0.023	
2	12	18	24	2/1000	1.1	0.09	
3	8	12	24	3/1000	2.5	0.21	
4	6	9	24	4/1000	4.4	0.37	
5	5	7	25	5/1000	6.3	0.58	

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

- I_s is positive when I_p 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.