

Hall Current Sensor -TA250-SCS

$I_{PN}=10..25A$

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.



Operating performance (AT =25°C)

RoHS COMPLIANT

| Performance | Model | TA100-SCS | TA250-SCS |
|---|----------------|---|-----------|
| Nominal primary current | $I_{PN}(A)$ | 10 | 25 |
| Primary current measuring range | $I_P(A)$ | 0~±32 | 0~±80 |
| Supply voltage(±5%) | V_{CC} | 5V | |
| Output voltage | V_{OUT} | 2.5V @ $I_P=0$ 2.5±0.625V@± I_{PN} | |
| Number of secondary turns(±1%) | N_S | 2000 | |
| Load resistance | R_L | 2KΩ | |
| Internal measuring resistance(±0.5%) | R_{IM} | 125Ω | 50Ω |
| Thermal drift of R_{IM} | TCR_{IM} | < 50 PPM/°C | |
| Current consumption@ $V_C=5V$ | I_C | 10+ I_S mA | |
| R.m.s. voltage for AC isolation test | V_d | 2.5KV @50/60HZ/1MIN | |
| R.m.s.rated voltage | V_b | 525V | |
| Accuracy @ I_{PN} , TA=25 | X | ±0.2% | |
| Accuracy with $R_{IM}@I_{PN}$, TA=25°C | X_G | ±0.7% | |
| Linearity | ϵ_L | < 0.1% | |
| Thermal drift of $V_{OUT}@I_P=0$ | TCV_{OUT} | 50 ppm/°C (typ) 100ppm/°C(max.) | |
| Thermal drift of the gain | $TC\epsilon_G$ | 50ppm/ | |
| Residual voltage | V_{OM} | ±0.5 mV @3x I_{PN} 0 ±2.0 mV@5x I_{PN} 0 ±2.0 mV@10x I_{PN} 0 | |
| Reaction time @10% of $I_{P_{MAX}}$ | t_{ra} | < 50ns @10% of $I_{P_{MAX}}$ | |
| Response time @90% of $I_{P_{MAX}}$ | t_r | < 400ns @90% of $I_{P_{MAX}}$ | |
| di/dt accurately followed | di/dt | > 50A/μs | |
| Frequency bandwidth@(-db) | f | DC... 150 KHZ | |

General data

| | | |
|-----------------------|-------|---|
| Operating temperature | TA | -25~+85°C |
| Storage temperature | T_S | -40~+85°C |
| Mass | m | 16g |
| note | | Insulated plastic case recognized according to UL 94-V0 |

Applications

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

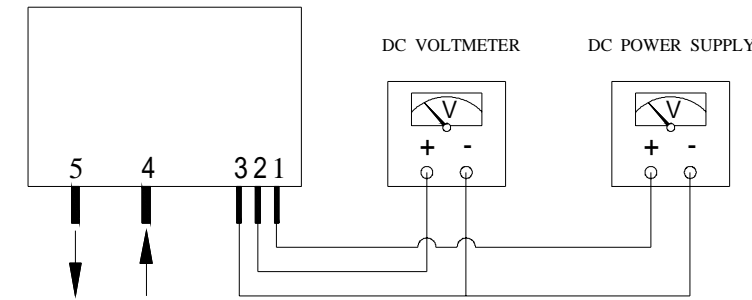
Advantages

| | |
|--------------------------|--|
| Excellent accuracy | Very good linearity |
| Low temperature drift | High immunity to external interference |
| No insertion losses | Optimized response time |
| Wide frequency bandwidth | Current overload capability |

Hall Current Sensor TA250-SCS

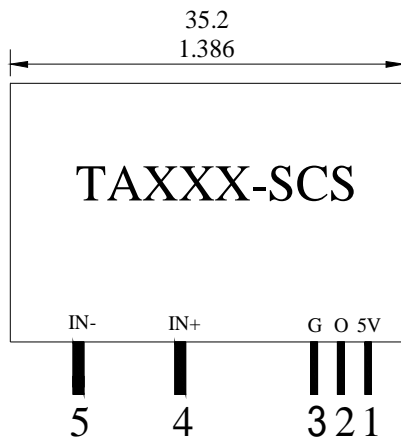
$I_{PN}=10..25A$

Connection

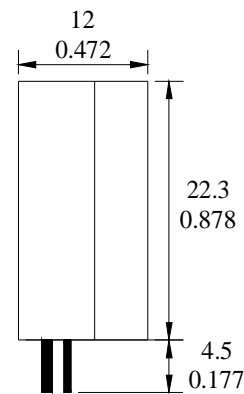


Current direction

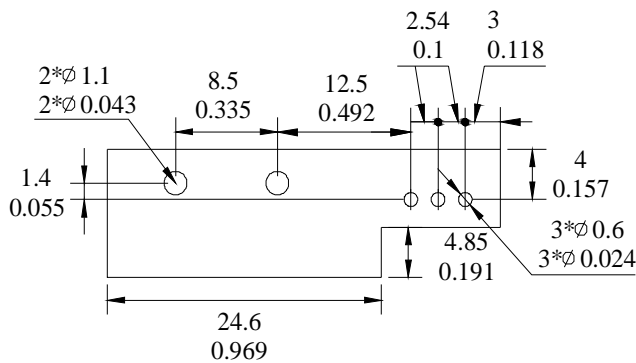
Dimensions (Unit:mm/inch)



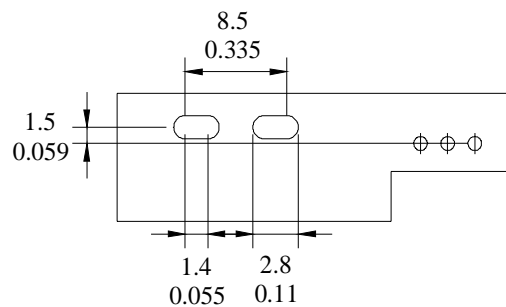
Front View



Right View



(TA100-SCS)



(TA250-SCS)

Bottom View

TOL : 0.2mm/0.0078inch

Pin Arrangement

Pin1: 5V , Pin2 :PUT, Pin3: GND , Pin4 : PRIMARY IN+ , Pin5 : PRIMARY IN-

Remarks

V_{OUT} is positive when I_P flows in the direction of the arrow.

Temperature of the primary conductor should not exceed 100 .

These are standard models. For different versions(supply voltages, secondary connections, unidirectional measurements, operating temperatures, etc.)please contact us.