

# Hall Current Sensor -TH500-CCS

$I_{PN}=50A$

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 performances ( AT =25°C )

Primary nominal r.m.s. current	$I_{PN}$	50	A				
Primary current measuring range	$I_P$	0~±70	A				
Secondary nominal r.m.s. current	$I_{SN}$	50	mA				
Measuring resistance	$R_M$	$T_A=70$		$T_A=85$			
			$r_{M}$	$r_{M}$	$R_{M \min}$	$r_{M}$	
		with ±12V @ ±50A <sub>max</sub>	10	100	60	95	Ω
		@ ±70A <sub>max</sub>	10	50	60 <sup>1)</sup>	60 <sup>1)</sup>	Ω
with ±15V @ ±50A <sub>max</sub>	50	160	135	155	Ω		
@ ±70A <sub>max</sub>	50	90	135 <sup>2)</sup>	135 <sup>2)</sup>	Ω		
Conversion ratio	$K_N$	1:1000					
Supply voltage	$V_{CC}$	±12~15 ( ±5% )	V				
Current consumption	$I_C$	10(@±15V)+ $I_S$	mA				
Linearity	$\epsilon_L$	±0.1 @0~± $I_{PN}$	%				
Accuracy	X	±0.65@ $I_{PN}, V_C=\pm 15V, T_A=25$	%				
Offset current	$I_O$	< ±0.2 @ $I_P=0, T_A=25$	mA				
Thermal drift of $I_O$	$I_{OT}$	±0.6 (type ±0.1)	mA/°C				
Response time	$t_r$	< 1	μs				
di/dt accurately followed	di/dt	200	A/μs				
Hysteresis offset current	$I_{OH}$	±0.3 @±3 $I_{PN}$ 0	mA				
Isolation voltage	$V_d$	2.5 @50(60)Hz/1min	KV				
Frequency bandwidth	f	0~200	KHz				

## • General data

Operating temperature	$T_O$	-25 ~+85°C	°C
Storage temperature	$T_S$	-40~+85°C	°C
Mass	m	18	g

## • 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

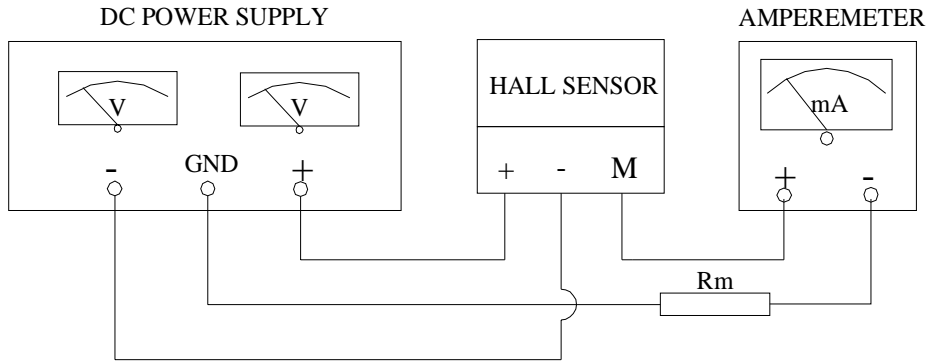
Excellent accuracy	Very good linearity
Low temperature drift	Optimized response time
Wide frequency bandwidth	High immunity to external interference
Very low insertion losses	Current overload capability

**Note:** 1)Measuring range limited to ±60A<sub>MAX</sub> 2)Measuring range limited to ±55A<sub>MAX</sub>

# Hall Current Sensor -TH500-CCS

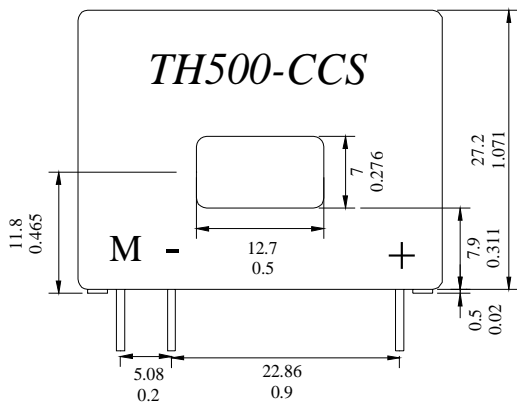
$I_{PN}=50A$

## Connection

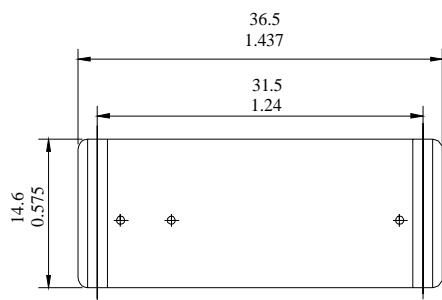
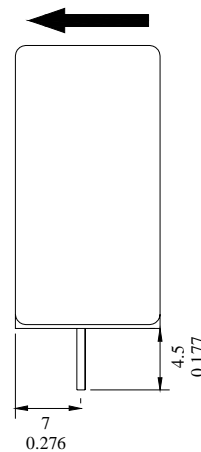


## Dimensions ( Unit:mm/inch )

### Front View



### Right View



### Bottom View

## Secondary terminals

Terminal +	+12...15V
Terminal -	-12...15V
Terminal M	measure

Tol:  $\pm 0.3\text{mm}/0.012\text{inch}$

## Remarks

$I_{OUT}$  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.