TBC-APS52 Series Closed Loop Mode Hall Effect Current Sensor

TBC-APS52 Series current sensor is a Closed loop device based on the measuring principle of the hall effect, with a galvanic isolation between primary and secondary circuit, it is used for precision measurement of DC, AC and pulse current.

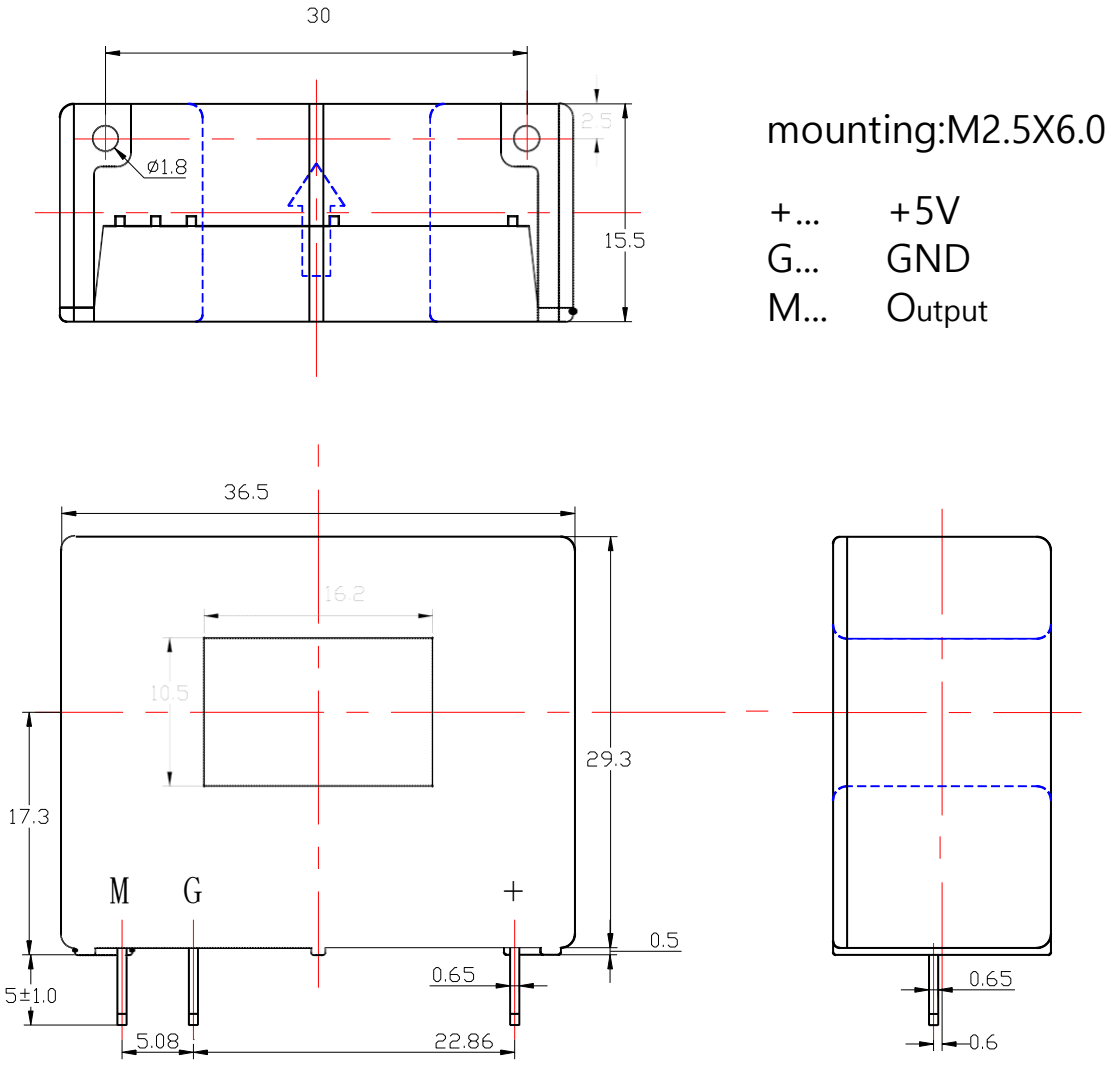
Electrical data **(Ta=25**℃±**5**℃, RL=10K**Ω, CL**=4700PF)

Type / Parameter	TBC- 50APS52	TBC- 75APS52	TBC- 100APS52	TBC- 150APS52	Unit
Rated input (Ipn)	±50	±75	±100	±150	A
Measure range (Ip)	±55	±82.5	±110	±165	A
Turns ratio (Np/Ns))	1:1000	1:1500	1:2000	1:1500	T
Internal resister	10±0.1%	10±0.1%	10±0.1%	5±0.1%	Ω
Rated output	@Ip=±Ipn ±2.0±0.5%				V
Supply voltage	+5.0 ±2%				V
Power consumption	≤20+IpX (Np/Ns)				mA
Zero voltage	@Ip=0 +2.5±0.4%				V
Zero voltage	≤±5				mV
Magnetic Offset voltage	≤±3.0				mV
Offset drift	≤±0.2				mV/℃
output drift	≤±0.2				mV/℃
Linearity	@Ip=0-±Ipn ≤0.1				%FS
Response time	@50A/μS,10%-90% ≤0.5				μs
Band-width	@-3dB DC-200				KHz
Galvanic isolation	@ 50Hz,AC,1min 2.5				KV

Applications

- Variable speed drives
- Welding machine
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Electrochemical

Mechanical dimension (for reference only)



Remarks :

1. All dimensions are in mm.
2. General tolerance ±1mm

Directions for use

1. When the current will be measured goes through a sensor, the voltage will be measured at the output end. (Note: The false wiring may result in the damage of the sensor)
2. Customs can adjust Output amplitude of the sensor by needs.
3. Custom design in the different rated input current and the output voltage are available.

Standards

UL94-V0.

EN60947-1:2004

IEC60950-1:2001

EN50178:1998

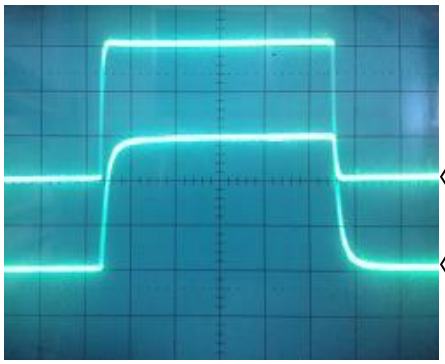
SJ 20790-2000

General data

	Value	Unit	Symbol
Operating temperature	-40 to +85	ºC	TA
Storage temperature	-40 to +125	ºC	TS
Mass(approx)	18	g	M

Characteristics chart

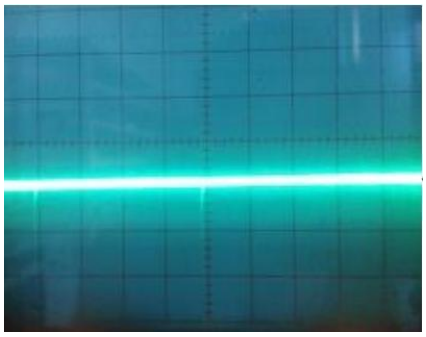
Pulse current signal response characteristic



(Input signal)

(Output signal)

Effects of impulse noise



(Output voltage)