CAB500 CURRENT SENSOR

1. Characteristic

Using the closed loop principle, the tested loop is isolated from the test loop
Low temperature drift, high precision, strong anti-interference ability
Support for CAN2.0B protocol
CAN timing error: 0.27%
No wake-up function
Can be an external 120 Ω common-mode resistance
Byte order: Big-end format (Motorola format)
High speed CAN transceiver: TJA1040
Baud rate to 500 KBPS.

2. General parameters

Working temperature:	-40℃~+105℃；
Storage temperature:	-40℃~+105℃；

3. Isolation parameters

Insulation resistance：	>= 500 MΩ；
Rms voltage for AC insulation test	50Hz 1min 2.5KV
Over-voltage	24V/1 minute
Minimum supply voltage	7.2V
Maximum supply voltage	18V
Electrostatic discharge voltage	4KV

4 . Electrical parameters

Condition: Uc =13.5 V, T A = 25℃, unless specified.

Type / Parameters	CAB-500A-C
Primary nominal current	500A
Primary current measuring range	±500A
Supply voltage	Min8V Tycital13.5V Max16V
Consumption current	@Uc13.5V@ Ip=0 <15mA @ Ip=500A <135mA
Offset current	@ Ip=0 <±50mA
Sensitivity error	<±0.5% (@Ta=25℃)
Linearity error with I_pn	<±0.1% (@Ta=25℃)
Temperature characteristic	<70ppm (@ Ta=-40~105℃)

5. CAB-500 Can Output specification

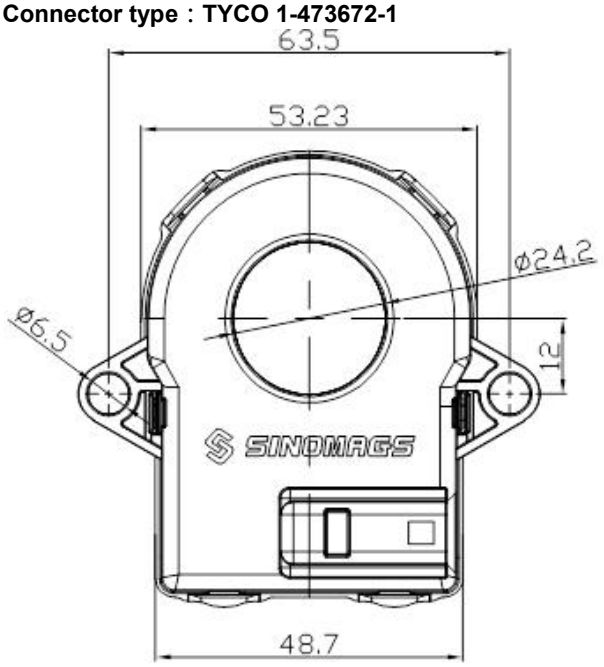
Message Description	CAN ID	name	Data Length (bytes)	Type of frame	Message launch type	Signal description	Signal Name	Start bit	End bit
Current IP (mA)	0x3C2	CAB500_Ip	8	standard	Cyclic message every 10ms	Ip Value : 80000000H= 0mA, 7FFFFFFFH= - 1mA, 8000001H= 1mA	IP_VALUE	0	31
						b0:Error information (0=Normal ,1=failure)	ERROR_INDICATION	32	32
						b7-b1:RxQuality (0-100%)	ERROR_INFORMATION	33	39
						Vacant bits (fix to 0)	VACANT_DATA_3BYTES	40	63

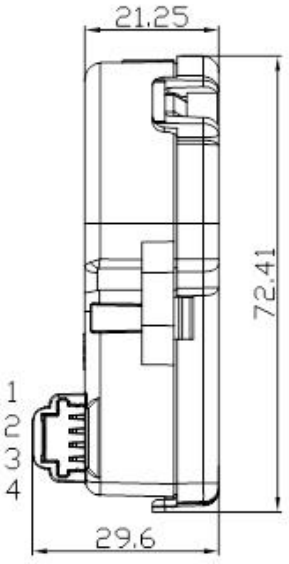
6. Diagnostic Trouble Code (DTC)

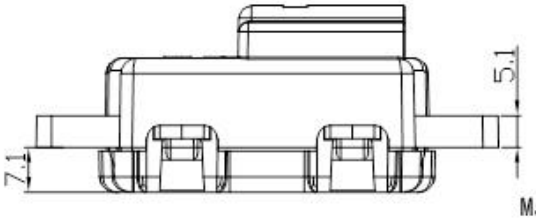
FAILLURE MODE	Ip VALUE	ERROR INDICATION	ERROR INFORMATION
Error on dataflash CRC	FFFFFFFF	1	0x41
Supply voltage out of range	FFFFFFFF	1	0x47
Closed-loop reference voltage over range	FFFFFFFF	1	0x48
Signal not available for more than 100ms	FFFFFFFF	1	0x46

7. Dimensions： (in mm)

Connector type：TYCO 1-473672-1



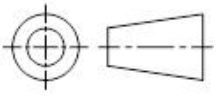




Terminals

1	CAN-L
2	CAN-H
3	GND
4	Uc

Material : Fit UL94V-0 & RoHS requirements ;
General tolerance : ±0.5
Unit :mm



8. Application

- Hybrid and electric vehicle battery pack
- Accurate current measurement for battery management applications