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CSEV-CAB High Accuracy DC Current Transducer

The CSEV-CAB-500 current transducer is a high-precision DC current sensor mainly installed on the battery pack bus to monitor the charging and discharging current. It uses fluxgate technology, with high precision, low hysteresis and other advantages. The zero bias current is less than 10mA. Due to the fluxgate principle, there is no hysteresis effect, and it can still maintain low zero bias and high precision after 1000A large current impact. Fluxgate principle has absolute technical advantages in the field of high precision measurement. The excitation magnetic field is used to oscillate continuously, which can be equivalent to the degaussing magnetic field, so that the hysteresis can be minimized.

The main components are selected in line with automotive electronic components, with high reliability, high stability characteristics.

Features:
- High Accuracy: ＜0.1%
- Excellent Linearity: ＜0.02%
- Low hysteresis, zero bias: ≤10mA
- With power protection function
- High-speed CAN2.0B /RS485 interface
- Operating Temp.: -40~105℃

Application:
- Battery Management System
- Battery System Distribution Box
- High Voltage Distribution Box
- Lithium battery energy management equipment

Electrical Characteristics:

TYPE	CSEV-CAB-500
Measuring Range I_{PM}	±500A
Operating Current I_C	30mA @ IP=0A, Uc=12V 80mA @ IP=IPM, Uc=12V
Primary Overload Current I_{PM}(Adc)	±300A / 60s
Operating Voltage V_C （V）	12 ±4
Linearity ε_L	±0.02% @ -40℃~105℃
Zero Offset Current I_o @ IP=0A	±10mA @ -40℃~105℃
Accuracy @IP=±40A X_G	±40mA @ -40℃~105℃
Dielectric Strength V_d	50Hz, 60s, 2.5kV
Operating Temperature	-40℃~105℃
IP Grade	IP56

OSWELL E-GROUP LIMITED

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CAN Output:

CAN2.0B

Baud Rate: 250kpbs

Data Pattern: Big-endian

Tolerance of CAN Oscillator: 0.27%

External Resistance: 120Ω
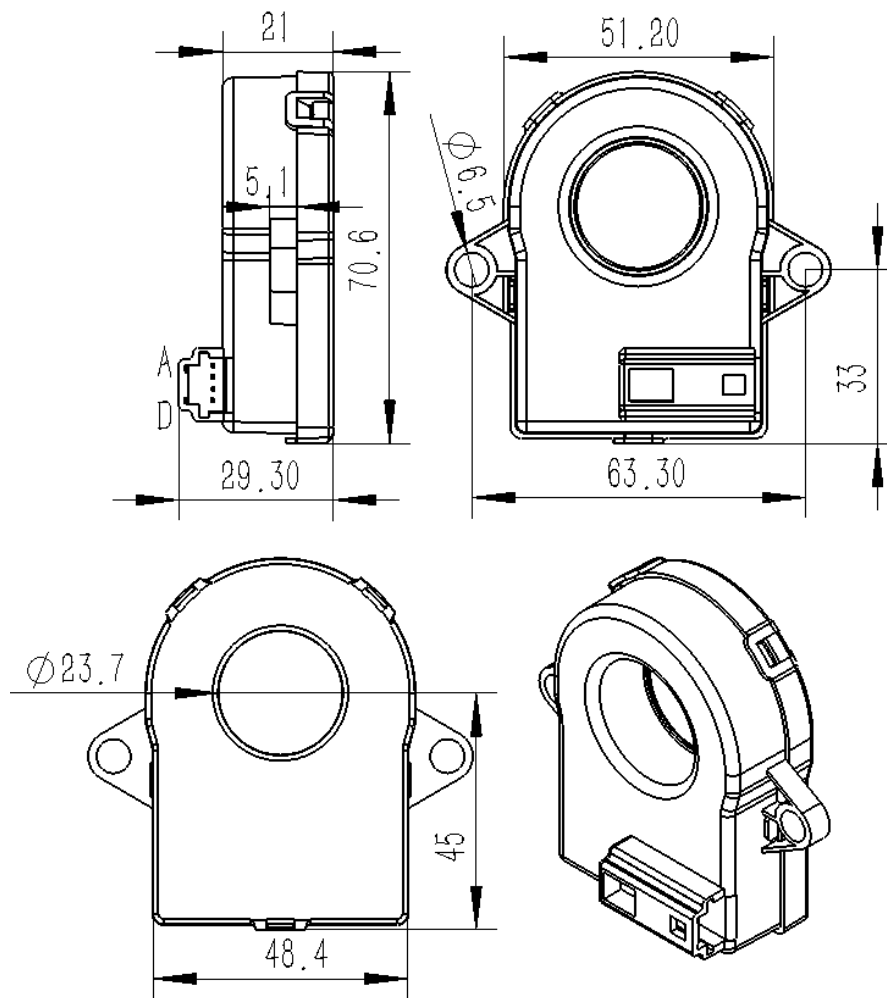
High Speed CAN Chip: TJA1040

Data Format:

Current	CAN ID	Name	Data Length	Type of Frame	Message Launch type	Signal Description	Signal Name	Start Bit	End Bit
Return Current IP (mA)	3C2H	CHCS-CAB-500A	8	Stand-ard	Cyclic tranceived message 10ms cycle	IP Value: 80000000H = 0mA, 7FFFFFFFH=-1mA , 80000001H=1mA	IP-VALUE	0	31
						B0:Error Information (0=Normal,1=failure)	ERROR INDICATION	32	32
						B7tob1:RxQuality (0to100%)	ERROR INFOR-MATION	33	39
						NAME	FSCATB300/360H	40	63

Error Message:

Misrepresentation	IP VALUE	ERROR INDICATION	ERROR INFORMATION
Flash CRC Error	FFFF FFFFH	1	41H
Overclocking oscillates for more than 10s (>2.5kHz)	FFFF FFFFH	1	42H
The magnetic ring does not oscillate beyond 20ms	FFFF FFFFH	1	43H
Enter Fault Mode	FFFF FFFFH	1	44H
No signal over 100ms	FFFF FFFFH	1	46H
Overvoltage (>32V)	FFFF FFFFH	1	47H

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Dimensions (mm) ±0.8mm

Mainly used in electric vehicle field, connector model Tyco AMP 1473672

PIN NO.	D	C	B	A
Function	VCC	GND	CAN_H	CAN_L

Attentions:

1. Prevent ESD impact during wiring, which requires professional engineers to operate. The power supply, input and output connecting wires must not be misaligned or reversed, otherwise the product may be damaged.

2. The product shall be installed and used in an environment free from conductive dust and corrosivity

3. Severe vibration or high temperature may also cause product damage. Please pay attention to the use occasion.

4. Please pay attention to the danger of electric shock. After installation, the operator shall not touch any exposed conductive parts. If necessary, the sensor can be protected, such as adding a protective cover.