威 佳

威佳电气，
每位工程师的专业选择！

UE-iLink-700DHR

Product Introduction

使用产品前请仔细阅读本使用说明，并请妥善保管

1 产品概述
Product Description

UE-iLink 系列电量传感器为一款高精度直流电流传感器，主要安装于电池组母排，用于监测充放电电流。采用磁通门技术，具有高精度，低磁滞等优点。零点偏置电流小于 10mA, 由于采用磁通门原理，无磁滞影响，在 1000A 大电流冲击后仍能保持低零偏，高精度特性。磁通门原理在高精度测量领域具有绝对的技术优势，采用激励磁场持续振荡，可等效于消磁磁场，进而使磁滞降到最低。

国标 QCT 897-2011 中第 4.2.4 条目规定 SOC 估算精度要求不大于 10% 。为保证该精度，充放电监测精度需优于 1%，为保证大电流，小电流场合下均有高精度 SOC， 传感器满量程精度需尽一步提高至 0.2%。UE-iLink 系列电量传感器满足该精度要求，并且具有更小的磁滞及更小的零点偏移。所用主要元器件均选用符合汽车电子级元器件，具备高可靠性，高稳定性特征。

UE-iLink series electric quantity sensor is a high-precision DC current sensor, which is mainly installed on the busbar of the battery pack to monitor the charge and discharge current. Fluxgate technology has the advantages of high precision and low hysteresis. The zero bias current is less than 10mA. Due to the fluxgate principle, it has no hysteresis effect, and can still maintain low zero bias and high accuracy after 1000A high current impact. The fluxgate principle has absolute technical advantages in the field of high-precision measurement. The continuous oscillation of the excitation magnetic field can be equivalent to the degaussing magnetic field, so as to minimize the hysteresis.

Article 4.2.4 of the national standard QCT 897-2011 stipulates that the SOC estimation accuracy shall not be greater than 10%. In order to ensure this accuracy, the accuracy of charge and discharge monitoring needs to be better than 1%. In order to ensure high-precision SOC in high current and low current occasions, the full-scale accuracy of the sensor needs to be further improved to 0.2%. UE-iLink series electric quantity sensor meets the accuracy requirements, and has smaller hysteresis and smaller zero offset. All the main components and parts used are in line with the automotive electronic level components and parts, which have the characteristics of high reliability and high stability.

产品特性

★ 高精度
★ 高线性度
★ 低磁滞，零点偏置：≤ 10mA
★ +9~16V 供电，具备电源保护功能
★ 高速 CAN2.0B 接口 /RS485 接口
★ 工作温度 -40°C ~105°C

应用领域

★ 电动汽车电池管理系统（BMS）
★ 电动汽车电池系统配电盒（BDU）
★ 电动汽车高压配电盒（PDU）
★ 工业用锂电池能源管理设备
★ 陆基坦克备用电源
★ 其它

1.1 电气参数 Electrical Parameters

参数	符号	单位	最小值	典型值	最大值	备注
量程	I_{PM}	A	-700		700	
供电电压	U_C	V	8	12	16	
工作电流 @IP=0A	I_C	mA		45		@ U_C=12V
工作电流 @IP=IPM	I_C	mA		180		@ U_C=12V
线性度误差	L	%	-0.1		0.1	±3σ 全温区
零点偏置 @IP=0A	I_O	mA	-10		10	±3σ 全温区
总精度	X_G	A	-1.5		1.5	@25°C
	X_G	A	-2.5		2.5	@-40°C ~105°C
零点温漂	T_{off}	mA/K		0		
增益温漂	T_{gain}	Ppm/K	70		70	±3σ
输出噪声	Noise	mA	-10		10	
工作温度	T_A	°C	-40		105	

1.2 极限参数 Limit Parameters

参数	符号	单位	规格	备注
过压	U_C	V	32	400mS
过压	U_C	V	24	1minute
负电压	U_C	V	-50	1minute
最小工作电压	U_C	V	6	连续工作，不能测量

最大工作电压	U_C	V	18	连续工作，不能测量
ESD	U_D	KV	2.5	50Hz, 1minute
防护等级			IP56	

2 数据反馈
Data Feedback

2.1 CAN 输出 CAN Output

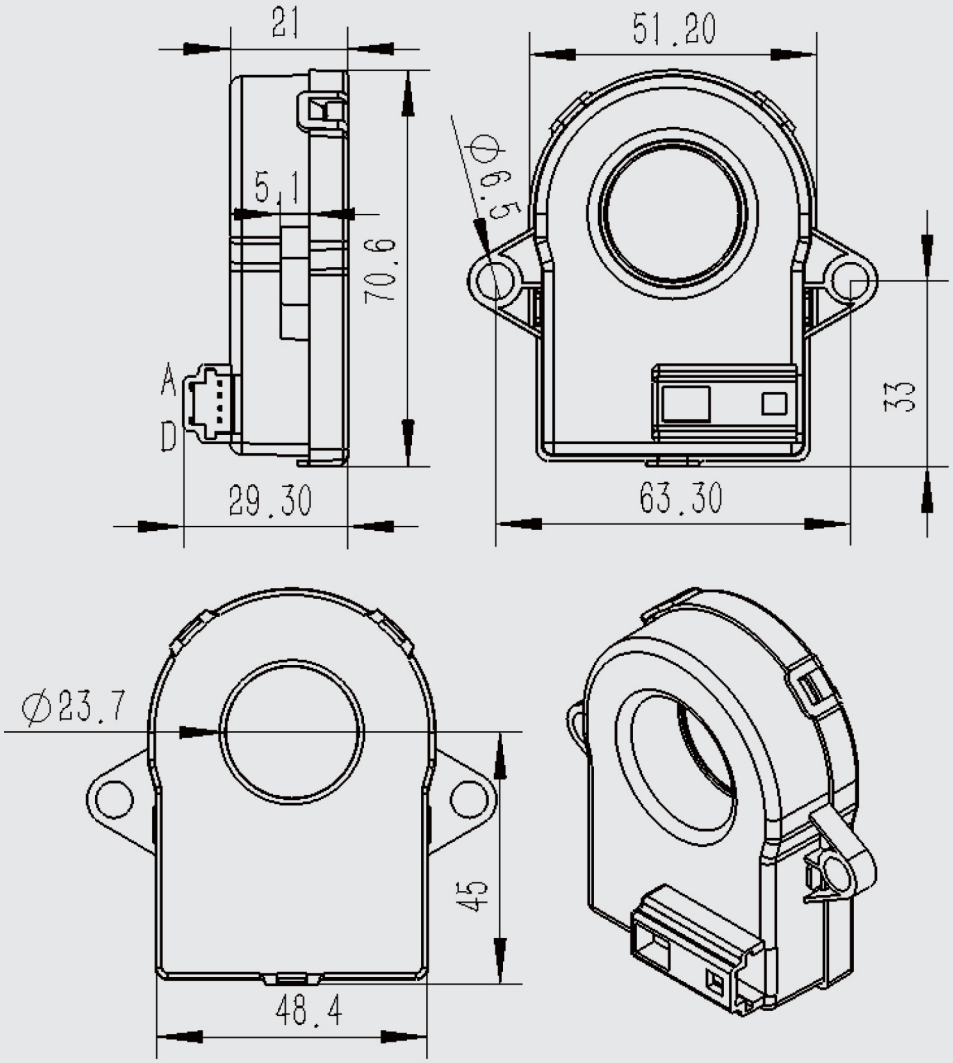
CAN2.0B
波特率： 250kpbs/500kpbs（可选）
数据模式：大端模式
CAN 震荡器公差：0.27%
外接电阻： 120Ω
高速 CAN 芯片：TJA1040

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	700 DHR	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	FSCATB30	40	63

2.3 错误信息 Error Message

错误说明	IP VALUE	ERROR INDICATION	ERROR INFORMATION
Flash CRC 错误	FFFF FFFFH	1	41H
超频振荡超过 10ms（>2.5kHz）	FFFF FFFFH	1	42H
磁环不振荡超过 20ms	FFFF FFFFH	1	43H
进入故障模式	FFFF FFFFH	1	44H
无信号超过 100ms	FFFF FFFFH	1	46H
过电压（>32V）	FFFF FFFFH	1	47H

3 结构图
Structure Diagram



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Product Introduction

Vaule Plus,
Professional Choice for Each Engineer!

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