HONGFA

2024

CURRENT SENOR

PERSEVERE FOR
PROGRESS,
STRIVE FOR EXCELLENCE!

PRODUCTION BASE

HPT became a wholly-owned subsidiary of Hongfa group in year 2017. It produces CT, Hall sensor, fluxgate and Shunt(in developing). The goal is to become the benchmark in the Asian electrical measuring components industry.

Factory area: **25,000m²**

Annual capacity for CT: **50M pcs**

Annual capacity for Hall Effect Sensor: **1.2M pcs**

Annual capacity for Fluxgate Sensor: **1M pcs**

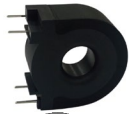
Current sensor product series

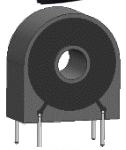
All below products comply to Reach&Rohs

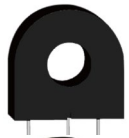
Mini CT: HMCTXXX;
DC Immune CT: HDCTXXX
Split core CT: HKCTXXX

For leakage current detection: HFCA-FXX
For measuring current: HFCA-MXX

Closed loop hall effect sensor: HFCA-LXX
Open loop hal leffect sensor:HFCA-PXX


HDCT2-2


HDCT406
HMCT406


HMCT221


HMCT061


HMCT3

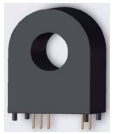

HMCT2


HMCT347


HKCT24
480A

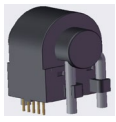

HKCT16
240A


HKCT10
60A

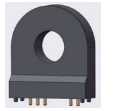

HFCA-F13

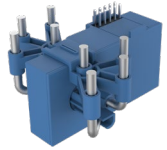

HFCA-F12-2

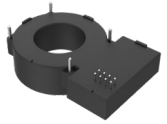

HFCA-F11

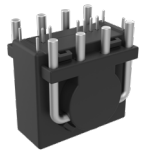

HFCA-F10


HFCA-F09


HFCA-F06-02


HFCA-F15


HFCA-F16

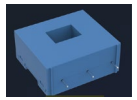

HFCA-F19

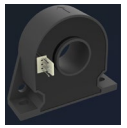

HFCA-F21


HFCA-F22


HFCA-M08

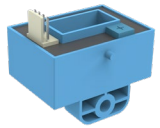

HFCA-L11


HFCA-L10

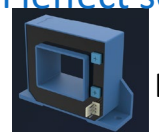

HFCA-L09

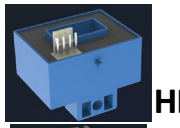

HFCA-L06

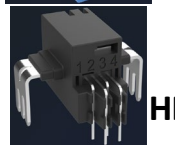

HFCA-L03


HFCA-L02


HFCA-L01


HFCA-P26


HFCA-P18

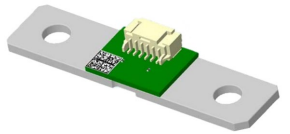

HFCA-P09

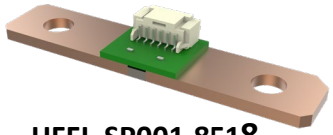

HFCA-P01


HFCA-P03


HFCA-P11


HFCA-P19


HFFL-SP001-8420


HFFL-SP001-8518


HFFL-S002-8436


HFFL-S001-8518

Category

CT | Fluxgate sensor | Closed loop hall effect sensor | Open loop hall effect sensor | Shunt

Remark: 1. Shunt is designed for vehicle. HPT will get TS16949 in mid 2025.
2. All above products comply to Reach&Rohs

Current transformer

产品与运用

Application

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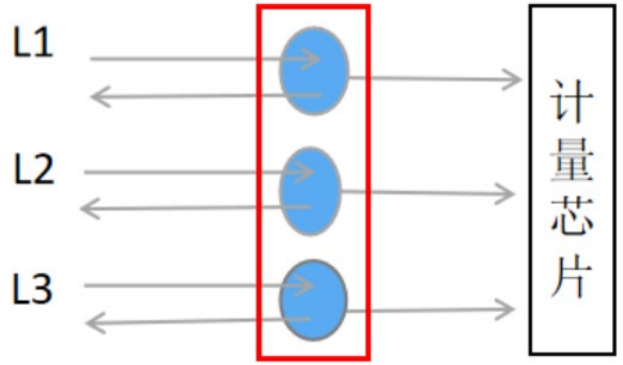
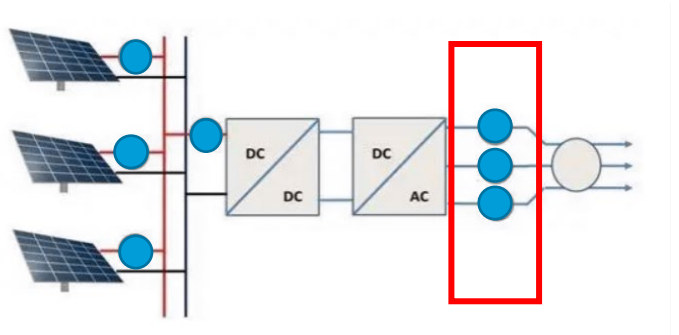
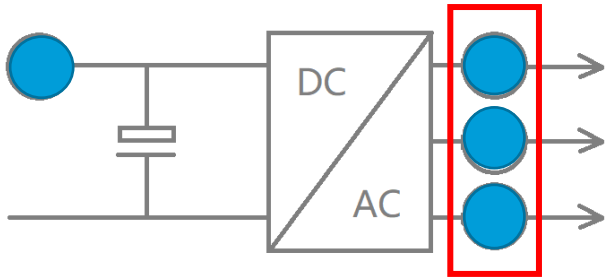
Metering: Measuring AC



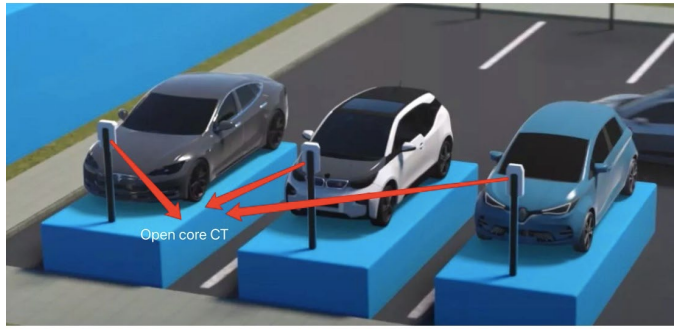
Inverter: Measuring or monitoring AC



Variable-frequency Drive: Detect the output current of the circuit, to control or adjust the frequency and speed.



Charging station: monitor the current and to achieve dynamic load balancing



Remark： The part in red box are current transformer

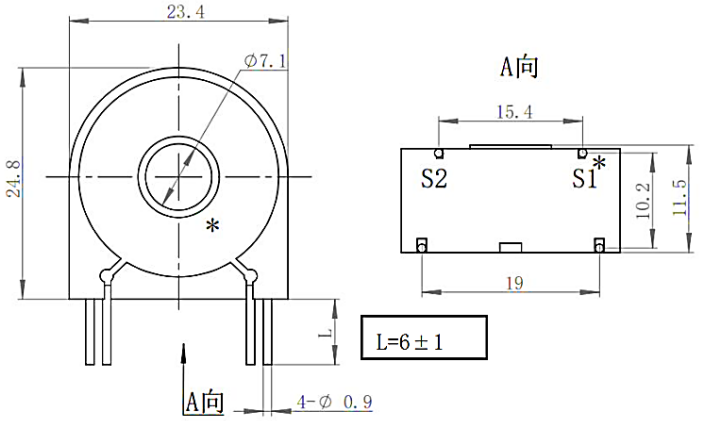
产品与运用

Mini current transformer: HMCT series

宏发股份 HONGFA GROUP

HMCT406

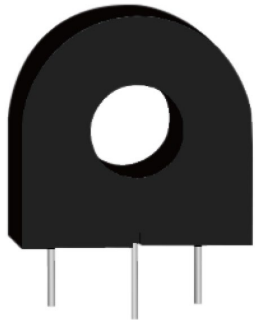
Parameter	Value	Parameter	Value
Primary current	5A	Accuracy class	0.2
Maximum current	60A	Secondary resistance	10Ω
Secondary current	2.5mA	Certificate	CE



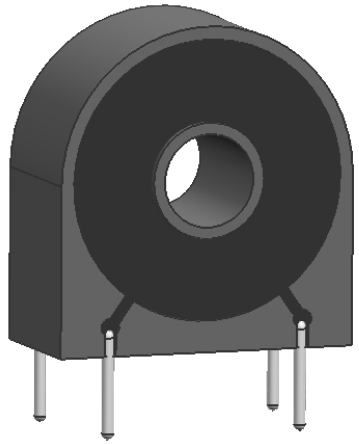
HMCT2

HMCT3

HMCT061



HMCT221



HMCT406

不断进取 永不满足

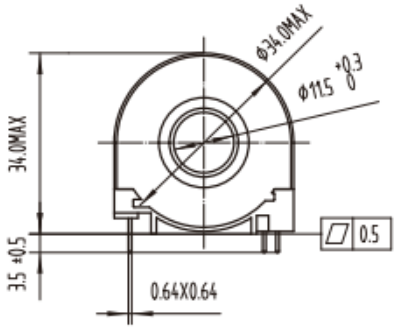
产品与运用

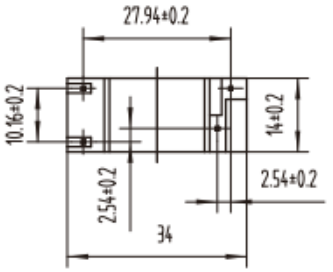
DC immune CT: HDCT Series

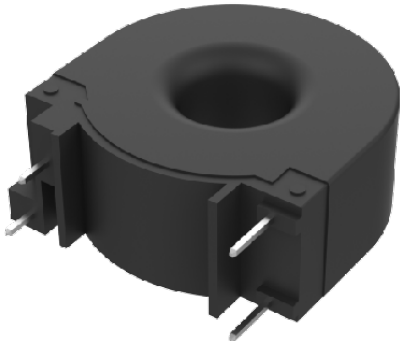
宏发股份 HONGFA GROUP

HDCT2-2

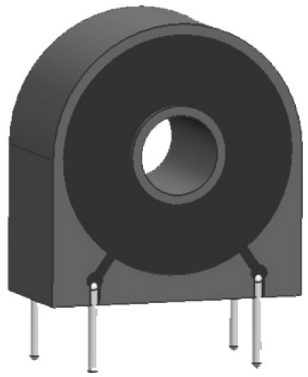
Parameter	Value	Parameter	Value
Primary current	5A	Accuracy class	0.2
Maximum current	100A	Secondary resistance	10Ω
Secondary current	2mA	DC immune	Conform to IEC62053-21
Application	Metering	Certificate	CE







HDCT2-2
Benchmark: VAC X501



HDCT666

不断进取 永不满足

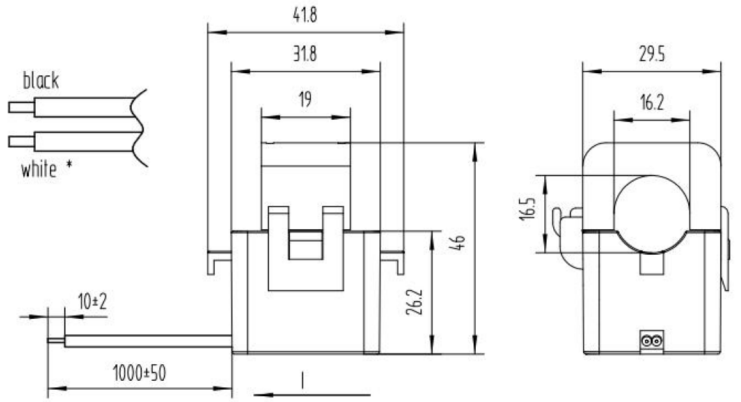
产品与运用

Split core CT: HKCT Series

宏发股份 HONGFA GROUP

HKCT16

Parameter	Value	Parameter	Value
Primary current	100A	Accuracy class	1.0
Maximum current	120A	Secondary resistance	10Ω
Secondary current	33.3mA	Certificate	CE



HKCT10

HKCT24

HKCT16

宏发股份 HONGFA GROUP

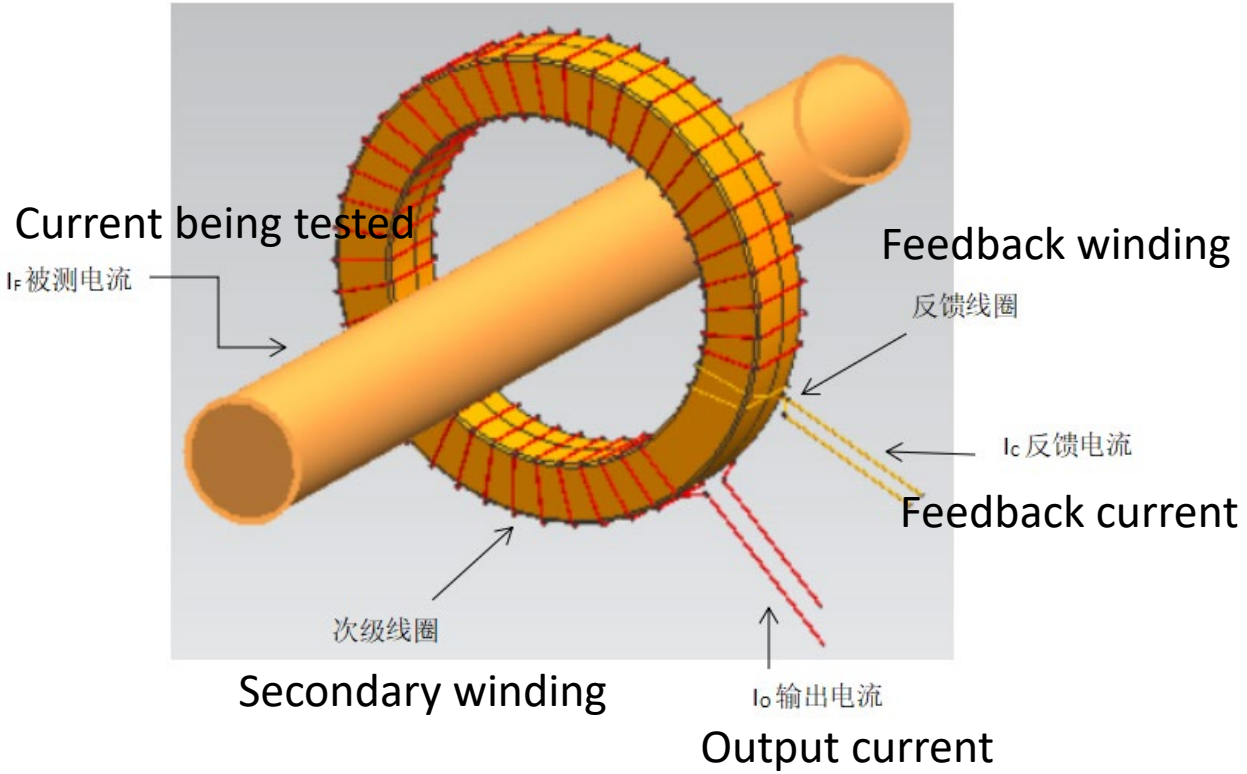
Fluxgate sensor

产品与运用

Working principle

- When Ip=0A, the energizing coil will generate magnetic field.
- When there is leakage current through the core, it will generate another magnetic field.
- This will have impact on the original magnetic field, finally impact the output signal. And the software will calculate the leakage current based on the output change.

Main feature: **Can measure both AC and DC, sensitvie to small current, can output both digital and analog signal, price is high.**



产品与运用

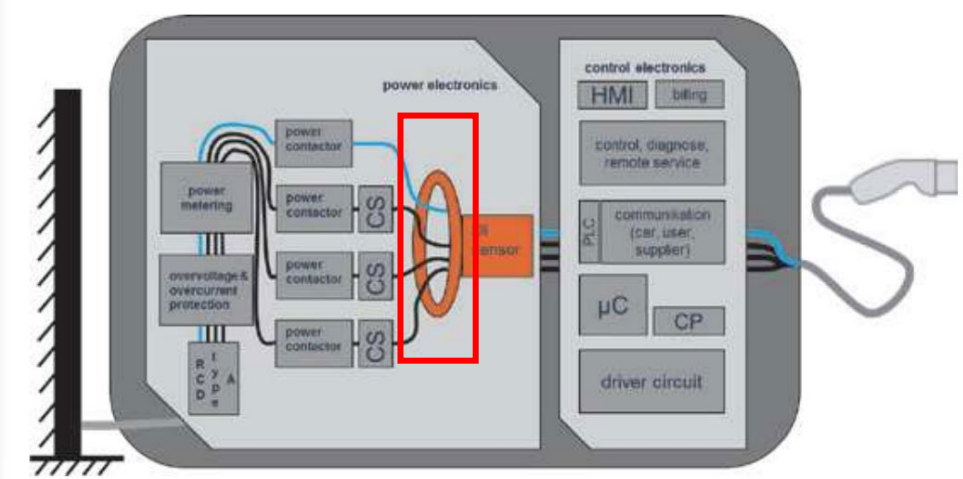
Application

宏发股份 HONGFA GROUP

EV charger：

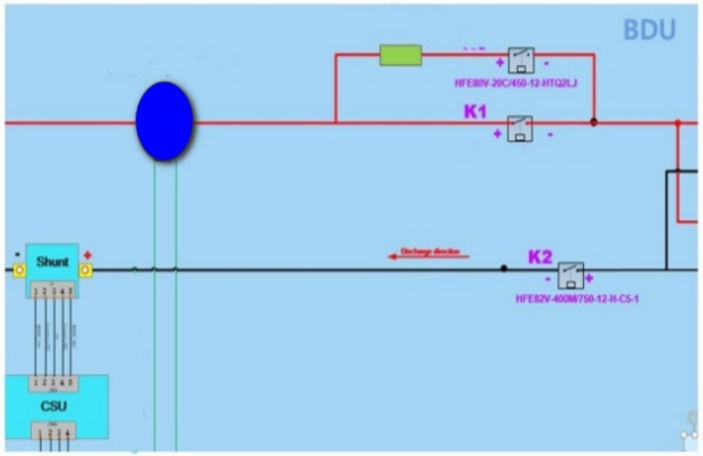
Function: Deteck leakage current for AC charger

IEC62955:RDC-MD and RDC-PD standard to make sure the charging safety



Energy storage cabinet：

Function: To monitor the current status of the battery pack in the BMS system in the energy storage cabinet to ensure the safety and performance of the battery pack



BDU内部图

Remark：The part in red box is Fluxgate sensor

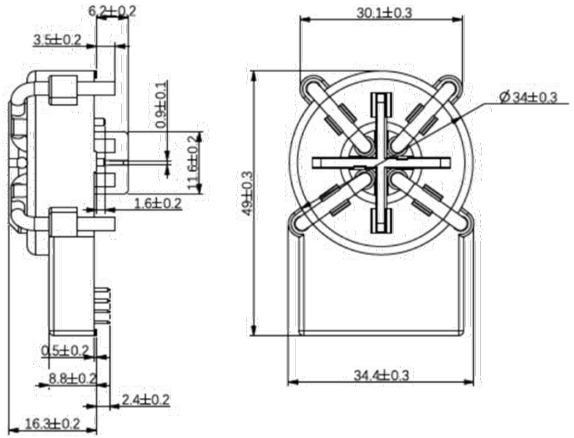
产品与运用

For RDC-MD

宏发股份 HONGFA GROUP

HFCA-F12-2

Parameters	Value
RMS Rated current	40A/32A
Rated residual operating current	DC 6mA
Output method	Digital output&PWM
Mounting method	PCB horizontal mounting with primary conductor
Conform to standards	IEC62955 RDC-MD
Application	Charging mode 3
Operation temperature	-40℃-+105℃
Certification	CE



HFCA-F12-2
Benchmark: VAC X920

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产品与运用

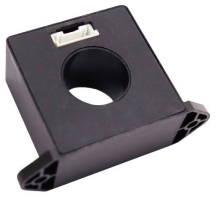
For RDC-PD

宏发股份 HONGFA GROUP

HFCA-F19

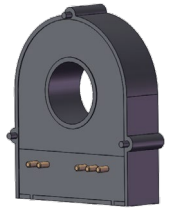
Parameters	Value
RMS Rated current	63A/32A
Rated residual operating current	DC 6mA & AC 30mA
Output method	Digital output
Conform to standards	IEC62955 RDC-PD
Application	Charging mode 3
Operation temperature	-40℃-+105℃
Certificate	CE

HFCA-F06



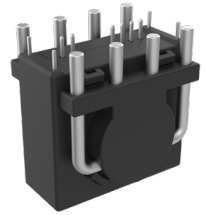
HFCA-F09

HFCA-F10

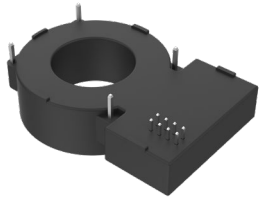


HFCA-F11

HFCA-F13

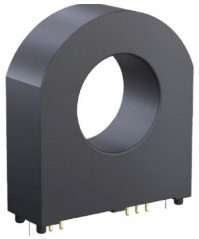


HFCA-F19



HFCA-F16
Benchmark:
VAC X900

HFCA-F21



HFCA-F22

不断进取 永不满足

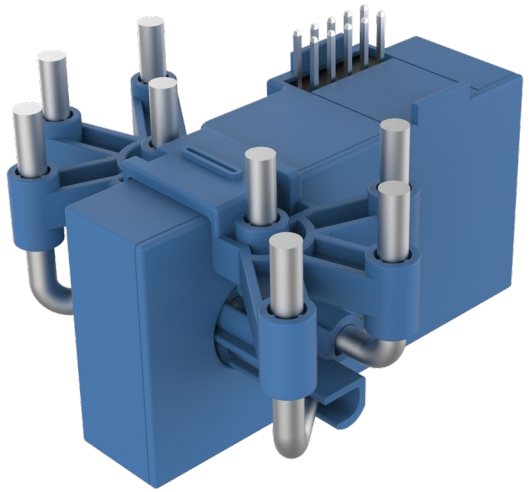
产品与运用

For RDC-PD

宏发股份 HONGFA GROUP

HFCA-F15，to replace LEM cdsr_0_07-np

Parameters	Value
RMS Rated current	32A
Primary residual current measuring range	
Operation temperature	-40℃-+85℃
Output method	Analog output&SPI
Mounting method	PCB horizontal mounting with primary conductor
Conform to standards	IEC62955 RDC-PD
Application	Charging mode 3
Certificate	CE



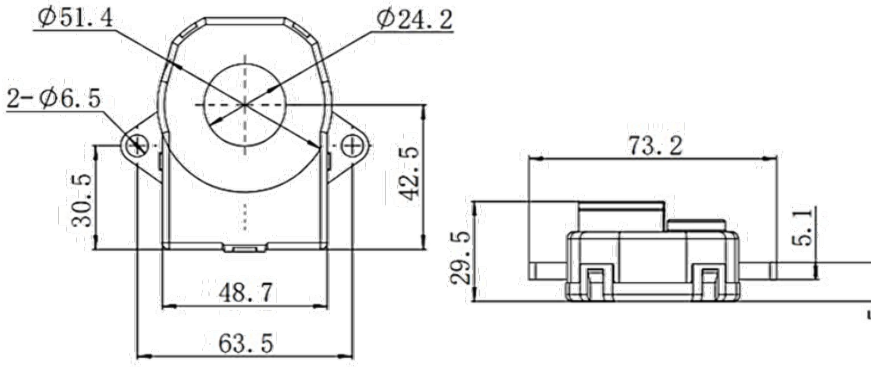
产品与运用

For Energy storage cabinet(measuring)

宏发股份 HONGFA GROUP

HFCA-M08

Parameters	Value
额定电流 Rated current	0~±500A
输出信号 Output signal	CAN 2.0B
零点输出 Output @ no current	≤±10mA
精度 Accuracy	0.3%@25℃ 0.5%@（-40~85）℃
线性度 linearity	0.1%@25℃
工作温度 Rated temp	-40℃~85℃
供电电压 Supply voltage	12V
证书 Certificate	UL&CE



HFCA-M08
Benchmark: LEM CAB500

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Hall effect sensor

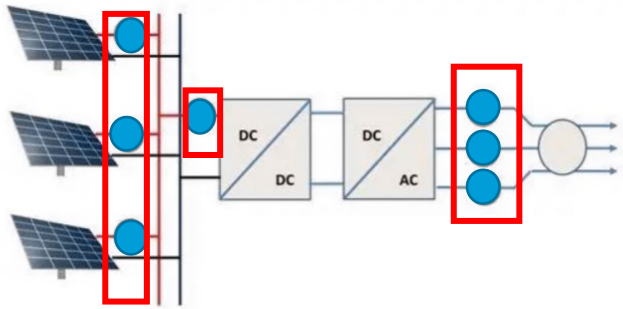
产品与运用

Application

宏发股份 HONGFA GROUP

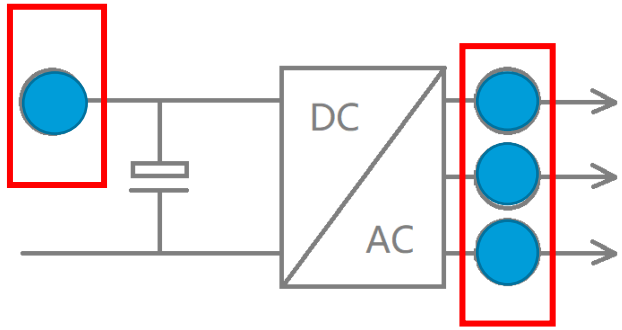
Inverter

Function: For ground fault detection, and for current measurement for DC and AC side



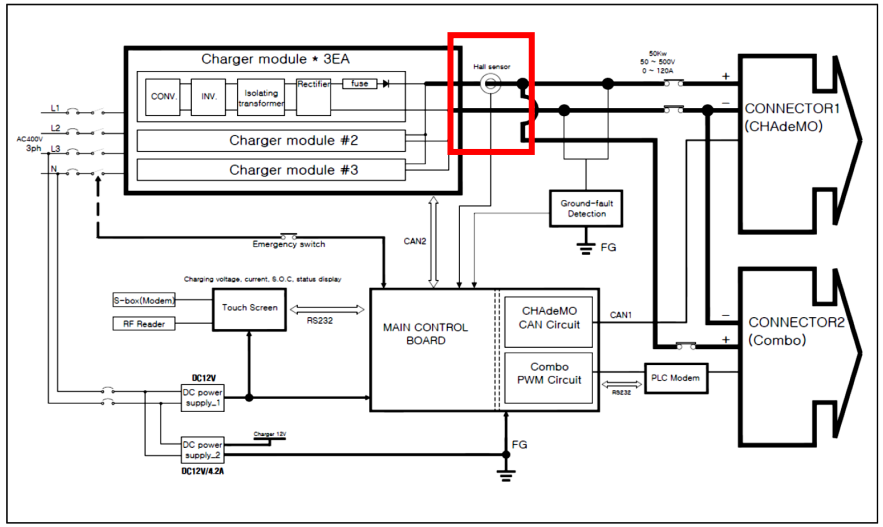
Variable-frequency Drive

Function: Detect the output current of the circuit and realize frequency and speed control.



EV charger：

Function： Current measurement of main circuit



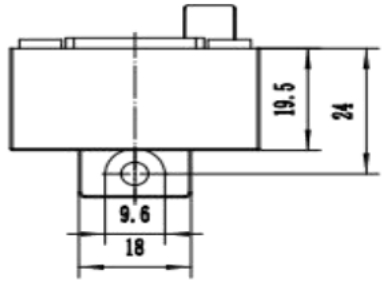
Remark：The part in red box is hall effect sensor

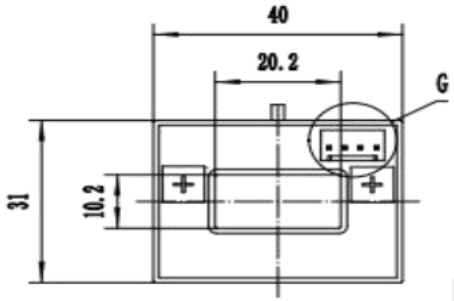
产品与运用

Open loop Hall effect sensor: HFCA-P01

宏发股份 HONGFA GROUP

Parameters	Value
额定电流Primary nominal current	50~600A
满量程输出 Output voltage@I_{PN}	2.5V±0.625V
零点输出 Electrical offset voltage	2.5V±0.015V
精度 Accuracy	≤±1%
线性度 linearity	≤±0.5%
响应时间 Response time	≤5us
带宽 Frequency	DC 200 Hz
零点温漂 Temp Effect @ Zero point	< 1mV/℃
供电电压 Supply voltage	5V
证书Certificate	CE





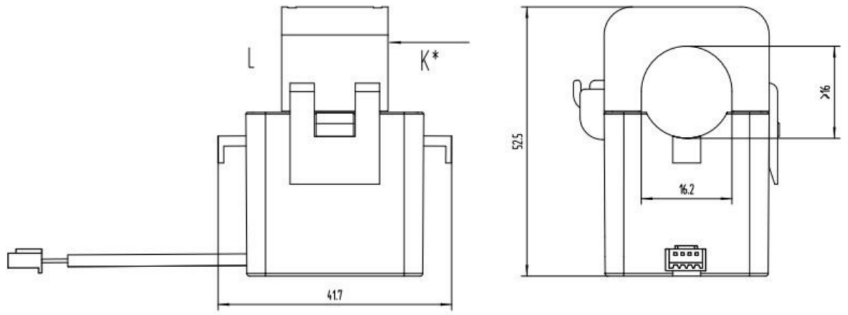
Benchmark:
LEM HASS 50~600-S

产品与运用

Open loop Hall effect sensor: HFCA-P03

宏发股份 HONGFA GROUP

Parameters	Value
额定电流 Primary nominal current	100A
满量程输出Output voltage@I_{PN}	2V±1V
零点输出 Electrical offset voltage	2V
精度 Accuracy	≤1%
线性度 linearity	/
响应时间 Response time	≤3.6 us
带宽 Frequency	50kHz
零点温漂 Temp Effect @ Zero point	< 1mV/℃
供电电压 Supply voltage	5V
证书 Certificate	CE



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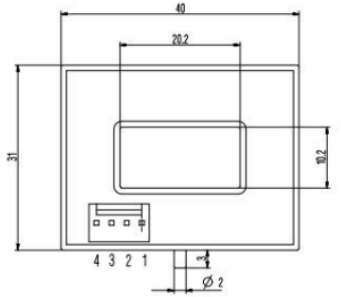
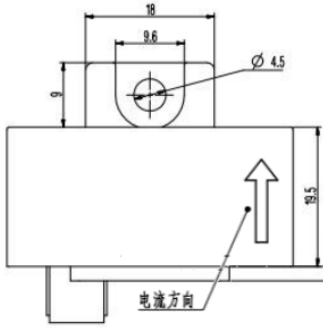
产品与运用

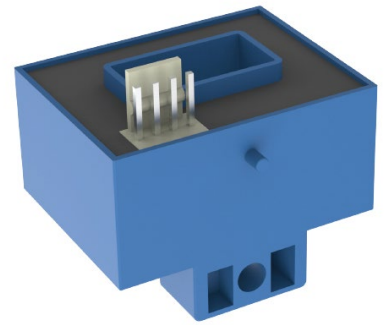
Open loop Hall effect sensor: HFCA-P11

宏发股份 HONGFA GROUP

Parameters	Value
额定电流 Primary nominal current	50~600A
满量程输出 Output voltage@I_{PN}	4V
零点输出 Electrical offset voltage	≤±20mV
精度 Accuracy	1%
线性度 linearity	0.8%
响应时间 Response time	≤5us
带宽 Frequency	0~50kHz
零点温漂 Temp Effect @ Zero point	< 1mV/℃
供电电压 Supply voltage	±15V±5%
证书 Certificate	CE







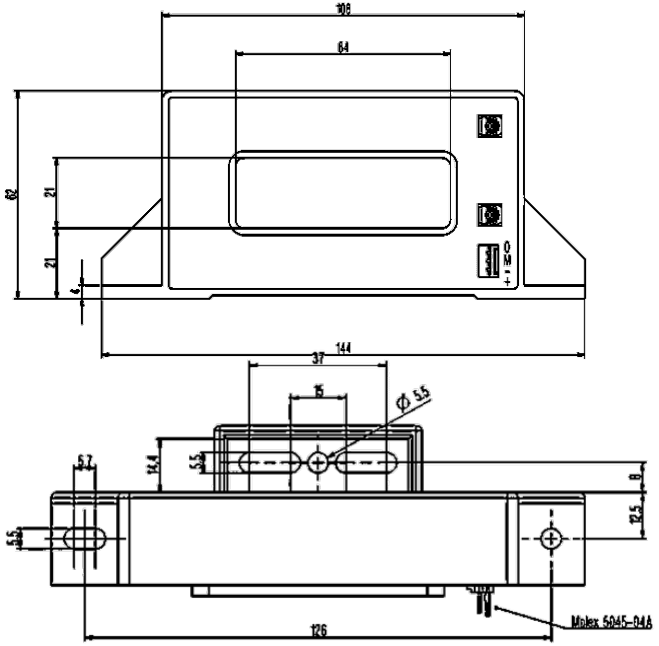
Benchmark:
LEM HAS 50~600-s

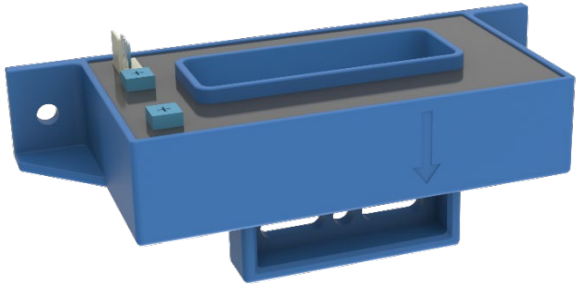
产品与运用

Open loop Hall effect sensor: HFCA-P19

宏发股份 HONGFA GROUP

Parameter	Value
额定电流 Primary nominal current	500~2500A
满量程输出Output voltage@I_{PN}	4V
零点输出 Electrical offset voltage	≤±20mV
精度 Accuracy	1%
线性度 linearity	1%
响应时间 Response time	≤5us
带宽 Frequency	0~25kHz
零点温漂 Temp Effect on Zero	< 1mV/℃
供电电压 Supply power	±15V±5%
证书 Certificate	UL & CE





Benchmark: LEM HAX 500~2500-S

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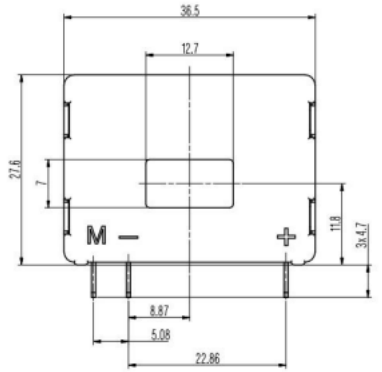
产品与运用

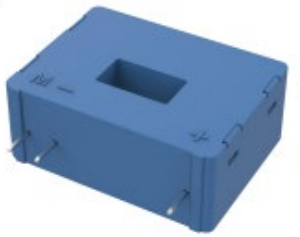
Closed loop Hall effect sensor: HFCA-L01

宏发股份 HONGFA GROUP

PN		HFCA-L01/25	HFCA-L01/50A	HFCA-L01/75	HFCA-L01/100
Parameters	Symbol				
额定输入电流 Primary nominal current	I_{PN}	25A	50A	75A	100A
测量范围 Measuring range	I_{PM}	±37.5A	±75A	±100A	±150A
额定输出电流 Output current@I_{PN}	I_{SN}	25mA	50mA	50mA	50mA
测量电阻 Resistance ($Vc=±15/I_{PN}$)	—	0-75Ω	0-75Ω	0-75Ω	0-75Ω
测量电阻 Resistance ($Vc=±15/I_{PM}$)	—	0-50Ω	0-50Ω	0-50Ω	0-50Ω
零点输出 Electrical offset current	I_O	Ta=25℃ < ±0.2mA			
线性度 Linearity	εL	Ta=25℃ < ±0.1%			
精度 Accuracy	X	≤±0.4% @ I_{PN}, TA = 25 °C			
响应时间 Response time	Tr	1μs max			
零点温漂 Temperature effect @ zero point	I_{OT}	< ±0.4mA (-40℃~85℃)			
工作电压 Operating voltage	Vc	±15V DC±5%			
证书Certificate	/	CE			

High accuracy &linearity, more expensive.





Benchmark: LEM LA 25~100-P

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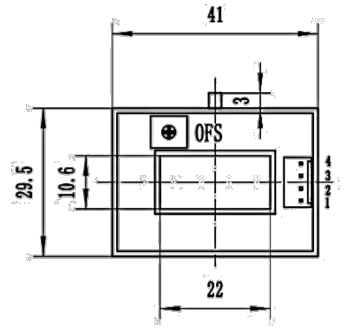
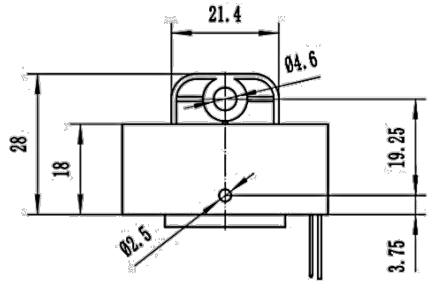
产品与运用

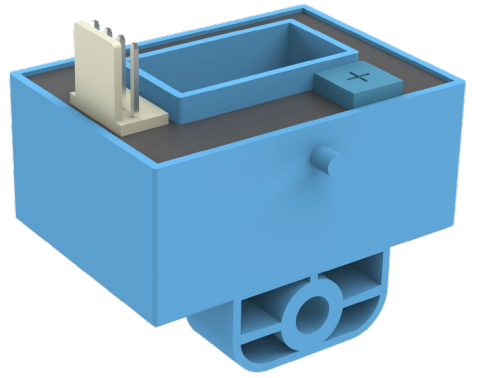
Closed loop Hall effect sensor: HFCA-L02

宏发股份 HONGFA GROUP

PN		HFCA-L02/25	HFCA-L02/50	HFCA-L02/100	HFCA-L02/200	HFCA-L02/300
Parameters	Symbol					
额定输入电流 Primary nominal current	I_{PN}	25A	50A	100A	200A	300A
测量范围 Measuring range	I_{PM}	±50A	±100A	±200A	±400A	±600A
额定输出电流 Output current@I_{PN}	I_{SN}	25mA	50mA	50mA	100mA	100mA
测量电阻 Resistance ($Vc=±15/I_{PN}$)	—	0-200Ω	0-100Ω	0-100Ω	0-50Ω	0-50Ω
测量电阻 Resistance ($Vc=±15/I_{PM}$)	—	0-100Ω	0-50Ω	0-50Ω	0-20Ω	0-20Ω
零点输出 Electrical offset current	I_O	Ta=25℃ < ±0.2mA				
线性度 Linearity	εL	Ta=25℃ < ±0.1%				
精度Accuracy	X	≤±0.4% @ I_{PN}, TA = 25 °C				
响应时间 Response time	Tr	1μs max				
零点温漂 Temperature effect on zero	IOT	< ±0.4mA (-40℃~85℃)				
工作电压 Operating voltage	Vc	±15V DC±5%				
证书 Certificate	/	CE				







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