

Current Sensor Selection Guide

Hall current sensors, transmitters, high-precision and multi-channel sensing families



Included product families

- Programming Hall Sensors
- Open Loop Hall Sensors
- Digital Signal Current Sensors
- High Precision Current Sensors
- New Energy Current Sensors
- Closed Loop Hall Sensors
- Current Transmitters
- Multi-channel Current Sensors

Current Sensor Portfolio

This EVSENSE guide focuses on current sensor families for BMS, energy storage, electric drive, power conversion, industrial control, precision instrumentation, and multi-channel monitoring. EV charging leakage/RCD products remain in the existing EV charging RCD sensor catalog and are intentionally excluded here.

Family	Typical Applications	Measurement / Output
Programming Hall Sensors	Photovoltaic inverters, Combiner boxes, Embedded power electronics	5-800A Voltage
New Energy Current Sensors	BMS, Electric drive systems, Electronic control systems	50-1000A Voltage
Open Loop Hall Sensors	Welding machines, Frequency converters, Power supplies	15-5000A Voltage
Closed Loop Hall Sensors	Variable-frequency drives, Servo systems, Motor control	10-5000A Current / Voltage
Digital Signal Current Sensors	Electric vehicles, Plug-in hybrid vehicles, Energy storage systems	0.01-800A CAN / RS485
Current Transmitters	Industrial current monitoring, Display instruments, Control cabinets	10-5000A Current
High Precision Current Sensors	Medical equipment, High-speed rail, Precision instruments	50-3000A Current
Multi-channel Current Sensors	BMS, Electric drive control, Multi-channel current monitoring	5-900A Multi-channel voltage



Programming Hall Sensors

HALL CURRENT SENSORS

16 models
English product view



RCS45C



RCS52C



RCS09C



RCS56C



RCSW09C



RCS59C



RCS06C



RCS63C



RCS58C



RLSR



RCS183



RCS182



RCS1005



RCSY03



RCSY04



RCS-LKH

Product images extracted and relabeled for EVSENSE current sensor selection.

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New Energy Current Sensors

NEW ENERGY CURRENT SENSORS

12 models
English product view



RCS01C



RCS02C



RCSH02



RCSH05



RCS22B



RCS22D



RCS23E



RCSH27



RCSC1



RCS33D



RCS-W5



RCS-Y5

Product images extracted and relabeled for EVSENSE current sensor selection.

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Open Loop Hall Sensors

OPEN-LOOP HALL CURRENT SENSORS

16 models
English product view



Product images extracted and relabeled for EVSENSE current sensor selection.

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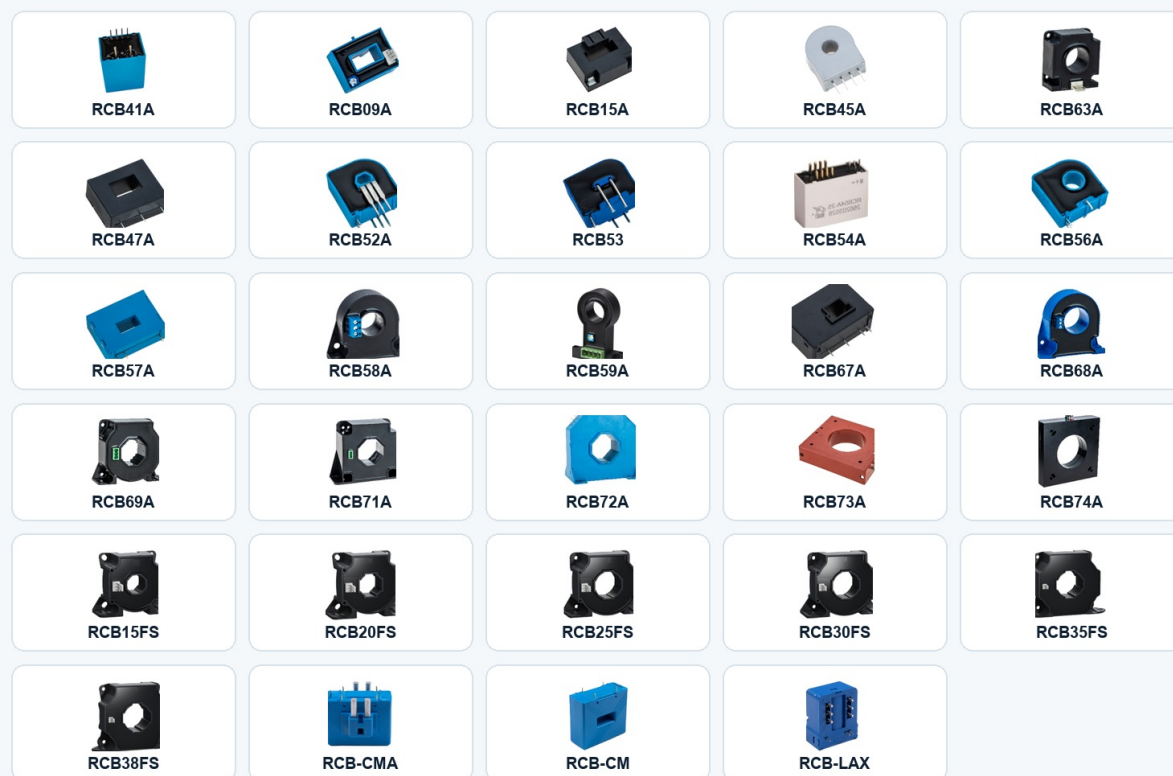


Closed Loop Hall Sensors

CLOSED-LOOP HALL CURRENT SENSORS

29 models

English product view



Product images extracted and relabeled for EVSENSE current sensor selection.

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Digital Signal Current Sensors

DIGITAL CURRENT SENSORS

12 models

English product view



RCSN



RCL68NV



RCL58



RCL59



RCL63



RCL83K



RCL84



RCL87A



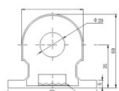
RCL88



RCL58KG



RCL23



RCL82

Product images extracted and relabeled for EVSENSE current sensor selection.

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Current Transmitters

CURRENT TRANSMITTERS

11 models

English product view



RCS59H



RCS07H



RCS18H



RCS24H



RCS11H



RCS58H



RCS68H



RCS07HD



RCS11HD



RCG25-B



RCG68-B

Product images extracted and relabeled for EVSENSE current sensor selection.

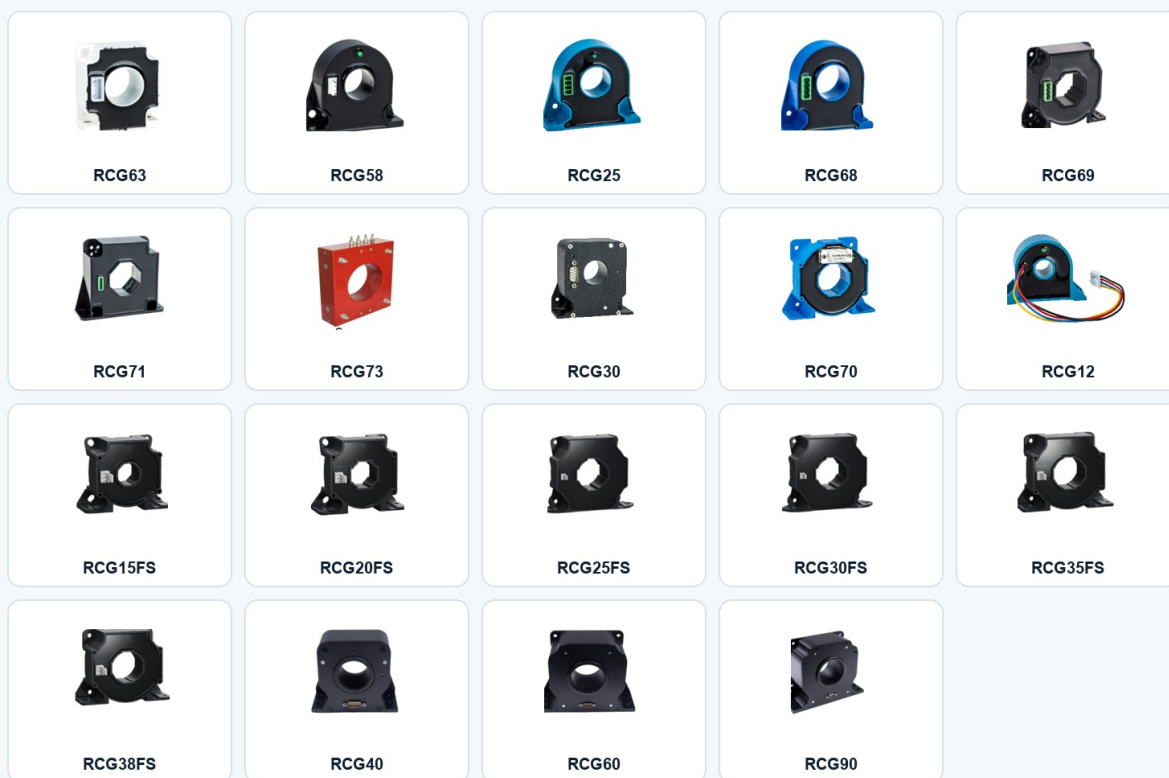
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High Precision Current Sensors

HIGH PRECISION CURRENT SENSORS

19 models
English product view



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Multi-channel Current Sensors

MULTI-CHANNEL CURRENT SENSORS

5 models

English product view



RCSH29



RCSH28



RCS2H1



RAH3DR



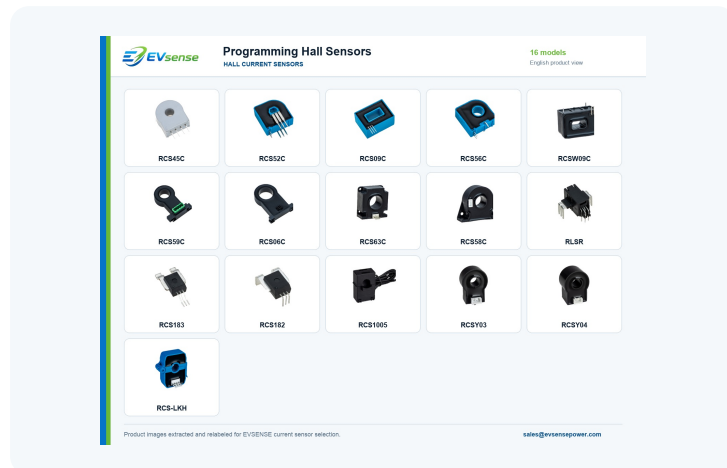
RCL-3TD-AC

Product images extracted and relabeled for EVSENSE current sensor selection.

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Programming Hall Sensors

Programmable Hall current sensors using integrated Hall ICs and calibration for compact inverter, combiner box, and embedded power electronics applications.



Output	Voltage
Power supply	3.3-6V / 4.5-5.5V
Withstand voltage	1-4.3kV
Measuring range	5-800A
Response time	<2.5us to <7us
Accuracy	1%

Typical applications

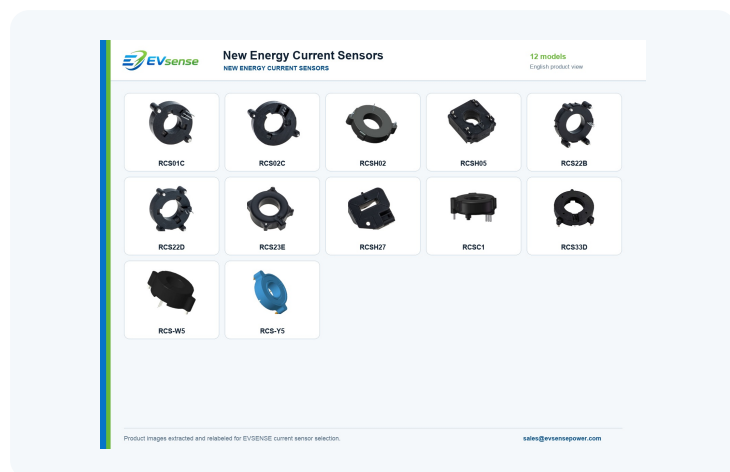
Photovoltaic inverters / Combiner boxes / Embedded power electronics / Compact DC current measurement

Complete model list

Model	Model	Model	Model
RCS45C	RCS52C	RCS09C	RCS56C
RCSW09C	RCS59C	RCS06C	RCS63C
RCS58C	RLSR	RCS183	RCS182
RCS1005	RCSY03	RCSY04	RCS-LKH

New Energy Current Sensors

Current sensors for battery management, electric drive, and electronic control systems where compact packaging and stable Hall measurement are required.



Output	Voltage
Power supply	3.3-6V
Withstand voltage	2-3kV
Measuring range	50-1000A
Response time	<5us to <10us
Accuracy	1%

Typical applications

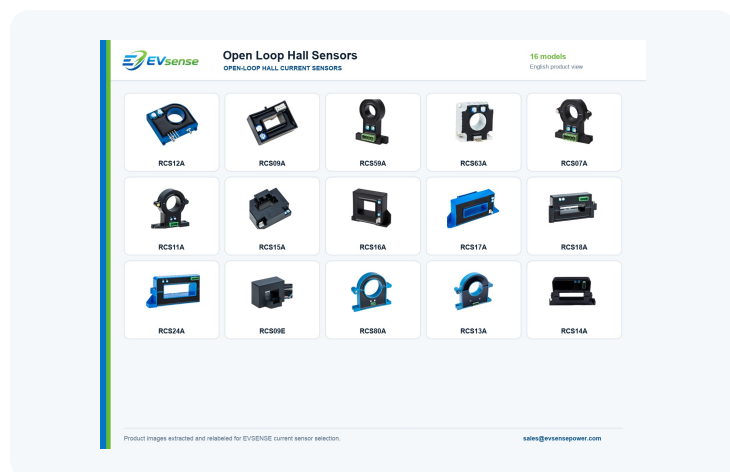
BMS / Electric drive systems / Electronic control systems / Energy storage hardware

Complete model list

Model	Model	Model	Model
RCS01C	RCS02C	RCSH02	RCSH05
RCS22B	RCS22D	RCS23E	RCSH27
RCSC1	RCS33D	RCS-W5	RCS-Y5

Open Loop Hall Sensors

Open-loop Hall current sensors for fast-response and cost-effective monitoring in welding machines, frequency converters, power supplies, drives, and industrial systems.



Output	Voltage
Power supply	+/-12V to +/-16V
Withstand voltage	2.5-6kV
Measuring range	15-5000A
Response time	<7us
Accuracy	1%

Typical applications

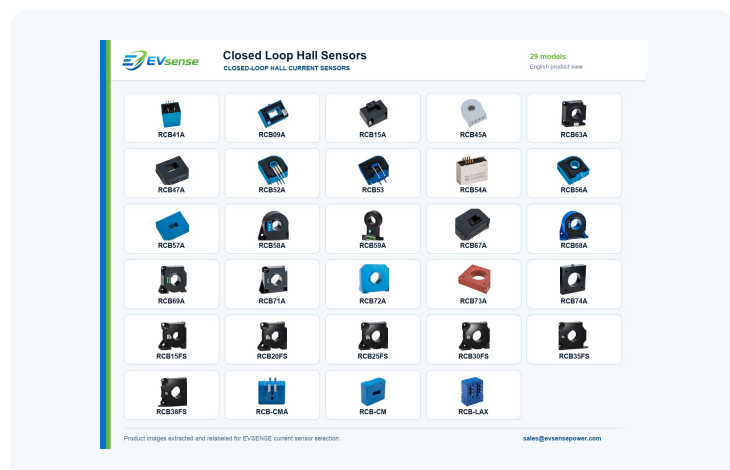
Welding machines / Frequency converters / Power supplies / Motor drives / Industrial monitoring

Complete model list

Model	Model	Model	Model
RCS12A	RCS09A	RCS59A	RCS63A
RCS07A	RCS11A	RCS15A	RCS16A
RCS17A	RCS18A	RCS24A	RCS41A
RCS09E	RCS80A	RCS13A	RCS14A

Closed Loop Hall Sensors

Closed-loop Hall current sensors using magnetic balance principles for high accuracy, strong linearity, low drift, and fast response in drive and power systems.



Output	Current / Voltage
Power supply	+/-12V to +/-24V
Withstand voltage	2.5-6kV
Measuring range	10-5000A
Response time	<1us
Accuracy	0.5%

Typical applications

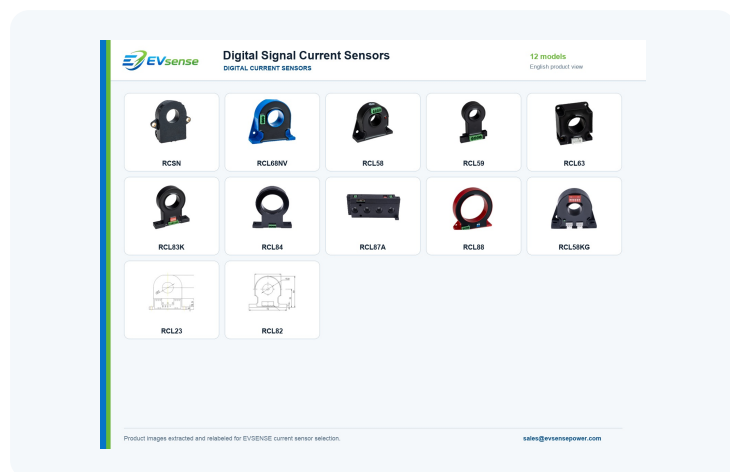
Variable-frequency drives / Servo systems / Motor control / Electric traction / Overcurrent protection

Complete model list

Model	Model	Model	Model
RCB41A	RCB09A	RCB15A	RCB45A
RCB63A	RCB47A	RCB52A	RCB53
RCB54A	RCB56A	RCB57A	RCB58A
RCB59A	RCB67A	RCB68A	RCB69A
RCB71A	RCB72A	RCB73A	RCB74A
RCB15FS	RCB20FS	RCB25FS	RCB30FS
RCB35FS	RCB38FS	RCB-CMA	RCB-CM
RCB-LAX			

Digital Signal Current Sensors

Digital current sensors with CAN or RS485 output for DC, AC, and pulsed current measurement in electric vehicles, plug-in hybrid vehicles, and energy storage systems.



Output	CAN / RS485
Power supply	8-24V / 10-24V
Withstand voltage	2.5-3kV
Measuring range	0.01-800A
Response time	100us to 500ms
Accuracy	0.15-1%

Typical applications

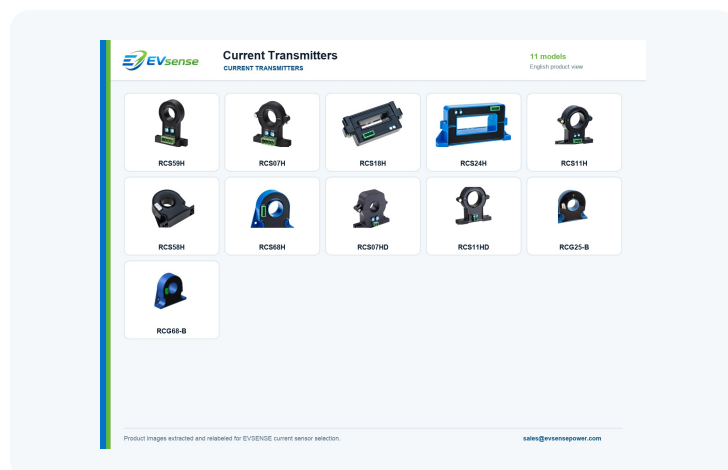
Electric vehicles / Plug-in hybrid vehicles / Energy storage systems / Battery management systems

Complete model list

Model	Model	Model	Model
RCSN	RCL68NV	RCL58	RCL59
RCL63	RCL83K	RCL84	RCL87A
RCL88	RCL58KG	RCL23	RCL82

Current Transmitters

Current transmitters converting measured AC current into standard DC output signals for receiving devices, computers, display instruments, and control systems.



Output	Current
Power supply	12-24V / +/-15V
Withstand voltage	2.5-5kV
Measuring range	10-5000A
Response time	<200ms
Accuracy	0.1-1%

Typical applications

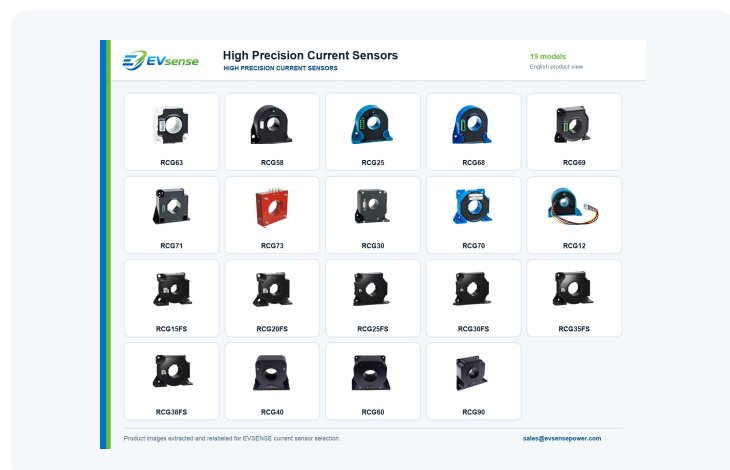
Industrial current monitoring / Display instruments / Control cabinets / AC current transmission / Signal conversion

Complete model list

Model	Model	Model	Model
RCS59H	RCS07H	RCS18H	RCS24H
RCS11H	RCS58H	RCS68H	RCS07HD
RCS11HD	RCG25-B	RCG68-B	

High Precision Current Sensors

High-precision current sensors for applications requiring very high accuracy, strong linearity, low temperature drift, and ppm-level performance.



Output	Current
Power supply	+/-12V to +/-24V
Withstand voltage	2.5-6kV
Measuring range	50-3000A
Response time	<1us
Accuracy	0.0001-0.02%

Typical applications

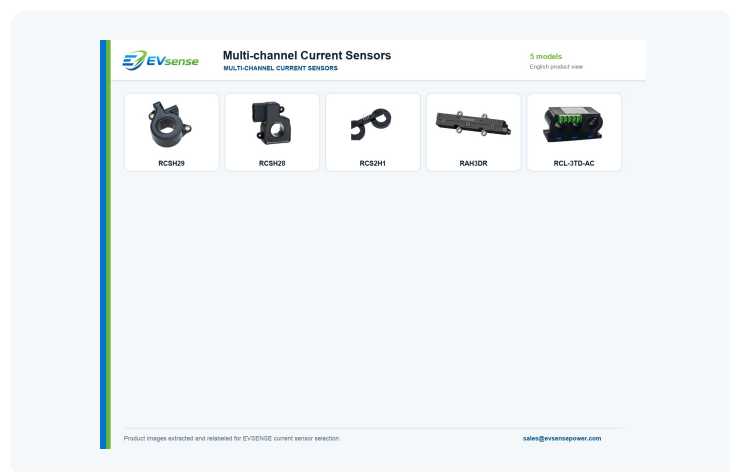
Medical equipment / High-speed rail / Precision instruments / University laboratories / Testing and calibration systems

Complete model list

Model	Model	Model	Model
RCG63	RCG58	RCG25	RCG68
RCG69	RCG71	RCG73	RCG30
RCG70	RCG12	RCG15FS	RCG20FS
RCG25FS	RCG30FS	RCG35FS	RCG38FS
RCG40	RCG60	RCG90	

Multi-channel Current Sensors

Multi-channel current sensors that measure multiple circuits or multiple current ranges for BMS, electric drive control, and compact multi-channel monitoring.



Output	Multi-channel voltage
Power supply	4.5-5.5V / 22-26V
Withstand voltage	2-3.6kV
Measuring range	5-900A
Response time	<7us to 1ms
Accuracy	0.6-1%

Typical applications

BMS / Electric drive control / Multi-channel current monitoring / Energy storage systems

Complete model list

Model	Model	Model	Model
RCSH29	RCSH28	RCS2H1	RAH3DR
RCL-3TD-AC			

How to Request Model Selection

- Application: BMS, inverter, drive, power supply, industrial control, precision measurement, or multi-channel monitoring.
- Current type and range: DC, AC, pulsed current, nominal current, peak current, and expected overload.
- Output and interface: voltage, current, CAN, RS485, or multi-channel output requirements.
- Power supply and insulation: available supply voltage, withstand voltage, safety isolation, and installation space.
- Mechanical fit: aperture / via size, conductor routing, enclosure limits, mounting style, and connector preference.
- Project context: sample quantity, validation stage, annual volume estimate, and target production schedule.

Contact EVSENSE

Email: sales@evsensepower.com

Website: <https://evsensepower.com/current-sensors/>

Note: EV charging leakage/RCD sensor products are intentionally managed in the separate EV charging RCD catalog.