

## CURRENT SENSOR APPLICATION



# CURRENT SENSOR Application

Electric Vehicle  
Charging Pile  
电流传感器应用  
——充电桩

Founded in 2013, Sinomags is dedicated to the development and production of magnetic sensors. we have four subsidiary companies in Germany, Wuxi, Ningbo, and Bengbu.

The company's R&D team consists of more than 250 R&D personnel with a number of experts in the field of magnetism and power electronics as the core, covering the design development and production of the whole industrial chain from xMR wafers to sensor modules.

**1200/250 employees**

1200 employees, 250 R&D staff

**500 Mpcs**

Wafer capacity 500 million pcs/year

**100 Mpcs**

2022 **current sensor** production capacity exceeds 100 million

**250 Mpcs**

Cumulative **current sensor** shipments of approximately 250 million units



○ **Wuxi**

R&D

○ **Bengbu**

Production for Current Sensor

○ **Ningbo**

R&D & Production for Current Sensor

○ **Mainz**

Waferfab for magnetic sensor

○ **Wetzlar**

R&D Center for magnetic sensor

## Electric Vehicle Charging Pile



IEC Standard (Residual)

UL Standard (Residual)

Full range of products and ranges

 Electric Vehicle Charging Pile

Charging pile module			Charging pile module		
Applied Current Sensor			Applied Current Sensor		
PN-01	STK-616TM		PN-01	STK-HD/P, STK-HD/P/G	
PN-02	STK-616KM		PN-02	STK-HD/K, STK-HD/K/G	
PN-03			PN-03		
V <sub>cc</sub>	3.3 or 5.0	V	V <sub>cc</sub>	3.3 or 5.0	V
I <sub>pn</sub>	20~65	A	I <sub>pn</sub>	5.0~50	A
I <sub>pm</sub>	NA	A	I <sub>pm</sub>	10~125	A
F <sub>band</sub>	600~1500	kHZ	F <sub>band</sub>	600~1000	kHZ
t <sub>r</sub>	0.2~0.9	μs	t <sub>r</sub>	1.0	μs
Acc.	3.0~3.5	%FS	Acc.	1.5~3.0	%FS

Charging pile module			Charging pile module		
Applied Current Sensor			Applied Current Sensor		
PN-01	STB-CAS		PN-01	STB-CAS/F	
PN-02	STB-CAS/R		PN-02	STB-CAS/R/F	
PN-03	STB-CAS/K		PN-03	STB-CAS/K/F	
V <sub>cc</sub>	5.0	V	V <sub>cc</sub>	10~180	V
I <sub>pn</sub>	15~75	A	I <sub>pn</sub>	6~75	A
I <sub>pm</sub>	51~220	A	I <sub>pm</sub>	20~220	A
F <sub>band</sub>	400	kHZ	F <sub>band</sub>	400	kHZ
t <sub>r</sub>	0.3	μs	t <sub>r</sub>	0.3	μs
Acc.	1.1~3.0	%FS	Acc.	1.1~3.0	%FS

Charging pile module			Charging pile module		
Applied Current Sensor			Applied Current Sensor		
PN-01	STK-PL/A		PN-01	STK-HO	
PN-02	STK-PL/M		PN-02		
PN-03	STK-PL/AG		PN-03		
V <sub>cc</sub>		V	V <sub>cc</sub>	5.0	V
I <sub>pn</sub>	10~180	A	I <sub>pn</sub>	60~120	A
I <sub>pm</sub>	25~450	A	I <sub>pm</sub>	150~375	A
F <sub>band</sub>	400~1000	kHZ	F <sub>band</sub>	150	kHZ
t <sub>r</sub>	0.2~1.5	μs	t <sub>r</sub>	2.0	μs
Acc.	2.0	%FS	Acc.	3.0	%FS

Charging pile module			Charging pile module		
Applied Current Sensor			Applied Current Sensor		
PN-01	STK-600/M		PN-01	STK-600/F	
PN-02	STK-600/M-M		PN-02		
PN-03			PN-03		
V <sub>cc</sub>	3.3 or 5.0	V	V <sub>cc</sub>	5.0	V
I <sub>pn</sub>	50, 100	A	I <sub>pn</sub>	50	A
I <sub>pm</sub>	50~400	A	I <sub>pm</sub>	200~400	A
F <sub>band</sub>	120	kHZ	F <sub>band</sub>	1000	kHZ
t <sub>r</sub>	4.6	μs	t <sub>r</sub>	0.4	μs
Acc.	3.5	%FS	Acc.	3.5	%FS

Residual current			Residual current		
Applied Current Sensor		Digital Output	Applied Current Sensor		Digital Output
PN-01	SFG-CPL/A series		PN-01	SFG-CPL/B	
I <sub>pn1</sub>	300	mA	I <sub>pn1</sub>	300	mA
I <sub>pn2</sub>	6	mA DC	I <sub>pn2</sub>	6	mA DC
I <sub>pn2</sub>	10,30	mA rms	I <sub>pn2</sub>	30	mA rms
F <sub>band</sub>	2.0	kHZ	F <sub>band</sub>	2.0	kHZ
t <sub>r</sub>	Follow IEC62752		t <sub>r</sub>	Follow IEC62752	

