



CURRENT SENSOR Application

EV / Automotive
电流传感器应用
——新能源车



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



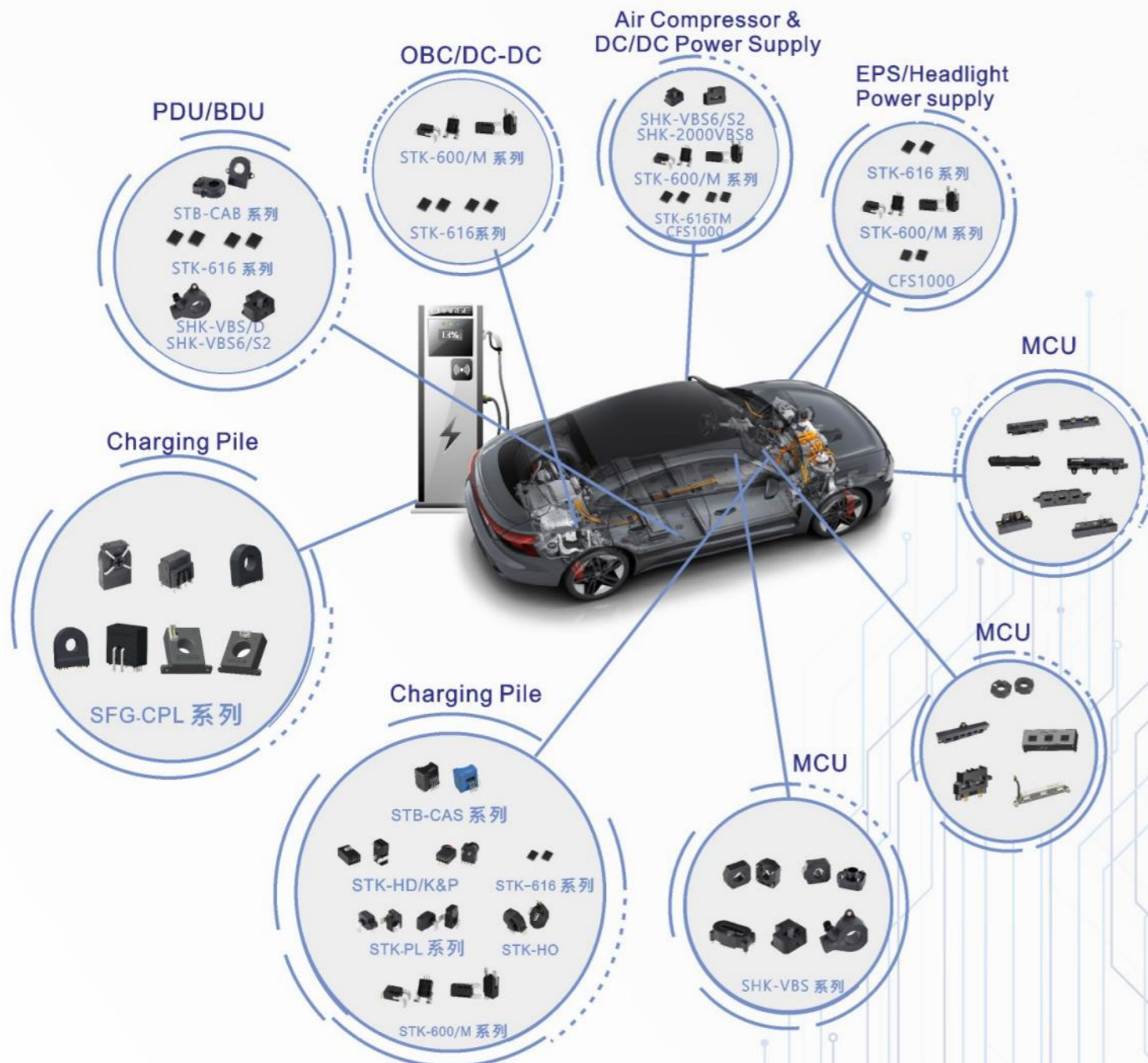
- **Wuxi**
R&D
- **Bengbu**
Production for Current Sensor
- **Ningbo**
R&D & Production for Current Sensor
- **Mainz**
Waferfab for magnetic sensor
- **Wetzlar**
R&D Center for magnetic sensor



EV / Automotive Application

◎ Features

- AEC-Q100 Qualified
- ISO26262
- Wide range of current detection
- Excellent EMC performance



Application: OBC, DC/DC



◎ Absolute parameter & Electrical parameters

Product	Out		V _{cc} (V)	U _{ESD} (kV)	U _d (kV)	I _{pn} (A)	I _{pm} (A)	f _{band} (kHz)	t _r (μs)	Acc. (%FS)	Application
	Voltage	Current									
STK-600/M-M	<input type="checkbox"/>		3.3, 5	4	4	50, 100	50~250	120	4.6	3.5	OBC, DC/DC
STK-600/M	<input type="checkbox"/>		3.3, 5	4	4	50, 100	50~400	120	4.6	3.5	
STK-616TML	<input type="checkbox"/>		3.3, 5	4	3.6	20	20~65	600	0.85	3.5	
STK-616KML	<input type="checkbox"/>		3.3, 5	4	3.6	20	40~65	600	0.9	3	
STK-616TMF	<input type="checkbox"/>		3.3, 5	4	3.6	20	20~65	1500	0.3	3.5	
STK-616KMF	<input type="checkbox"/>		3.3, 5	4	3.6	20	40~65	1500	0.2	3	

Application: EPS



◎ Absolute parameter & Electrical parameters

Product	Out			V _{cc} (V)	U _{ESD} (kV)	U _d (kV)	I _{pn} (A)	I _{pm} (A)	f _{band} (kHz)	t _r (μs)	Acc. (%FS)	Application
	Voltage	Digital	Current									
STK-600/M-M	<input type="checkbox"/>			5, 3.3	4	4	50,100	50~250	120	4.6	3.5	EPS
STK-616YML	<input type="checkbox"/>			5, 3.3	4	2	20	20~50	400	1	3.5	

Application : MCU



SHK-VBS/D



SHK-VBS2/D



SHK-VBS3



SHK-VBS3/S2



SHK-VBS3/S4



SHK-VBS3/S5



SHK-VBS5/S2



SHK-VBS6-S2



SHK-VBS8



SHK-VBS/TE



SHK-VBS/TF



SHK-VBS/TG



SHK-VBS-TH



STK-VBS/T3



STK-VBS/T4



SHK-VBS/T5



SHK-VBS/T6



SHK-VBS/T7



SHK-VBS/T8



SHK-VBS/T9

● Absolute parameter & Electrical parameters

Product	Out		V _{cc} (V)	U _{BSD} (kV)	U _d (kV)	I _{pn} (A)	I _{pm} (A)	f _{band} (kHz)	t _r (μs)	Acc. (%FS)	Application
	Voltage	Current									
SHK-VBS/D-A	<input type="checkbox"/>		5	8	2.5	75~1000	75~1000	10	18	0.15	MCU
SHK-VBS/D-B	<input type="checkbox"/>		5	8	2.5	75~750	75~750	10	18	0.15	
SHK-VBS/D-C	<input type="checkbox"/>		5	8	2.5	75~500	75~500	10	18	0.15	
SHK-VBS/D-D	<input type="checkbox"/>		5	8	2.5	30~350	30~350	10	18	0.15	
SHK-VBS/D-E	<input type="checkbox"/>		5	8	2.5	40~400	40~400	10	18	0.15	
SHK-VBS2/D	<input type="checkbox"/>		5	4	4	545	1090	NC	3.5	3.5	
SHK-VBS3/S2	<input type="checkbox"/>		5	4	4	400~900	400~900	100	3.5	3.5	
SHK-VBS3/S4	<input type="checkbox"/>		5	4	4	400~900	400~900	100	3.5	3.5	
SHK-VBS3/S5	<input type="checkbox"/>		5	4	4	400~900	400~900	100	3.5	3	
SHK-VBS5/S2	<input type="checkbox"/>		5	4	4	100~900	100~900	100	3.5	2.5	
SHK-VBS6-S2	<input type="checkbox"/>		5	4	4	100~1500	100~1500	40	2	1	
SHK-VBS8	<input type="checkbox"/>		5	8	2.5	2000	2000	40	2	1	
SHK-VBS/TE	<input type="checkbox"/>		5	4	2	200	300	40	4	NA	
SHK-VBS/TF	<input type="checkbox"/>		5	4	5.4	300	200	100	3.5	2.5	
SHK-VBS/TG	<input type="checkbox"/>		15	2	2.5	50~150	150~450	60	7	3	
SHK-VBS/TH	<input type="checkbox"/>		5	8	3	660	660	40	2	NA	

Product	Out		V _{cc} (V)	U _{BSD} (kV)	U _d (kV)	I _{pn} (A)	I _{pm} (A)	f _{band} (kHz)	t _r (μs)	Acc. (%FS)	Application
	Voltage	Current									
SHK-VBS/T3	<input type="checkbox"/>		5	4	4	545	1090	100	1	2.5	MCU
SHK-VBS/T4	<input type="checkbox"/>		5	4	4	545	1090	100	18	2.5	
SHK-VBS/T5	<input type="checkbox"/>		5	4	4	300	300	40	18	1	
SHK-VBS/T6	<input type="checkbox"/>		5	4	4	800~1200	800~1200	40	18	2	
SHK-VBS/T7	<input type="checkbox"/>		5	4	4	600	300, 600	40	3.5	1	
SHK-VBS/T8	<input type="checkbox"/>		5	4	4	300~1200	300~1200	40	3.5	1	
SHK-VBS/T9	<input type="checkbox"/>		5	4	4	900	900	40	3.5	1	

Application: Air Compressor & DC/DC Power supply



SHK-VBS2/D



SHK-VBS3/S2



STK-600/M-MPFF



STK-600/M-MSFF



STK-600/M-PFF



STK-600/M-PSF



STK-616TM,KM



STK-616BM,EM,DM

● Absolute parameter & Electrical parameters

Product	Out			V _{cc} (V)	U _{BSD} (kV)	U _d (kV)	I _{pn} (A)	I _{pm} (A)	f _{band} (kHz)	t _r (μs)	Acc. (%FS)	Application
	Voltage	Digital	Current									
SHK-VBS2/D	<input type="checkbox"/>			5	4	4	545	1090	NC	3.5	3	Air Compressor & DC/DC Power supply
SHK-VBS3/S2	<input type="checkbox"/>			5	4	4	400~900	400~900	100	3.5	3.5	
STK-600/M-M	<input type="checkbox"/>			5, 3.3	4	4	50, 100	50~250	120	4.6	3.5	
STK-600/M	<input type="checkbox"/>			5, 3.3	4	4	50, 100	50~400	120	4.6	3.5	
STK-616KML	<input type="checkbox"/>			5, 3.3	4	3.6	20	40~65	600	0.9	3	
STK-616KMF	<input type="checkbox"/>			5, 3.3	4	3.6	20	40~65	1500	0.2	3	
STK-616TML	<input type="checkbox"/>			5, 3.3	4	3.6	20	20~65	600	0.85	3.5	
STK-616TMF	<input type="checkbox"/>			5, 3.3	4	3.6	20	20~65	1500	0.2	3.5	
STK-616BML	<input type="checkbox"/>			5	4	3.6	13~20	13~65	600	0.9	3.5	
STK-616DML	<input type="checkbox"/>			3.3	4	3.6	12.5~20	12.5~65	600	0.9	3.5	
STK-616EML	<input type="checkbox"/>			5	4	3.6	20	20~65	600	0.9	3.5	

Application: BDU



STB-CAB540, 500



STB-CAB1500



SHK-VBS6/S2



SHK-VBS/D

● Absolute parameter & Electrical parameters

Product	Out			V _{cc} (V)	U _{ESD} (kV)	U _d (kV)	I _{pn} (A)	I _{pm} (A)	f _{band} (kHz)	t _r (μs)	Acc. (%FS)	Application
	Voltage	Digital	Current									
STB-CAB		<input type="checkbox"/>		12	4	2.5	500~1500	500~1500	NA	NA	0.15	BDU
SHK-VBS/D-A	<input type="checkbox"/>			5	8	2.5	75~1000	75~1000	10	18	0.15	
SHK-VBS/D-B	<input type="checkbox"/>			5	8	2.5	75~750	75~750	10	18	0.15	
SHK-VBS/D-C	<input type="checkbox"/>			5	8	2.5	75~500	75~500	10	18	0.15	
SHK-VBS/D-D	<input type="checkbox"/>			5	8	2.5	30~350	30~350	10	18	0.15	
SHK-VBS/D-E	<input type="checkbox"/>			5	8	2.5	40~400	40~400	10	18	0.15	
SHK-VBS6/S2	<input type="checkbox"/>			5	4	4	100~1500	100~1500	40	2	2.5	

Application: Headlight Power supply



STK-616ZM



STK-616YM

Product	Out			V _{cc} (V)	U _{ESD} (kV)	U _d (kV)	I _{pn} (A)	I _{pm} (A)	f _{band} (kHz)	t _r (μs)	Acc. (%FS)	Application
	Voltage	Digital	Current									
STK-616ZMF	<input type="checkbox"/>			5, 3.3	4	2.4	20	20~50	2000	0.05	3.5	Headlight Power supply
STK-616YML	<input type="checkbox"/>			5, 3.3	4	2.0	20	20~50	400	1	3.5	

Application: Electric Vehicle Charging piles



STK-HO



STK-PL/A



STK-PL/M



STK-616TM,KM



STK-616BM



STK-616EM



STK-616DM



STK-600/M-PSF



STK-600/M-PFF



STK-600/M-MPFF



STK-600/M-MSFF



STK-HD/P



STK-HD/K



STB-CAS



STB-CAS/K



STB-CAS/R

● Absolute parameter & Electrical parameters

Product	Out			V _{cc} (V)	U _{ESD} (kV)	U _d (kV)	I _{pn} (A)	I _{pm} (A)	f _{band} (kHz)	t _r (μs)	Acc. (%FS)	Application
	Voltage	Digital	Current									
STK-HO	<input type="checkbox"/>			5	4	4	60~150	150~375	150	2	3	Charging piles
STK-PL/A	<input type="checkbox"/>			5	4	5	10~50	25~125	400	1.5	2	
STK-PL/M	<input type="checkbox"/>			5	4	5	80~180	200~450	500	1	2	
STK-616KMF	<input type="checkbox"/>			5, 3.3	4	3.6	20	40~65	1500	0.2	3	
STK-616TML	<input type="checkbox"/>			5, 3.3	4	3.6	20	20~65	600	0.85	3.5	
STK-616TMF	<input type="checkbox"/>			5, 3.3	4	3.6	20	20~65	1500	0.2	3.5	
STK-616KML	<input type="checkbox"/>			5, 3.3	4	3.6	20	40~65	600	0.9	3	
STK-616BML	<input type="checkbox"/>			5	4	3.6	13~20	13~65	600	0.9	3.5	
STK-616DML	<input type="checkbox"/>			3.3	4	3.6	12.5~20	12.5~25	600	0.9	3.5	
STK-616EML	<input type="checkbox"/>			5	4	3.6	20	20~65	600	0.9	3.5	
STK-600/M	<input type="checkbox"/>			5, 3.3	4	4	50, 100	50~400	120	4.6	3.5	
STK-600/M-M	<input type="checkbox"/>			5, 3.3	4	4	50, 100	50~250	120	4.6	3.5	
STK-HD/P	<input type="checkbox"/>			5, 3.3	4	4	5~30	10~75	600	1	3	
STK-HD/K	<input type="checkbox"/>			5	4	4	32~50	80~125	600	1	1.5	
STB-CAS/x	<input type="checkbox"/>			5	4	5	15~75	51~220	400	0.3	1.1~3	

Application: Electric Vehicle Charging Pile



Accuracy
--1 mA

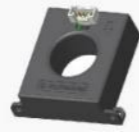
Type B
Leakage Current
Protection



SFG-CPL/A



SFG-CPL/B



SFG-CPL/A2



SFG-CPL/A3



SFG-CPL/A4



SFG-CPL/A5



SFG-CPL/A6

© Features

- IEC 62752
- IEC 62955
- Compact design
- Frequency DC ~ 1 kHz
- Supports DC 6 mA, AC 30 mA digital output
- Primary side load current 40 A (expandable to 100 A)
- Fast response and judgement output function
- Self-checking function
- High-precision small-current, large-current, and high-frequency AC residual current detection
- High-performance EMC shielding function
- Wide range of working temperature (-40~+105°C)

● Absolute parameter & Electrical parameters

Product	Out			V _{cc} (V)	EMC			I _{trip} (mA)	I _{pm} (mA)	I _{ck} (mA)
	Voltage	Digital	Current		V _w (kV)	U _d (kV)	I _{LS} (kA)			
SFG-CPL/A	<input type="checkbox"/>	<input type="checkbox"/>		5	7	3	5	DC 6, AC 30	300	30
SFG-CPL/B	<input type="checkbox"/>	<input type="checkbox"/>		5	7	3	5	DC 6, AC 30	300	30
SFG-CPL/B-A	<input type="checkbox"/>	<input type="checkbox"/>		5	7	3	5	DC 6, AC 30	300	30
SFG-CPL/A2	<input type="checkbox"/>	<input type="checkbox"/>		5	7	3	5	DC 6, AC 30	300	30
SFG-CPL/A2-A	<input type="checkbox"/>	<input type="checkbox"/>		5	7	3	5	DC 6	300	30
SFG-CPL/A3	<input type="checkbox"/>	<input type="checkbox"/>		5	7	3	5	DC 6, AC 30	300	30
SFG-CPL/A4	<input type="checkbox"/>	<input type="checkbox"/>		5	7	3	5	DC 6, AC 10/30	300	30
SFG-CPL/A5	<input type="checkbox"/>	<input type="checkbox"/>		5	7	3	5	DC 6, AC 30	300	30
SFG-CPL/A6	<input type="checkbox"/>	<input type="checkbox"/>		5	7	3	5	DC 6, AC 30	300	30

