

CURRENT SENSOR

PRODUCT SERIES: STB-LF8

PRODUCT PART NUMBER: STB-88LF8

VERSION: Ver 1.1



Sinomags Technology Co., Ltd.

Web site: www.sinomags.com

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1. Description

STB-LF8 series current sensors are based on close loop principle. The sensor can detect the current with DC, AC, pulse and irregular wave shape with current output.

Typical application

- Windmill inverters
- Test and measurement
- Battery supplied applications
- Static converters for DC motors drives
- AC variable speed and servo motor drives
- Switched model power supplies (SMPS)
- UPS

General parameters

Parameter	Symbol	Unit	Value
Sensor operating temperature	T_A	°C	-40 ~ 85
Storage temperature	T_S	°C	-40 ~ 90
Mass	m	g	60

Absolute parameters

Parameters	Symbol	Unit	Value
Supply voltage (-15°C...85°C)	V_{CCmax}	V	±15.75
Maximum primary conductor temperature	T_{Bmax}	°C	90

Ratings

Parameter	Unit	Value
Primary involved potential	V AC/DC	200
Maximum surrounding air temperature	°C	85
Primary current	A	STB-88LF8:0...100

Isolation parameters

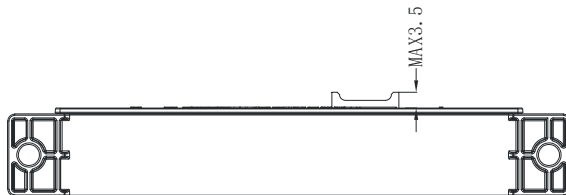
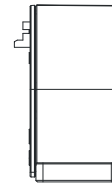
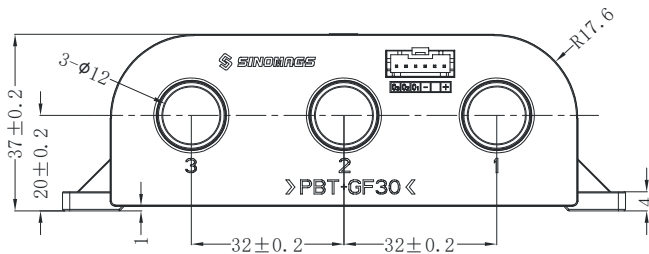
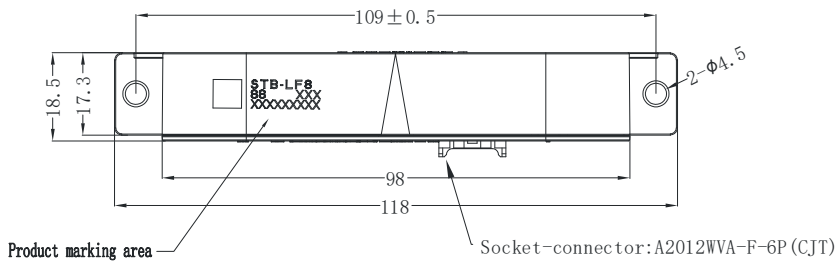
Parameter	Symbol	Unit	Value	Remark
RMS voltage for AC test 50Hz/1 min	U_d	kV	3	
Case material	-	-	V0	According to UL 94 Shell material: PA66 Adhesive material: Polyurethane
Insulation resistance	S	MΩ	>500	

2. STB-88LF8 Electrical parameters

Condition: $V_{CC} = \pm 15V$, $T_A = 25^\circ C$, unless specified.

Parameters	Symbol	Unit	Min	Typ	Max	Remark
Primary nominal RMS current	I_{PN}	A			88	
Primary current measuring range	I_{PM}	A	-240		240	$V_{CC} = \pm 15V$
Secondary nominal RMS current	I_{SN}	mA		$I_0 \pm 22$		
Measuring resistance@ ± 88 A max	R_M	Ω	10		100	$V_{CC} = \pm 15V$
Resistance of secondary winding	R_S	Ω			120	
Supply voltage	V_{CC}	V	± 14.25		± 15.75	
Current consumption	I_{CC}	mA		$38 + I_S$		
Turns ratio	N_S	NT		4000		
Nominal sensitivity	S_N	mA/A		0.25		
Offset current	I_0	mA	-0.2		0.2	
Offset current temperature drift	I_{OT}	mA	-0.6		0.6	$-40^\circ C \sim 85^\circ C$
Linearity error	ε_L	% of I_{PN}	-0.3		0.3	
RMS noise current referred to pri.	I_{no}	mA		20		1Hz to 100kHz
Reaction time	t_{d10}	μs		0.5		@10% of I_{PN}
Response time	t_{d90}	μs			1	@90% of I_{PN}
-3 dB band width	BW	kHz		100		
Total error at I_{PN}	ε_{tot}	% of I_{PN}	-1.2		1.2	$-40^\circ C \dots 85^\circ C$

3. Dimensions:



Material : Fit UL94V-0 &
RoHS requirements ;
General tolerance : ± 0.5
Unit : mm



Secondary terminals

- Terminal 1: Output3
- Terminal 2: Output2
- Terminal 3: Output1
- Terminal 4: supply voltage-15V
- Terminal 5: Not Connected
- Terminal 6: supply voltage+15V

Connection

