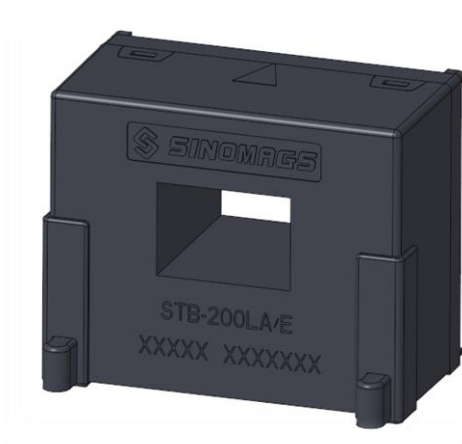# CURRENT SENSOR

PRODUCT SERIES: STB-LA/E

PRODUCT PART NUMBER: STB-200LA/E

VERSION: Ver 1.0

Sinomags Technology Co., Ltd.

Web site: www.sinomags.com

CONTENT

1. Description

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

Typical application

- ○ Solar inverter
- ○ Uninterruptible Power Supplies (UPS)
- ○ Variable frequency converter
- ○ Direct-current dynamo
- ○ Switched model power supplies (SMPS)

General parameters

Parameter	Symbol	Unit	Value	Remark
Working environment temperature	T_A	℃	-40 ~ 70	
			-40 ~ 85	$R_M \geqslant 24\,\Omega$ or $I_{PN} \leqslant 125A$
Sensor operating limit temperature	T_{SL}	℃	-40 ~ 85	
Limit temperature of primary conductor	T_{LP}	℃	105	/
Mass	m	g		

Absolute parameters

Parameters	Symbol	Unit	Value
Supply voltage	Vcc_{max}	V	±18
Maximum primary current	$I_{PN_{max}}$	A	±350

Remark: the unrecoverable damage may occur when the product works on the conditions over the absolute maximum ratings. Long-time working on the absolute maximum ratings may cause the degradation on performance and reliability.
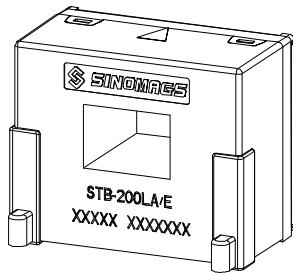
Isolation parameters

Parameter	Symbol	Unit	Value	Remark
RMS voltage for AC test 50Hz/1 min	U_d	kV	3	
Clearance distance (pri. -sec)	dCI	mm	8	Shortest distance through air
Creepage distance (pri. -sec)	dCp	mm	8	Shortest path along device body

受控

2.　Electrical parameters (STB-200LA/E)

Condition: V_{CC}= ±15.0 V, T_A = 25℃, R_M=10Ω, unless specified.

Parameters	Symbol	Unit	Min.	Typ.	Max.	Remark
Primary nominal RMS current	I_{PN}	A		200		
Output current	I_{SN}	mA		100		
Supply voltage	V_{CC}	V		±15		R_M=50Ω
Maximum supply voltage (without function)	V_{CCmax}	V		±18		
Primary current measuring range	I_{PM}	A	-350		350	$R_M < 15$ Ω
Current consumption	I_{CC}	mA		18		
Internal resistance	R_S	Ω			61	
Measuring resistance	R_M	Ω	10		200	
Turns ratio	N_S	N_T		1：2000		
Offset current	I_O	mA			0.05	I_P=0, T_A = 25℃
	I_{oges}				0.05	Including I_O, ΔI_{Ot}, ΔI_{OT}
Offset current temperature drift	I_{OT}	mA			0.05	T_A=-40℃~70°C
Hysteresis of I_O	I_{OH}	mA			0.085	
Supply voltage rejection ratio	$\Delta I_O/\Delta V_C$	mA/V			0.01	
Linearity error within I_{PN}	ε_L	% of I_{PN}			0.1	
Delay time at I_{PM}	$\Delta t(I_{PM})$	µs			1	d_i/d_t=100A/µs
Response time	t_r	µs			1	90% of I_{PN}
Frequency range (with limited amplitude)	F	kHz	DC		100	
Measuring accuracy	X	%			0.5	T_A= 25°C
Temperature drift of X	X_{Ti}	%			0.1	T_A= -40 ... 70°C

3. Dimensions: STB-200LA/E

5*0.5x0.5

Current
Direction

40

15

33.4

10.5

STB-200LA/E

XXXXX XXXXXXX

41

21

4*0.5

2*19

2*13

≤27

5*4±0.5

35.56

5

6

27.95

+U$_B$

i

-U$_B$

0.5

19

1

3

2

12.7

12.7

STB-200LA/E

XXXXX XXXXXXX
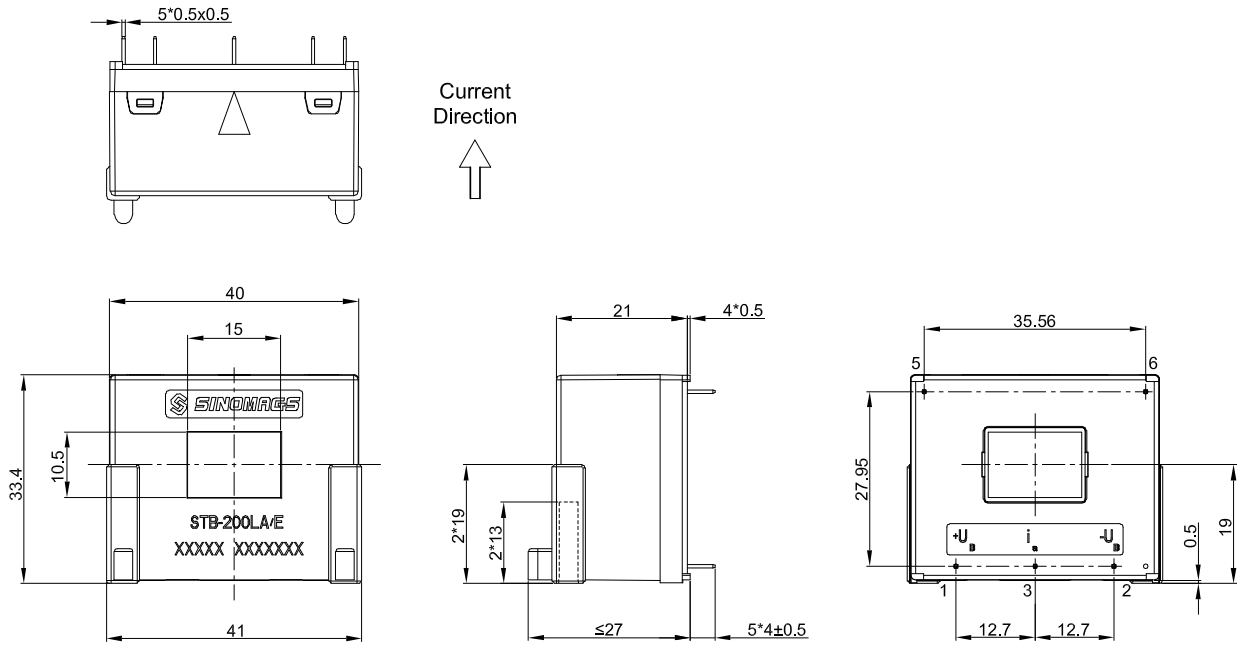
3D VIEW

Material : Fit UL94V-0 & RoHS
requirements ;
General tolerance : ±0.3
Unit :mm