

## HS62-5000A-E4 SERIES CURRENT SENSOR/TRANSDUCER

### DESCRIPTION:

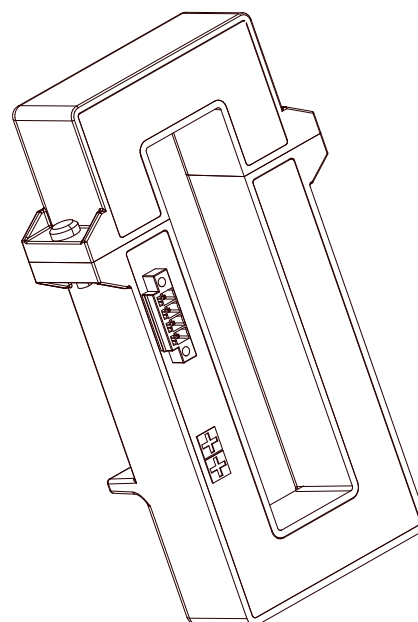
For the electronic measurement of current: DC, AC, pulsed ..., with galvanic separation between the primary and the secondary circuit.

### FEATURES:

- ◆ Open loop using the Hall effect
- ◆ The primary side and the secondary side are isolated
- ◆ Low power consumption
- ◆ Wide range
- ◆ No insertion loss
- ◆ Raw materials recognized according to UL 94-V0

### APPLICATIONS:

- ◆ Inverter
- ◆ Uninterruptible Power Supplies (UPS)
- ◆ Static converters for DC motor drives
- ◆ Switched Mode Power Supplies (SMPS)
- ◆ Power supplies for welding applications
- ◆ Battery management



### MODEL LIST:

PRODUCT MODEL		
Model	Rated input current $I_{PN}$ (A)	Measuring range $I_{PM}$ (A)
HS62-5000A-E4	5000	$\pm 6000$

### HS62-A-E4 SPECIFICATION

Parameter	Symbol	Unit	Value	Test Conditions
<b>Electrical Data</b>				
Supply voltage ( $\pm 5\%$ ) <sup>(1)</sup>	$V_C$	V	$\pm 15$	
Current consumption	$I_C$	mA	$\pm 25$	
Output voltage ( analog output )	$V_{OUT}$	mV	$\pm 5V \pm 50$	@ $\pm I_{PN}$ , $R_L = 10\text{ k}\Omega$ , $T_A = 25^\circ\text{C}$
Output clamp voltage	$V_{max}$	V	8.5V	@ $\pm I_{PM}$ , $R_L = 10\text{ k}\Omega$ , $T_A = 25^\circ\text{C}$
Overcurrent capability (1ms )	$I_{PC}$	At	$5 * I_{PN}$	
Insulation resistance	$R_{IS}$	$M\Omega$	$> 1000$	@ 500 VDC
Internal impedance	$R_{OUT}$	$\Omega$	100	approximation
Load Resistor <sup>(2)</sup>	$R_L$	$K\Omega$	$> 10$	
<b>Performance Data</b>				
Linearity <sup>(3)</sup> ( $0 \dots \pm I_{PN}$ )	$\varepsilon_L$	% of $I_{PN}$	$< \pm 0.5$	
Precision	X	%	$< \pm 1$	@ $I_{PN}$ , $T_A = 25^\circ\text{C}$ ( remove zero offset voltage)
Zero offset voltage	$V_{OE}$	mV	$< \pm 20$	@ $T_A = 25^\circ\text{C}$
Magnetic offset voltage	$V_{OM}$	mV	$< \pm 10$	@ $I_P = 0$ ; 1 times the rated current impact
Zero offset temperature drift	$TCV_{OE}$	mV/K	$< \pm 0.5$	@ HS62-A- E4
Output offset temperature drift	$TCV_{OUT}$	ppm/K	$< 500$	@ % of reading
Response time	$t_r$	$\mu\text{S}$	$< 3$	@ 90% of $I_{PN}$ step response
Current follows $d_i/d_t$	$d_i/d_t$	A/ $\mu\text{S}$	$> 500$	
Bandwidth <sup>(4)</sup>	BW	kHz	DC~40	@ -3dB
<b>General Data</b>				
Ambient operating temperature	$T_A$	$^\circ\text{C}$	-40....+85	
Ambient storage temperature	$T_S$	$^\circ\text{C}$	-40....+105	
Mass	m	g	-	approximation

### Notice:

- (1) Under the power supply condition of  $\pm 12V \leq V_C \leq \pm 15V$ , the measurement range of the sensor will be reduced;
- (2) If the customer uses a load resistance of  $1\text{ K}\Omega$ , the current to be measured needs to be limited to the rated current. If the full-scale current is to be measured, the load resistance should be at least  $10\text{ K}\Omega$ .
- (3) Linearity data does not include zero offset;

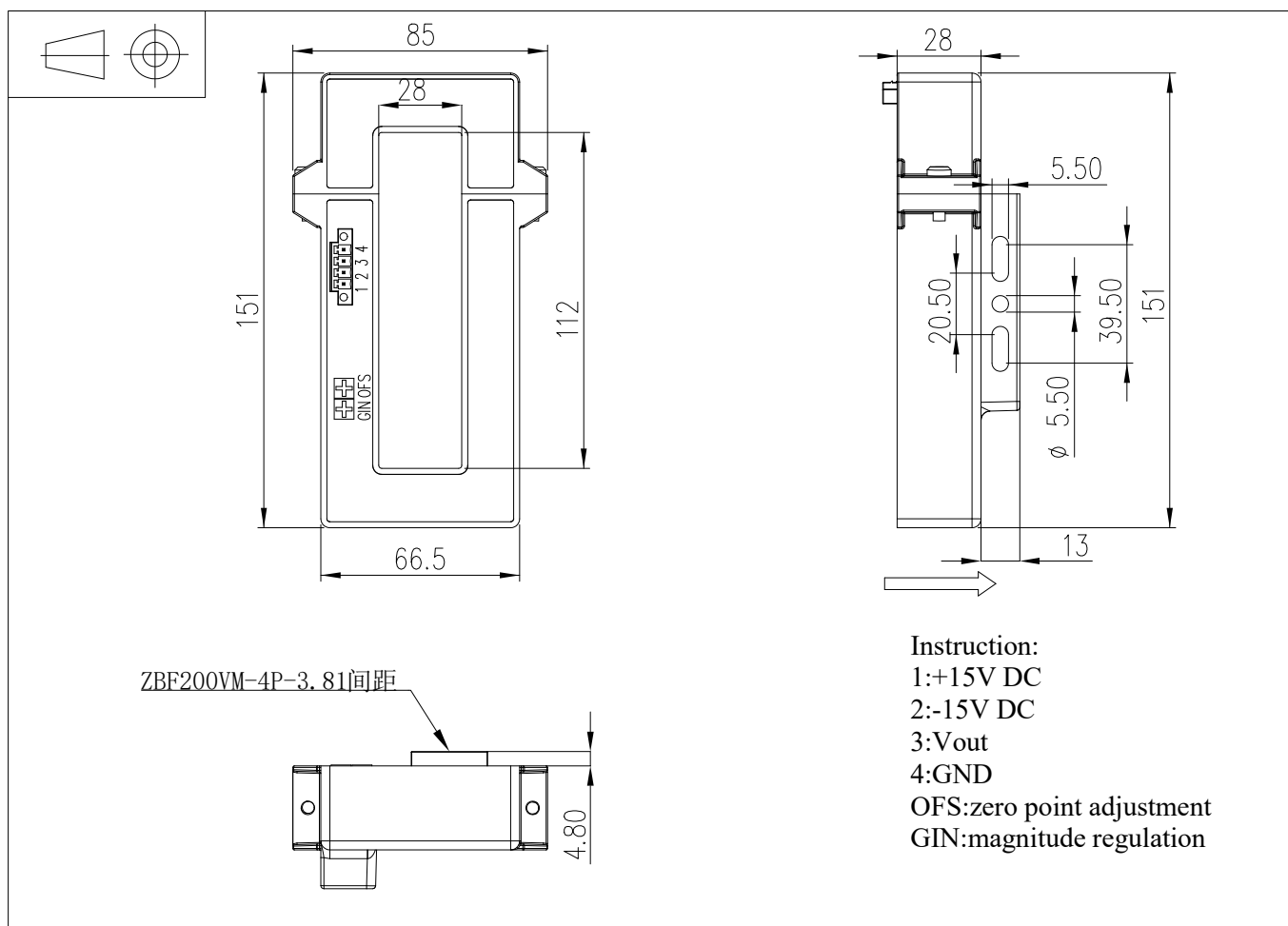
### Insulation data:

Parameter	Symbol	Unit	Value	Remark
AC isolation withstand voltage test RMS @ 50Hz, 1min	$U_D$	KV	3	
Impulse withstand voltage 1.2/50uS	$U_W$	KV	12	
Shell material	-	-	UL94-V0	PTE+30%GF
Relative tracking index	CTI	PLC	3	
Creepage distance	$d_{CP}$	mm	17	
Electrical clearance	$d_{CI}$	mm	12	

### Maximum limit:

Parameter	Symbol	Unit	Value
Supply voltage	$V_C$	V	$\pm 18$
Output current (output shorted to ground)	$I_{out}$	mA	-
Electrostatic discharge - contact discharge	$V_{ESD}$	V	-

## Mechanical Dimensions:



## Safety

This device must be used according to IEC610101.



This device must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the operating instructions.

Caution, risk of electrical shock.



When operating the device, certain parts can carry hazardous voltage (eg. primary busbar, power supply). Ignoring this warning can lead to injury and/or cause serious damage.

This is a builtin device, whose conducting parts must be inaccessible after installation.

A protective housing or additional shield can be used.

Main supply must be able to be disconnected.