

NACGL50T-P6/SP1VN 电流传感器 Current Transducer

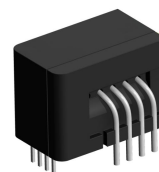
版本: A2

产 品 说 明

Applications

该磁通门电流传感器，对直流和脉动电流的隔离精确测量，测量时一次侧与二次侧之间完全绝缘。

The fluxgate current sensor for DC IMPL.,etc.,with galvanic isolation between the primary (high power) and the secondary (electronic) circuits.



产品优点 Advantages	产品应用 Applications	参照标准 Standards
精度好 excellent accuracy	光伏逆变器 Solar inverter	EN50178:2017
线性度好 Very good linearity		IEC61010-1:2010
低温漂 Low temperature drift		IEC62109-1:2010

主要电气参数 Main electrical data (TA = 25℃)		
额定测量电流 I_{PN}	Primary nominal RMS current	50A
测量范围 I_{PM}	Primary current measuring peak range	$\pm 150A$
匝比	Conversion ratio	1:966
电源电压 V_C	Supply voltage	+ 5 (1 $\pm$ 5%)V
测量输出 (@ I_{PN}) V_{out}	Secondary nominal voltage (@ I_{PN})	+ 2.5V $\pm$ 625mV
测量输出 (@ I_{PM}) V_{out}	Secondary voltage (@ I_{PM})	+ 2.5V $\pm$ 1.875V
测量输出 (@ $I=0$) V_{ref}	Reference voltage(output) (@ $I=0$)	2.5V $\pm$ 5mV
外部参考输入	External reference voltage	0~4V
输出电压增益 V_G	Output Voltage Gain	12.5mV/A
二次侧电流消耗 I_C	Current consumption	$\leq 20mA$
原边母排匝数 N_p	Primary busbar number	1,2,3,4

精度 - 动态参数 Accuracy - Dynamic performance data		
总精度 δ_{tot} (@ I_{PN} , $T_A = 25^\circ C$)	Accuracy (@ I_{PN} , $T_A = 25^\circ C$, Include offset)	$\leq \pm 0.9\%$
总精度 δ_{tot} (@ I_{PN} , $T_A = -40 \sim 105^\circ C$)	Accuracy (@ I_{PN} , $T_A = -40 \sim 105^\circ C$, Include offset)	$\leq \pm 1.4\%$
精度 δ_i (@ I_{PN} , $T_A = 25^\circ C$)	Accuracy (@ I_{PN} , $T_A = 25^\circ C$)	$\leq \pm 0.8\%$
精度 δ_i (@ I_{PN} , $T_A = -40 \sim 105^\circ C$)	Accuracy (@ I_{PN} , $T_A = -40 \sim 105^\circ C$)	$\leq \pm 1.3\%$
线性度误差 δ_L	Linearity error	$\leq 0.1\%$

A2:增加波峰焊要求

(@IPN, $T_A = -40^{\circ}\text{C} \sim +105^{\circ}\text{C}$)		
电失调电压 $V_{out}-V_{ref}$ ($T_A = 25^{\circ}\text{C}$)	Offset voltage of $V_{out}-V_{ref}$	$\leq 0.725\text{mV}$
参考电压温度漂移 V_{ref} ($T_A = -40^{\circ}\text{C} \sim +105^{\circ}\text{C}$)	Temperature drift of V_{ref}	$\leq 50\text{PPM}/^{\circ}\text{C}$ ($-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$)
零点温度漂移 V_{out} ($I_p=0$) ($T_A = -40^{\circ}\text{C} \sim +105^{\circ}\text{C}$)	Temperature drift of V_{out} ($I_p=0$)	$\leq 4\text{PPM}/^{\circ}\text{C}$ ($-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$)
灵敏度温度漂移 V_{GT} (不包含零点温漂)	Temperature drift of V_G (Excluding V_{OET})	$\leq 40\text{PPM}/^{\circ}\text{C}$ ($-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$)
响应时间 $T_R(90\% \text{ of } I_{PN} \& di/dt > 50\text{A}/\mu\text{S})$	Response time to 90% of I_{PN} step @ $di/dt \geq 50\text{A}/\mu\text{s}$, $R_L > 10\text{k}\Omega$	$\leq 300\text{ns}$
带宽 (-1dB)BW	Frequency bandwidth (-1dB)	DC..200kHz
带宽 (-3dB)BW	Frequency bandwidth (-3dB)	DC..300kHz
负载电阻 R_L	R_L	$10\text{k}\Omega$

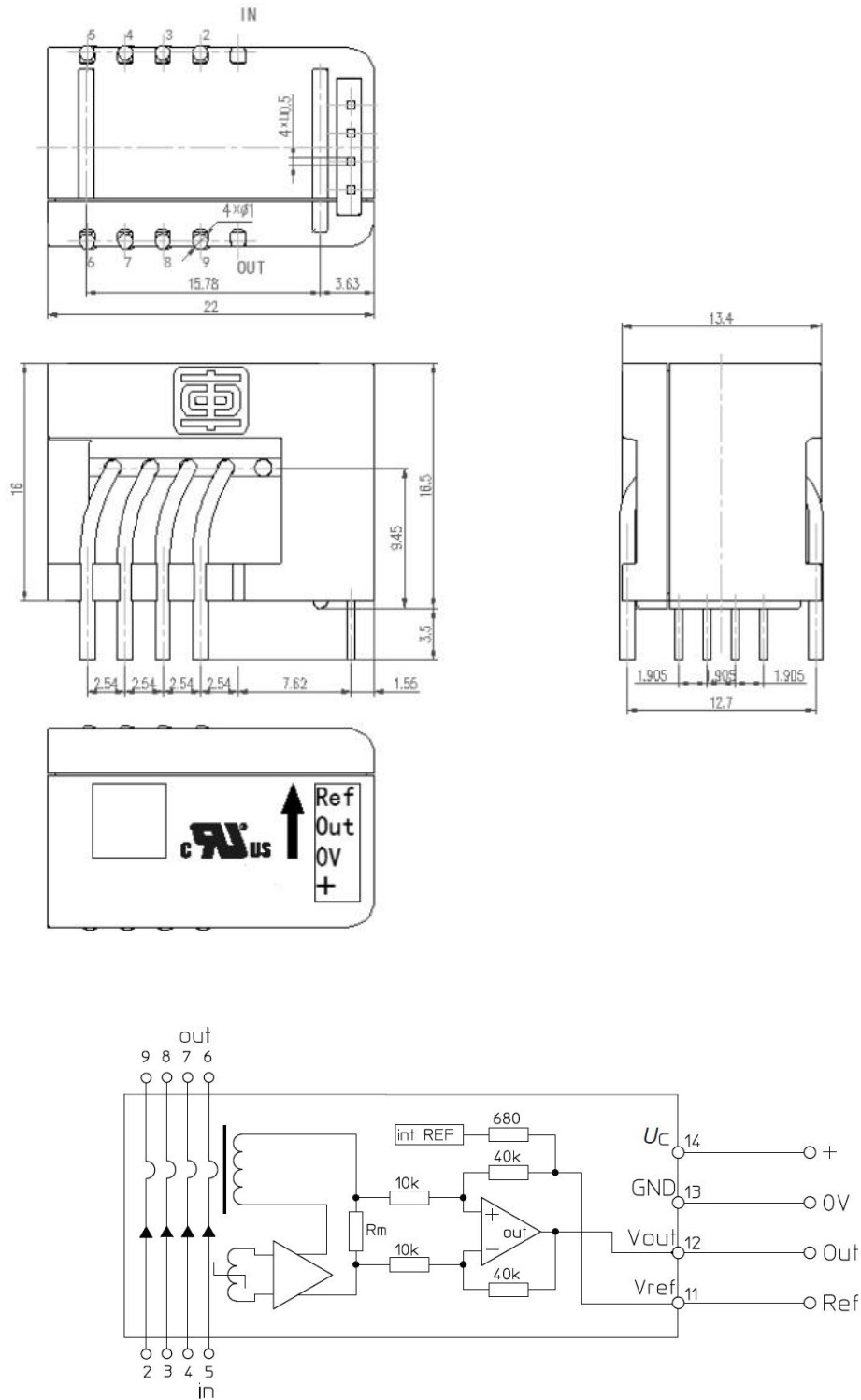
一般数据 General data

工作温度 T_A	Ambient operating temperature	$-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
储存温度 T_S	Ambient storage temperature	$-45^{\circ}\text{C} \sim +105^{\circ}\text{C}$
重量 m	Mass	10g

绝缘 Isolation

隔离耐压 (primary- secondary)	Isolation test: Between the primary circuit to the secondary circuit	4.1kVrms/50Hz/1min
电气间隙	Clearance	7.5mm
爬电距离	Creepage distance	7.5mm
CTI	Comparative tracking index	600
脉冲耐受电压	Impulse withstand voltage 1.2/50us	7.5kV
静电等级人体模型	ESD(Human)	4kV

外形图 Dimensions (in mm)



机械特征 Mechanical characteristics

备注 Remark

未注公差 General tolerance ±0.5 mm	最大原边母排导体适用温度<110℃ 波峰焊焊接温度<260℃ 10s
传感器安装方式一 Transducer fastening PCB mounting	