

NACGL.25T-P6/SP1VN 电流传感器 Current Transducer

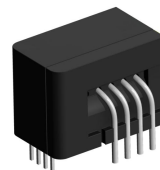
版本: A1

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

极限参数 maximum ratings		
最大供电电压	Maximum supply voltage	7V
原边导体最高温度	Maximum primary conductor temperature	110℃
最大原边电流	Maximum primary current	10×IPN
静电人体模式	HBM	4kv

主要电气参数 Main electrical data (TA = 25℃)		
额定测量电流 IPN	Primary nominal RMS current	25A
测量范围 IPM	Primary current measuring peak range	±85A
匝比 Ns	Conversion ratio	1:1731
电源电压 Vc	Supply voltage	+ 5 (1±5%)V
测量输出 (@ IPN) Vout	Secondary nominal voltage (@ IPN)	+ 2.5V ± 625mV
测量输出 (@ IPM) Vout	Secondary voltage (@ IPM)	+ 2.5V ± 2.125V
测量输出 (@I=0) Vref	Reference voltage(output) (@I=0)	2.5V ± 5mV
外部参考输入	External reference voltage	0~4V
灵敏度 VG	Output Voltage Gain	25mV/A
二次侧电流消耗 Ic	Current consumption	≤20mA+Ip/Ns
原边母排匝数 Np	Primary busbar number	1,2,3,4

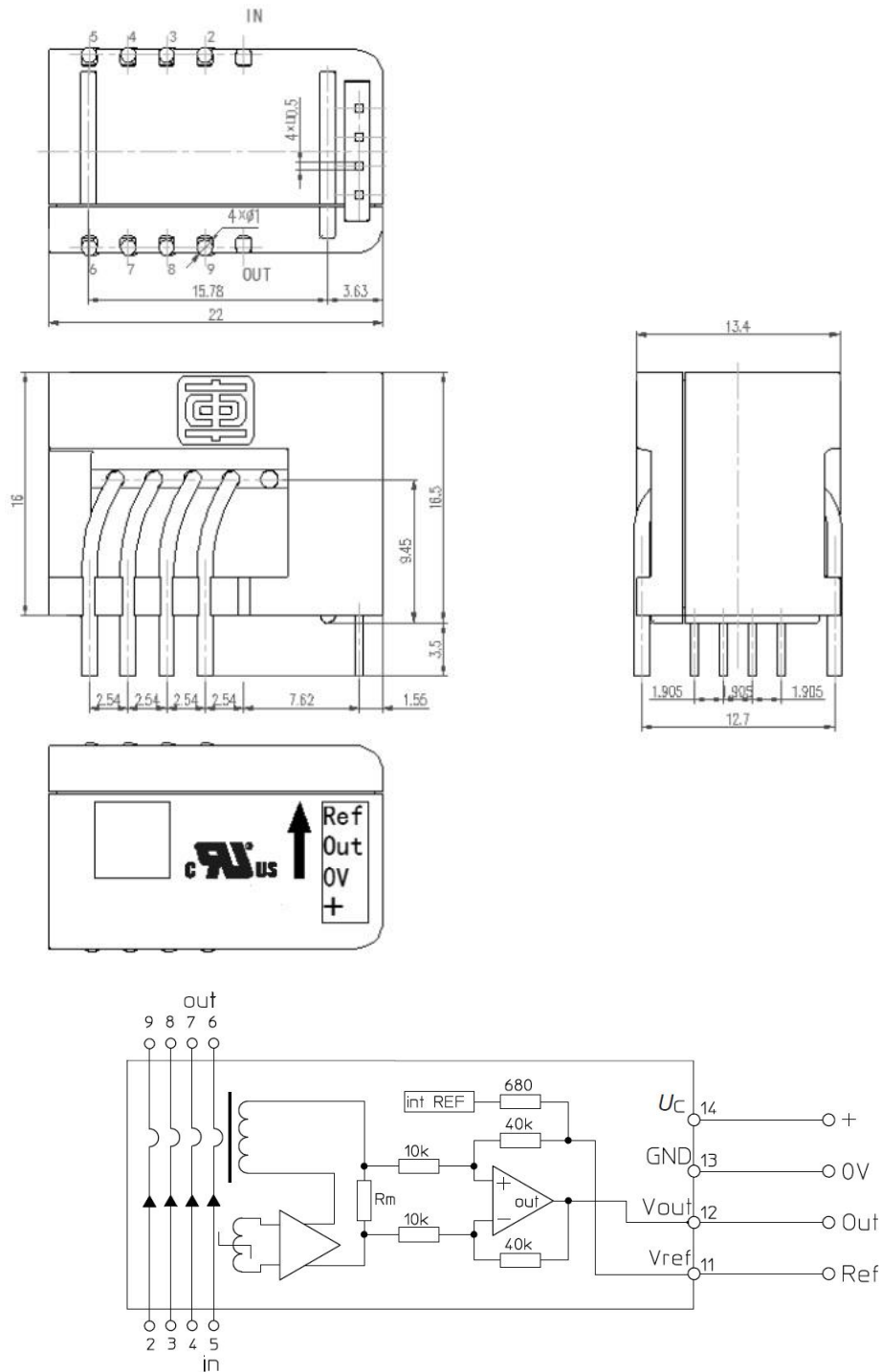
精度 - 动态参数 Accuracy - Dynamic performance data		
总精度 δ tot (@IPN, TA=25℃)	Accuracy (@IPN, TA=25℃, Include offset)	≤±1.0%

总精度 δ_{tot} (@IPN, $T_A = -40 \sim 105^\circ\text{C}$)	Accuracy (@IPN, $T_A = -40 \sim 105^\circ\text{C}$, Include offset)	$\leq \pm 1.45\%$
精度 δ_i (@IPN, $T_A = 25^\circ\text{C}$)	Accuracy (@IPN, $T_A = 25^\circ\text{C}$)	$\leq \pm 0.8\%$
精度 δ_i (@IPN, $T_A = -40 \sim 105^\circ\text{C}$)	Accuracy (@IPN, $T_A = -40 \sim 105^\circ\text{C}$)	$\leq \pm 1.25\%$
线性度误差 δ_L (@IPN, $T_A = -40^\circ\text{C} \sim +105^\circ\text{C}$)	Linearity error	$\leq 0.1\%$
电失调电压 $V_{out}-V_{ref}$ ($T_A = 25^\circ\text{C}$)	Electrical offset voltage $V_{out}-V_{ref}$	$\leq \pm 1.35\text{mV}$
电失调电流参考原边电流 I_{oe}	Electrical offset current $V_{out}-V_{ref}$	$\leq \pm 54\text{mA}$
磁偏移电流 ($10 \times I_{pn}$)	Magnet offset current ($10 \times I_{pn}$)	$\leq \pm 0.1\text{A}$
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 @ $di/dt \geq 50\text{A}/\mu\text{s}$, $R_L > 10\text{k}\Omega$	$< 300\text{ns}$
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	$10\text{k}\Omega$

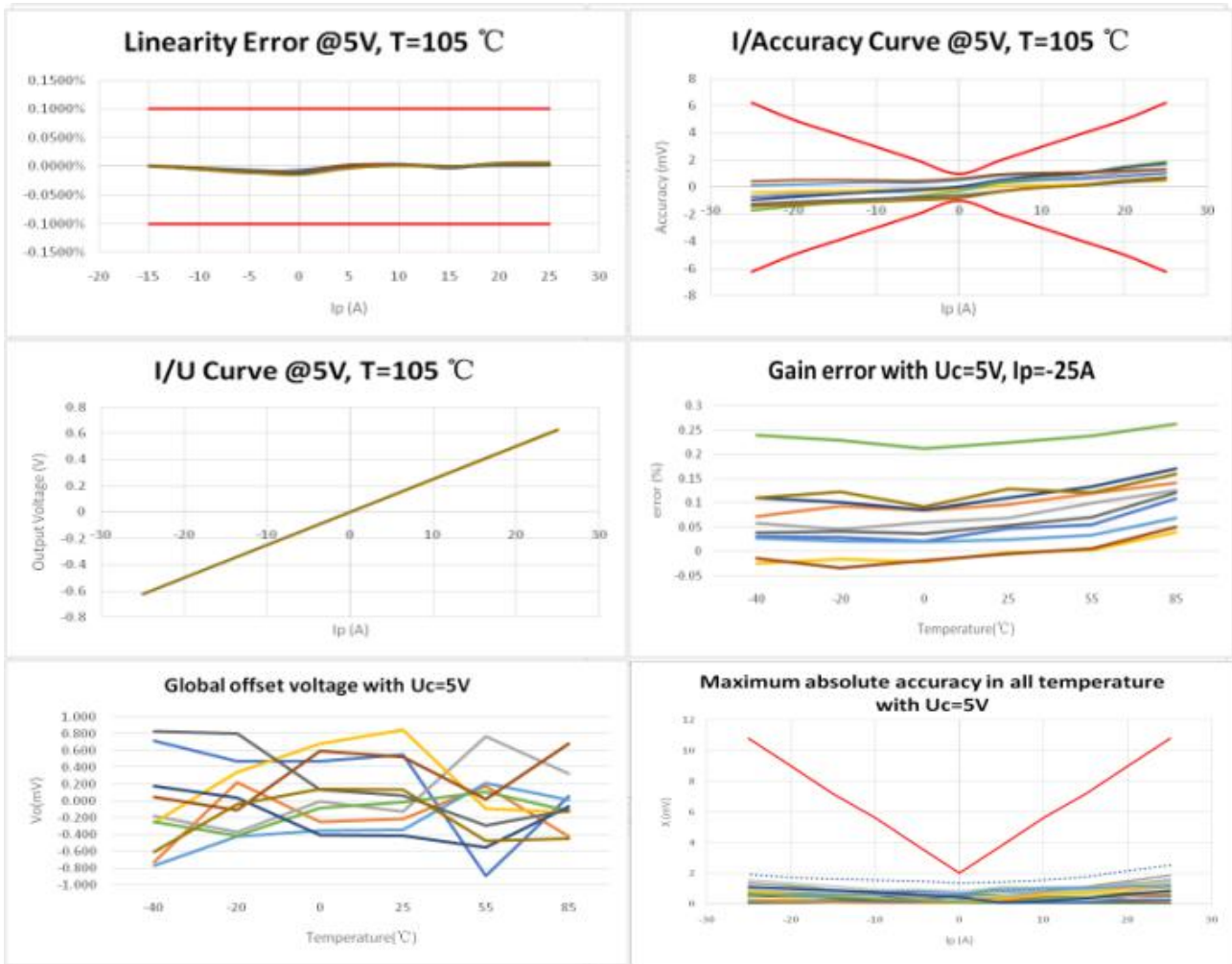
一般数据 General data

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

外形图 Dimensions (in mm)



注：未注公差按±0.25mm 执行



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 $<110^{\circ}\text{C}$ 波峰焊接温度 $<260^{\circ}\text{C}$ 10s
传感器安装方式一 Transducer fastening	PCB mounting	