



# DATA SHEET

## Hall Effect Current Sensor

PN: CHK\_TF5S2L

IPN=50~800A

### Feature

- Open- loop (compensated) current transducer
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC + 5.0V
- PCB mounting installation

### Advantages

- High accuracy
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption
- Very good linearity
- Can be customized

### Applications

- The application of variable frequency electrical appliances
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications



### Electrical data : (Ta=25°C±5°C,RL=2KΩ,CL=10000PF)

Parameter Ref	CHK50 TF5S2L	CHK100 TF5S2L	CHK200 TF5S2L	CHK300 TF5S2L	CHK400 TF5S2L	CHK600 TF5S2L	CHK800 TF5S2L
Rated input I <sub>pn</sub> (A)	± 50	± 100	± 200	± 300	± 400	± 600	± 800
Measuring range I <sub>p</sub> (A)	± 55	± 110	± 220	± 330	± 440	± 660	± 880
Output voltage V <sub>o</sub> (V)	@I <sub>p</sub> =± I <sub>pn</sub>			± 1.25± 1%			
Zero voltage V <sub>C</sub> (V)	@I <sub>p</sub> =0			1/2V <sub>cc</sub> ± 0.5%			
Reference voltage V <sub>C</sub> (V)	@I <sub>p</sub> =0			1/2V <sub>cc</sub> ± 0.5%			
Supply voltage V <sub>C</sub> (V)				+5± 5%			
Zero offset voltage (mV)				≤ ± 20			
Magnetic offset (mV)	@I <sub>p</sub> =± 15		± 10				
Offset drift (mV)	≤ ± 1.0		≤ ± 0.5				
output drift (mV/°C)	≤ ± 1.0		≤ ± 0.5				
Total accuracy X <sub>G</sub> (%)	@IPN,T=25°C			< ± 1			
Bandwidth (KHZ)	@ -3dB			DC~20			
Linearity error ε <sub>r</sub> (%FS)	@I <sub>p</sub> =0-± I <sub>pn</sub>			≤ 1			
Response time τ <sub>ra</sub> (μs)	@50A/ μ S, 10%-90%			≤ 3			

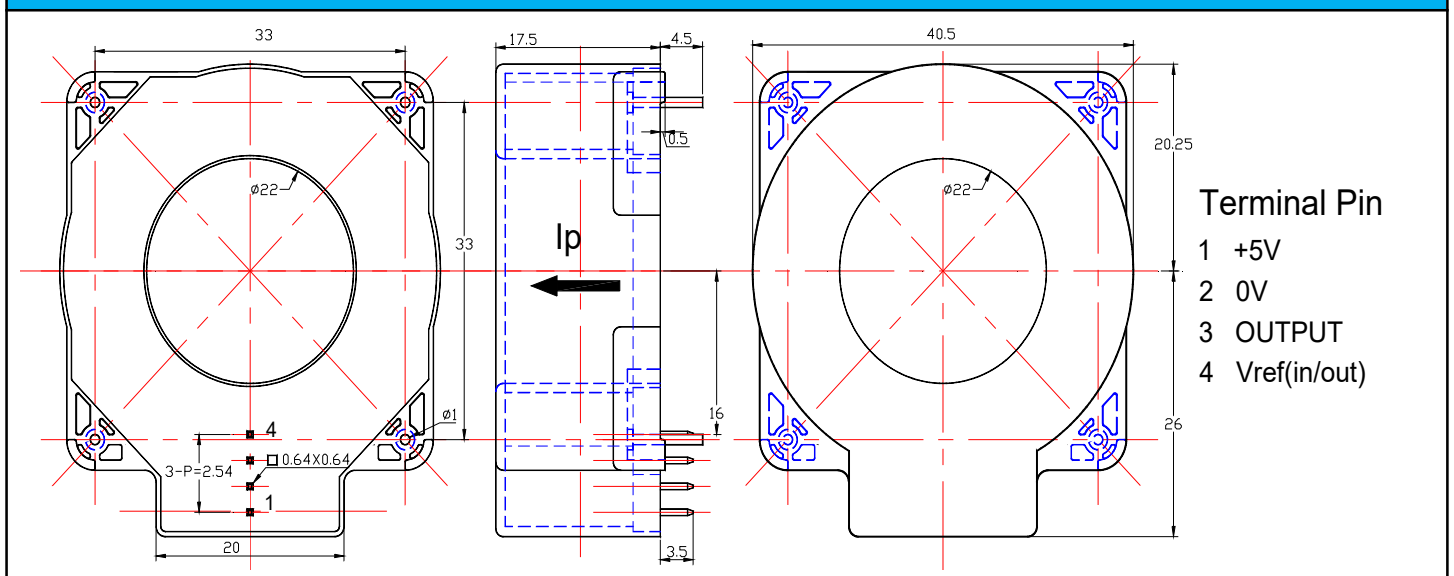


Power consumption IC(mA)		≤ 15
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	2.5

## General data:

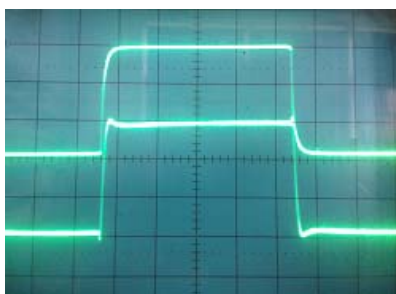
Parameter	Value
Operating temperature TA(°C)	-40 ~ 105
Storage temperature TS(°C)	-40~ +125
Mass M(g)	65
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

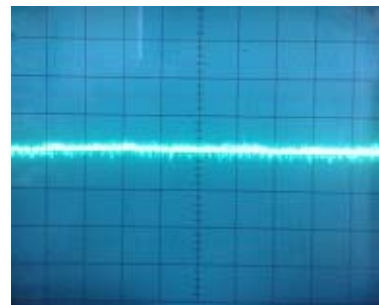


## Characteristics chart:

Pulse current signal response characteristic



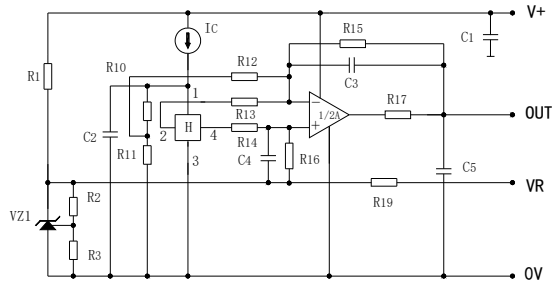
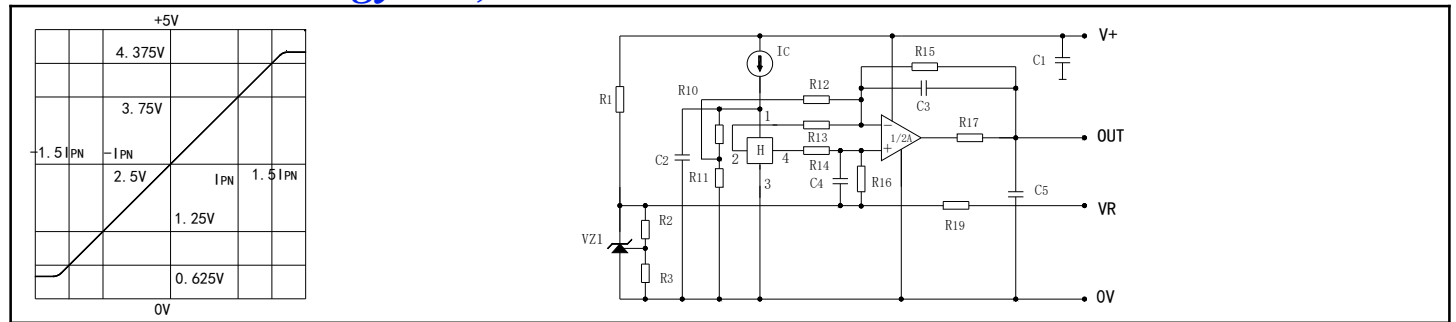
Effects of impulse noise



Input current-Output Voltage characteristic

Circuit Principle





**WARNING : Incorrect wiring may cause damage to the sensor.**

**Remarks:**

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- Custom design is available for the different rated input current and the output voltage.
- The dynamic performance is the best when the primary hole is fully filled with.
- The primary conductor should be <math><100^{\circ}\text{C}</math>.

**WARNING : Incorrect wiring may cause damage to the sensor.**

