



# DATA SHEET

## Hall Effect Current Sensor

**PN: CHK\_LTG24S4**

**IPN=05-100A**

### Feature

- Open- loop current transducer using the hall effect
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Output signal can be directly acquisition-ed by the PLC or DSP terminal control system.
- Supply voltage: DC +12.0~+24.0V

### Advantages

- Easy installation
- No insertion losses
- Low power consumption
- Wide current measuring range
- High immunity to external interference
- 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



**RoHS**

**Electrical data: (Ta=25°C, Vc=+24.0VDC)**

| Parameter                               | Ref | CHK05<br>LTG24S4                  | CHK10<br>LTG24S4 | CHK20<br>LTG24S4 | CHK30FL<br>TG24S4 | CHK50FL<br>TG24S4 | CHK100<br>LTG24S4 |
|---|-----|-----------------------------------|------------------|------------------|-------------------|-------------------|-------------------|
| Rated input Ipn(A)                      |     | 05                                | 10               | 20               | 30                | 50                | 100               |
| Measuring range Ip(A)                   |     | 0 ~ +10                           | 0 ~ +20          | 0 ~ +40          | 0 ~ +60           | 0 ~ +100          | 0 ~ +200          |
| Output current Io(mA)                   |     | @CHK-LTG24S4 4.0+16.0*(IP/IPN),DC |                  |                  |                   |                   |                   |
| Output current Io(mA)                   |     | @IP=0,CHK-LTG24S4 4.0±0.1,DC      |                  |                  |                   |                   |                   |
| Supply voltage Vc(V)                    |     | (+12.0~+24.0) ±5%                 |                  |                  |                   |                   |                   |
| Accuracy XG(%)                          |     | @IPN,T=25°C < ±1.0                |                  |                  |                   |                   |                   |
| Temperature variation of IOE IOT(mA/°C) |     | @IP=0,-40 ~ +85°C < ±0.005        |                  |                  |                   |                   |                   |
| Linearity error er(%FS)                 |     | < 1.0                             |                  |                  |                   |                   |                   |
| Response time tra(ms)                   |     | @90% of IPN <200                  |                  |                  |                   |                   |                   |
| Power consumption IC(mA)                |     | 25+IO                             |                  |                  |                   |                   |                   |



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|                           |                   |         |
|---------------------------|-------------------|---------|
| Bandwidth Bw(KHZ)         | @-3dB,IPN         | 20-2000 |
| Insulation voltage Vd(KV) | @50/60Hz, 1min,AC | 2.5     |

## General data:

| Parameter                    | Value                  |
|------------------------------|------------------------|
| Operating temperature TA(°C) | -40 ~ +85              |
| Storage temperature TS(°C)   | -55 ~ +125             |
| Mass M(g)                    | 53                     |
| Plastic material             | PBT G30/G15, UL94- V0; |
| Standards                    | IEC60950-1:2001        |
|                              | EN50178:1998           |
|                              | SJ20790-2000           |

## Dimensions(mm):

|  |   |
|--|---|
|  | <p style="text-align: center;">Connection</p>   |
|  | <p style="text-align: center;">General tolerance</p> <p>General tolerance: &lt;math&gt;&lt; \pm 0.5\text{mm}&lt;/math&gt;<br/>           Primary through-hole : <math>D12.0 \pm 0.3</math><br/>           Connection of Secondary :<br/>           2510-03A (Instead of Molex 5045-03A)</p> |

## 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.**

