

CSM100LTAH 系列多量程闭环型霍尔电流传感器

CSM100LTAH Series Multi-range Closed Loop Mode Hall Effect Current Sensor

CSM100LTAH 系列高精度闭环型电流传感器的初、次级之间是绝缘的，无位置误差，能真正测量分辨 1000:1，用于精密测量直流、交流和脉冲电流。

The CSM100LTAH Series current sensor is a closed loop device based on the measuring principle of the hall effect, with a galvanic isolation between primary and secondary circuit, the size of primary doesn't affect test precision, no matter the location of primary in the hole of current sensor, It can really measure resolution 1000:1, it uses for precision measurement of DC, AC and pulse current.



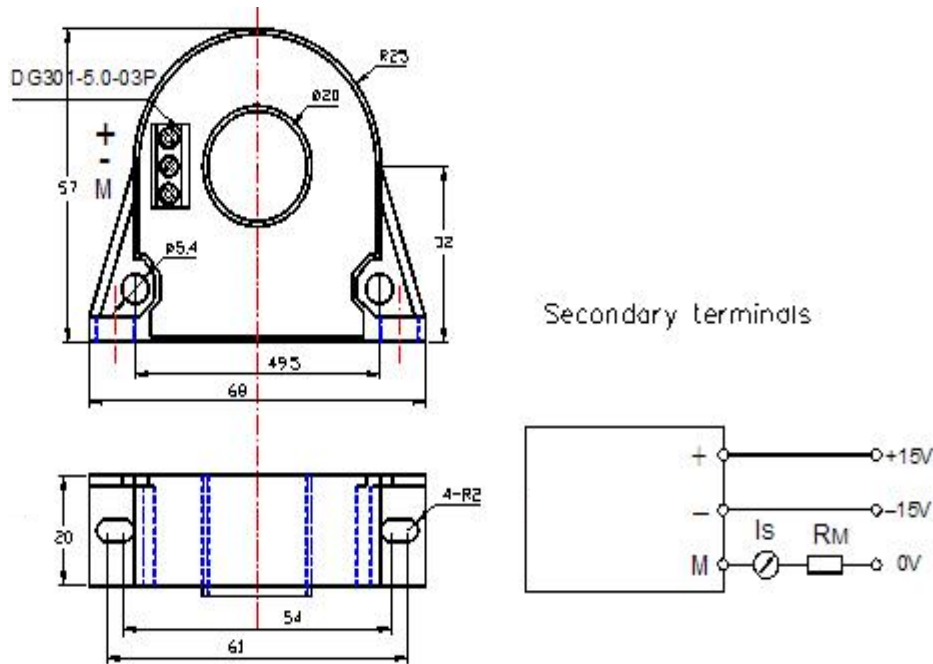
电参数 Electrical data (Ta=25°C ±5°C)

型号 Type	CSM050LTAH	CSM100LTAH	单位 Unit
参数 Parameter			
额定输入电流 (I _{pn}) Rated input I _{pn}	50	50	A
测量电流范围 (I _p) Measure range (I _p)	150 (±18V, 30 Ω)	300 (±18V, 30 Ω)	A
匝比 (N _p /N _s) Turns ratio (N _p /N _s)	1:1000	1:1000	T
测量电阻 Measure resister with ±12V	@50A _{max} 190(max)	@100A _{max} 190(max)	Ω
	@100A _{max} 90(max)	@200A _{max} 80(max)	Ω
测量电阻 Measure resister with ±15V	@50A _{max} 200(max)	@100A _{max} 250(max)	Ω
	@100A _{max} 100(max)	@200A _{max} 110(max)	Ω
次级线圈电阻 Secondary resister	10	25	Ω
额定输出电流 (I _{sn}) Rated output (I _{sn})	50 ± 0.2%	50 ± 0.2%	mA
电源电压 Supply voltage	±12 ~ ±18		V
功耗电流 Power consumption	≤ 20 + I _p X (N _p /N _s)		mA
零点失调电流 Zero offset current	@I _p =0	≤ ±0.1	mA
失调电流温漂 Offset current drift	@ -40°C ~ 85°C	≤ ±0.05	mA
响应时间 Response time	@100A/μS, 10%-90%	< 1.0	μs
线性度 Linearity	@I _p =0 ~ ±I _{pn}	≤ 0.05	%FS
绝缘电压 Galvanic isolation	@ 50Hz, AC, 1min	6	KV
di/dt 跟随精度 di/dt accurately followed		> 100	A/μs
带宽 Bandwidth	@ -3db	DC ~ 100	KHz

应用 Applications

- 变频调速系统 Variable speed drives
- 电焊机 Welding machine
- 电化学 Electrochemical
- 通讯电源 Battery supplied applications
- 不间断电源 UPS Uninterruptible Power Supplies (UPS)

结构参数 Mechanical dimension(for reference only)



1. All dimensions are in mm.
2. General tolerance $\pm 1\text{mm}$

使用说明 Directions for use

1. 产品箭头的方向为 I_p 方向。
Is will be in a forward direction when the I_p flows according to the direction of the arrowhead.
2. 初级导体温度不应超过 100°C 。
The primary conductor should be $\leq 100^\circ\text{C}$.
3. 母排完全充满初级穿孔时动态表现 (di/dt 和响应时间) 为最佳。
The dynamic performance (di/dt and the response time) is the best when the primary hole is fully filled with the bus bar.
4. 为了达到最佳的磁耦合, 初级线匝应绕在传感器顶部。
The primary turns should be at the top of the sensor for the best magnetic coupling.

执行标准 Standards

- UL94-V0.
- EN60947-1:2004
- IEC60950-1:2001 Test Voltage: 1000V
- EN50178:1998 Test Voltage: 1000V
- SJ 20790-2000

总体参数 General date

	数值 Value	单位 Unit	符号 Symbol
工作温度 Operating temperature	-40 to +85	$^\circ\text{C}$	TA
储存温度 Storage temperature	-40 to +125	$^\circ\text{C}$	TS
毛重(约) Mass (approx)	79	g	M