

DATA SHEET

Closed-loop Effect Current Sensor

P/N: FSM200LAP

I_{PN}=200A

Feature

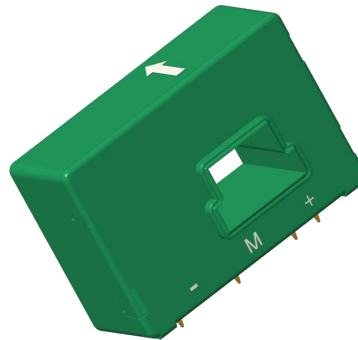
- Closed loop (compensated) current transducer using the hall effect
- For the electronic measurement of currents: DC, AC, pulsed, ..., with galvanic separation between primary circuit and secondary circuit
- Supply voltage: DC ±12~15V

Advantages

- High accuracy
- Very good linearity
- Low temperature drift
- Optimized response time
- High immunity to external interference

Applications

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



ROHS

Electrical data: (T_a=25°C, V_c=±15VDC)

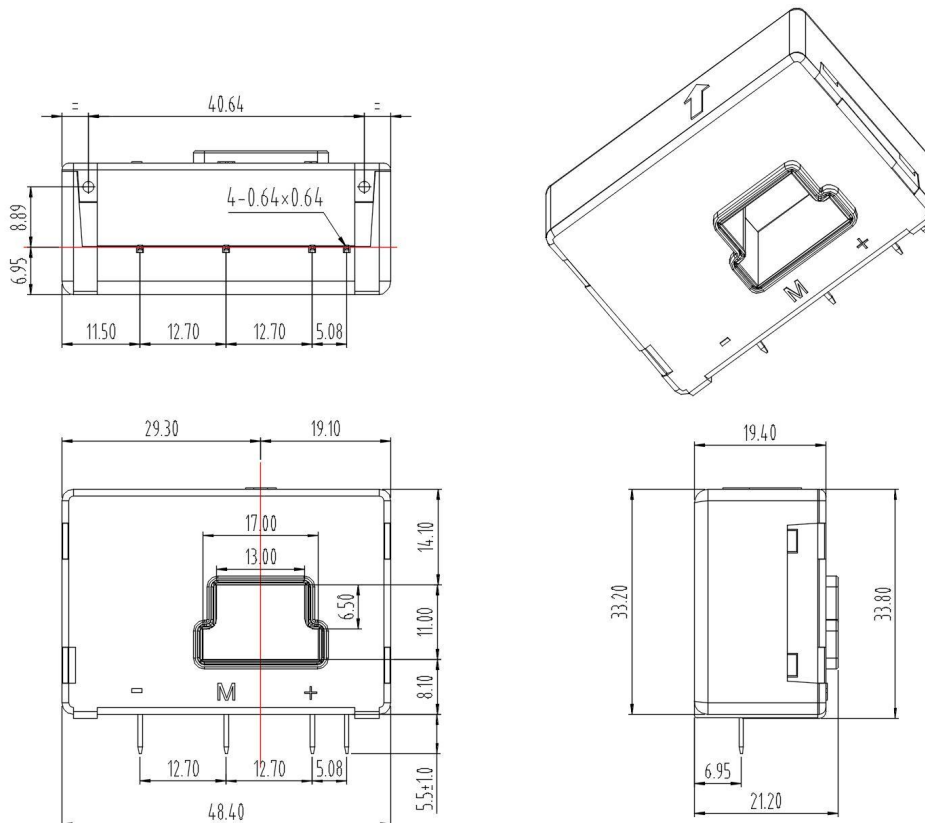
Parameter Ref	FSM125LAP	FSM200LAP
Rated input I _{pn} (A)	125	200
Measuring range I _p (A)	0~±187.5	0~±300
Turns ratio N _p /N _s (T)	1:1000	1:2000
Output current rms I _s (mA)	±125*I _p /I _{PN}	±100*I _p /I _{PN}
Secondary coil resistance R _s (Ω)	50	76
Inside resistance R _M (Ω)	[(V _c -1.2V)/ (I _s *0.001)]-R _s	
	@ ±12V	@200A 0~30 @250A 0~8
	@ ±15V	@200A 0~60 @300A 0~12
Supply voltage V _c (V)	(±12~±15) ±5%	
Accuracy X _G (%)	@I _{PN} , T=25°C	< ±0.5
Offset current I _{OE} (mA)	@I _p =0, T=25°C	< ±0.15
Hysteresis offset current I _{OH} (mA)	@I _p =0, after 1*I _{PN}	< ±0.05

Temperature variation of IOE I _{OT} (mA)	@I _P =0,-40 ~ +85°C	< ±0.3
Linearity error ε _r (%FS)		< 0.15
Di/dt accurately followed (A/μs)		> 200
Response time τ _{ra} (μs)	@90% of I _{PN}	< 1.0
Power consumption I _c (mA)		16+I _s
Bandwidth BW(kHz)	@-3dB,I _{PN}	DC-100
Insulation voltage V _d (KV)	@50/60Hz, 1min,AC	3.0

General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55 ~ +125
Mass M(g)	40
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000
Internal process	The interior has been treated with three anti-paint

Dimensions(mm):



General tolerance	Connection
<p>General tolerance: < $\pm 1.0\text{mm}$; According to the drawing tolerance, not marked according to GB/T 1804-2000-M; Primary through-hole dimensions: See the figure above Secondary pin size :4pin 0.64*0.64; Pin is not marked as fixed, no electrical connection;</p>	

Remarks:

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end. (Note: The false wiring may result in the damage the sensor).
- Custom design is available for the different rated input current and the output voltage.
- The dynamic performance is the best when the primary hole if fully filled with.
- The primary conductor should be 100°C.

WARNING : Incorrect wiring may cause damage to the sensor.