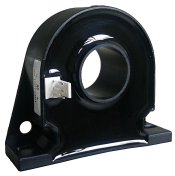
CSM300LT-3PN Hall-effect Current Sensor Series

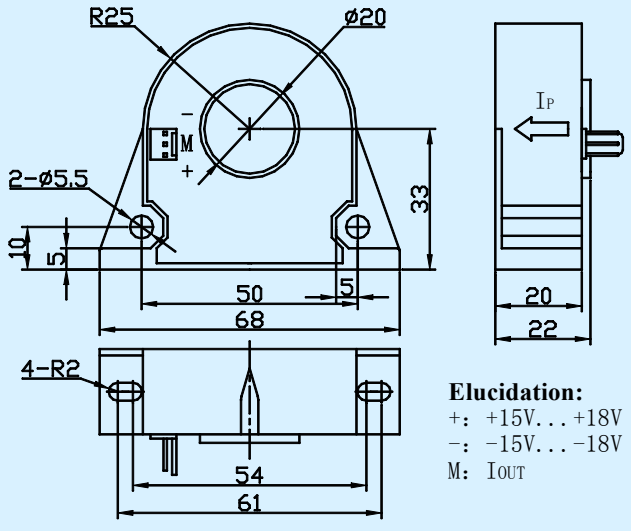


Closed loop current sensor based on the principle of Hall-effect. It can be used for measuring AC,DC,pulsed and mixed current.

Electrical characteristics

	Type	CSM050LT-3PN	CSM100LT-3PN	CSM200LT-3PN	CSM300LT-3PN	
I_{PN}	Primary nominal input current	50	100	200	300	A
I_P	Measuring range of primary current	0~±75	0~±150	0~±300	0~±500	A
I_{SN}	Secondary nominal output current	25	50	100	150	mA
K_N	Conversion ratio	1:2000				
R_M	Measuring resistance (V_C=±15V/ I_{PN})	504(max)	237(max)	100(max)	56(max)	Ω
	(V_C=±15V/ I_P)	327(max)	147(max)	56(max)	21(max)	Ω
	(V_C=±18V/ I_{PN})	619(max)	293(max)	130(max)	75 (max)	Ω
	(V_C=±18V/ I_P)	397(max)	148(max)	75(max)	31(max)	Ω
V_C	Supply voltage	±15~±18(±5%)				V
I_C	Current consumption	V_C=±15V	20+Is			mA
V_D	Insulation voltage	AC/50Hz/1min	6			kV
ε_L	Linearity	<0.1				%F
X	Accuracy	T_A=25℃	<±0.7			%
I_0	Zero offset current	T_A=25℃	<±0.25			mA
I_{OM}	Residual current	I_P→0	<±0.2			mA
I_{OT}	Thermal drift of I_0	I_P=0 T_A=-25~+85℃	<±0.65			mA
T_R	Response time	<1				μs
di/dt	di/dt accurately followed	>100				A/μ
f	Frequency bandwidth(-3dB)	DC~100				kH
T_A	Ambient operating temperature	-25~+85				℃
T_S	Ambient storage temperature	-40~+100				℃
R_S	Secondary coil resistance(T_A=25℃)	14	25	25	25	Ω
m	Mass	79				g
	Standard	Q/320115QHKJ01-2013				

Dimensions of drawing (mm)



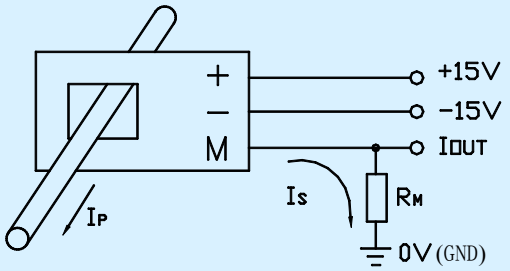
Elucidation:

+: +15V...+18V

−: −15V...−18V

M: IOUT

Connection



Remarks

·Incorrect connection may lead to the damage of the sensor. I_{SN} is positive when the I_P flows in the direction of the arrow.

·Dynamic performance (di/dt and response time) are best with a primary bar in the center of the through-hole.