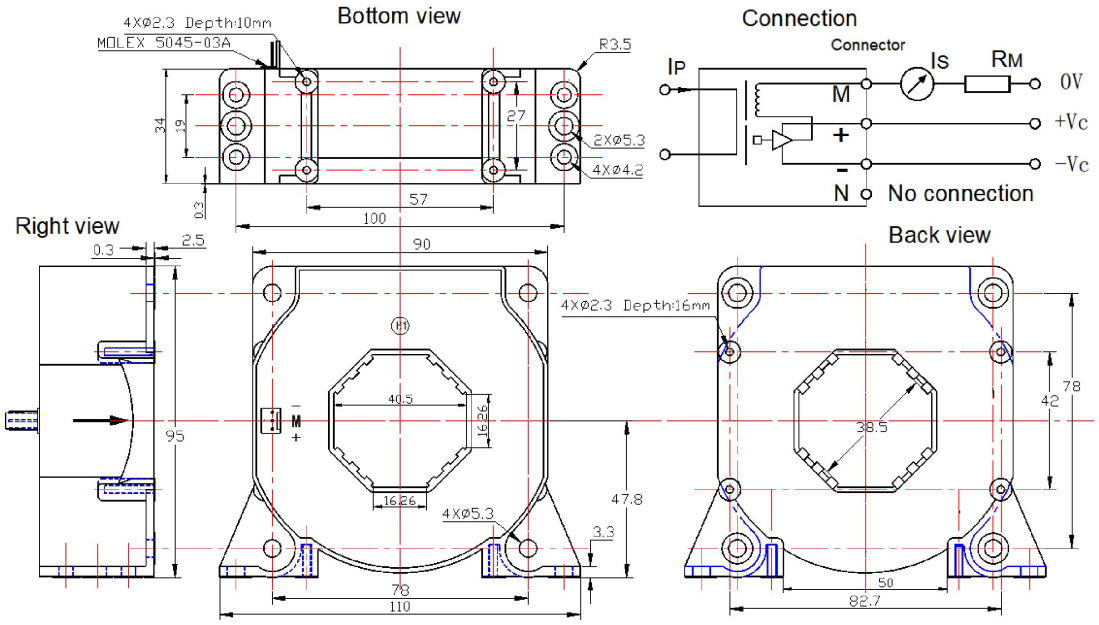
CSM1000LFA Hall-effect Current Sensor

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		
		CSM1000LFA	
I_{PN}	Primary nominal input current	1000	A
I_P	Measuring range of primary current	0~±2800(V_C=±24V R_M=2Ω)	A
I_{OUT}	Secondary nominal output current	200±0.3%	mA
K_N	Conversion ratio	1:5000	T
R_M	Measuring resistance	with±15V @±1000Amax 0(min) 35(max)	Ω
		with±15V @±1600Amax 0(min) 4.5(max)	Ω
		with±24V @±1000Amax 0(min) 80(max)	Ω
		with±24V @±2800Amax 0(min) 2.0(max)	Ω
V_C	Supply voltage	±15~±24(±5%)	V
I_C	Current consumption	20+I_P/K_N	mA
V_D	Insulation voltage	AC/50Hz/1min 6	kV
ε_L	Linearity	@I_P=0-±I_{PN} ±0.1	%FS
I_0	Zero offset current	@T_A=25℃ <±0.2	mA
I_{OT}	Thermal drift of I_0	@I_{PN}=0 T_A=-40～+85℃ <±0.5	mA
T_R	Response time	@100A/μS, 10%-90% ≤1	μs
f	Frequency bandwidth	@-3dB DC～200	kHz
di/dt	di/dt accurately followed	＞100	A/μs
T_A	Ambient operating temperature	-40～+85	℃
T_S	Ambient storage temperature	-40～+125	℃
R_S	Secondary coil resistance	@T_A=25℃ 36	Ω
m	Mass	505	g
	Standard	Q/320115QHKJ01-2016	

Dimensions of drawing (mm)



Elucidation: +:+15V...+24V -:-15V...-24V M:I_{OUT}

Remarks

·Incorrect connection may lead to the damage of the sensor. I_{OUT} 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.
·The primary conductor should be≤120℃.