

CSM025A Hall-effect Current Sensor Series

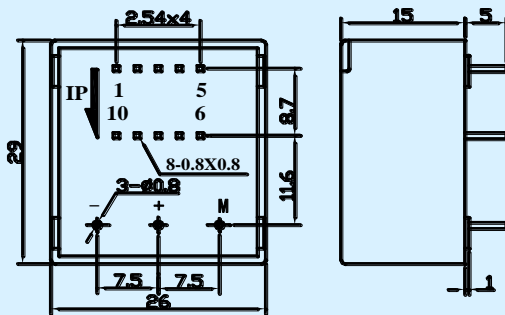


Closed loop current sensor based on the principle of Hall-effect. It can be used for measuring AC,DC,pulsed and mixed current.

Electrical characteristics				
Type	CSM025A			
I_{PN}	Primary nominal input current	25		A
I_P	Measuring range of primary current	0~±36		A
I_{SN}	Secondary nominal output current	25		mA
K_N	Conversion ratio	1-2-3-4-5:1000		
R_M	Measuring resistance ($V_C = \pm 15V$)	$I_{PN} = \pm 25A$ 100~460	$I_P = \pm 36A$ 100~304	R_M
V_C	Supply voltage	±15(±5%)		V
I_C	Current consumption	$V_C = \pm 15V$	10+ I_S	mA
V_D	Insulation voltage	AC/50Hz/1min	2.5	kV
ϵ_L	Linearity	<0.2		%FS
X	Accuracy	$T_A = 25^\circ C$ $V_C = \pm 15V$	<±0.7	%
I_O	Zero offset current	$T_A = 25^\circ C$	<±0.15	mA
I_{OM}	Residual current	$I_P \rightarrow 0$	<±0.15	mA
I_{OT}	Thermal drift of I_O	$I_P = 0$ $T_A = -25 \sim +85^\circ C$	<±0.5	mA
T_R	Response time	<1		μs
di/dt	di/dt accurately followed	>50		A/μs
f	Frequency bandwidth(-1dB)	DC~100		kHz
T_A	Ambient operating temperature	-25~+85		°C
T_S	Ambient storage temperature	-40~+100		°C
R_S	Secondary coil resistance($T_A = 85^\circ C$)	50		Ω
	Standard	Q/3201CHGL02-2007		

Dimensions of drawing (mm)

Connection



Elucidation: +: +15V -:-15V M: Iout

Conversion ratio	$I_{PN}(A)$	$I_P(A)$	$I_{SN}(mA)$	$R_p(m\Omega)$	Primary connection
1:1000	25	36	25	0.3	5 ○ ○ ○ ○ 1 IN OUT 6 ○ ○ ○ ○ 10
2:1000	12	18	24	1.1	5 ○ ○ ○ ○ 1 IN OUT 6 ○ ○ ○ ○ 10
3:1000	8	12	24	2.5	5 ○ ○ ○ ○ 1 IN OUT 6 ○ ○ ○ ○ 10
4:1000	6	9	24	4.4	5 ○ ○ ○ ○ 1 IN OUT 6 ○ ○ ○ ○ 10
5:1000	5	7	25	6.3	5 ○ ○ ○ ○ 1 IN OUT 6 ○ ○ ○ ○ 10

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.