



Hall Effect Current Sensor S29S1T0D24ZM

Features:

- Closed Loop type
- Current or voltage output
- Conversion ratio K = 1:5000
- Panel mounting with Molex 6410-03C.
- Large aperture
- Insulated plastic case according to UL94V0

Advantages:

- Excellent accuracy and linearity
- Very low temperature drift
- No insertion loss
- High Immunity to external interferences
- Optimised response time
- Wide supply voltage range

Specifications

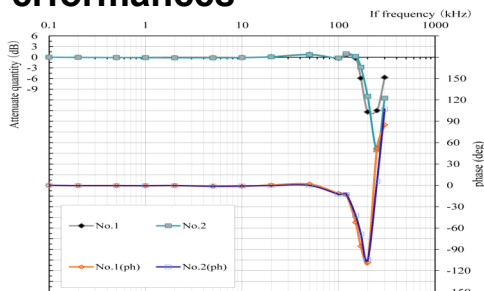
T_A=25°C, V_{CC}=±24V

Parameters	Symbol	S29S1T0D24ZM		
Rated Current	I _f	1000A		
Maximum Current	I _{fmax}	± 2100A (see below)		
I _f = ± A _{DC} Measuring resistance @ 85°C	R _M	±15V	70°C	1000A : 0Ω ~ 21Ω 1200A : 0Ω ~ 9Ω 1300A : 0Ω ~ 5Ω
			85°C	1000A : 0Ω ~ 18Ω 1200A : 0Ω ~ 7Ω
		±24V	70°C	1000A : 0Ω ~ 60.5Ω 1800A : 0Ω ~ 14Ω 2100A : 0Ω ~ 4Ω
			85°C	1000A : 10Ω ~ 58.5Ω 1800A : 10Ω ~ 12Ω
Conversion Ratio	K	1 : 5000		
Output Current	I _{OUT}	± 200mA		
Offset Current	I _{OE}	≤ ± 0.4mA @ I _f = 0A ¹		
Output Current Accuracy	X	I _{OUT} ± 0.4% (without I _{of})		
Output Linearity	ε _L	≤ ± 0.1% @ I _f		
Supply Voltage	V _{CC}	± 15V ~ ± 24V		
Consumption Current	I _{CC}	± 35mA (Output Current is not included)		
Response Time ²	t _r	< 1.0μs @ di/dt = 100A / μs		
Output Temperature Characteristic	TCI _{OUT}	< ± 0.01 % / °C @ I _f (without TCI _{OE})		
Offset Temperature Characteristic	TCI _{OE}	≤ ± 0.8mA max @ I _f = 0A		
Hysteresis allowance	I _{OH}	≤ 0.2mA (0A ↔ 3 x I _f)		
Insulation Withstanding	V _d	AC 4000V, for 1minute (sensing current 0.5mA), inside of aperture ↔ terminals		
Insulation Resistance	R _{IS}	> 500MΩ (@ DC 500V) inside of aperture ↔ terminals		
Frequency Bandwidth	f	DC .. 100 kHz		
Secondary Coil Resistance	R _S	48Ω @ T _A = 70°C 50Ω @ T _A = 85°C		
Operating Temperature	T _A	- 40°C ~ +85°C		
Storage Temperature	T _S	- 40°C ~ +90°C		

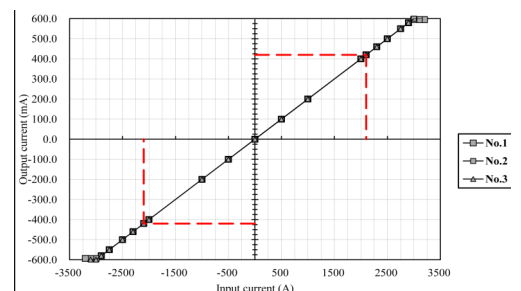
¹ Offset current value is after removal of core hysteresis — ² Time between 90% input current full scale and 90% of sensor output full scale

Electrical Performances

Frequency Characteristics

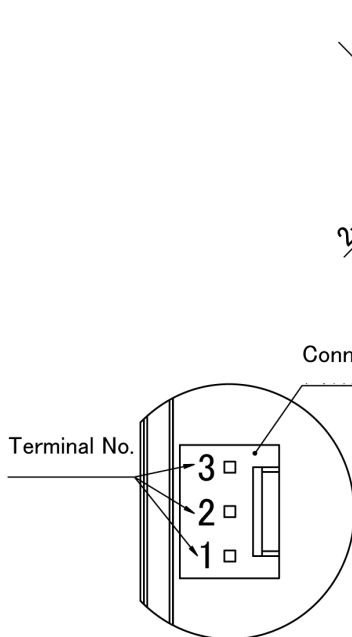
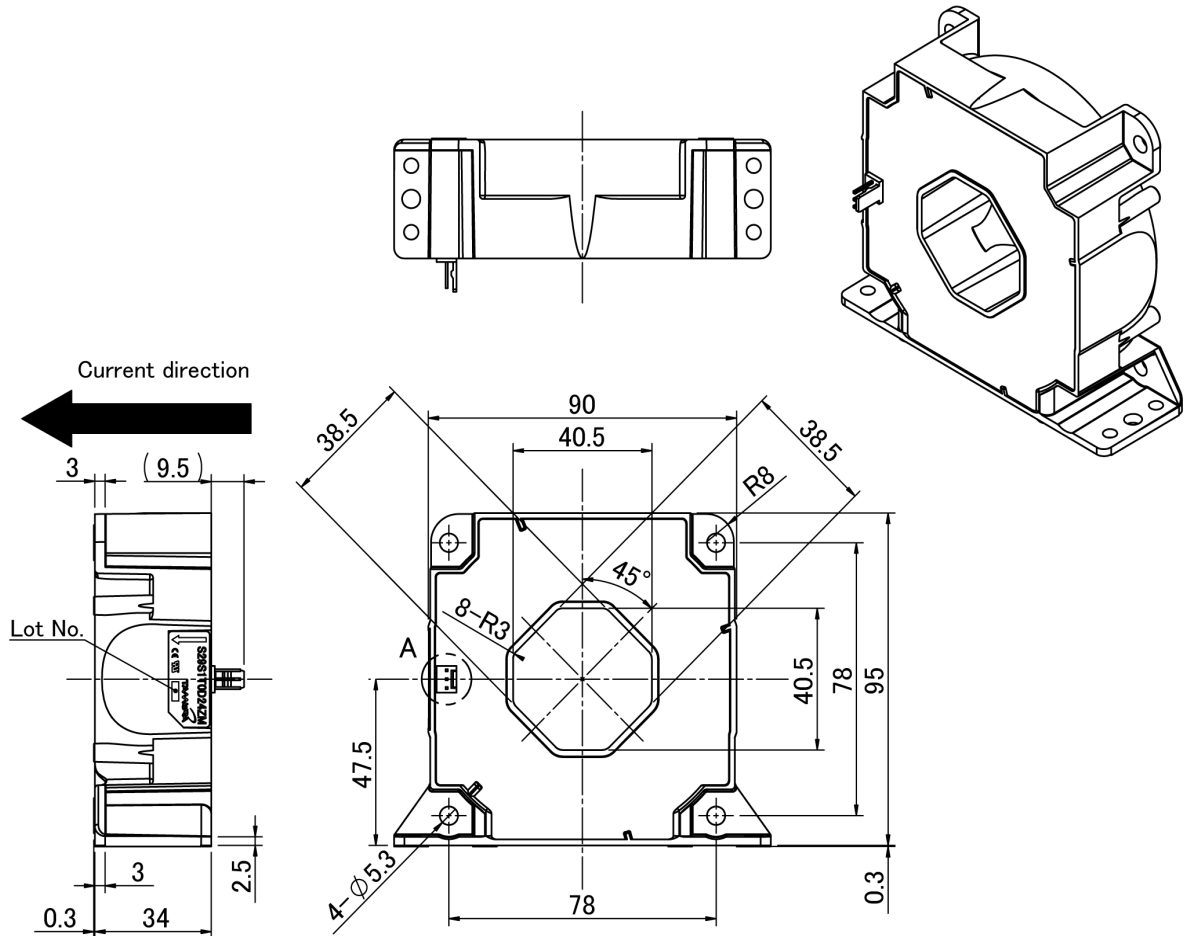


Saturation Characteristics



Hall Effect Current Sensor S29S1T0D24ZM

Mechanical dimensions in mm



Detail A (2:1)

Tolerance : ± 0.5
Unit : mm

Terminal No.
1. -Vcc
2. Iout
3. +Vcc

Connector	
Maker	Molex
Part No.	6410-03C (38-00-6293)

Plating of terminal : Sn

Weight : 560g

*Unless specified, tolerance shall be ± 0.5 mm