



# 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

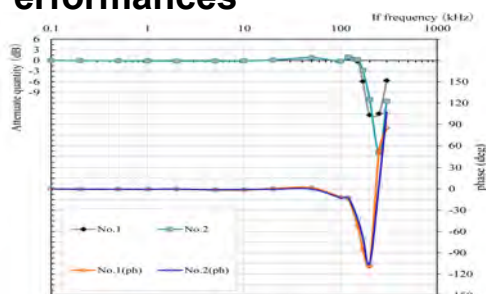
T<sub>A</sub>=25°C, V<sub>CC</sub>=±24V

Parameters	Symbol	S29S1T0D24ZM		
Rated Current	I <sub>f</sub>	1000A		
Maximum Current	I <sub>fmax</sub>	± 2100A (see below)		
I <sub>f</sub> = ± A <sub>DC</sub> Measuring resistance @ 85°C	R <sub>M</sub>	±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 <sub>OUT</sub>	± 200mA		
Offset Current	I <sub>OE</sub>	≤ ± 0.4mA @ I <sub>f</sub> = 0A <sup>1</sup>		
Output Current Accuracy	X	I <sub>OUT</sub> ± 0.4% (without I <sub>of</sub> )		
Output Linearity	ε <sub>L</sub>	≤ ± 0.1% @ I <sub>f</sub>		
Supply Voltage	V <sub>CC</sub>	± 15V ~ ± 24V (±5%)		
Consumption Current	I <sub>CC</sub>	± 35mA (Output Current is not included)		
Response Time <sup>2</sup>	t <sub>r</sub>	< 1.0μs @ di/dt = 100A / μs		
Output Temperature Characteristic	TCI <sub>OUT</sub>	< ± 0.01 % / °C @ I <sub>f</sub> (without TCI <sub>OE</sub> )		
Offset Temperature Characteristic	TCI <sub>OE</sub>	≤ ± 0.8mA max @ I <sub>f</sub> = 0A		
Hysteresis allowance	I <sub>OH</sub>	≤ 0.2mA (0A ↔ 3 x I <sub>f</sub> )		
Insulation Withstanding	V <sub>d</sub>	AC 4000V, for 1minute (sensing current 0.5mA), inside of aperture ↔ terminals		
Insulation Resistance	R <sub>IS</sub>	> 500MΩ (@ DC 500V) inside of aperture ↔ terminals		
Frequency Bandwidth	f	DC .. 100 kHz		
Secondary Coil Resistance	R <sub>S</sub>	48Ω @ T <sub>A</sub> = 70°C 50Ω @ T <sub>A</sub> = 85°C		
Operating Temperature	T <sub>A</sub>	- 40°C ~ +85°C		
Storage Temperature	T <sub>S</sub>	- 40°C ~ +90°C		

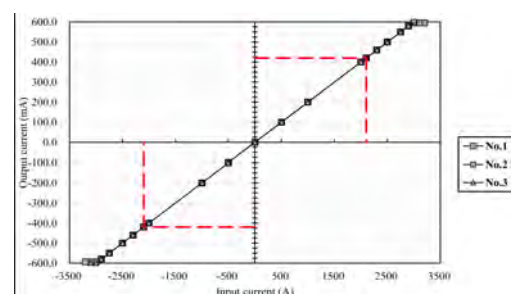
<sup>1</sup> Offset current value is after removal of core hysteresis — <sup>2</sup> Time between 90% input current full scale and 90% of sensor output full scale

## Electrical Performances

Frequency Characteristics

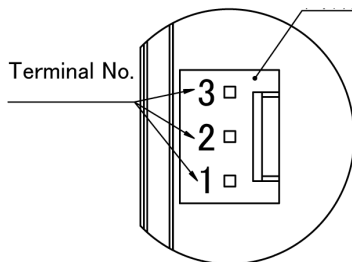
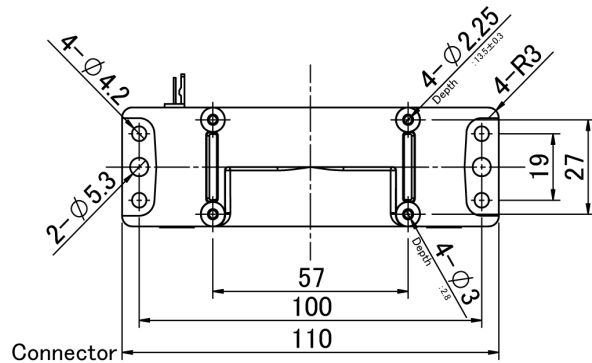
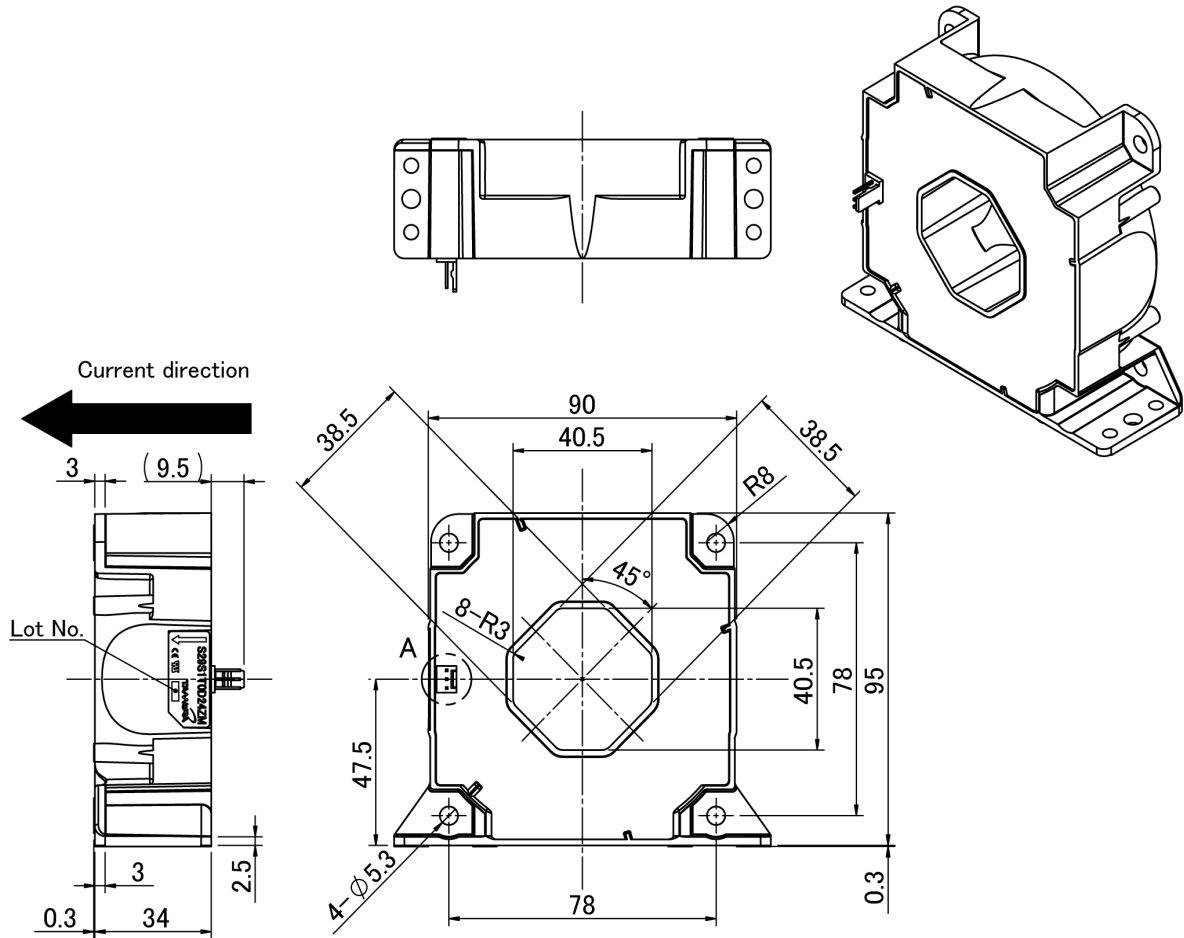


Saturation Characteristics



# 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 ±0.5mm