Hall Effect Current Sensor S28S500D24Z

Features:

- Closed Loop type
- Current or voltage output
- Conversion ratio K = 1:5000
- Panel mounting with Molex mini-fit Jr
- 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

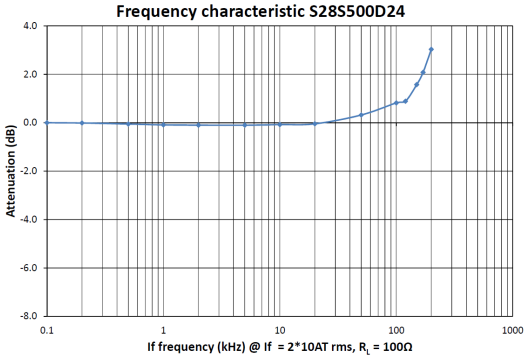
Specifications

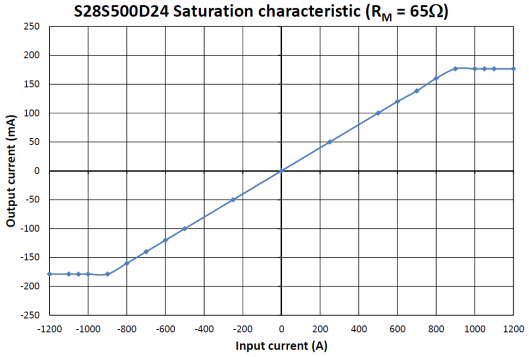
T_A=25°C, V_{CC}=±15V

Parameters	Symbol	S28S500D24Z	
Rated Current	I_f	500A	
Maximum Current[1]	I_{fmax}	± 800A (see below)	
If = ± A_{DC} Measuring resistance @ 85°C	R_M	±15V	500AT : 0Ω ~ 60Ω 800AT : 0Ω ~ 11Ω
		±18V	500AT : 0Ω ~ 92Ω 800AT : 0Ω ~ 30Ω
		±24V	500AT : 5Ω ~ 149Ω 800AT : 5Ω ~ 65Ω
Conversion Ratio	K	1 : 5000	
Output Current	I_{OUT}	± 100mA	
Offset Current	I_{OE}	≤ ± 0.4mA @ I_f = 0A	
Output Current Accuracy	X	I_{OUT} ± 0.5% (w/o IoE)	
Output Linearity	ε_L	≤ ± 0.1% @ I_f	
Supply Voltage[2]	V_{CC}	± 15V ~ ± 24V (±5%)	
Consumption Current	I_{CC}	± 30mA (Output Current is not included)	
Response Time[3]	t_r	< 1.0µs @ di/dt = 100A / µs	
Output Temperature Characteristic	TCI_{OUT}	< ± 0.01 % / °C @ I_f (w/o TCIoE)	
Offset Temperature Characteristic[4]	TCI_{OE}	< ± 0.4mA @ I_f = 0A (Max)	
Hysteresis allowance	I_{OH}	≤ 0.2mA (0A ⇔ 3 x I_f) Max	
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	70Ω @ T_A = 70°C	
Operating Temperature	T_A	– 40°C ~ +70°C	
Storage Temperature	T_S	– 40°C ~ +85°C	

[1] @ V_{CC}=±15V for 10 Seconds — [2] Rated Current is restricted by V_{CC} — [3] Time between 10% input current full scale and 90% of sensor output full scale — < ± 0.4mA max. @ I_f = 0A (-10°C ~ +70°C)

Electrical Performances





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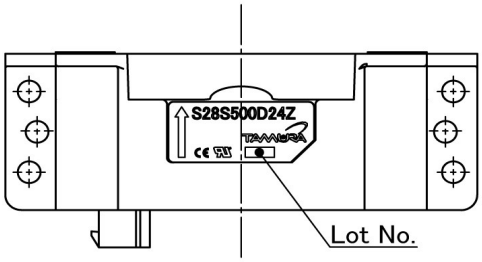

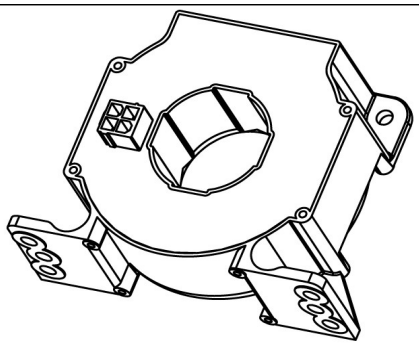

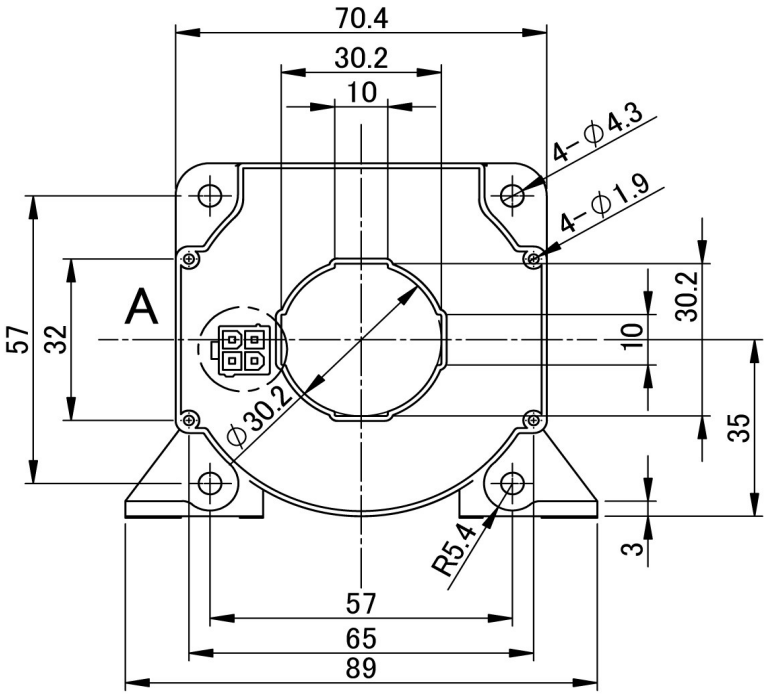

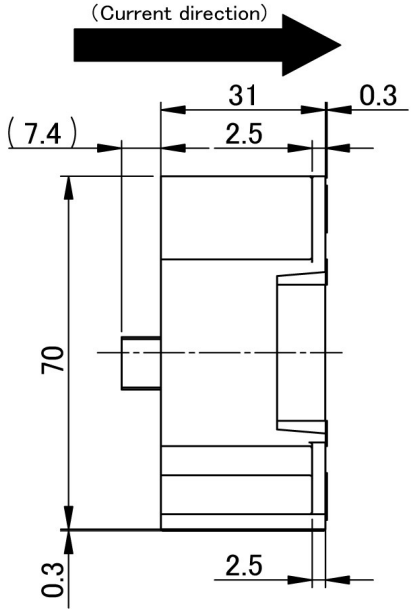

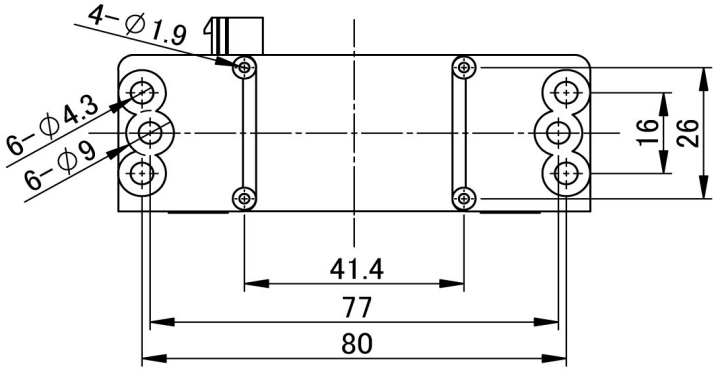

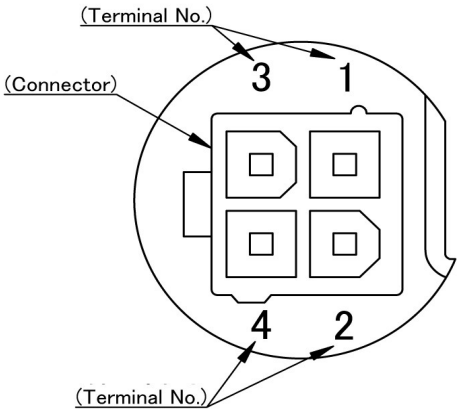

Detail A (2.5:1)

(Tolerance): ±0.5

(Unit): mm

(Terminal No.)
1. NC
2. -Vcc
3. Output
4. +Vcc

(Connector)

Molex	39-28-8040	5566-04A-210

Mouser Electronics

Authorized Distributor

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Tamura:
S28S500D24Z