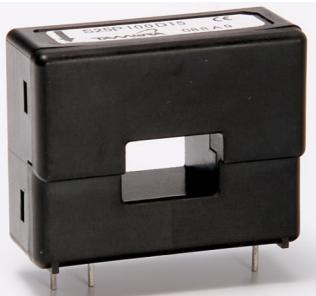


Hall Effect Current Sensor S25P100D15X



Features:

- Closed Loop type
- Current or voltage output
- Conversion ratio $K_N = 1:1000$
- Printed circuit board mounting
- Aperture
- Insulated plastic case according to UL94V0
- UL Recognition

Advantages:

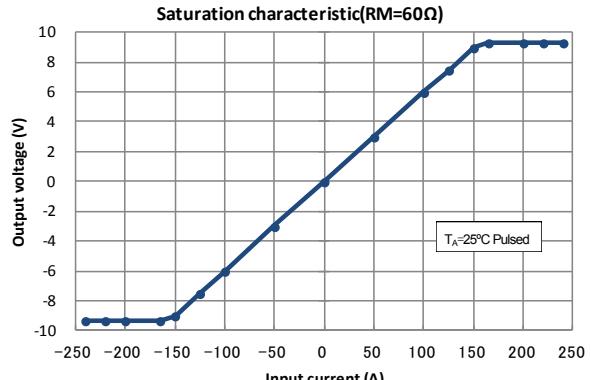
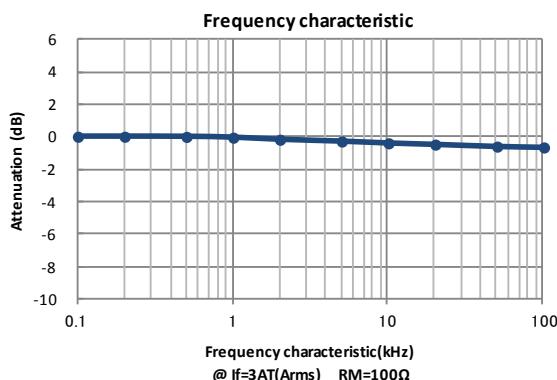
- Excellent accuracy and linearity
- Low temperature drift
- Wide frequency bandwidth
- No insertion loss
- High Immunity to external interferences
- Optimised response time
- Current overload capability

Specifications

Parameters	Symbol	T _A =25°C, V _{CC} =±15V
Primary nominal current	I _f	100A
Maximum current ¹ (at 85°C)	I _{fmax}	± 160A (at 40Ω ≤ R _M ≤ 50Ω)
Measuring resistance (If = ±A _{DC} at 85°C)	R _M	10Ω ~ 65Ω (at V _{CC} = ±12V) / 40Ω ~ 95Ω (at V _{CC} = ±15V)
Conversion Ratio	K _N	1 : 1000
Rated output current	I _o	100mA
Output current accuracy ² (at I _f)	X	I _o ± 0.5%
Offset current ³ (at If=0A)	I _{of}	≤ ± 0.2mA
Output linearity ² (0A~I _f)	ε _L	≤ ± 0.15% (at I _f)
Power supply voltage ¹	V _{CC}	± 12V..± 15V ± 5%
Consumption current	I _{cc}	≤ ± 16mA (Output current is not included)
Response time ⁴	t _r	≤ 1.0μs (at di/dt = 100A / μs)
Thermal drift of gain ⁵	T _{clo}	≤ ± 0.01% / °C
Thermal drift of offset current	T _{clof}	≤ ± 0.5mA (at T _A = -40°C ⇔ +85°C)
Hysteresis error	I _{OH}	≤ 0.3mA (at I _f =0A → I _f → 0A)
Insulation voltage	V _d	AC 3000V, for 1minute (sensing current 0.5mA), inside of through hole ⇔ terminal
Insulation resistance	R _{IS}	≥ 500MΩ (at DC 500V) , inside of through hole ⇔ terminal
Secondary coil resistance	R _S	25Ω (at T _A = 70°C) / 28Ω (at T _A = 85°C)
Ambient operation temperature	T _A	-40°C ~ +85°C
Ambient storage temperature	T _s	-40°C ~ +90°C

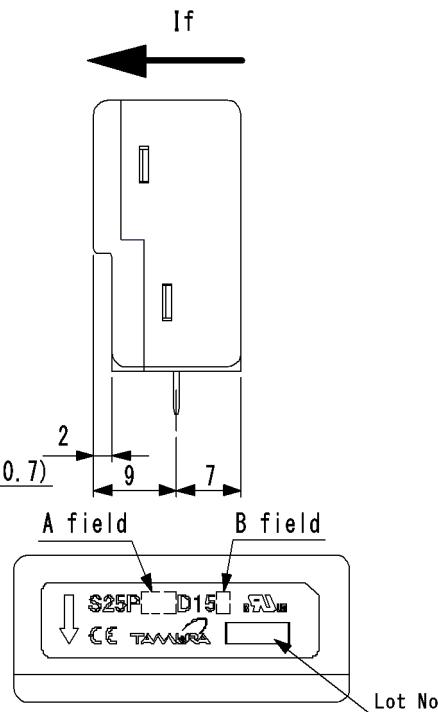
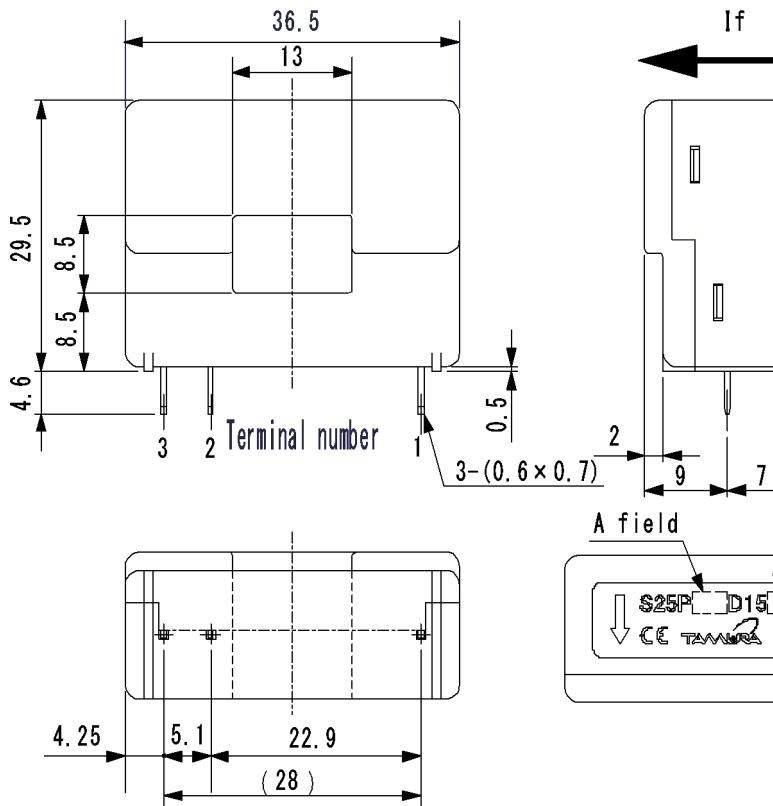
¹ Maximum current is restricted by V_{CC} — ² Without offset current — ³ After removal of core hysteresis — ⁴ Time between 90% input current full scale and 90% of sensor output full scale — ⁵ Without Thermal drift of offset current

Electrical Performances



Hall Effect Current Sensor S25P100D15X

Mechanical dimensions



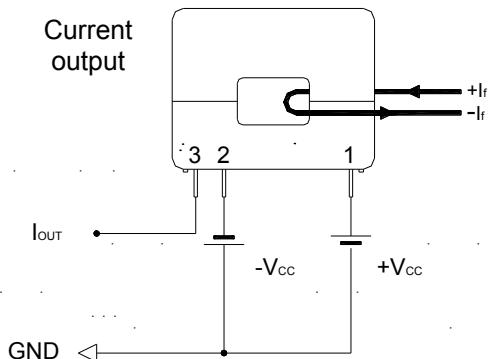
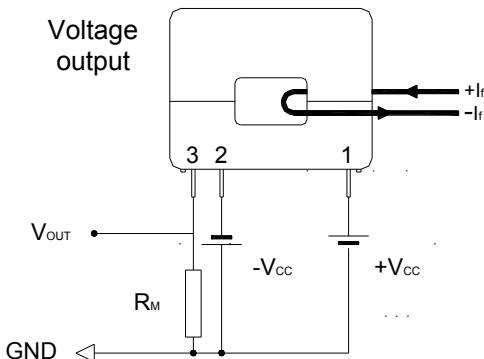
NOTES
 1. Unit is mm
 2. Tolerance is 0.5mm

Terminal number:
 1. +Vcc(+15V)
 2. -Vcc(-15V)
 3. I_{OUT}

A field display		B field display	
Current	A field	Coil turn	B field
50A	050	1000T	X
100A	100	2000T	Y
150A	150		

50A is 1000T only
 150A is 2000T only

Electrical connection diagram



S25P100D15X
 At I_f = 100A & V_{CC} = ±15V_{DC}
 40Ω ≤ R_M ≤ 95Ω

UL Standard

UL 508, CSA C22.2 No.14 (UL FILE No.E243511)

- For use in Pollution Degree 2 Environment.
- Maximum Surrounding air temperature rating, 85°C.

CAUTION

Do not wrap the primary conductor around the core part of the product to increase measured current.

Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
20g	100	300	7200



Mouser Electronics

Authorized Distributor

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Tamura:

[S25P100D15X](#)