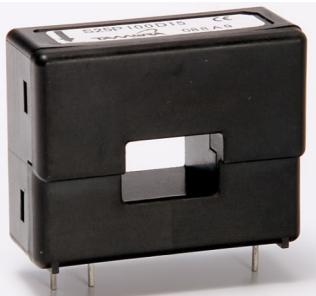


# Hall Effect Current Sensor S25P100D15X



## 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:

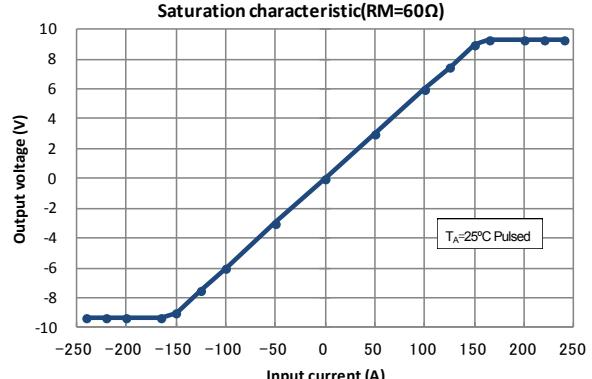
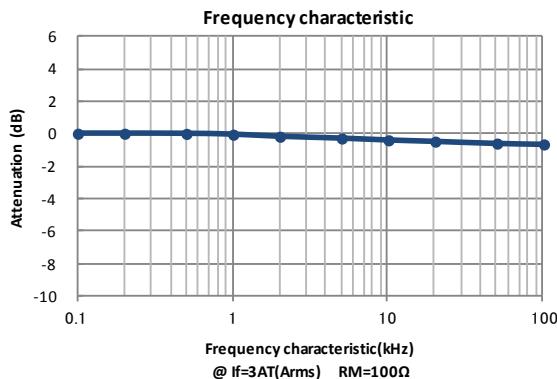
- Excellent accuracy and linearity
- Low temperature drift
- Wide frequency bandwidth
- No insertion loss
- High Immunity to external interferences
- Optimised response time
- Current overload capability

## Specifications

Parameters	Symbol	T <sub>A</sub> =25°C, V <sub>CC</sub> =±15V
Primary nominal current	I <sub>f</sub>	100A
Maximum current <sup>1</sup> (at 85°C)	I <sub>fmax</sub>	± 160A (at 40Ω ≤ R <sub>M</sub> ≤ 50Ω)
Measuring resistance (If = ±A <sub>DC</sub> at 85°C)	R <sub>M</sub>	10Ω ~ 65Ω (at V <sub>CC</sub> = ±12V) / 40Ω ~ 95Ω (at V <sub>CC</sub> = ±15V)
Conversion Ratio	K <sub>N</sub>	1 : 1000
Rated output current	I <sub>o</sub>	100mA
Output current accuracy <sup>2</sup> (at I <sub>f</sub> )	X	I <sub>o</sub> ± 0.5%
Offset current <sup>3</sup> (at If=0A)	I <sub>of</sub>	≤ ± 0.2mA
Output linearity <sup>2</sup> (0A~I <sub>f</sub> )	ε <sub>L</sub>	≤ ± 0.15% (at I <sub>f</sub> )
Power supply voltage <sup>1</sup>	V <sub>CC</sub>	± 12V..± 15V ± 5%
Consumption current	I <sub>cc</sub>	≤ ± 16mA (Output current is not included)
Response time <sup>4</sup>	t <sub>r</sub>	≤ 1.0μs (at di/dt = 100A / μs)
Thermal drift of gain <sup>5</sup>	T <sub>Clo</sub>	≤ ± 0.01% / °C
Thermal drift of offset current	T <sub>Clof</sub>	≤ ± 0.5mA (at T <sub>A</sub> = -40°C ⇔ +85°C)
Hysteresis error	I <sub>OH</sub>	≤ 0.3mA (at I <sub>f</sub> =0A → I <sub>f</sub> → 0A)
Insulation voltage	V <sub>d</sub>	AC 3000V, for 1minute (sensing current 0.5mA), inside of through hole ⇔ terminal
Insulation resistance	R <sub>IS</sub>	≥ 500MΩ (at DC 500V) , inside of through hole ⇔ terminal
Secondary coil resistance	R <sub>S</sub>	25Ω (at T <sub>A</sub> = 70°C) / 28Ω (at T <sub>A</sub> = 85°C)
Ambient operation temperature	T <sub>A</sub>	-40°C ~ +85°C
Ambient storage temperature	T <sub>s</sub>	-40°C ~ +90°C

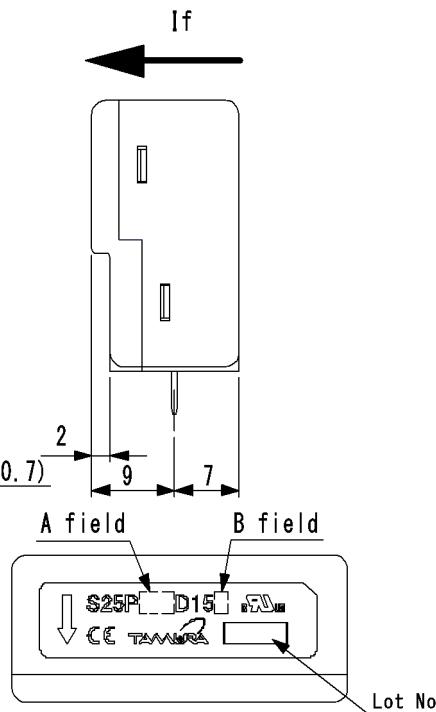
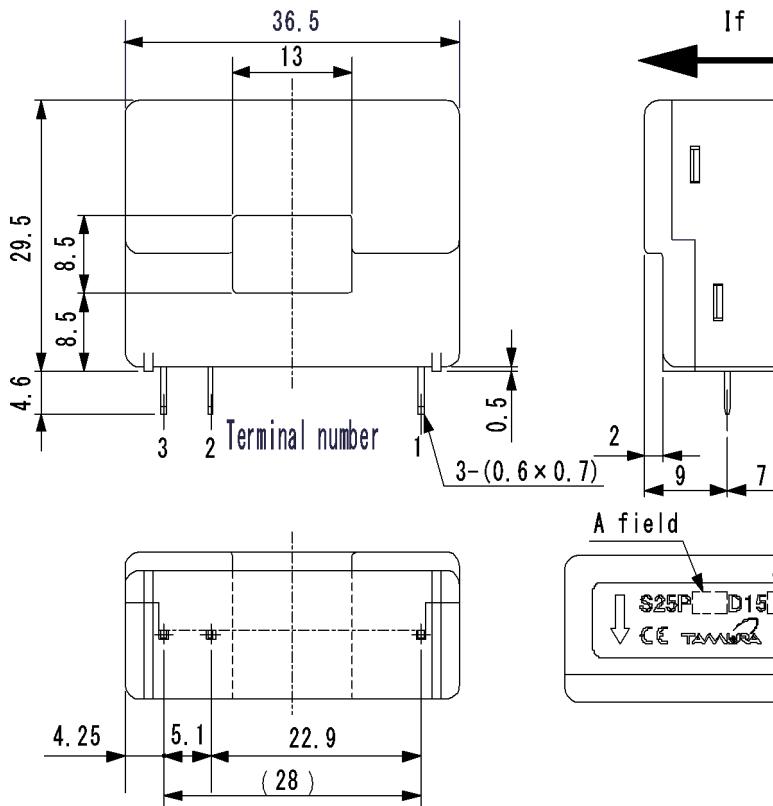
<sup>1</sup> Maximum current is restricted by V<sub>CC</sub> — <sup>2</sup> Without offset current — <sup>3</sup> After removal of core hysteresis — <sup>4</sup> Time between 90% input current full scale and 90% of sensor output full scale — <sup>5</sup> Without Thermal drift of offset current

## Electrical Performances



# Hall Effect Current Sensor S25P100D15X

## Mechanical dimensions



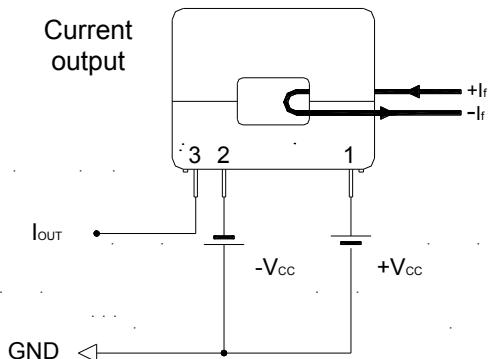
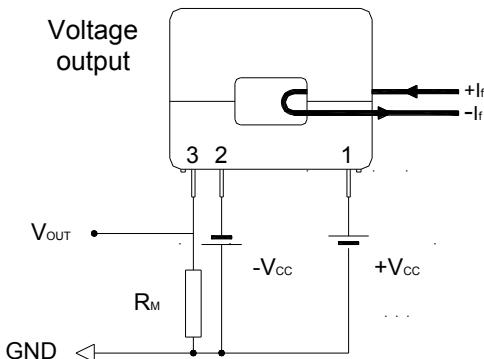
NOTES  
 1. Unit is mm  
 2. Tolerance is 0.5mm

Terminal number:  
 1. +Vcc(+15V)  
 2. -Vcc(-15V)  
 3. I<sub>OUT</sub>

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<sub>f</sub> = 100A & V<sub>CC</sub> = ±15V<sub>DC</sub>  
 40Ω ≤ R<sub>M</sub> ≤ 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

