

Hall Effect Current Sensors L18P***D15 Series



Features:

- Open Loop type
- Printed circuit board mounting
- Integrated primary
- Voltage output
- Busbar version from 40A to 60A
- Insulated plastic case according to UL94V0
- UL Recognition

Advantage:

- Excellent accuracy and linearity
- Wide nominal current range
- Low temperature drift
- Wide frequency bandwidth
- No insertion loss
- High Immunity To External Interference
- Optimised response time
- Current overload capability

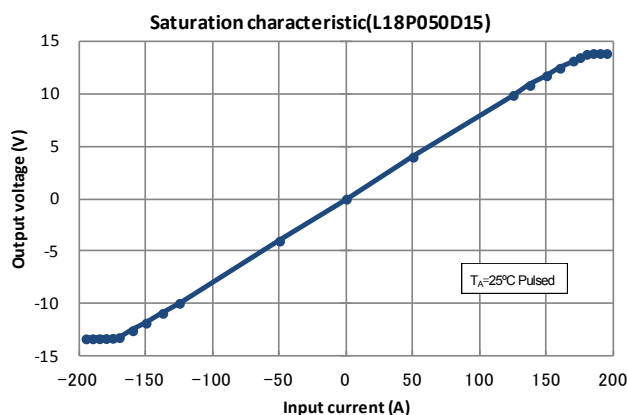
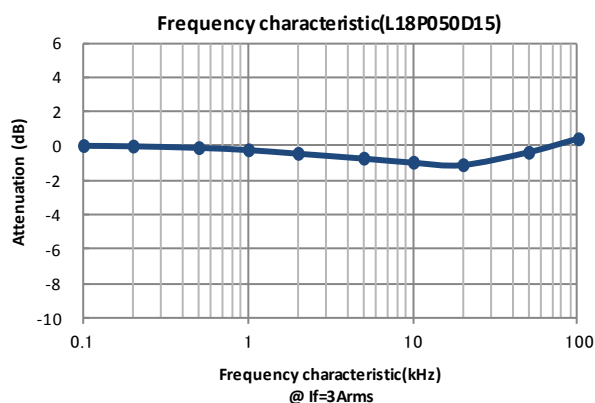
Specifications

 $T_A=25^{\circ}\text{C}$, $V_{CC}=\pm 15\text{V}$, $R_L=10\text{k}\Omega$

Parameters	Symbol	L18P003 D15	L18P005 D15	L18P010 D15	L18P015 D15	L18P020 D15	L18P025 D15	L18P030 D15	L18P040 D15	L18P050 D15	L18P060 D15
Primary nominal current	I _f	3A	5A	10A	15A	20A	25A	30A	40A	50A	60A
Saturation current	I _{fmax}	≥ ± I _f × 3									
Rated output voltage	V _o	4V ±0.040V (at I _f)							4V ±0.050V (at I _f)		
Offset voltage ¹	V _{of}	≤ ±0.040V (at I _f =0A)							≤ ±0.050V (at I _f =0A)		
Output linearity ² (0A~I _f)	ε _L	≤ ±1% (at I _f)									
Power supply voltage	V _{CC}	±15V ±5%									
Consumption current	I _{cc}	≤ ±15mA									
Response time ³	t _r	≤ 5μs (at di/dt = I _f / μs)									
Thermal drift of gain ⁴	TcVo	≤ ±0.1%/ °C									
Thermal drift of offset	TcVof	≤ ±1.5mV/ °C									
Hysteresis error (at I _f =0A→I _f →0A)	V _{OH}	≤ 25mV							≤ 40mV		
Insulation voltage	V _d	AC3000V for 1minute (sensing current 0.5mA), primary ⇔ secondary									
Insulation resistance	R _{IS}	≥ 500MΩ (at DC500V) , primary ⇔ secondary									
Ambient operation tem- perature	T _A	-30°C~+80°C									
Ambient storage tem- perature	T _S	-40°C~+85°C									

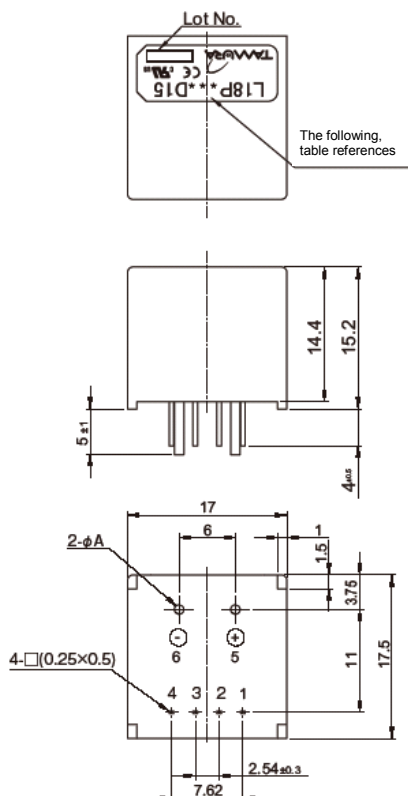
¹ After removal of core hysteresis — ² Without offset — ³ Time between 10% input current full scale and 90% of sensor output full scale — ⁴ Without Thermal drift of offset

Electrical Performances



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Mechanical dimensions



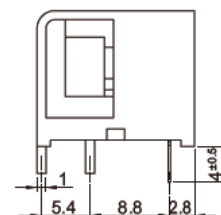
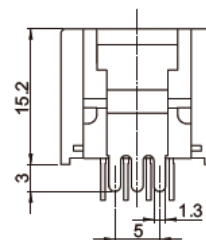
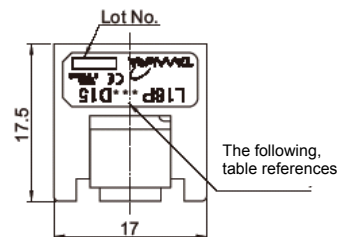
Terminal Number:

- 1: -V_{CC}(-15V)
- 2: GND
- 3: +V_{CC}(+15V)
- 4: V_{OUT}
- 5: Primary input current (+)
- 6: Primary input current (-)

Current	XXX	φA
3A	003	φ0.6
5A	005	φ0.8
10A	010	φ1.1
15A	015	φ1.4
20A	020	φ1.6
25A	025	φ1.6
30A	030	φ1.6

NOTES

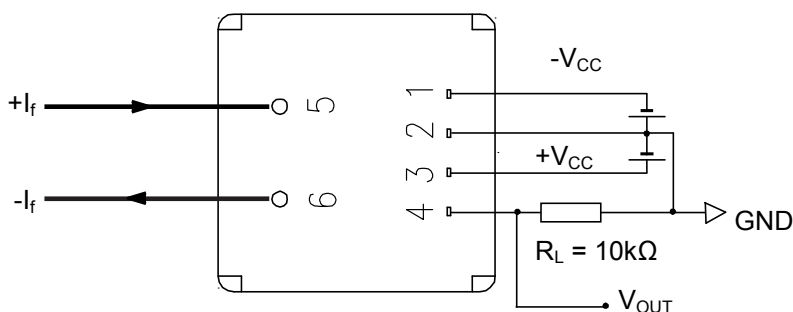
1. Unit is mm
2. Tolerance is 0.5mm
3. Cover is optional parts.



Current	XXX
40A	040
50A	050
60A	060

Primary :Busbar

Electrical connection diagram



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, 80°C.

Package & Weight Information

nominal current	Weight	Pcs/box	Pcs/carton	Pcs/pallet
10A..60A	8g	100	600	12000
3A , 5A	8g	50	1200	28800

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Tamura:

[L18P005D15](#) [L18P020D15](#) [L18P040D15](#) [L18P010D15](#) [L18P050D15](#) [L18P015D15](#) [L18P003D15](#) [L18P025D15](#)
[L18P030D15](#) [L18P060D15](#)