



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

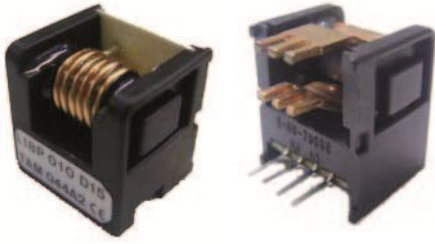
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# Hall Effect Current Sensors L18P\*\*\*S05R Series



## Features:

- Open Loop type
- Printed circuit board mounting
- Integrated primary
- Unipolar power supply
- Busbar version from 40A to 60A
- Insulated plastic case according to UL94V0
- Regulated offset voltage

## Advantages:

- 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

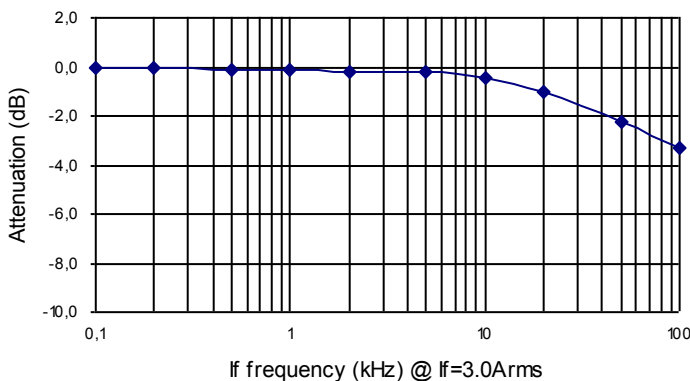
$T_A=25^{\circ}\text{C}$ ,  $V_{CC}=+5\text{V}$ ,  $R_L=10\text{k}\Omega$

Parameters	Symbol	L18P003S05R	L18P005S05R	L18P010S05R	L18P015S05R	L18P020S05R	L18P025S05R	L18P030S05R	L18P040S05R	L18P050S05R	L18P060S05R
Rated current	$I_f$	3A	5A	10A	15A	20A	25A	30A	40A	50A	60A
Maximum Current	$I_{fmax}$	$I_f \times 3$									
Output Voltage	$V_{OUT}$	$V_{OE} \pm 0.625V \pm 0.045V @ \pm I_f$									
Offset Voltage <sup>1</sup>	$V_{OE}$	$2.5V \pm 0.035V @ I_f = 0A$									
Accuracy <sup>2</sup> @ $I_f$	$X$	$\pm 1\%$									
Output Linearity	$\epsilon_L$	$\leq \pm 1\% @ I_f$									
Power Supply	$V_{CC}$	$+5V \pm 5\%$									
Consumption Current	$I_C$	$\leq 15\text{mA}$									
Response Time <sup>3</sup>	$t_r$	$\leq 5\mu\text{s} (@ di/dt = I_f / \mu\text{s})$									
Output Temperature Characteristic <sup>2</sup>	$TCV_{OUT}$	$\leq \pm 2.0\text{mV}/^{\circ}\text{C}$									
Offset Temperature Characteristic	$TCV_{OE}$	$\leq \pm 2.0\text{mV}/^{\circ}\text{C}$									
Hysteresis error	$V_{OH}$	$\leq 25\text{mV} (0A \leftrightarrow I_f)$									
Withstand Voltage	$V_d$	AC 3000V for 1minute (sensing current 0.5mA), primary pin $\leftrightarrow$ secondary pin									
Insulation Resistance	$R_{IS}$	$> 500\text{M}\Omega$ (500V DC), primary pin $\leftrightarrow$ secondary pin									
Frequency Bandwidth <sup>4</sup>	$f$	DC .. 50kHz									
Operating Temperature	$T_A$	$-10^{\circ}\text{C} \sim +80^{\circ}\text{C}$									
Storage Temperature	$T_S$	$-20^{\circ}\text{C} \sim +85^{\circ}\text{C}$									

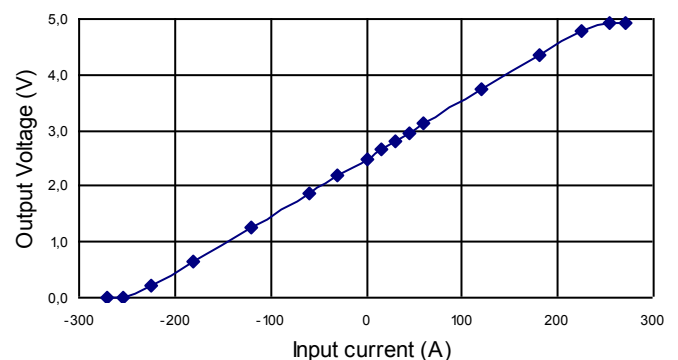
<sup>1</sup>  $V_{OE}$  is fixed (independent of  $V_{CC}$ ) — <sup>2</sup> Without offset — <sup>3</sup> Time between 10% input current full scale and 90% of sensor output full scale — <sup>4</sup> Small signal only to avoid excessive heating of magnetic core

## Electrical Performances

Frequency Characteristic (L18P060S05R)



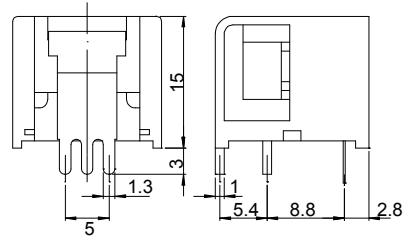
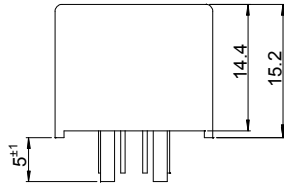
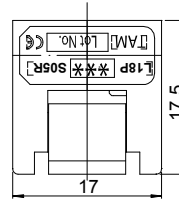
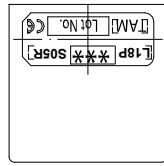
Saturation Characteristic (L18P060S05R)



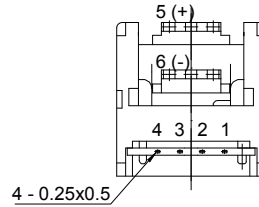
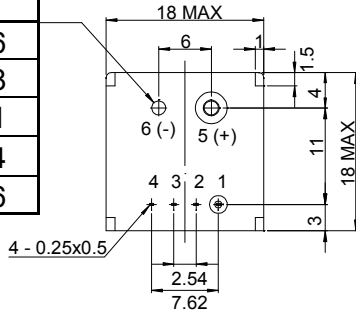
## Mechanical dimensions in mm

### Terminal Pin Identification

- 1: GND
- 2: GND
- 3: +V<sub>CC</sub>
- 4: Output
- 5: Primary input current (+)
- 6: Primary input current (-)



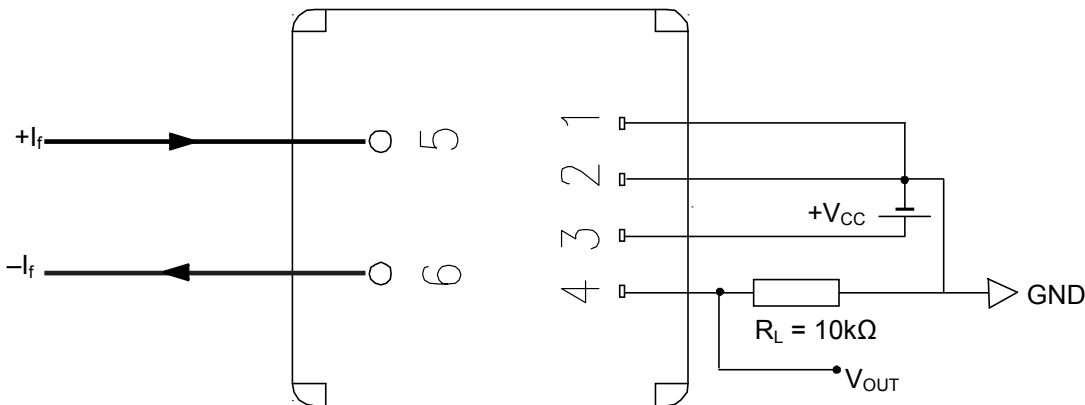
A	φD
3A	φ0.6
5A	φ0.8
10A	φ1.1
15A	φ1.4
20A~30A	φ1.6



### NOTES

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

## Electrical connection diagram



## Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
8g	100	600	9600

