

# Hall Effect Current Sensors L06P\*\*\*S05 Series



## Features:

- Open Loop type
- Printed circuit board mounting
- Horizontal mounting
- Unipolar power supply
- Industrial temperature range
- Mounting pins
- Insulated plastic case according to UL94V0

## 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

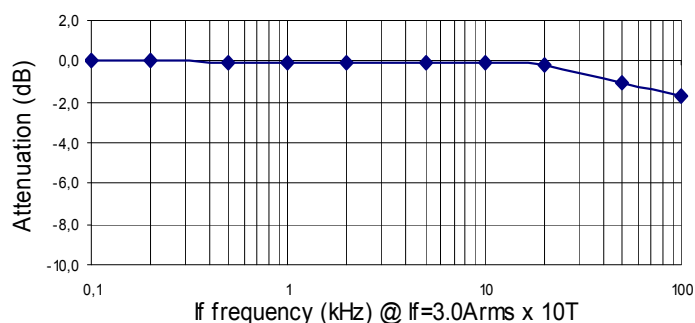
$T_A=25^{\circ}\text{C}$ ,  $V_{CC}=+5\text{V}$ ,  $R_L=10\text{k}\Omega$

Parameters	Symbol	L06P300S05	L06P400S05	L06P500S05	L06P600S05	L06P700S05	L06P800S05
Rated current	$I_f$	300AT	400AT	500AT	600AT	700AT	800AT
Maximum Current	$I_{fmax}$	$\geq I_f \times 1.33$					
Output Voltage	$V_{OUT}$	$V_{OE} \pm 1.5\text{V} @ \pm I_f$					
Offset Voltage <sup>1</sup>	$V_{OE}$	$V_{REF} \pm 30\text{mV} @ I_f = 0\text{A}$					
Accuracy <sup>2</sup>	$X$	$< 1\% @ I_f$					
Output Linearity <sup>2</sup>	$\epsilon_L$	$\leq \pm 1\% @ I_f$					
Power Supply	$V_{CC}$	$+ 5\text{V} \pm 2\%$					
Current Consumption	$I_c$	$\leq 15\text{mA}$					
Response Time <sup>3</sup>	$t_r$	$\leq 5\mu\text{s} (@ di/dt = 100\text{A} / \mu\text{s})$					
Output Temperature Characteristic <sup>2</sup>	$TCV_{OUT}$	$\leq \pm 1.5\text{mV}/^{\circ}\text{C}$					
Offset Temperature Characteristic	$TCV_{OE}$	$\leq \pm 1.0 \text{ mV}/^{\circ}\text{C} @ I_f = 0\text{A}$					
Hysteresis error	$V_{OH}$	$\leq 10\text{mV} (0\text{A} \leftrightarrow I_f)$					
Withstand Voltage	$V_d$	AC2500V for 1minute (sensing current 0.5mA), inside of aperture $\leftrightarrow$ terminal					
Insulation Resistance	$R_{IS}$	$> 500\text{M}\Omega$ (500V DC), inside of aperture $\leftrightarrow$ terminal					
Frequency Bandwidth <sup>4</sup>	$f$	DC .. 50kHz					
Operating Temperature	$T_A$	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$					
Storage Temperature	$T_s$	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$					

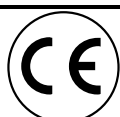
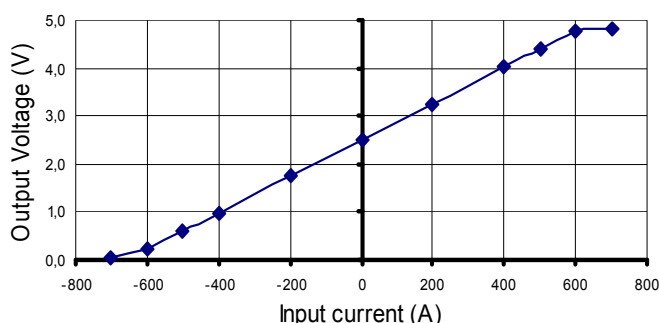
<sup>1</sup>  $V_{REF} = V_{CC} / 2$  (ratiometric) — <sup>2</sup> Without offset — <sup>3</sup> Time between 10% input current full scale and 90% of sensor output full scale — <sup>4</sup> Small signal only to avoid excessive heating of magnetic core

## Electrical Performances

Frequency Characteristic (L06P400S05)

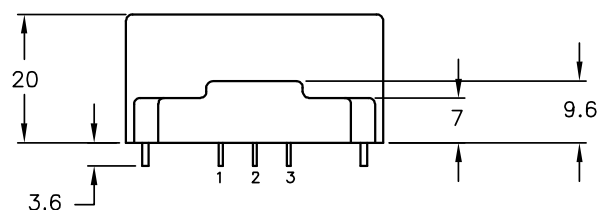
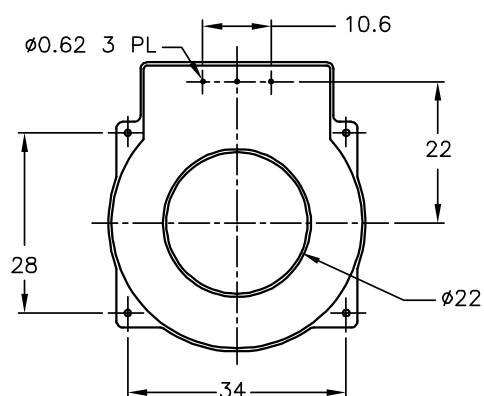
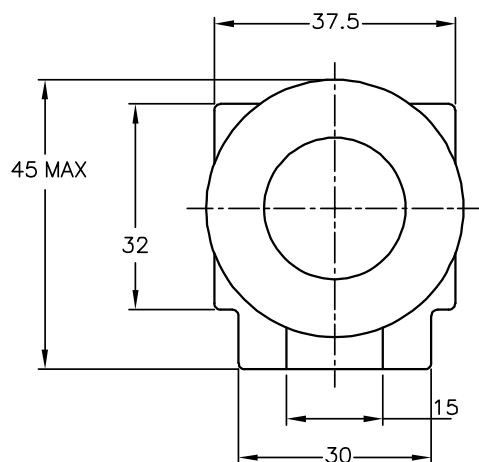
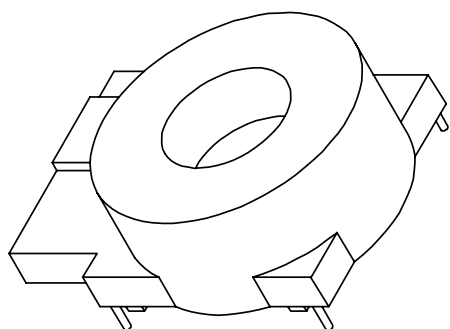


Saturation Characteristic (L06P400S05)

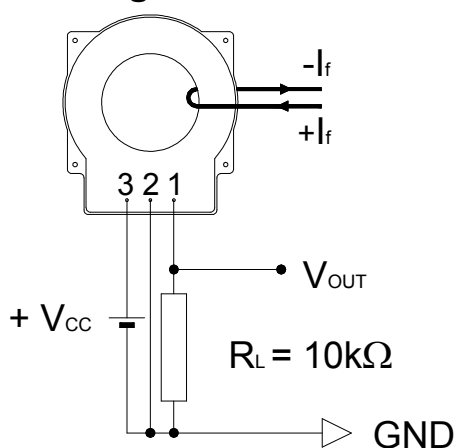


## Hall Effect Current Sensors L06P\*\*\*S05 Series

### Mechanical dimensions in mm



### Electrical connection diagram



#### Terminal Pin Identification

- 1: Output
- 2: GND
- 3: +V<sub>CC</sub>

### Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
66g	100	500	9000

