

## 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	L06P400S05	L06P600S05	L06P800S05
Primary nominal current	$I_f$	400AT	600AT	800AT
Saturation current	$I_{fmax}$	$\geq \pm I_f \times 1.33$		
Rated output voltage	$V_o$	$V_{of} + 1.5\text{V} \pm 0.035\text{V}$ (at $I_f$ )		
Offset voltage <sup>1</sup>	$V_{of}$	$V_{REF}^1 \pm 30\text{mV}$ (at $I_f = 0\text{A}$ )		
Output linearity <sup>2</sup> (0A~ $I_f$ )	$\epsilon_L$	$\leq \pm 1\%$ (at $I_f$ )		
Power supply voltage	$V_{CC}$	$+5\text{V} \pm 0.1\text{V}$		
Consumption current	$I_{CC}$	$\leq 15\text{mA}$		
Response time <sup>3</sup>	$t_r$	$\leq 5\mu\text{s}$ (at $di/dt = 100\text{A} / \mu\text{s}$ )		
Thermal drift of gain <sup>4</sup>	$TcVo$	$\leq \pm 1.5\text{mV}/^{\circ}\text{C}$		
Thermal drift of offset	$TcVof$	$\leq \pm 1.0\text{mV}/^{\circ}\text{C}$		
Hysteresis error	$V_{OH}$	$\leq 10\text{mV}$ (at $I_f = 0\text{A} \rightarrow I_f \rightarrow 0\text{A}$ )		
Insulation voltage	$V_d$	AC2500V for 1minute (sensing current 0.5mA), inside of through hole $\leftrightarrow$ terminal		
Insulation resistance	$R_{IS}$	$\geq 500\text{M}\Omega$ (at DC500V), inside of through hole $\leftrightarrow$ terminal		
Ambient operation temperature	$T_A$	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$		
Ambient storage temperature	$T_S$	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$		

<sup>1</sup>  $V_{REF} = V_{CC} / 2$  (ratiometric). After removal of core hysteresis—<sup>2</sup> Without offset —<sup>3</sup> Time between 90% input current full scale and 90% of sensor output full scale—<sup>4</sup> Without Thermal drift of offset

### Electrical Performances





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