

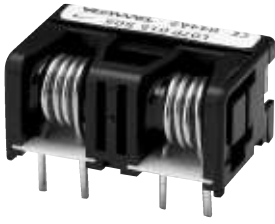
Hall Effect Current Sensors L07P***S05 Series

Features:

- Open Loop type
- Dual integrated primary
- Unipolar power supply
- Printed circuit board mounting
- 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

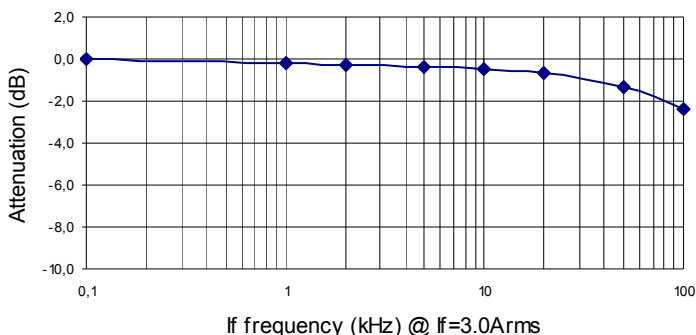
$T_A=25^{\circ}\text{C}$, $V_{CC}=+5\text{V}$, $R_L=10\text{k}\Omega$

Parameters	Symbol	L07P005S05	L07P007S05	L07P010S05	L07P015S05	L07P020S05	L07P025S05	L07P030S05
Rated current	I_f	$\pm 5\text{A}$	$\pm 7.5\text{A}$	$\pm 10\text{A}$	$\pm 15\text{A}$	$\pm 20\text{A}$	$\pm 25\text{A}$	$\pm 30\text{A}$
Maximum Current	I_{fmax}	$I_f \times 1.5$						
Output Voltage	V_{OUT}	$V_{OE} \pm 1.25\text{V} \pm 40\text{mV} @ \pm I_f$						
Offset Voltage ¹	V_{OE}	$V_{REF} \pm 40\text{mV} @ I_f = 0\text{A}$						
Accuracy ²	X	$\pm 1\% @ I_f$						
Output Linearity ²	ϵ_L	$\leq \pm 1\% @ I_f$						
Power Supply	V_{CC}	$+ 5\text{V} \pm 5\%$						
Current Consumption	I_C	$\leq 30\text{mA}$						
Response Time ³	t_r	$\leq 5\mu\text{s} (@ di/dt = I_f / \mu\text{s})$						
Output Temperature Characteristic ²	TCV_{OUT}	$\leq \pm 2\text{mV}/^{\circ}\text{C}$						
Offset Temperature Characteristic	TCV_{OE}	$\leq \pm 1\text{mV}/^{\circ}\text{C} (@ I_f = 0\text{A})$						
Hysteresis error	V_{OH}	$\leq 15\text{mV} (0\text{A} \leftrightarrow I_f)$						
Withstand Voltage	V_d	AC2000V for 1minute (sensing current 0.5mA), inside of through hole \leftrightarrow terminal						
Insulation Resistance	R_{IS}	$> 500\text{M}\Omega$ (500V DC), inside of through hole \leftrightarrow terminal						
Frequency Bandwidth ⁴	f	DC .. 50kHz						
Operating Temperature	T_A	$-10^{\circ}\text{C} \sim +80^{\circ}\text{C}$						
Storage Temperature	T_S	$-15^{\circ}\text{C} \sim +85^{\circ}\text{C}$						

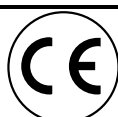
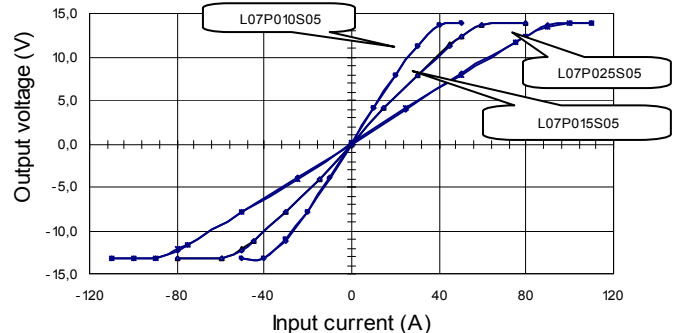
¹ $V_{REF} = V_{CC} / 2$ (ratiometric) — ² Without offset — ³ Time between 10% input current full scale and 90% of sensor output full scale — ⁴ Small signal only to avoid excessive heating of magnetic core

Electrical Performances

Frequency Characteristic

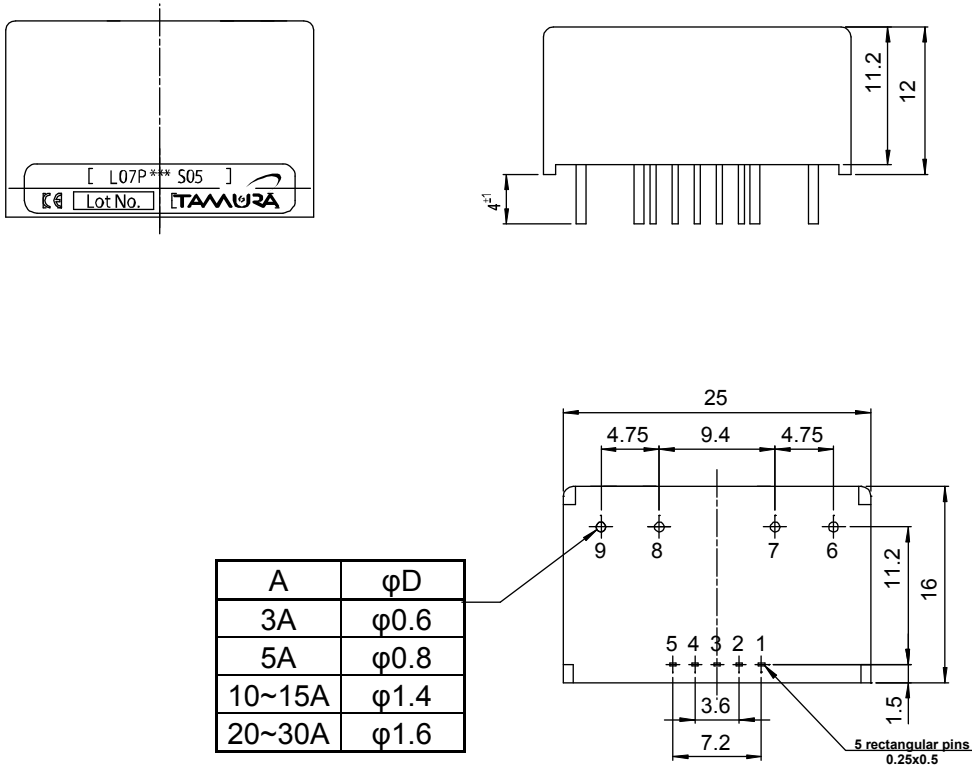


Saturation characteristic



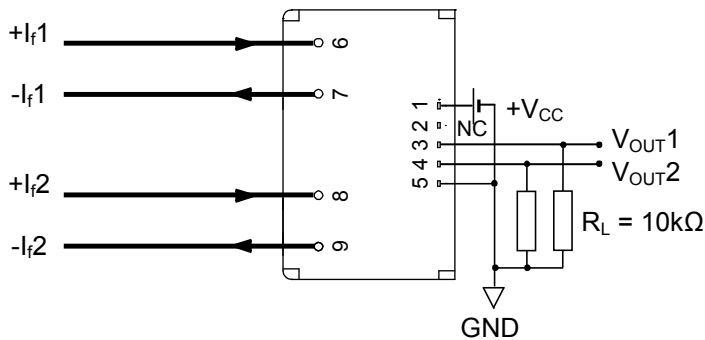
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Mechanical dimensions in mm



Terminal	Function
1	+5V
2	NC
3	V _{OUT1}
4	V _{OUT2}
5	GND
6	+I _{f1}
7	-I _{f1}
8	+I _{f2}
9	-I _{f2}

Electrical connection diagram



Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
12g	100	400	9600

