

# Hall Effect Current Sensors RAL08P200S05W Series



## Features:

- Open Loop type
- Printed circuit board mounting
- Bipolar power supply
- Extended measurement range
- Insulated plastic case according to UL94V0

## Advantages:

- Excellent accuracy
- Very good linearity
- Low temperature drift
- No insertion loss
- High Immunity To External Interference
- Current overload capability

## Specifications

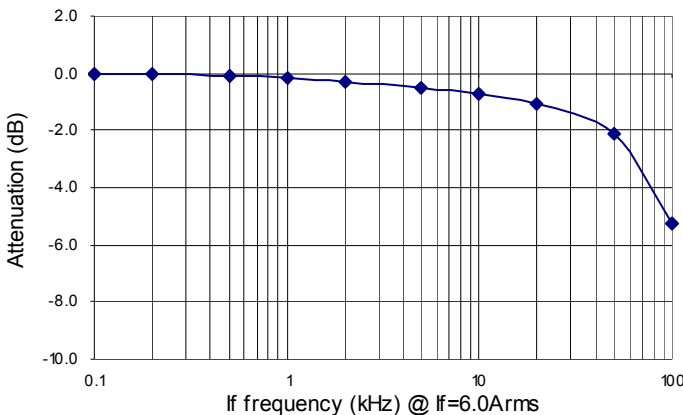
$T_A=25^{\circ}\text{C}$ ,  $V_{CC}=+5.0\text{V}$ ,  $R_L=10\text{k}\Omega$

Parameters	Symbol	RAL08P200S05W
Nominal Primary DC current	$I_f$	200A
Maximum Current	$I_{fmax}$	$> I_f \times 3$
Output Voltage	$V_{OUT}$	$V_{OE} + 0.625V \pm 0.035V @ \pm I_f$
Offset Voltage <sup>1</sup>	$V_{OE}$	$+2.5V \pm 0.030V @ I_f = 0A$
Accuracy <sup>2</sup>	$X$	$\pm 1\%$
Output Linearity <sup>1</sup>	$\epsilon_L$	$\leq \pm 1\% (0A \leftrightarrow I_f)$
Power Supply	$V_{CC}$	$+5V \pm 5\%$
Current Consumption	$I_C$	$\leq \pm 15\text{mA}$
Response Time	$t_r$	$\leq 5\mu\text{s} (@ di/dt = 200A / \mu\text{s})$
Output Temperature Characteristic <sup>2</sup>	$TCV_{OUT}$	$< \pm 1\text{mV} / ^{\circ}\text{C}$
Offset Temperature Characteristic	$TCV_{OE}$	$< \pm 1\text{mV} / ^{\circ}\text{C} @ I_f = 0A$
Hysteresis error	$V_{OH}$	$\leq 10\text{mV} (0A \leftrightarrow I_f)$
Withstand Voltage	$V_d$	AC 2500V 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>3</sup>	$f$	DC .. 50kHz
Operating Temperature	$T_A$	$-20^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Storage Temperature	$T_S$	$-25^{\circ}\text{C} \sim +90^{\circ}\text{C}$

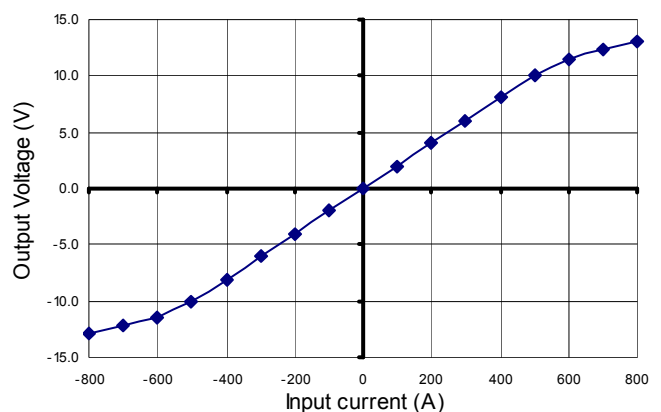
<sup>1</sup>  $V_{OE}$  is fixed (independent of  $V_{CC}$ ) — <sup>2</sup> Without offset — <sup>3</sup> Small signal only to avoid excessive heating of magnetic core

## Electrical Performances

Frequency Characteristic

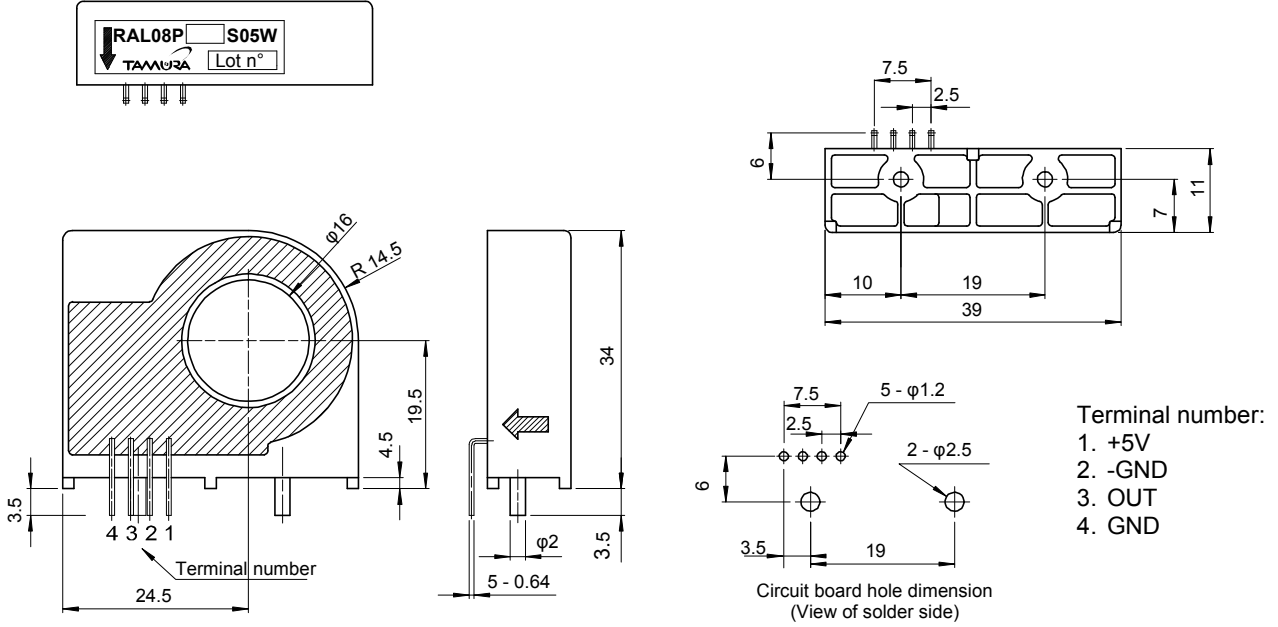


Saturation Characteristic

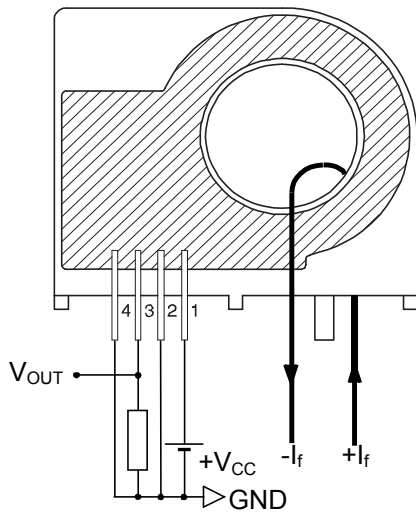


# Hall Effect Current Sensors RAL08P200S05W Series

## Mechanical dimensions in mm



## Electrical connection diagram



## Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
20g	50	500	9000