



# Hall Effect Current Sensor S27S300D15Y

## Features:

- Closed Loop type
- Current or voltage output
- Conversion ratio  $K = 1:2000$
- Panel mounting with Molex Minifit connector
- Large aperture
- Insulated plastic case according to UL94V0

## Advantages:

- Excellent accuracy and linearity
- Low temperature drift
- Wide frequency bandwidth
- No insertion loss
- High Immunity to external interferences
- Optimised response time
- Current overload capability

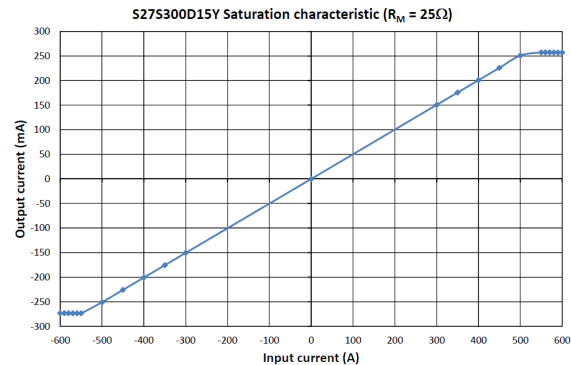
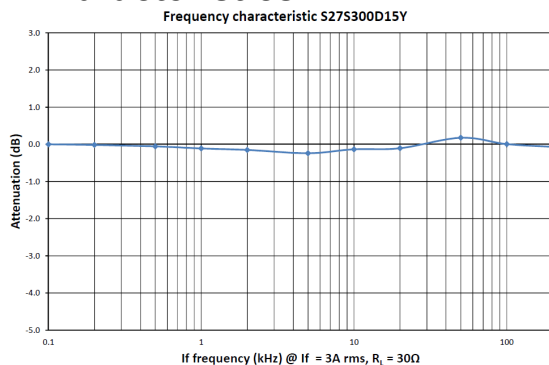
## Specifications

$T_A=25^\circ\text{C}$ ,  $V_{CC}=\pm 15\text{V}$

Parameters	Symbol	S27S300D15Y	
Rated Current	$I_f$	300A	
Maximum Current <sup>1</sup>	$I_{fmax}$	$\pm 500\text{A}$ (@ $R_M \leq 5\Omega$ )	
$I_f = \pm A_{DC}$ Measuring resistance @ $85^\circ\text{C}$	$R_M$	$\pm 12\text{V}$	300A : $0\Omega \sim 39\Omega$ 500A : $0\Omega \sim 12\Omega$
		$\pm 15\text{V}$	300A : $0\Omega \sim 58\Omega$ 500A : $0\Omega \sim 22\Omega$
		$\pm 20\text{V}$	300A : $15\Omega \sim 93\Omega$ 500A : $15\Omega \sim 45\Omega$
Conversion Ratio	$K$	1 : 2000	
Output Current	$I_{OUT}$	$\pm 150\text{mA}$	
Offset Current	$I_{OE}$	$\leq \pm 0.2\text{mA}$ @ $I_f = 0\text{A}$	
Output Current Accuracy	$X$	$I_{OUT} \pm 0.4\%$ (w/o $I_{of}$ )	
Output Linearity	$\epsilon_L$	$\pm 0.1\%$ @ $I_f$	
Supply Voltage <sup>2</sup>	$V_{CC}$	$\pm 12\text{V} \sim \pm 20\text{V}$ ( $\pm 5\%$ )	
Consumption Current	$I_{CC}$	$\pm 20\text{mA}$ (Output Current is not included)	
Response Time <sup>3</sup>	$t_r$	$< 1.0\mu\text{s}$ @ $di/dt = 100\text{A} / \mu\text{s}$	
Output Temperature Characteristic	$TCI_{OUT}$	$\leq \pm 0.01\%$ / $^\circ\text{C}$ @ $I_f$	
Offset Temperature Characteristic	$TCI_{OE}$	$< \pm 0.5\text{mA}$ max. @ $I_f = 0\text{A}$ ( $-40^\circ\text{C} \sim +85^\circ\text{C}$ )	
Hysteresis allowance	$I_{OH}$	$\leq 0.08\text{mA}$ ( $0\text{A} \leftrightarrow 3 \times I_f$ )	
Insulation Withstanding	$V_d$	AC 4000V, for 1minute (sensing current 0.5mA), inside of aperture $\leftrightarrow$ terminals	
Insulation Resistance	$R_{IS}$	$> 500\text{M}\Omega$ (@ DC 500V) inside of aperture $\leftrightarrow$ terminals	
Frequency Bandwidth	$f$	DC .. 100 kHz	
Secondary Coil Resistance	$R_S$	25 $\Omega$ @ $T_A = 70^\circ\text{C}$ 28 $\Omega$ @ $T_A = 85^\circ\text{C}$	
Operating Temperature	$T_A$	$-40^\circ\text{C} \sim +85^\circ\text{C}$	
Storage Temperature	$T_S$	$-40^\circ\text{C} \sim +90^\circ\text{C}$	

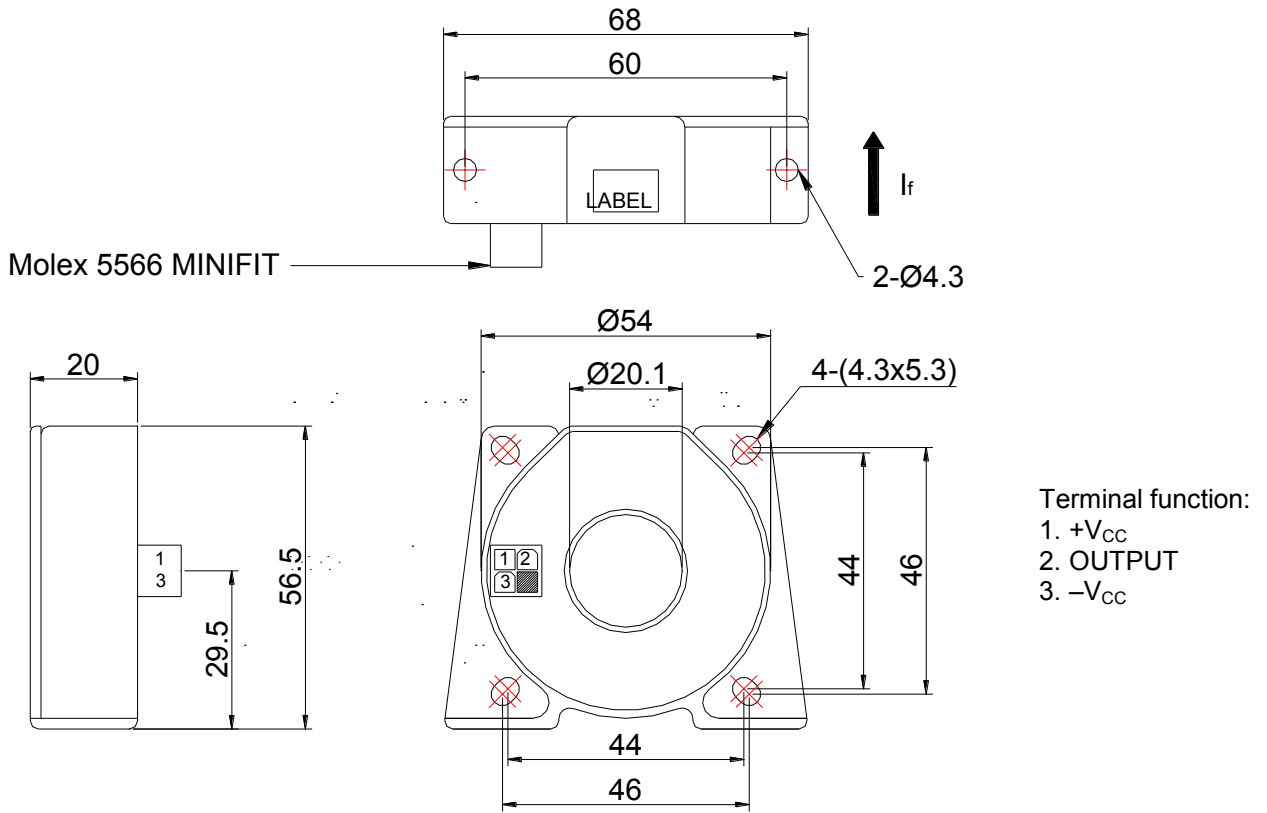
<sup>1</sup> @  $V_{CC}=\pm 15\text{V}$  for 10 Seconds — <sup>2</sup> Rated Current is restricted by  $V_{CC}$  — <sup>3</sup> Time between 10% input current full scale and 90% of sensor output full scale —  $< \pm 0.3\text{mA}$  max. @  $I_f = 0\text{A}$  ( $-10^\circ\text{C} \sim +70^\circ\text{C}$ )

## Electrical Characteristics

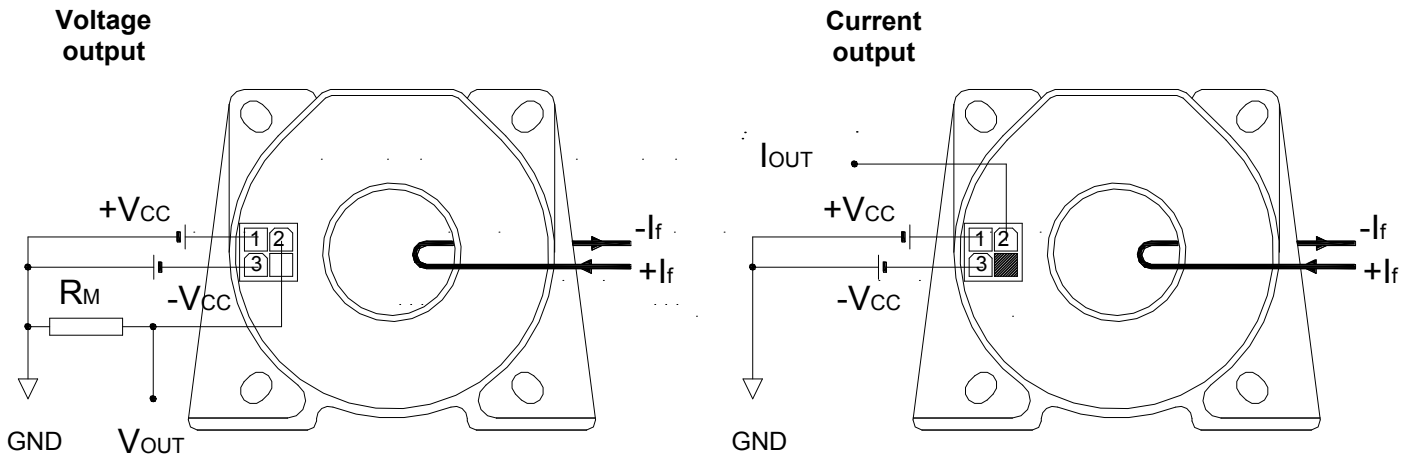


# Hall Effect Current Sensor S27S300D15Y

## Mechanical dimensions in mm



## Electrical connection diagram



## Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet