

Hall Effect Current Sensors S20S200D15M1



Features:

- Closed Loop type
- Voltage or current output
- Panel mounting
- JST connector
- Insulated plastic case according to UL94V0

Advantage:

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Wide frequency bandwidth
- No insertion loss
- High Immunity To External Interference
- Optimised response time
- Current overload capability

Specifications

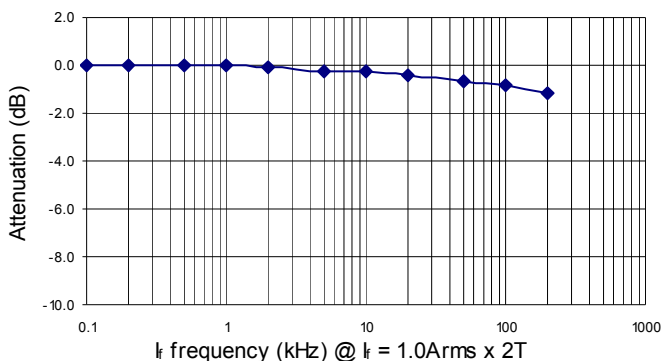
$T_A=25^{\circ}\text{C}$, $V_{CC}=\pm 15\text{V}$

Parameter	Symbol	S20S200D15M1	
		200AT	300AT
Rated Current	I_f	200AT	300AT
Maximum Current ¹ @70°C $V_{CC}=\pm 15\text{V}$	I_{fmax}	$\pm 300\text{A}$ @ $R_M=30\Omega$	
Measurement Resistance @70°C	R_M	$5\Omega\sim 35\Omega$ @ $V_{CC} = \pm 12\text{V}$	$9\Omega\sim 13\Omega$ @ $V_{CC} = \pm 12\text{V}$
		$25\Omega\sim 65\Omega$ @ $V_{CC} = \pm 15\text{V}$	$29\Omega\sim 33\Omega$ @ $V_{CC} = \pm 15\text{V}$
Conversion Ratio	K	1 : 2000	
Output Current	I_{OUT}	100mA	150mA
Offset Current	I_{OE}	$\pm 0.5\text{mA}$ @ $I_f=0\text{A}$	
Output Current Accuracy	X	$I_{OUT}\pm 1\%$	
Output Linearity	ϵ_L	$\pm 0.25\%$ @ I_f	
Supply Voltage ¹	V_{CC}	$\pm 12\text{V} \dots \pm 15\text{V} \pm 5\%$	
Consumption Current	I_{CC}	$\pm 16\text{mA}$ (Output Current is not included)	
Response Time ²	t_r	$\leq 1\mu\text{s}$ @ $di/dt = I_f/\mu\text{s}$	
Output Temperature Characteristic	$T_{CI_{OUT}}$	$\pm 0.02\%/^{\circ}\text{C}$ @ I_f ($T_A = -5^{\circ}\text{C}\sim +70^{\circ}\text{C}$)	
Offset Temperature Characteristic	$T_{CI_{OE}}$	$\pm 0.012\text{mA}/^{\circ}\text{C}$ @ $I_f = 0\text{A}$ ($T_A = -5^{\circ}\text{C}\sim +70^{\circ}\text{C}$)	
Hysteresis allowance	I_{OH}	$\leq 0.3\text{mA}$ ($0\text{A} \leftrightarrow I_f$)	
Insulation Withstanding	R_{IS}	AC2500V, for 1minute (sensing current 0.5mA), inside of aperture \leftrightarrow terminal	
Frequency Response	f	DC .. 150kHz	
Insulation Resistance	V_d	$> 500\text{M}\Omega$ (at DC500V) inside of aperture \leftrightarrow terminal	
Secondary coil resistance	R_S	33Ω @ $T_A=70^{\circ}\text{C}$	
Operating Temperature	T_A	$-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$	
Storage Temperature	T_S	$-20^{\circ}\text{C} \sim +85^{\circ}\text{C}$	

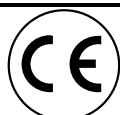
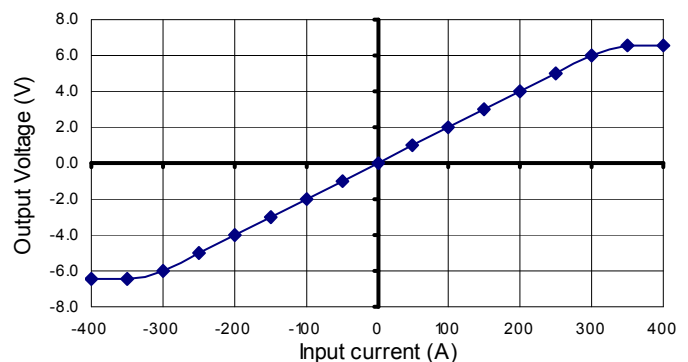
¹ Rated Current is restricted by V_{CC} — ² Time between 10% input current full scale and 90% of sensor output full scale

Electrical Performances

Frequency Characteristic

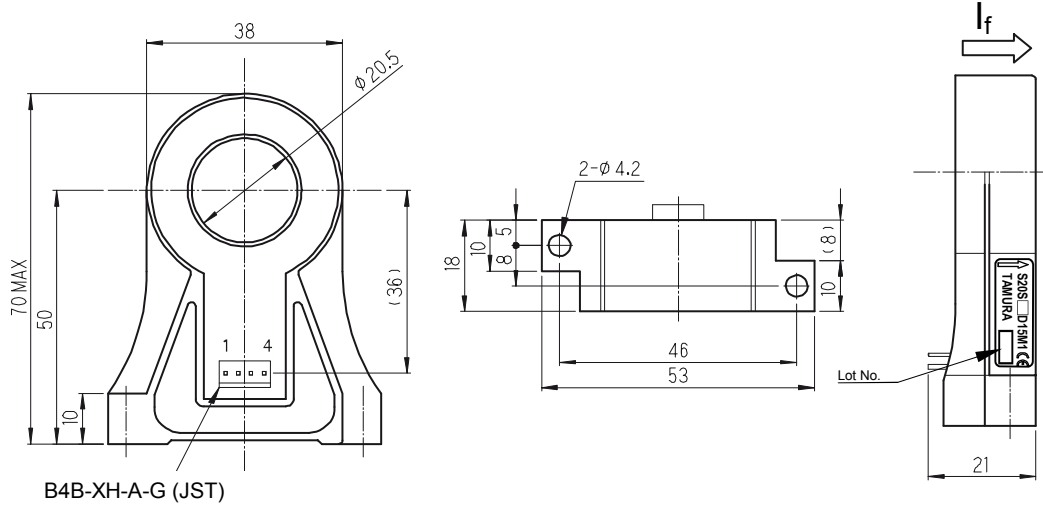


Saturation Characteristic ($R_L=40\Omega$)

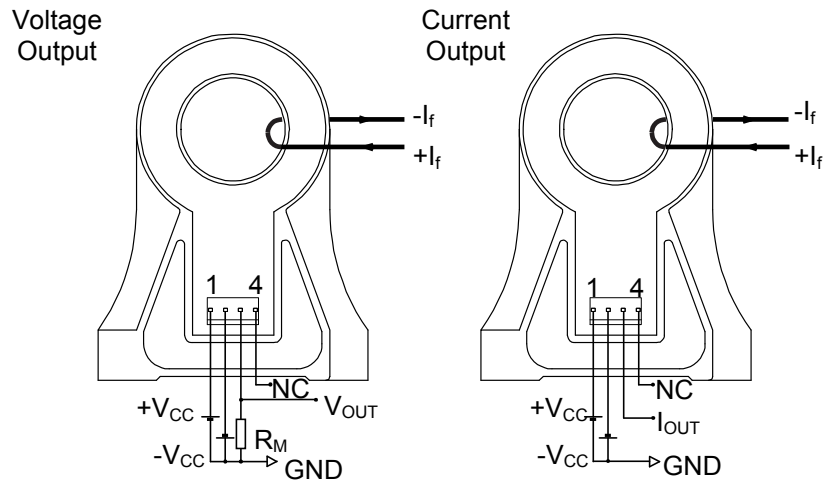


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Mechanical dimensions in mm



Electrical connection diagram



@ $I_f=200A$ & $V_{CC}=\pm 15V$
 $25\Omega \leq R_M \leq 65\Omega$
 @ $I_f=300A$ & $V_{CC}=\pm 15V$
 $29\Omega \leq R_M \leq 33\Omega$

Package & Weight Information

Weight	Pcs/box	Pcs/carton	Pcs/pallet
46g	50	200	2400

