

Hall Effect Current Sensors

100 to 300 Amp Applications — Closed Loop

- PCB Mount Design
- Current Output type
- Very High Linearity
- $\pm 15V$ Supply Voltage
- CE EN50178 (pending)



Specifications Measured at 25°C, RL=10K Ω , VCC= $\pm 15V$

Specification		S21Z100D15	S21Z150D15	S21Z200D15	S21Z300D15
Nominal Primary DC Current	(If)	100A	150A	200A	300A
Maximum Current	If(max)	150A	225A	300A	450A
Output Current @ If	I _{OUT}	50mA	75mA	100mA	150mA
Conversion Ratio	K _n	1:2000	1:2000	1:2000	1:2000
Accuracy	X	$\pm 1\%$ of If			
Offset Current (If=0) ¹	I _o	$\pm 0.5mA$			
Output Linearity ¹ (0..If)	E _L	$\pm 0.25\%$ of If			
Power Supply	V _{CC}	$\pm 15V \pm 5\%$ ²			
Response Time	t _r	$\leq 1\mu s$			
Current Consumption	I _c	$\pm 16mA$ ³			
Output Temperature Characteristic	TC _{OUT}	$\pm 0.025\% / ^\circ C$ @ If=0 (Ta=-5 to +70°C)			
Offset Temperature Characteristic	I _{OT}	$\pm 0.025mA / ^\circ C$ @ If=0 (Ta=-5 to +70°C)			
Hysteresis Allowance If=0 - Ifmax)	I _{OH}	$\leq 0.3mA$			
Withstand Voltage (50/60Hz)	V _d	2,500VACrms for 1 minute (sensing current 0.5mA)			
Insulation Resistance @ 500VDC	R _{IS}	500M Ω			
Frequency Bandwidth (-3dB)	f	DC - 150kHz			
Operating Temperature	T _A	-10 - +70°C			
Storage Temperature	T _S	-20 - +85°C			
Secondary Coil Resistance	R _s	TBD Ohms @ Ta = 70°C (Contact Tamura for additional info)			

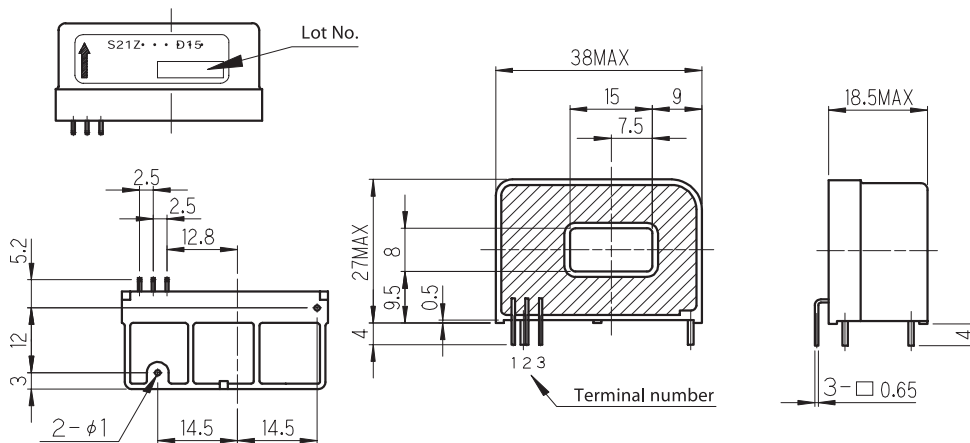
¹ Without Offset

² Ifmax is Restricted by Vcc

³ Output Current not included

Package & Weight Information

QTY/Box	Weight/each(g)
50	25



Note 1. Unless otherwise specified, tolerances shall be ± 0.5

Terminal number
1. OUT
2. -15V
3. +15V

TAMURA CORPORATION

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Hall Effect Current Sensors

50 to 300 Amp Applications — Closed Loop



- Panel Mount Design
- Current Output type
- Very High Linearity
- $\pm 12V$ or $\pm 15V$ Supply Voltage
- CE EN50178 (pending)

Specifications Measured at 25°C, $R_L \pm 15K\Omega$, $V_{CC} = \pm 12V$

Specification		S20S050A	S20S100A	S20S150A	S20S200A	S20S300A
Nominal Primary DC Current	(If)	50A	100A	150A	200A	300A
Maximum Current	$I_{F(max)}$	75A	150A	225A	300A	450A
Output Current @ If	I_{OUT}	50mA	100mA	150mA	100mA	150mA
Conversion Ratio	K_H	1:1000	1:1000	1:1000	1:2000	1:2000
Offset Current (If=0)	I_o			$\pm 0.5mA$		
Accuracy ⁴	X			$< \pm 1\%$ of If		
Output Linearity ⁴ (0..MAX)	E_L			$\pm 0.25\%$		
Power Supply	V_{CC}			$12V$ or $\pm 15V \pm 5\%$ ²		
Response Time @ $di/dt=50A/\mu Sec$	t_r			$\leq 1\mu s$		
Current Consumption	I_c			$\pm 16mA$ ³		
Output Temperature Characteristic	TCI_{OUT}			$\pm 0.02\% / ^\circ C$ @ If (Ta=-5 to +70°C)		
Offset Temperature Characteristic	I_{OT}			$\pm 0.025mA / ^\circ C$ @ If=0 (Ta=-5 to +70°C)		
Hysteresis Allowance	I_{OH}			$\leq 0.5mA$		
Withstand Voltage (50/60Hz)	V_d			2,500VACrms for 1 minute (sensing current 0.5mA)		
Insulation Resistance @ 500VDC	R_{IS}			$\geq 500M\Omega$		
Frequency Bandwidth (-3dB)	f			DC - 150kHz		
Operating Temperature	T_A			-10 - +70°C		
Storage Temperature	T_S			-20 - +85°C		
Secondary Coil Resistance	R_S			¹ Ohms @ 70°C (Contact Tamura Tech Support)		

¹ TBD

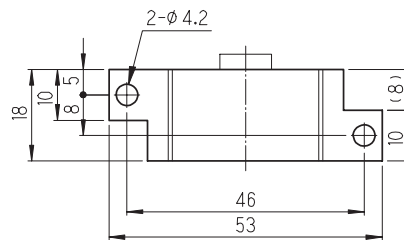
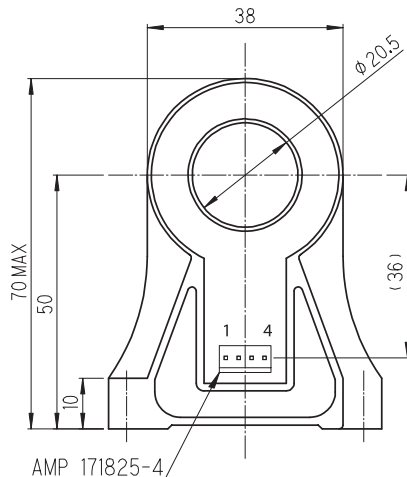
² Ifmax is Restricted by Vcc

³ Output Current not included

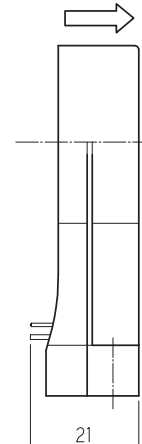
⁴ Without offset

Package & Weight Information

QTY/Box	Weight/each(g)
TBD	46



Note Unless otherwise specified, tolerances shall be ± 0.5



Terminal Pin
1+15V
2- 15V
3.OUT
4.NC

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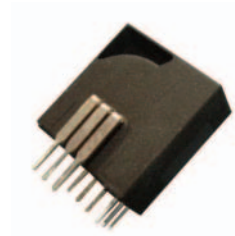
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Hall Effect Current Sensors

6 to 25 Amp Applications — Closed Loop

- Multirange Current Sensor
- Voltage Output
- Compact PCB Mount
- Single Supply ($\pm 5V$)
- CE EN50178 (pending)



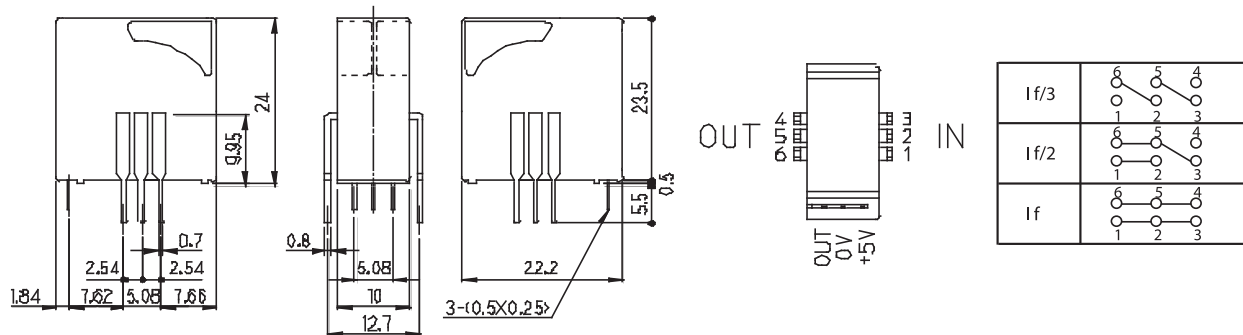
Specifications Measured at 25°C, RL=10K Ω , V_{CC}=+5V

Specification	S22P006S05	S22P015S05	S22P025S05
Nominal Primary r.m.s. Current (I _f)	$\pm 6A$	$\pm 15A$	$\pm 25A$
Maximum Current I _{f(max)}	$\pm 18A$	$\pm 45A$	$\pm 75A$
Offset Voltage (I _f =0) V _{REF}	2.5V $\pm 30mV$	2.5V $\pm 20mV$	2.5V $\pm 15mV$
Output Voltage V _{OUT}		VREF $\pm 0.625V$	
Output Voltage Accuracy ¹ @ I _f	X	0.625V $\pm 10mV$	
Output Linearity (0 to I _f) E _L		$\pm 0.25\%$	
Power Supply V _{CC}		$\pm 5V \pm 5\%$	
Response Time t _r		$\leq 1\mu s$	
Current Consumption I _C		12.5mA Typ	
Output Temperature Characteristic ICEG		$\pm 0.05mV/^\circ C$	
Offset Temperature Characteristic TC _{OUT}	1.25mV/ $^\circ C$	1.25mV/ $^\circ C$	1.25mV/ $^\circ C$
Hysteresis Allowance (I _f =0 to I _{fmax}) V _{OH}		$\leq 0.25mV$	
Withstand Voltage (50/60Hz) V _d		3,000VACrms for 1 minute (sensing current 0.5mA)	
Insulation Resistance @ 500VDC R _{IS}		$\geq 500M\Omega$	
Operating Bandwidth (1dB) f		DC - 200kHz	
Operating Temperature T _A		-10 - +85°C	
Storage Temperature T _S		-25 - +100°C	

¹ Without offset

Package & Weight Information

QTY/Box	Weight/each(g)
100	8



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