

RAZTEC MOULDED CURRENT SENSOR RAZC-2-FL

PERFORMANCE CHARACTERISTICS

High performance, compact cable mounted current sensor for installation into rugged environments where a fully sealed product is required to assure reliability. The device is 100A rated, cannot be damaged by overload and is compatible with computer systems with its single 5V supply requirement.



CONFIGURATION

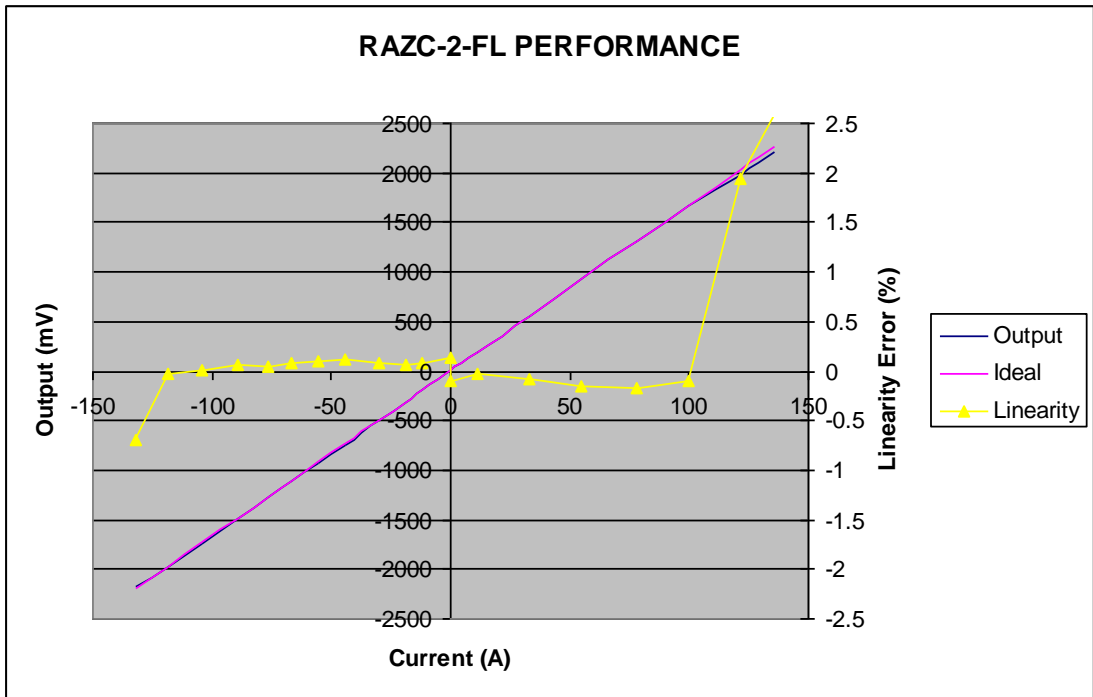
Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Operating Temperature	T_A	-40 to +85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +100	$^\circ\text{C}$
Supply Voltage	V_s	8	V
Output sinking current	I_o	10	mA
Measured Current	I_m	Limited only by conductor	A

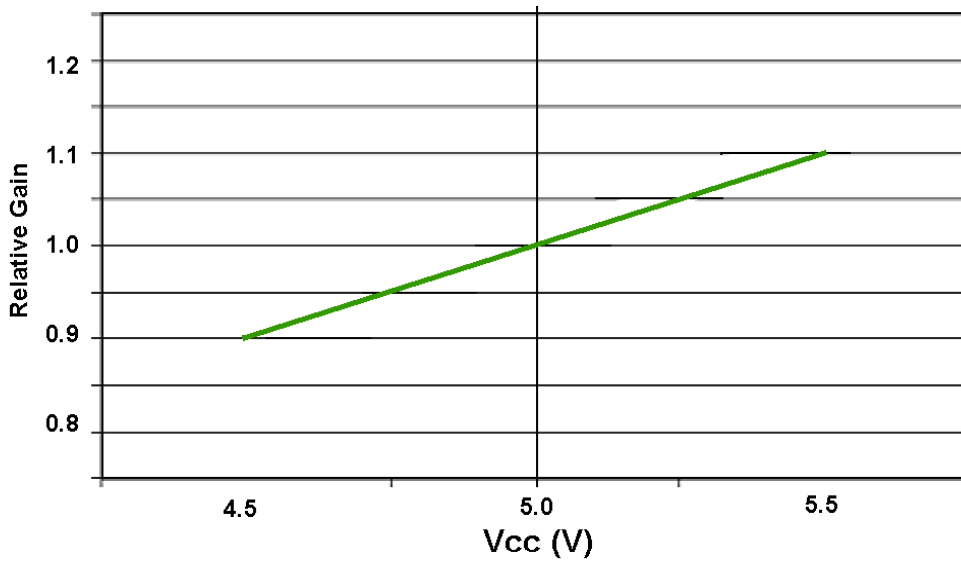
Characteristics ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Lower Limit	Typical	Upper Limit	Unit
Supply Current	I_s		9.2	12	mA
Supply Voltage	V_s	4.5	5.0	5.5	V
Current Range for < $\pm 1\%$ error (-25 to $+85^\circ\text{C}$)	I_m	± 100			A
Power-on settling time to 99%	t_{po}			15	μs
Null Output ($V_s = 5\text{V}$)	V_o	2.49	2.50	2.51	V
Transfer Function (per turn)	$\Delta V/I$	15.6	16	16.4	mV/A
Combined non-linearity and hysteresis error ($\pm 100\text{A}$, -25 to $+85^\circ\text{C}$)			0.5	1.5	%
Output error due to 5mm diameter wire position				± 0.1	%
Hysteresis (0 to 100AT)	Hys		0.1		%
Null drift due to temperature change	$TC_{\Delta V_o/V_o}$			± 0.25	mV/K
Gain Change due to temperature change	TC_G	-0.1	+0.1	0.18	%/K
Risetime 0 to 20AT	t_r		7		μs
Frequency Response	f_{-3dB}		50		kHz
Output Resistance	R_o		2	5	Ω
Electrical Isolation	V_d	600			V

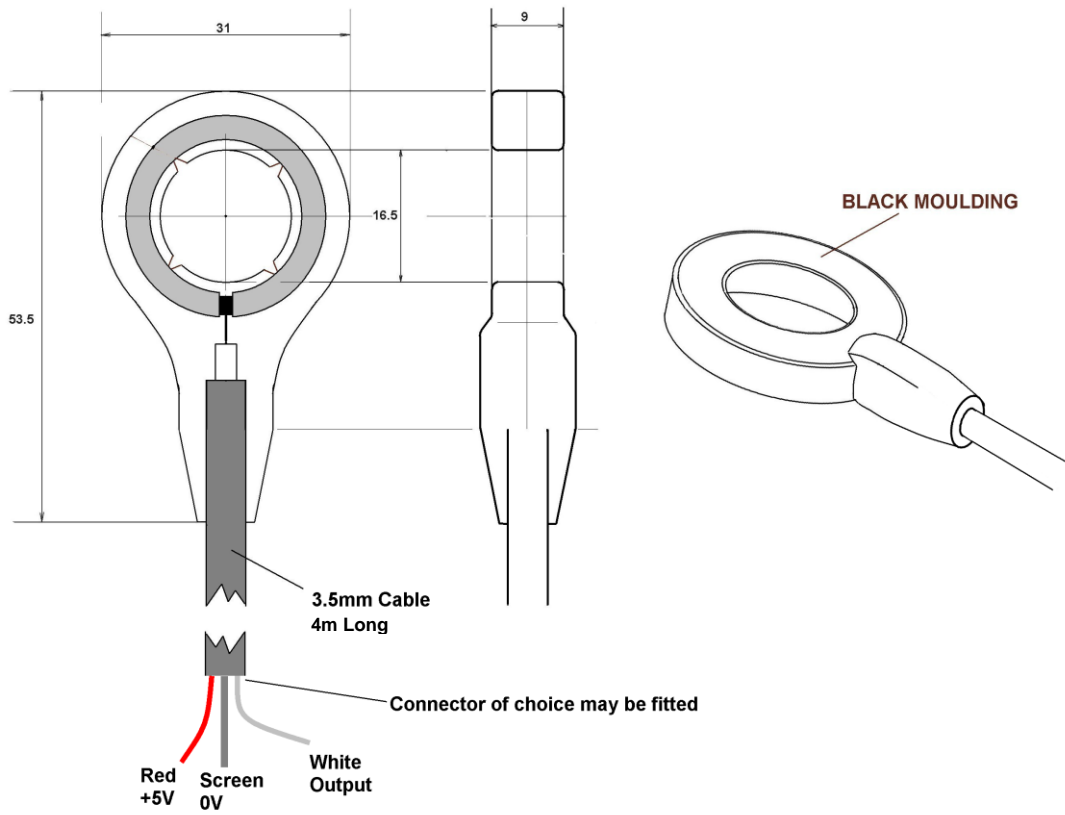
RAZC-2-FL PERFORMANCE



Relative change in transfer function wrt supply voltage



NOTE: If an A/D is referenced from the same supply as the sensor, gain change effects with supply voltage are cancelled.



Raztec (NZ) Ltd operates a continuous product improvement program, therefore information contained in our datasheets may not reflect all current features. For clarification please contact sales@raztec.co.nz