



20 Amp Current Transducer

This CE certified Hall Effect Current Transducer offers excellent linearity and low hysteresis with 2% calibration accuracy. It has a very convenient and compact machine-insertable package which has mains voltage rating and compliance.

RAZ3 parts can replace closed loop sensors in many applications.

Features:

- Small footprint UL94-V0 rated package.
- CE certified
- Line voltage isolated
- High measured circuit dV/dt rejection (suitable for PWM controllers)
- Gains compatible with 12-bit ADC (1 lsb = 10mA)
- Highly accurate null-trimming for current control applications
- 2% transfer function accuracy

Maximum Ratings (TA = 25 °C)

Parameter	Symbol	Value	Unit
Operating temperature	TA	-40 to +85	°C
Storage temperature	Tstg	-65 to +110	°C
Supply voltage	Vs	6	V
Maximum measured circuit current	I _{max}	30	A



RAZ3-203AMAG

Characteristics

($T_A = 25^\circ\text{C}$, $V_s = 5\text{V}$ except where stated)

Parameter	Symbol	Lower Limit	Typical	Upper Limit	Unit
Measured current range (-40 to +85 °C)	IP		±20		A
Measuring circuit insertion resistance (excluding PCB tracks)	R _p		1.0		mΩ
Measuring circuit insertion inductance (excluding PCB tracks)	L _p		640		nH
Resolution with 5.0V (user supplied) 12-bit ADC (I _{sb} magnitude)	δI		25		mA
Supply current	I _s		10	15	mA
Supply voltage	V _s	4.5	5.0	5.5	V
Null output	V _o	2.49	2.50	2.51	V
Transfer function (V _s = 5.00V)	ΔV/I	47.86	48.84*	49.82	mV/A
Non-linearity (±8A, -25 to +85 °C)			1	1.5	%
Hysteresis (0 to 5.0A)	Hys		0.1	0.25	%
Null drift due to temperature change (as equivalent circuit)	TC ΔV _o /V _o		±0.5	±2.0	mV/k
Gain change due to temperature change	TCG		±0.03		%/K
Risetime (0 to 2.0A)	T _r		9		μs
Frequency response	f-3dB		120		kHz
Output resistance	R _o		9		Ω
Output noise	Enrms		1.0		mV rms
Effect of primary dV/dt (Equivalent measured Amperes / (Primary Volts/second) for PWM applications)			10 ⁻⁹		AV ⁻¹ s
RMS voltage for AC isolation test, 50Hz, 1min	V _d	3			kV
Partial discharge extinction voltage ema @ 10pc	V _e	1			kV
Impulse withstand voltage 1.2/50μs	V _w	6			kV
Creepage/clearance distance	dCp/dCl	12			mm
Mass			6.5		g
Fire resistance rating			UL94-V0		

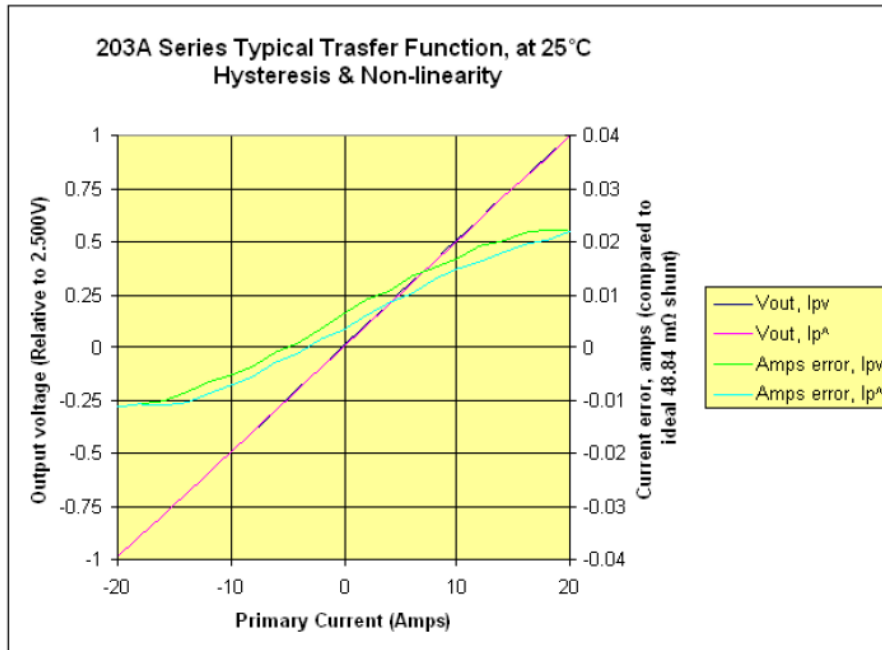
*=5.00V/4096 x 100 based on least significant bit of 12-bit ADC corresponding to 10mA measurement

Standards: ENC50178 (1997)
IEC 61010-1:2001
AS 61010.1:2003

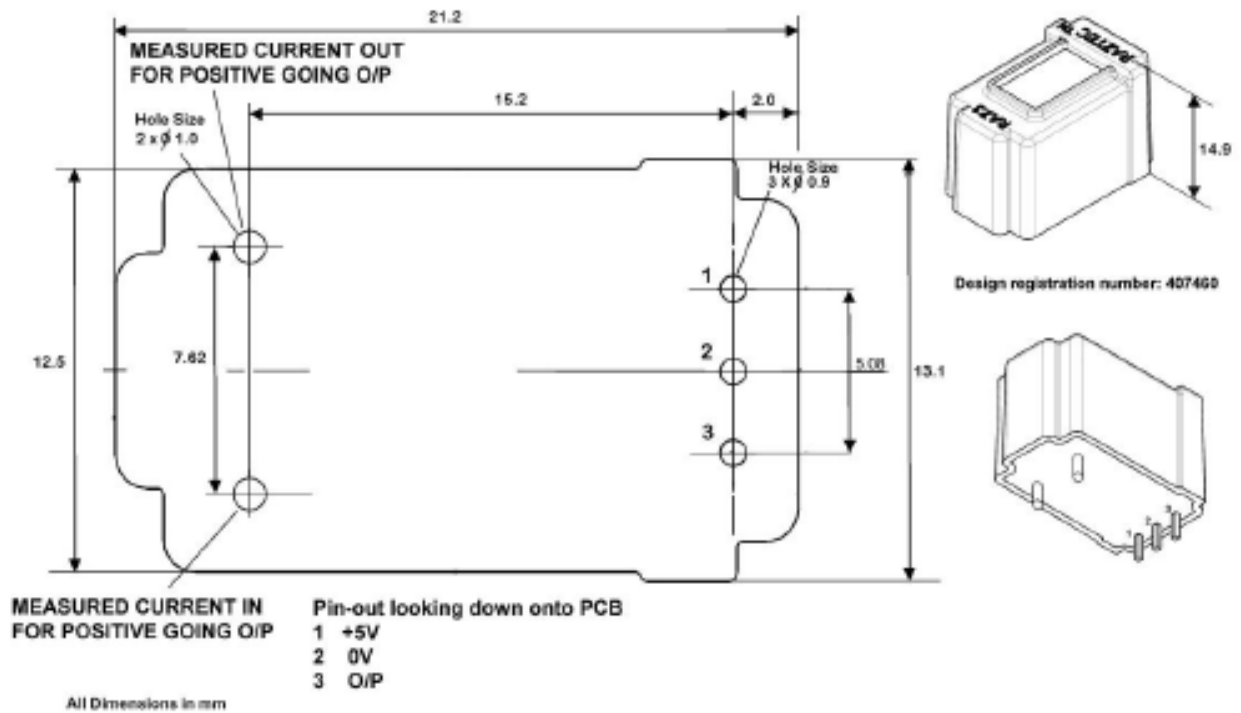


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Performance Characteristics



Physical Properties



Footprint looking onto mounting surface – dimensions in mm



Raztec New Zealand 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



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About Raztec

Raztec Sensors was formed in 1992 and since then have been designing, manufacturing and supplying Hall Effect current transducers to some of the world's most critical and demanding users.

Over the past twenty-plus years many millions of our current transducers have been designed into failure intolerant applications where Raztec's refusal to accept anything other than the very highest standard of manufacturing excellence (ISO9001:2015 approved) has resulted in a reputation that is the envy of companies significantly larger and perhaps better known.

Who are our customers?

Raztec Sensors are recognized by many of our customers for our ability to provide top-quality performance at a very effective market price. Working with clients such as Dunkermotoren/AMETEK, Siemens, Wrightspeed, Komatsu, Panasonic Electric Works, Marinco, Techna-Tool, Metropolitan Pumps, Dynamic Controls, has provided us the opportunity to engineer solutions that are specific to our clients' application. This has resulted in a current transducer that provides exactly the output required for perfect control of the customer's specific application - at the most competitive price possible.

Need a custom solution?

Raztec are specialists in designing customised Hall Effect current sensors to suit almost any type of application. A large proportion of the products we sell are customised towards our customer's needs. If you have a particular need that an off-the-shelf sensor just can't meet, then contact us about designing a current sensor to meet your requirements.



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Custom Current Sensing Solutions