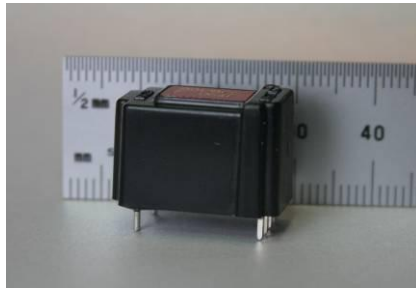


## 80 Amp current transducer RAZ3-803AQA(F/G/J)\* range



\*Suffix code F = 1%, G = 2% and J = 5% transfer function accuracy.

*This CE certified Hall Effect Current Transducer offers excellent linearity and low hysteresis with either 1%, 2% or 5% calibration accuracy. It has a very convenient and compact machine-insertable package which has a mains voltage rating and compliance.*

*RAZ3 parts can replace closed-loop current sensors in many applications.*

### Features –

- Small-footprint UL94-V0 rated package
- CE certified
- Line voltage isolated
- High measuring circuit dV/dt rejection – suitable for PWM controllers
- Gains compatible with 12 bit ADC (1 lsb = 0.1A)
- Highly accurate null-trimming for current-control applications
- 1%(F), 2%(G) or 5%(J) transfer function accuracy

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

Parameter	Symbol	Value	Unit
Operating Temperature	$T_A$	-40 to +85	$^\circ\text{C}$
Storage Temperature	$T_{\text{stg}}$	-65 to +110	$^\circ\text{C}$
Supply Voltage	$V_S$	8	V
Maximum measuring-circuit current	$I_{\text{max}}$	100	A

*Characteristics (TA = 25 °C, except where stated)*

Parameter	Symbol	Lower Limit	Typical	Upper Limit	Unit	
Measured current range (-40 to +85 °C)	I <sub>p</sub>		±80		A	
Measuring Circuit insertion resistance (excluding PCB tracks)	R <sub>p</sub>		0.06		mΩ	
Measuring Circuit insertion inductance (excluding PCB tracks)	L <sub>p</sub>		40		nH	
Resolution with 5.0V (user supplied) 12-bit ADC (lsb magnitude)	δI		0.1		A	
Supply Current	I <sub>s</sub>		9.2	12	mA	
Supply Voltage	V <sub>s</sub>	4.5	5.0	5.5	V	
Null Output (V <sub>s</sub> = 5.00V)	V <sub>o</sub>	2.49	2.5	2.51	V	
Transfer Function (V <sub>s</sub> = 5.00V)	ΔV/I	Tolerance Code F = 1% Tolerance Code G = 2% Tolerance Code J = 5%	12.09 11.96 11.6	12.21*	12.33 12.46 12.82	mV/A
Non-linearity (±80A, -40 to +85 °C)			1	1.5	%	
Hysteresis (0 to 50A)	Hys		0.1	0.25	%	
Null drift due to temperature change (as equivalent current)	TC <sub>ΔI/ΔT</sub>		±0.005	±0.02	A/K	
Gain Change due to temperature change	TC <sub>G</sub>		±0.05		%/K	
Risetime (0 to 20A)	Tr		15		μs	

Standards

EN50178 (1997)



\* = 5.00V/4096 x 10, based on least-significant bit of 12-bit ADC corresponding to 0.1A measurement.

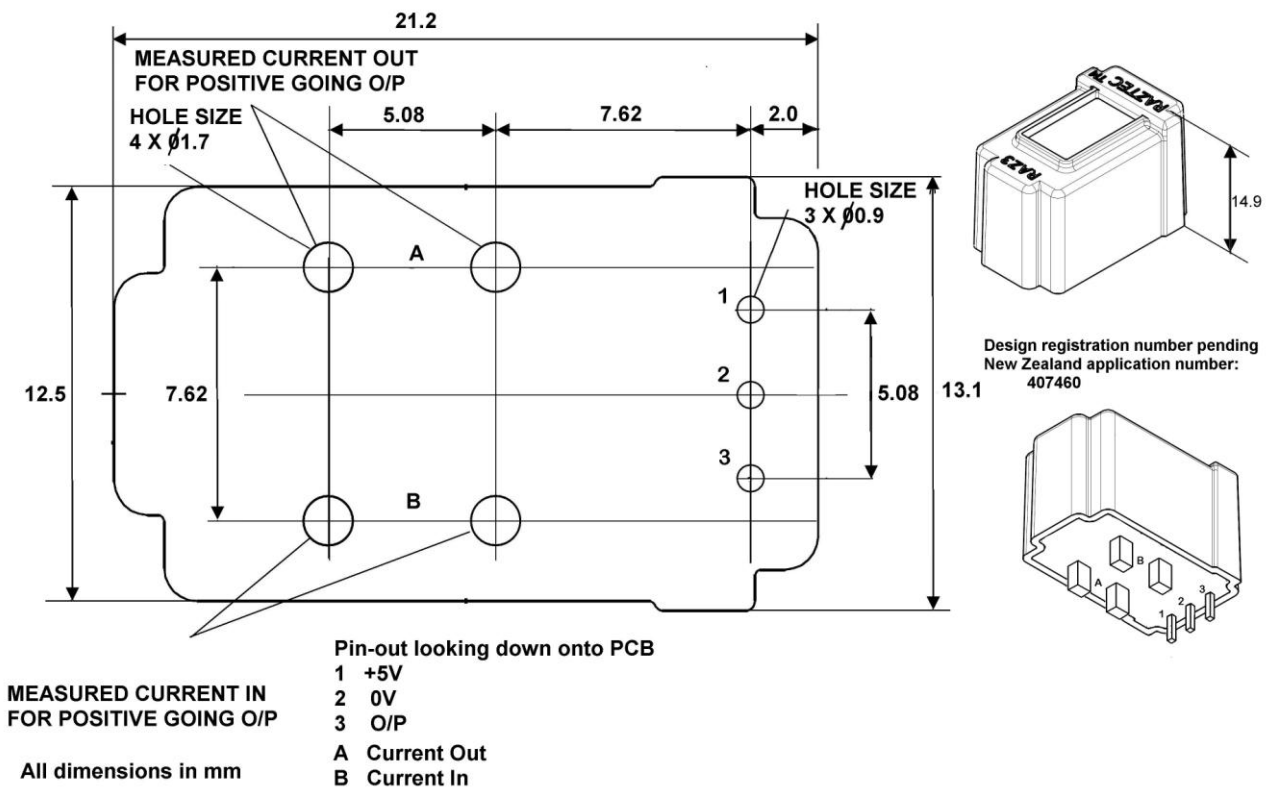
*Characteristics (TA = 25°C) ..... Continued*

Parameter	Symbol	Lower Limit	Typical	Upper Limit	Unit
Output Resistance	R <sub>o</sub>		1		Ω
Effect of primary dV/dt (Equivalent measured Ampères/(Primary Volts/second) – for PWM applications)			10 <sup>-9</sup>		AV <sup>-1</sup> s
Noise	E <sub>n rms</sub>			2.5	mV rms
Creepage/Clearance Distance		6.5			mm
Mass			6.5		g
Fire Resistance rating			UL94-V0		

Standards

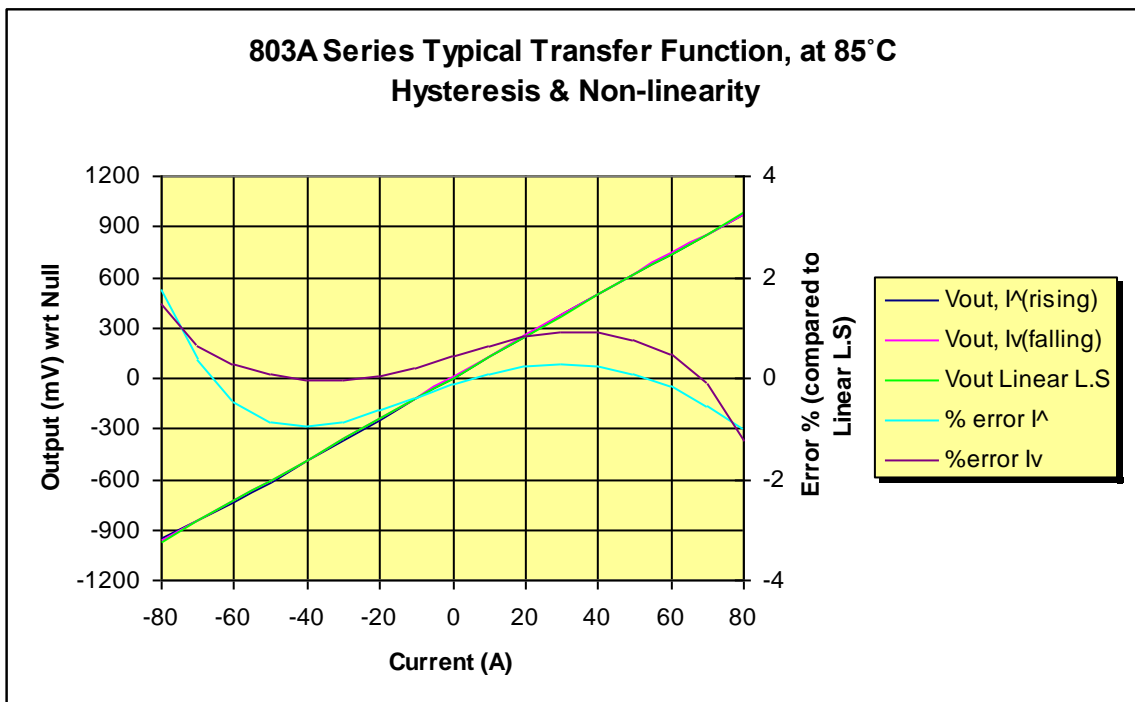
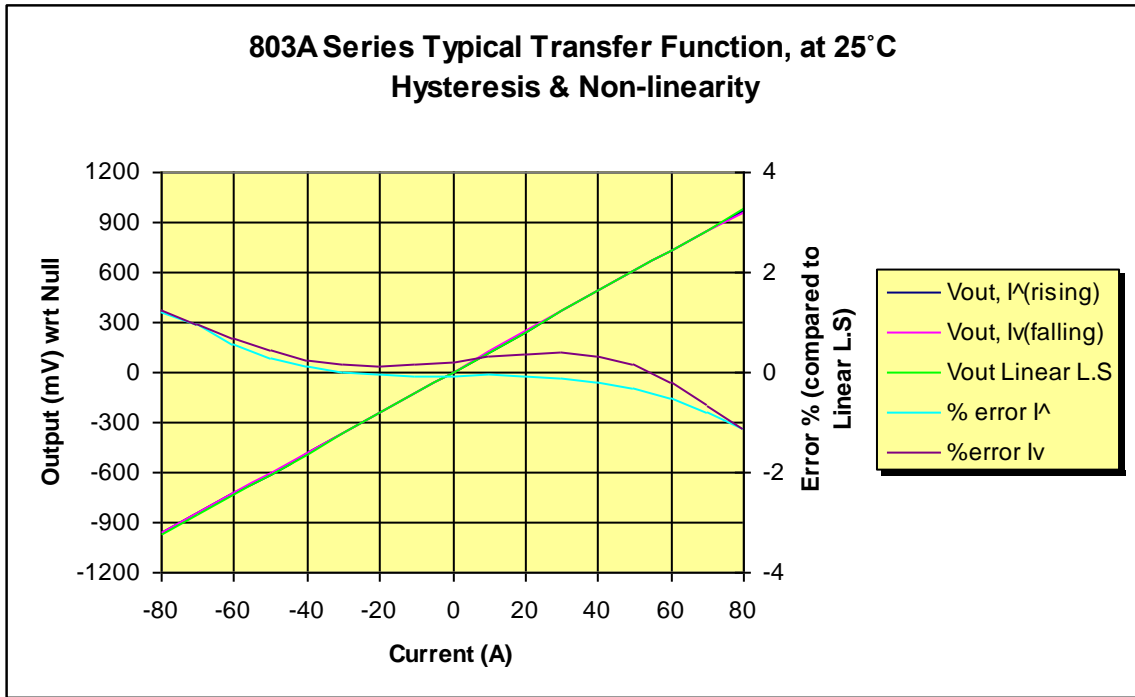
EN50178 (1997)

*Mechanical*



Footprint looking onto mounting surface – dimensions in mm

## Performance characteristics



Raztec (NZ) Ltd operate 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](mailto:sales@raztec.co.nz)