

PROVISIONAL



Compact Current Transducer

This Hall Effect Current Transducer is distinctive for its very small size, high current capability, very high speed and ability to operate with supplies between 3V and 5.5V.

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

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

| Parameter | Symbol | Value | Unit |
|------------------------|------------------|---------------------------|------------------|
| Operating temperature | T_A | -40 to +100 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -40 to +125 | $^\circ\text{C}$ |
| Supply voltage | V_s | 6 | V |
| Output sinking current | I_o | 1.2 | mA |
| Measured current | I_m | Limited only by conductor | A |



Raztec Sensors
NEW ZEALAND LTD

RAZC-204XUCN

Characteristics

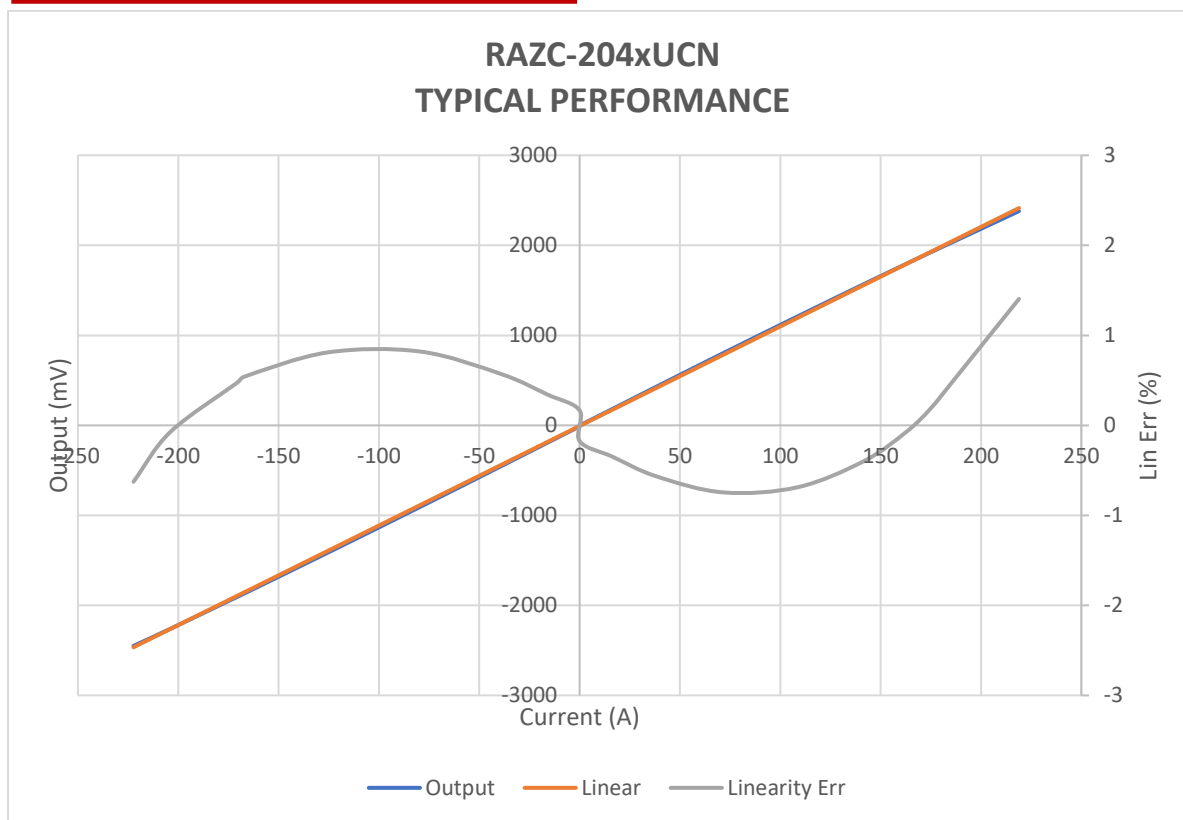
($T_A = 25^\circ\text{C}$, $V_S = 5\text{V}$ (3.3V))

| Parameter | Symbol | Lower Limit | Typical | Upper Limit | Unit |
|--|---------------------|-------------|------------|------------------|---------------|
| Supply current (no load) | I_S | | 9 | 12 | mA |
| Supply voltage | V_S | 3.0 | 5.0 | 5.5 | V |
| Current range for $<\pm 1\%$ error (-25 to $+85^\circ\text{C}$) | I_m | ± 200 | | | A |
| Null output | V_o | 2.4 (1.58) | 2.5 (1.65) | 2.6 (1.72) | V |
| Transfer function (per turn 25 to $+85^\circ\text{C}$) | $\Delta V/I$ | 8.4 (5.5) | 11.3(7.3) | 14.2 (9.3) | mV/A |
| Combined non-linearity and hysteresis error ($\pm 250\text{A}$, -25 to $+85^\circ\text{C}$) | | | | 1.0 | % |
| Null drift due to temperature change | $TC \Delta V_o/V_o$ | | .07 | ± 0.5 (0.35) | mV/k |
| Gain change due to temperature change | TC_G | -0.05 | | 0.05 | %/K |
| Risetime (0 to 20AT) | t_r | | | 3 | μs |
| Frequency response | f-3dB | | 190 | | kHz |
| Output resistance | R_o | | 1 | | Ω |



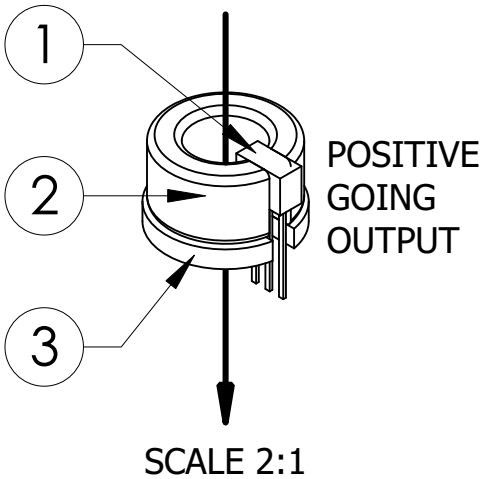
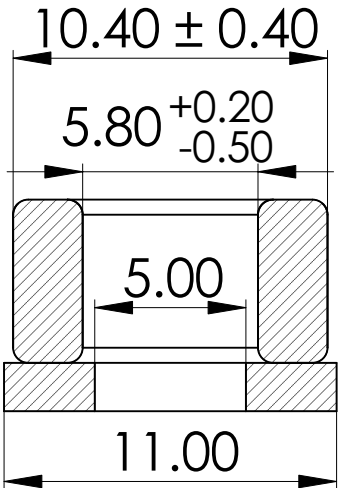
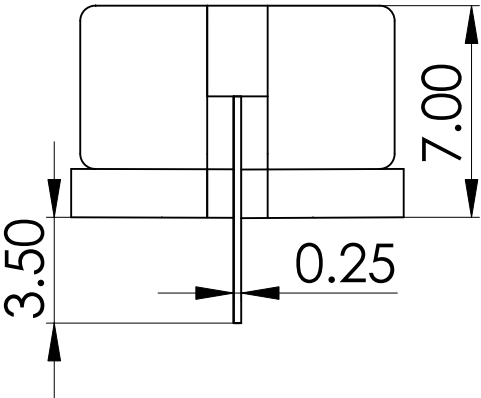
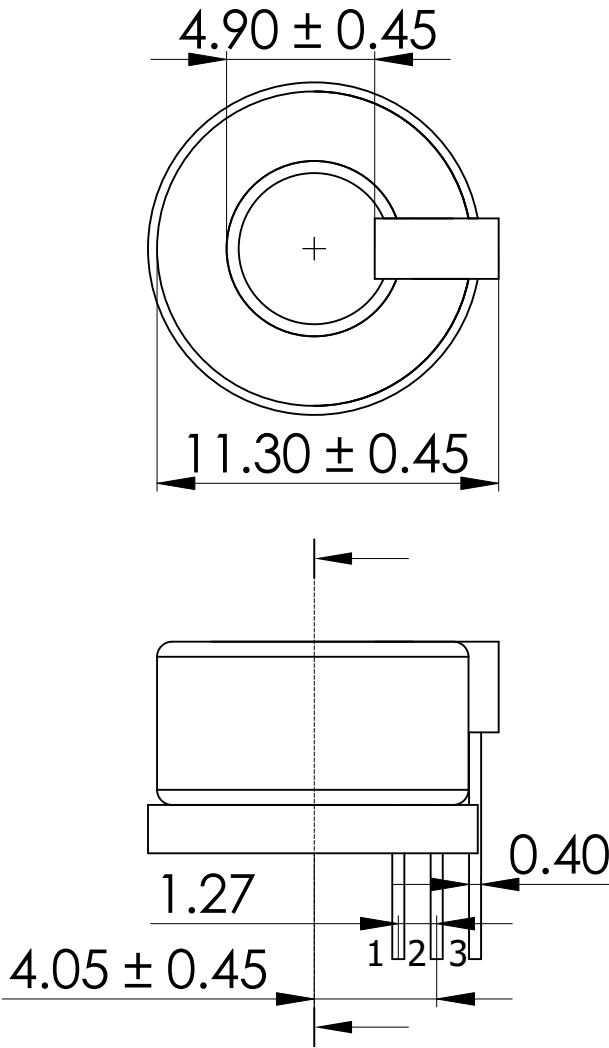
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NOTES UNLESS OTHERWISE SPECIFIED:
1: ALL UNITS ARE IN MM

| ITEM | DESCRIPTION |
|------|----------------------|
| 1 | HALL MAGNETIC SENSOR |
| 2 | FLUX CONCENTRATOR |
| 3 | ADHESIVE FOAM PAD |

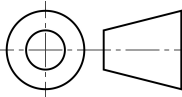


RAZC-204XUCN

TOLERANCE UNLESS OTHERWISE SPECIFIED $\pm 0.10\text{mm}$

DRAWN: TG SIZE: A4

APPROVED: WP DATE: 12/09/23



SCALE: 4:1

REVISION: R1

| PIN NUMBER | DESCRIPTION |
|------------|-------------|
| 1 | SUPPLY |
| 2 | GND |
| 3 | OUTPUT |

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.



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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