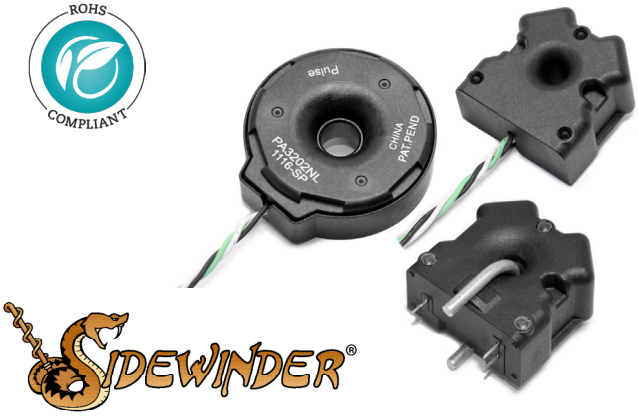
SIDEWINDER® - CURRENT SENSOR

PA320XNL Series



- *50/60 Hz, Single Phase, AC Current Sensor*
- *Dynamic Range from 0.1 to 1000 Amps*
- *Meets ANSI C12.20 Accuracy Class 0.2*
- *Meets IEC 62053-21 class 1*
- *Phase error < 0.05 degree*
- *Bandwidth 500KHz*
- *Immune to external AC magnetic fields*
- *Immune to DC current & DC magnetic field*
- *Very low temperature coefficient*
- *Patent pending*

Electrical Specifications at 25°C Temp Range -40°C to 130°C							Actual Secondary Output Voltage (Vsa)	
Part Number	Accuracy Class[3]	Kr[4] (μΩ/Hz typ)	Pri-Sec Isolation (V min)	Ls[5] (mH typ)	Rs[6] (Ohms typ)	SRF[7] (Hz typ)	@ 50 Hz (μV/A)[1]	@ 60 Hz (μV/A)[1]
PA3202NL	0.2	8.33	6,000	1.75	57.3	160,000	416	500
PA3206NL	0.2	7.66	6000	1.14	37.6	200,000	383	460
PA3208NL	0.2	7.66	6000	1.14	37.6	200,000	383	460

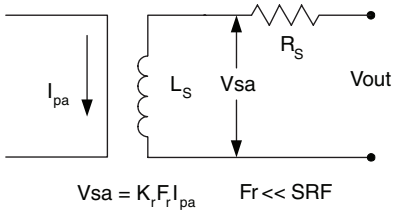
EQUATIONS: $Vsa = K_r F_r I_{pa}$

$F_r << SRF$

NOTES:

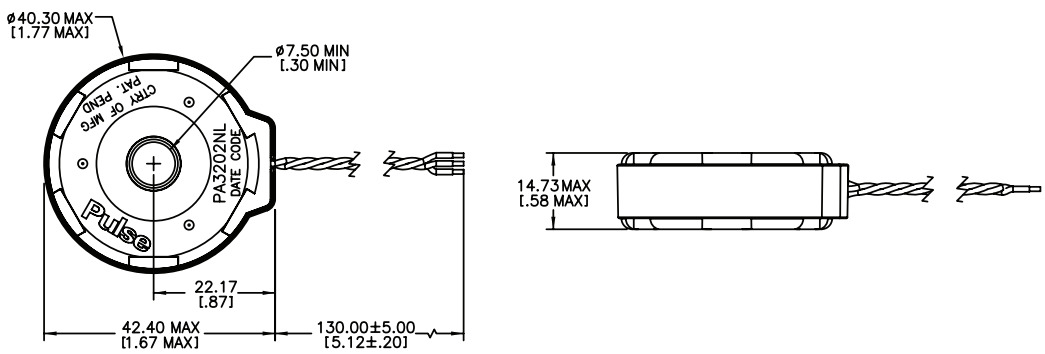
1. Output Voltage is proportional to the derivative (di/dt) of the input current based on the Rogowski Coil principle.
2. All current and voltages assumed to be sinusoidal waveforms at Fr, the constant rated frequency in Hz, measured as RMS values.
3. Accuracy Class per IEC 60044-1 Table 11 where:
   - Percentage current error = ((Kr•Fr•Ipa - Vout) / Vout) x 100
   - Phase displacement = the difference between the primary current (Ipa) phase vector and the (secondary voltage (Vout) phase vector minus 90 degrees)
4. Kr = Rated transformation constant
5. Ls = Secondary winding inductance
6. Rs = Secondary winding resistance
7. SRF = Self Resonate Frequency
8. Ipa = Actual primary current
9. Vsa = Actual secondary output voltage

Low Frequency Equivalent Circuit

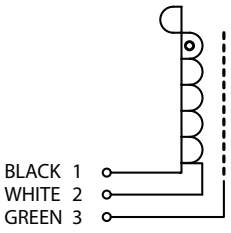


Mechanicals

PA3202NL



Schematics

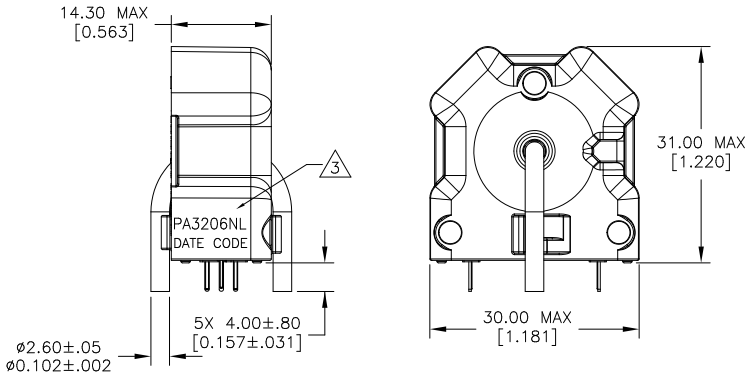


SIDEWINDER® - CURRENT SENSOR

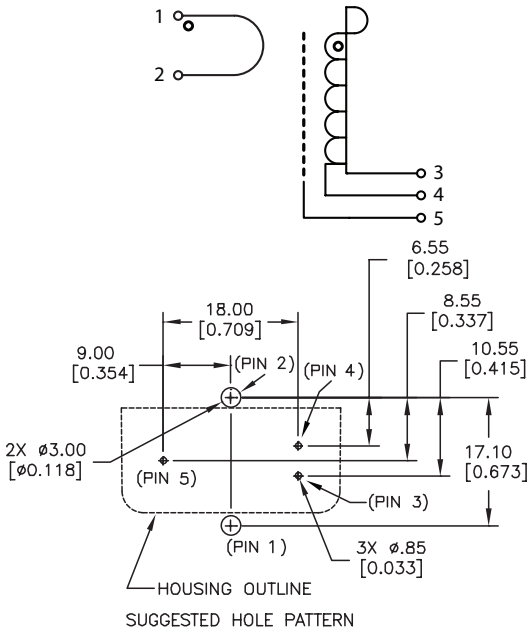
PA320XNL Series

PA3206NL

Mechanicals

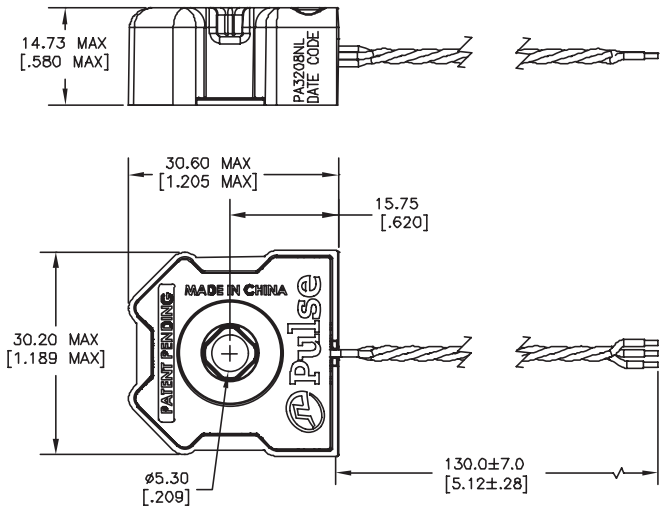


Schematics

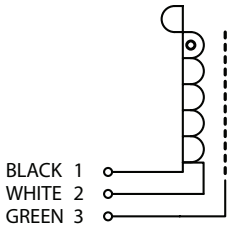


PA3208NL

Mechanicals



Schematics



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