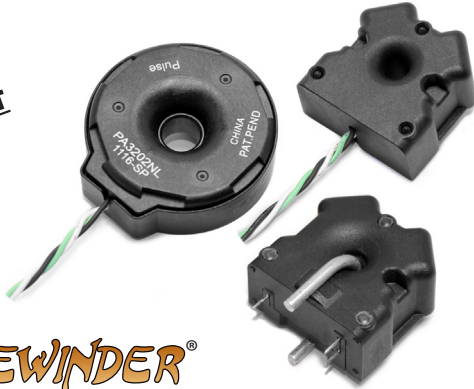


SIDEWINDER® - CURRENT SENSOR

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

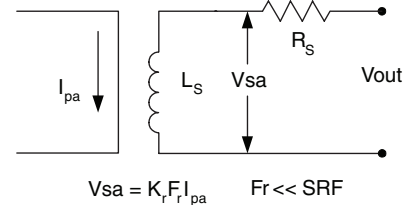
Electrical Specifications at 25°C Temp Range -40°C to 130°C							Actual Secondary Output Voltage (V _{sa})	
Part Number	Accuracy Class ³	Kr ⁴ (μΩ/Hz typ)	Pri-Sec Isolation (V min)	L _s ⁵ (mH typ)	R _s ⁶ (Ohms typ)	SRF ⁷ (Hz typ)	@ 50 Hz (μV/A) ¹	@ 60 Hz (μV/A) ¹
PA3202NL	0.2	8.33	6,000	1.75	57.3	160,000	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: $V_{sa} = K_r F_r I_{pa}$
 $F_r \ll SRF$

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 = $((Kr \cdot Fr \cdot I_{pa} - V_{out}) / V_{out}) \times 100$
 - Phase displacement = the difference between the primary current (I_{pa}) phase vector and the (secondary voltage (V_{out})) phase vector minus 90 degrees)
4. Kr = Rated transformation constant
5. L_s = Secondary winding inductance
6. R_s = Secondary winding resistance
7. SRF = Self Resonate Frequency
8. I_{pa} = Actual primary current
9. V_{sa} = Actual secondary output voltage

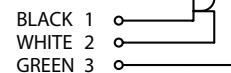
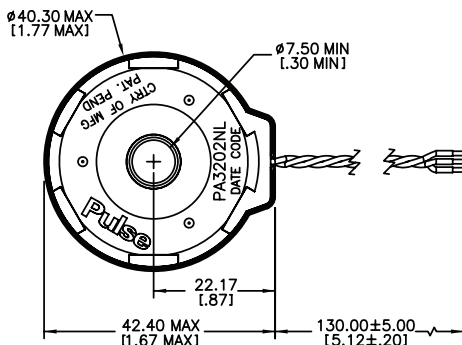
Low Frequency Equivalent Circuit



Mechanicals

Schematics

PA3202NL



SIDEWINDER® - CURRENT SENSOR

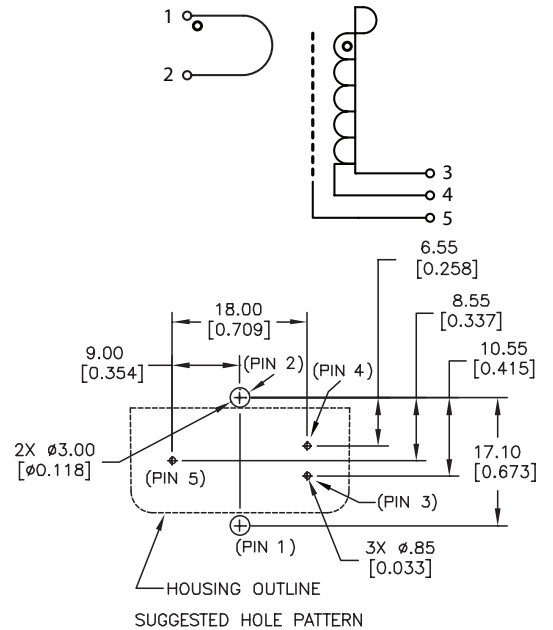
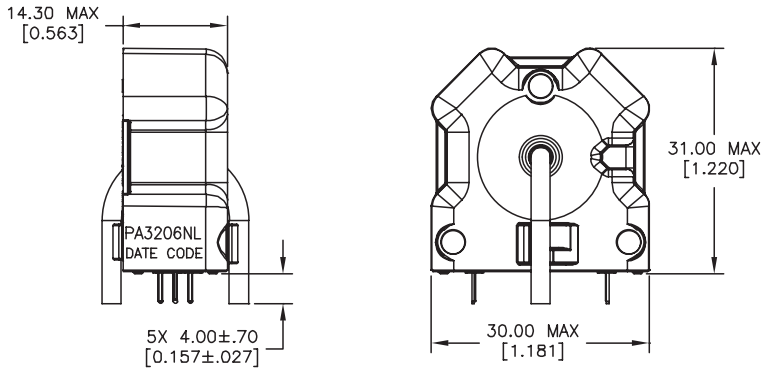
PA320XNL Series



Mechanicals

Schematics

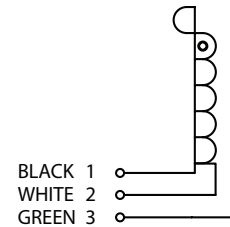
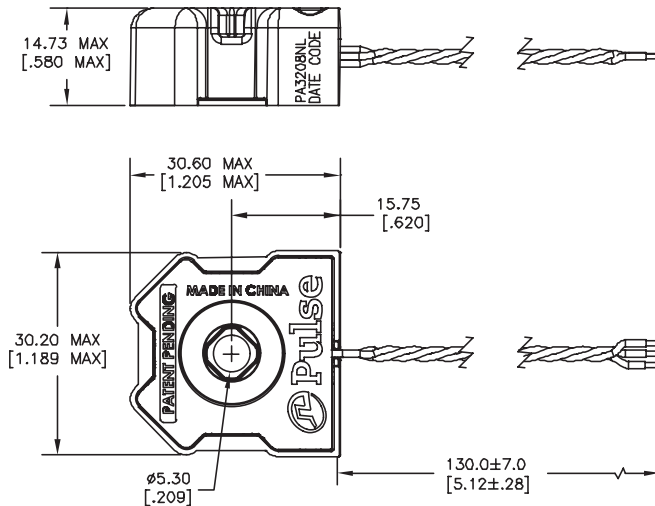
PA3206NL



Mechanicals

Schematics

PA3208NL



For More Information

Pulse Worldwide Headquarters
 12220 World Trade Drive
 San Diego, CA 92128
 U.S.A.

Pulse Europe
 Einsteinstrasse 1
 D-71083 Herrenberg
 Germany

Pulse China Headquarters
 B402, Shenzhen Academy of
 Aerospace Technology Bldg.
 10th Kejianan Road
 High-Tech Zone
 Nanshan District
 Shenzhen, PR China 518057
 Tel: 86 755 33966678
 Fax: 86 755 33966700

Pulse North China
 Room 2704/2705
 Super Ocean Finance Ctr.
 2067 Yan An Road West
 Shanghai 200336
 China
 Tel: 86 21 62787060
 Fax: 86 2162786973

Pulse South Asia
 135 Joo Seng Road
 #03-02
 PM Industrial Bldg.
 Singapore 368363

Pulse North Asia
 3F, No. 198
 Zhongyuan Road
 Zhongli City
 Taoyuan County 320
 Taiwan R. O. C.
 Tel: 886 3 4356768
 Fax: 886 3 4356823 (Pulse)
 Fax: 886 3 4356820 (FRE)

Tel: 858 674 8100
 Fax: 858 674 8262

Tel: 49 7032 7806 0
 Fax: 49 7032 7806 135

Tel: 65 6287 8998
 Fax: 65 6287 8998

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