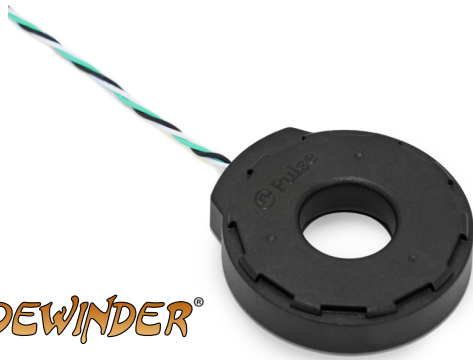


SIDEWINDER® - CURRENT SENSOR

PA3209NL Series



- ⊕ 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 100KHz
- ⊕ Immune to external AC magnetic fields
- ⊕ Immune to DC current & magnetic field
- ⊕ Low temperature coefficient
- ⊕ Patent pending

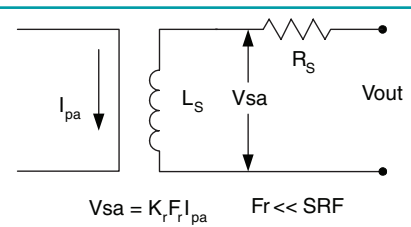
Electrical Specifications at 25°C Temp Range -40°C to 130°C							Actual Secondary Output Voltage (V _{sa})	
Part Number	Accuracy Class ³	Kr ⁴ (μΩ/Hz typ)	Pri-Sec Isolation (V min)	Ls ⁵ (mH typ)	Rs ⁶ (Ohms typ)	SRF ⁷ (Hz typ)	@ 50 Hz (μV/A) ¹	@ 60 Hz (μV/A) ¹
PA3209NL	0.2	9.26	6,000	3.0	96.0	80,000	463	556

EQUATIONS: $V_{sa} = K_r F_r I_{pa}$
 $F_r \ll SRF$

NOTES:

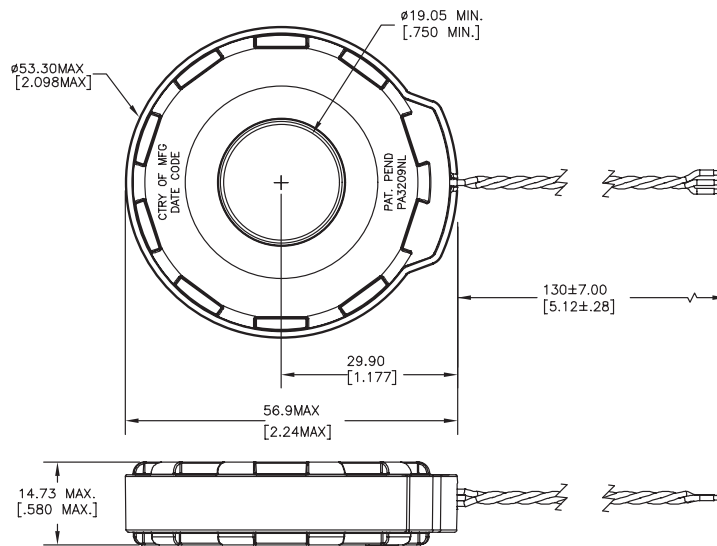
1. Output Voltage is proportional to the derivative (di/dt) of the input current based on the Rogowski Coil principle.
2. All current and voltages assumed to be sinusoidal waveforms at F_r, the constant rated frequency in Hz, measured as RMS values.
3. Accuracy Class per IEC 60044-1 Table 11 where:
 - Percentage current error = ((K_r•F_r•I_{pa} - V_{out}) / V_{out}) x 100
 - Phase displacement = the difference between the primary current (I_{pa}) phase vector and the (secondary voltage (V_{out}) phase vector minus 90 degrees), in minutes
4. K_r = 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



Mechanical

PA3209NL



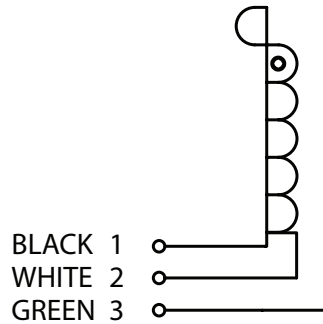
SIDEWINDER® - CURRENT SENSOR

PA3209NL Series



Schematic

PA3209NL



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