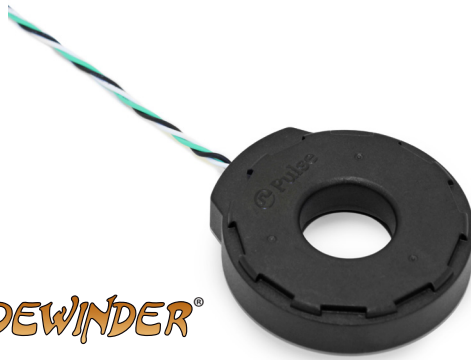


SIDEWINDER® - CURRENT SENSOR

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

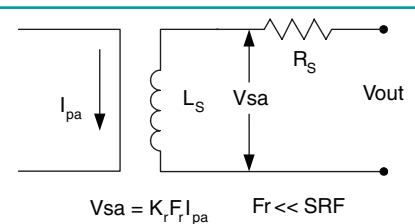
Electrical Specifications at 25°C Temp Range -40°C to 130°C							Actual Secondary Output Voltage (Vsa)	
	Accuracy	Kr ⁴	Pri-Sec	Ls ⁵	Rs ⁶	SRF ⁷		
Part Number	Class ³	(μΩ/Hz typ)	Isolation (V min)	(mH typ)	(Ohms typ)	(Hz typ)	@ 50 Hz (μV/A) ¹	@ 60 Hz (μV/A) ¹
PA3209NL	0.2	9.26	6,000	3.0	96.0	80,000	463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

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

NOTES:

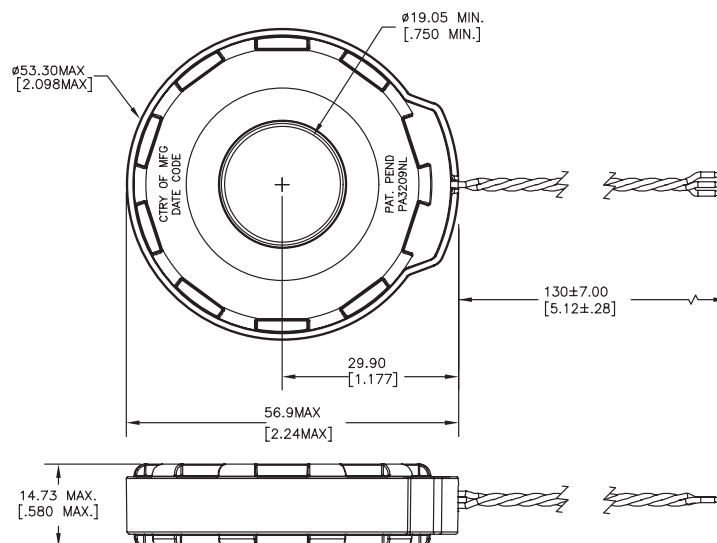
- Output Voltage is proportional to the derivative (di/dt) of the input current based on the Rogowski Coil principle.
- All current and voltages assumed to be sinusoidal waveforms at F_r , the constant rated frequency in Hz, measured as RMS values.
- Accuracy Class per IEC 60044-1 Table 11 where:
 - Percentage current error = $((K_r F_r I_{pa} - V_{out}) / V_{out}) \times 100$
 - Phase displacement = the difference between the primary current (I_{pa}) phase vector and the (secondary voltage (V_{out}) phase vector minus 90 degrees), in minutes
- K_r = Rated transformation constant
- L_s = Secondary winding inductance
- R_s = Secondary winding resistance
- SRF = Self Resonate Frequency
- I_{pa} = Actual primary current
- V_{sa} = Actual secondary output voltage

Low Frequency Equivalent Circuit



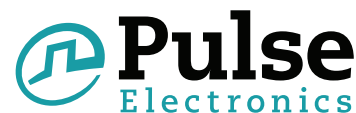
Mechanical

PA3209NL



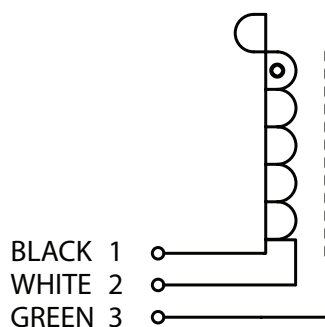
SIDEWINDER® - CURRENT SENSOR

PA3209NL Series



Schematic

PA3209NL



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