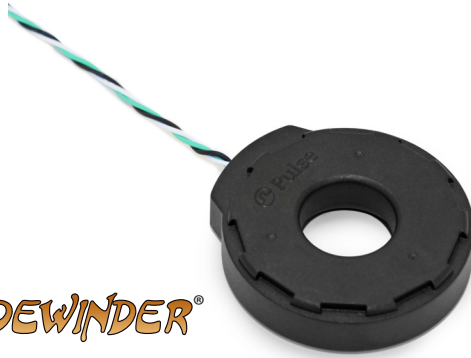


SIDEWINDER® - CURRENT SENSOR

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

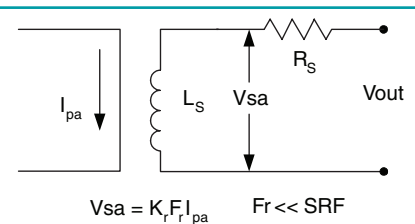
Electrical Specifications at 25°C Temp Range -40°C to 130°C							Actual Secondary Output Voltage (Vsa)	
	Accuracy	Kr ⁴	Pri-Sec	Ls ⁵	Rs ⁶	SRF ⁷		
Part Number	Class ³	(μΩ/Hz typ)	Isolation (V min)	(mH typ)	(Ohms typ)	(Hz typ)	@ 50 Hz (μV/A) ¹	@ 60 Hz (μV/A) ¹
PA3209NL	0.2	9.26	6,000	3.0	96.0	80,000	463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

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

NOTES:

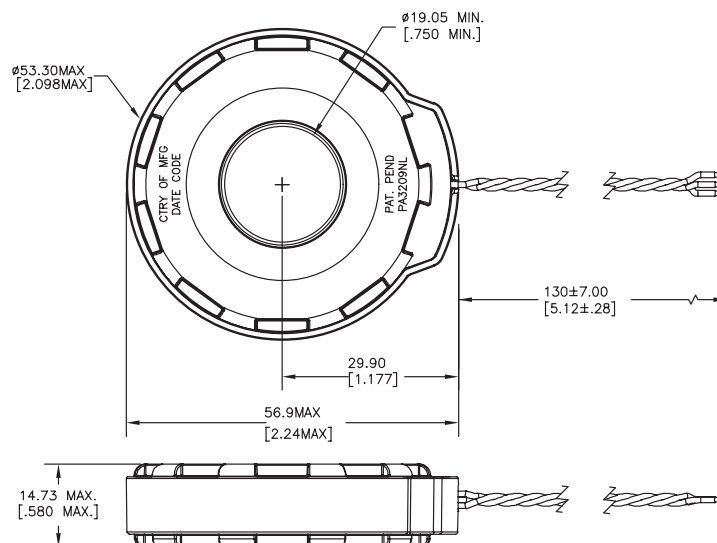
1. Output Voltage is proportional to the derivative (di/dt) of the input current based on the Rogowski Coil principle.
2. All current and voltages assumed to be sinusoidal waveforms at Fr, the constant rated frequency in Hz, measured as RMS values.
3. Accuracy Class per IEC 60044-1 Table 11 where:
 -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



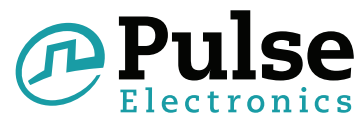
Mechanical

PA3209NL



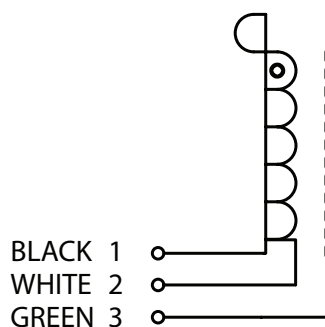
SIDEWINDER® - CURRENT SENSOR

PA3209NL Series



Schematic

PA3209NL



For More Information

Pulse Worldwide Headquarters

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

Tel: 858 674 8100
Fax: 858 674 8262

Pulse Europe

Einsteinstrasse 1
D-71083 Herrenberg
Germany

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

Pulse China Headquarters

B402, Shenzhen Academy of
Aerospace Technology Bldg.
10th Kejinan 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

Tel: 65 6287 8998
Fax: 65 6287 8998

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)

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