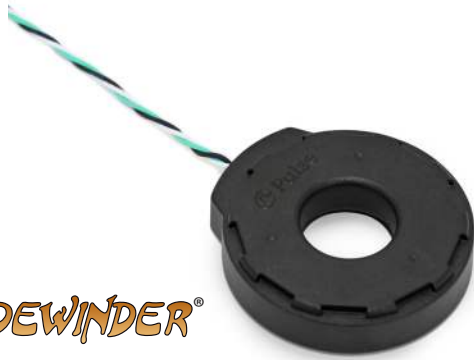


SIDEWINDER® - CURRENT SENSOR

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

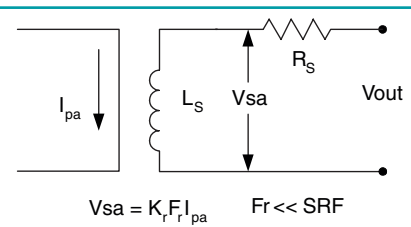
Electrical Specifications at 25°C Temp Range -40°C to 130°C							Actual Secondary Output Voltage (V _{sa})	
Part Number	Accuracy Class ³	Kr ⁴ (μΩ/Hz typ)	Pri-Sec Isolation (V min)	Ls ⁵ (mH typ)	Rs ⁶ (Ohms typ)	SRF ⁷ (Hz typ)	@ 50 Hz (μV/A) ¹	@ 60 Hz (μV/A) ¹
PA3209NL	0.2	9.26	6,000	3.0	96.0	80,000	463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

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

NOTES:

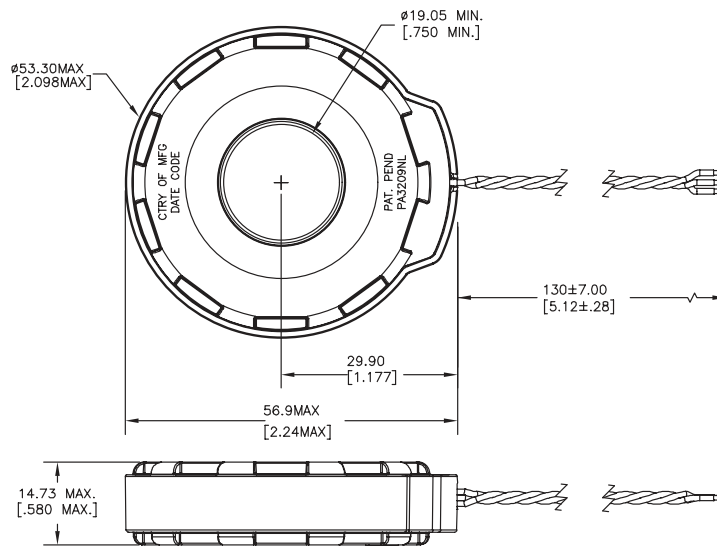
1. Output Voltage is proportional to the derivative (di/dt) of the input current based on the Rogowski Coil principle.
2. All current and voltages assumed to be sinusoidal waveforms at F_r, the constant rated frequency in Hz, measured as RMS values.
3. Accuracy Class per IEC 60044-1 Table 11 where:
 - 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



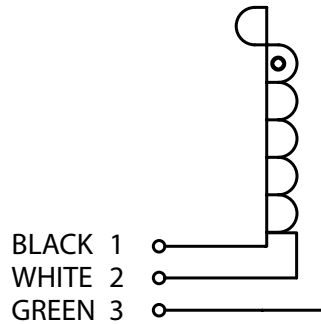
SIDEWINDER® - CURRENT SENSOR

PA3209NL Series



Schematic

PA3209NL



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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