

Blade Generic Environmental Specification

Gill non-contact induction position sensor



- Designed to withstand the harshest environments
- Low cost, high quality
- High reliability
- Rapid customisation capability

Gill uses leading-edge technology to provide innovative solutions to position sensing problems

This specification sheet outlines the performance obtained from rigorous environmental testing of a typical Gill non-contact position sensor. The Blade sensor family is attractive for use in harsh environments, it's flexible, robust and easy to install. Gill sensors represent the best solution for your application's demanding position sensing needs.

Typical Applications

- Motorsport
- Agricultural Equipment
- Construction Equipment
- Specialist Vehicles
- Marine
- Industrial
- Process Control
- Military Vehicles & Equipment



Lifetime	Life expectancy is 10 years.												
Material compatability	Resistant exposure to: water, engine oil, engine coolant, diesel fuel, gasoline, salt spray, degreaser, degreaser, tsp, ammonia and dust. All common automotive liquids and materials.												
Sealing	IP67 minimum High pressure water spray sealing test: 1200psi High pressure wash at 0.5m.5% aqueous solution NaCl for 48 hours at 35°C.												
Electric and electromagnetic tests													
<i>Operating over voltage</i>	Tested to withstand 35V for 1 hour.												
<i>Reversed power supply voltage</i>	Tested to withstand a reversed power supply voltage of 35V for 1 hour.												
<i>Resistance to random connection</i>	Tested to withstand inputs and outputs short circuit towards ground for 30 minutes.												
<i>Immunity to electrostatic charge</i>	Tested at 15kV applied with a capacitance of 150pF and a resistor of 330ohm.												
<i>Immunity to electromagnetic disturbances</i>	Tested in an electromagnetic field of 100V/m within the frequency range of 14kHz to 1GHz.												
<i>Pulse energy absorbtion</i>	1.7J												
Mechanical tests													
<i>Sinusoidal vibration resistance</i>	<i>Tests carried out on sensor:</i> Frequency 10 – 2000Hz Displacement (peak to peak) 1.5mm (from 10 to 40Hz). Acceleration 35m/sec ² (from 10 – 40Hz) Sweep time 0.5 oct/min Duration 8 hours per plane												
<i>Random vibration</i>	<i>Tests carried out on sensor:</i> Oscillation frequency from 24 – 2000Hz <table border="1" style="display: inline-table; vertical-align: top;"> <thead> <tr> <th>Frequency</th> <th>Power spectral density</th> </tr> </thead> <tbody> <tr> <td>24</td> <td>0.04g²/Hz</td> </tr> <tr> <td>60</td> <td>0.504g²/Hz</td> </tr> <tr> <td>100</td> <td>0.50g²/Hz</td> </tr> <tr> <td>240</td> <td>0.10g²/Hz</td> </tr> <tr> <td>2000</td> <td>0.10g²/Hz</td> </tr> </tbody> </table>	Frequency	Power spectral density	24	0.04g ² /Hz	60	0.504g ² /Hz	100	0.50g ² /Hz	240	0.10g ² /Hz	2000	0.10g ² /Hz
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<i>Mechanical drop</i>	Multiple drops onto a concrete surface from a height of 1m. Number of drops: 10												
Thermal shock	<i>Tested to:</i> Upper temperature 120°C Lower temperature -40°C Dwell time at each extreme 2 hrs Transfer time within 30 sec Number of cycles 5												
Operating temperature test <i>(in normal working condition)</i>	<i>Tested to:</i> Cycle: 4 hours at 120° 4 hours at -40° Changing rate 20°/min Number of cycles 100												

The technology employed is readily customised to your exact application requirements (range, connections etc) in relatively small OEM volumes. Contact us for further information.

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