

## SIL Declaration of Conformity

Functional Safety according to

IEC 61508/61511

Manufacturer: Hansford Sensors, Ltd  
Address: Artisan, Hillbottom Rd  
High Wycombe, HP12 4 HJ, UK  
Product Description: HS-510 Series Vibration/Trip Display Module

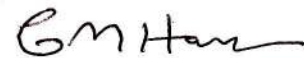
Based on functional safety assessment according to IEC 61508 requirements and dependable reliability data from field experience, Hansford Sensors, Ltd. declare that Vibration/Trip Display Modules of HS-510 Series meet criteria of operation in safety instrumented systems to Safety Integrity Levels SIL 1 and SIL 2 with a hardware fault tolerance down to 0 in low/high demand/continuous modes.

The appropriate SIL safety instructions of the HS-510 Series Manual should be observed.

The assessment was based on the Route 1<sub>H</sub> procedure as defined by IEC 61508, Parts 2, 6.

Product revisions will be carried out by Hansford Sensors, Ltd in accordance with IEC 61508/61511 guidance.

Appendix to this document summarises safety related data for HS-510 Series transmitters.



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Appendix.

### SIL Declaration of Conformity

Product description: HS-510 Series Vibration Sensor/Transducer

Device Group	B
SIL (Safety Integrity Level)	1 and 2
HFT (Hardware Fault Tolerance)	0
MTBF (Mean Time Between Failures)	615,000 hours
SFF (Safe Failure Fraction)	91%
PFD (over 5 years)	115 FIT

The data above is calculated assuming a calibration check every 5 years. The mean time to repair a unit is 8 hours. A PFD value of 115 FIT gives a risk reduction of  $8.64 \text{ E}+6$  which indicates in accordance with IES 61508 that when correctly installed the unit can be used in a SIL 1 or SIL 2 loop.