

# FUNCTIONAL SAFETY CERTIFICATE

CERTIFICATO – ZERTIFIKAT – CERTIFICADO – CERTIFICAT

The product:

**HS-420I & HS-422I**  
*Intrinsically Safe Accelerometer*

Manufactured by:

**Hansford Sensors Ltd.**  
*Artisan, Hillbottom Road, Sands Industrial Estate,  
High Wycombe HP12 4HJ 8824  
UK*

suitable for the following safety function(s):

Overall vibration protection input device

has been assessed per the relevant requirements of

**IEC 61508:2010 Parts 1 to 7**

and meets the requirements providing the following:

## Systematic Capability:

The compliance with the requirements for the avoidance of systematic faults and the requirements for the control of systematic faults have been achieved following the compliance route 1<sub>S</sub>.

SC 3

## Hardware Safety Integrity:

The constraints on hardware safety integrity have been verified in order to achieve a sufficiently robust architecture taking into account the level of element and subsystem complexity following the compliance route 1<sub>H</sub>.

Type

A

## Random Safety Integrity:

The estimated safety integrity, for each safety function, due to random hardware safe and dangerous failures rates (excluding "no part" and "no effect" contribution).

See

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The architectural constraints and the effects of random failures (PFH/PFD<sub>AVG</sub>) must be verified for each specific application and safety function implemented by the E/E/PE safety-related system.

Certified by:

**BYHON**

BYHON Certification Director:



Rosati Francesco

CERTIFICATE No:  
**HANS-420VB-ENS-E01**

Revision: A

Issued:  
March 30th, 2021

Valid until:  
March 29th, 2024

The owner of a valid certificate for an assessed product is authorized to affix the following mark and relative ID number, to all recognized devices which are identical to the product assessed.

**BYHON**  
**SIL** ✓

**ID.N° 155421E01N**



#8914  
ISO/IEC 17065  
Product Certification Body