

SIL



Functional Safety Certificate

No. 0P200821.FTICS76

Technical Construction File no. TCF-2020081801-SIL

Certificate's Holder:

FTI TECHNOLOGY INC.

1013 Centre Road, Suite 403S Wilmington, DE 19805 USA

Product:

Digital differential pressure switch / transmitter

Model(s):

PB5702 series

Standard:

Has been assessed per the relevant requirements of:

IEC 61508 Parts 1-7:2010, IEC 62061:2005+AMD1:2012+AMD2:2015

And meets requirements providing a level of integrity to:

Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type A Element

SIL 2 @ HFT= 0; SIL 3@ HFT=1; Route 2H

* Safety Function:

PB5702 series micro differential pressure transmitter is suitable for Monitor the pressure in the air conditioning system and laboratory and flow. A group of analog signal output, at the same time, it can carry two sets of switch alarm signals. This product has two series of ordinary type and explosion-proof type.

* Specific requirements: The instructions of the associated Installation and Operating Manual shall be considered.

* Is suitable to be safety function according to the description and the configuration defined in Annex I.

Verification Mark:



The Verification Mark can be affixed on the product. It is NOT permitted to alter the Verification Mark in any way

Remark: This SIL Verification of Compliance has been issued on a voluntary basis. ECM confirms that a Test Report is existent for the above listed product(s) and found to meet the requirements of above standards for application in safety related system up to Safety Level of **SIL 3**.

The unit must be properly designed into a Safety Instrument Function as per the requirements in the Safety Manual. The Verification Mark shown above can be affixed on the product. It is NOT permitted to alter the Verification Mark in any way. In addition the Verification's Holder is NOT allowed to transfer the Verification to third parties. This certificate can be checked for validity at www.entecerma.it

Date of issue 21 August 2020

Expiry date 20 August 2025

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Annex I

No. 0P200821.FTICS76

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1. The use of the product [Digital differential pressure switch / transmitter] must obey the required rules to conservation of SIL3 properties. These rules are recalled in the §6 of the Assessment Report reference: [SIL Capability assessment report]

2. The product version of hardware components used for validation and type tests are the following:

Component	Model
Digital differential pressure switch / transmitter	PB5702 series

3. Assessed documents for the present certification are defined in the Assessment Report [SIL Capability assessment report].

4. Acceptable environmental constraints for the system are recalled in the safety Manual (Ref: [TCF-2020081801-SIL]). These elements must be checked for each integration operation of the product.

5. The SIL 3 capable certified Safety Function of product is the following:

- SF1: To Close on demand.
- SF2: To Open on demand.

6. Hypothesis used for calculations are presented here under: The mode of operation is Low demand, which means less than 1 trip demand each year;

Component architecture	Safety function	Test intervals	MTTR	Failure rate	Undetected dangerous failure rate	PFD	SIL Capability
Loo1 configuration	SF1	1 year	24h	1.93E-06	1.93E-06	8.45E-03	SIL2
Loo1 configuration	SF2	1 year	24h	3.75E-07	1.28E-07	5.67E-04	SIL3

7. The Safety Integrated Level of the safety function using the product [Digital differential pressure switch / transmitter] shall be calculated taking into account the characteristics of the complete system supporting the safety function.