1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres**
Directive 2014/34/EU

3 EU - Type Examination Certificate Number: **SGS23ATEX0197X**

4 Product: **CMCP422/IS Series Accelerometer**

5 Held by: **STI Vibration Monitoring Inc.**

6 Address: **1010 East Main Street, League City, Texas 77573, USA**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS Fimko Oy, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **GB/SGS/ExTR24.0014/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0: 2018 EN 60079-11: 2012

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following :

⟨Ex⟩ **I M1 Ex ia I Ma (-40°C ≤ T_a ≤ +60°C)**

II 1GD Ex ia IIC T6 Ga (-40°C ≤ T_a ≤ +60°C)
Ex ia IIIC T80°C IP65 Da (-40°C ≤ T_a ≤ +60°C)

SGS Fimko Oy Customer Reference No. **7077** Project File No. **23/0479**

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13 # Schedule

14 ## Certificate Number SGS23ATEX0197X

15 Description of Product

The CMCP422/IS Series Accelerometers are designed to measure velocity or acceleration by converting the signal generated by the compression of a piezo electric crystal by a given seismic mass and output a 4 to 20mA signal proportional to velocity or acceleration to the monitoring equipment.

The accelerometer comprises a piezo electric crystal connected to a signal conditioning board all contained within a stainless-steel enclosure of various shapes measuring approximately 33cm^3. The enclosure is a fully welded construction.

Electrical connections are made to the apparatus either via an IP65 rated connector or via an integral cable which is encapsulated in the end of the apparatus.

The CMCP422IS Series Accelerometers is designed to measure velocity and acceleration respectively and output a 4 to 20mA output. A variant of the accelerometer is also available with an integral temperature sensor.

Input Parameters

The Group II & III versions of the CMCP422/IS Series Accelerometer (excluding cable) have the following terminal parameters:

U_i = 28V C_i = 0
I_i = 115mA L_i = 0
P_i = 0.65W

The Group I versions of the CMCP422/IS Series Accelerometer (excluding cable) have the following terminal parameters:

U_i = 16.5V C_i = 0
P_i = 1.74W L_i = 0

The apparatus must be powered from a power limited source such as an appropriately certified fuse assembly containing a ≤62mA fuse, 1.74W (16.5V x 62mA x 1.7).

The Group I version of the apparatus (excluding cable) has the following alternative terminal parameters:

U_i = 28V C_i = 0
I_i = 115mA L_i = 0
P_i = 0.65W

The capacitance and inductance to resistance ratio of the different versions have the following parameters:

	Integral Cable or 2-Pin Mil Spec Connector with cable				4-Pin M12 Connector
	Polyurethane Cable	Silicone Cable	Armoured Cable	PUR Cable	Polyurethane Cable
C_i	= 160pF/m	= 370pF/m	= 290pF/m	= 884pF/m	= 120pF/m
L_i	= 0.72µH/m	= 0.5µH/m	= 0.5µH/m	= 0.6µH/m	= 0.7µH/m
L_i/R_i	= 8.32µH/Ω	= 15.4µH/Ω	= 15.4µH/Ω	= 6.1µH/Ω	= 11.7µH/Ω

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17 Specific Conditions of Use

1. The free end of the cable on the integral cable version of the apparatus must be terminated in an appropriately certified dust proof enclosure.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc.)
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
M06-107-D	1 of 1	D	22/03/24	General Arrangement and Product Information for Group II and Group III CMCP422/IS Series Accelerometers.

For all other constructional drawings refer to Baseefa08ATEX0086X