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Type Examination Certificate

for Electrical Equipment used in Potentially Explosive Atmosphere

Issued by Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK	
Applicant	Pepperl+Fuchs K.K. Hanasaki-cho 6-145, Nishi-ku, Yokohama, Japan
Manufacturer name	Pepperl+Fuchs SE Lilienthalstrasse 200, 68307 Mannheim, Germany
Product name	Remote Speaker Microphone
Type/model code	RSM-Ex 01
Type of protection	Intrinsic safety
Group, Temperature Class and EPL	IIC, T4, Gb IIIC, T135°C, Db
The equipment shall be marked with the following	Ex ib IIC T4 Gb Ex ib IIIC T135°C Db
Ratings	See attachment 1
Special condition for safe use	See attachment 2
Certificate number	CML 21JPN21343X
Term of validity	From 05-12-2022 to 04-12-2025 

This is to certify that the equipment specified above complies with the requirements stipulated in Ordinance on Examination of Machines and Other Equipment of the Ministry of Health, Labour and Welfare, Japan.

Issue date: 05-12-2022

Signature of chief examiner:



Attachment 1: Rating

Ambient temperature range:	from -20 °C to +55 °C																
Degree of ingress protection:	IP 64																
Fixed battery	Nominal voltage: 3.7V Nominal capacity: 1960 mAh or 2200 mAh																
Intrinsically safe signal circuit in Ex ia IIC	<table> <tr><td>Uo</td><td>4.2 V</td></tr> <tr><td>Io</td><td>22.3 mA</td></tr> <tr><td>Po</td><td>23.5 mW</td></tr> <tr><td>Ui</td><td>4.2 V</td></tr> <tr><td>Ii</td><td>350 mA</td></tr> <tr><td>Pi</td><td>900 mW</td></tr> <tr><td>Li</td><td>1 μH</td></tr> <tr><td>Ci</td><td>1 μF</td></tr> </table>	Uo	4.2 V	Io	22.3 mA	Po	23.5 mW	Ui	4.2 V	Ii	350 mA	Pi	900 mW	Li	1 μH	Ci	1 μF
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Common Lo and Co

Lo in μH	499	199	99	49	19	9	4	1	0
Co in μF	2.5	5.2	7.4	10	16	23	39	129	419

The RSM-Ex 01 has a jack connector where a headset can be connected. Following headsets are approved and allowed to be connected to RSM-Ex 01*:

- ComCom Ex and additional in-ear plug Serenity SPC Ex
- RSM HS 01 -W
RSM HS 01 -B

Further intrinsically safe audio headsets can be connected to the Headset Jack. The headsets must be certified for the use in hazardous locations and match with the following entity parameters:

Ui	= 0 V	Only passive headsets are intended for use
Ii	= 0 A	Only passive headsets are intended for use
Pi	= 0 W	Only passive headsets are intended for use
Li	= 0 μH	
Ci	= 0.12 μF	
Uo	= 8.4 V	
Po	= 36 mW	

Lo and Co:

Lo in μH	290	200	100	50	20	10	5
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Issue: 0

Co in μF 0.98 1.38 1.95 2.68 3.88 5.28 6.68

The approved headsets are allowed to be connected and disconnected directly inside the Ex-area.

Attachment 2: Special Conditions for Safe Use

1. Do not open for any reason.
2. Do not charge or open the device inside the Ex-area.
3. It must be ensured that the maximum input voltage (U_m) for the device from the charger between the lines is 6V.
4. The ambient temperature during the charging shall be in the range from 0 °C to +45 °C.
5. Only those accessories approved by the manufacturer shall be used.