1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **CSANe 23ATEX1162X** Issue: **0**

4 Equipment: **Explosion-proof Telephone / JREX106 Series**

5 Applicant: **J&R Technology Limited**

6 Address: 6A, Building A1, XingYi Industrial Park,
Fuyong Town, Bao'an District,
Shenzhen,
Guangdong 518103,
China

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

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 EN IEC 60079-7:2015+A1:2018 EN 60079-11:2012
EN 60079-18:2015+A1:2017 EN 60079-31:2014

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

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 2 (2) GD
Ex eb ib [ib Gb] mb IIC T6/T5 Gb
Ex ib [ib Db] tb IIIC T80°C/T95°C Db
Ambient Temperature:
T6/T80°C: -40°C to +40°C
T5/T95°C: -40°C to +55°C

Signed: Michelle Halliwell

Title: Director of Operations

PRODUCTS
RvA C 652

Project Number 80151905

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **CSANe 23ATEX1162X**
Issue 0

13 **DESCRIPTION OF EQUIPMENT**

JREX106 series Explosion-proof Telephone is a rugged weatherproof telephone for use in explosive atmospheres. The handset is supplied with a stainless-steel cord and the optional keypad has up to 20 buttons.

The telephone consists of a single compartment shell which is manufactured from plastic polyester with a stainless-steel keyboard panel; held together by four stainless-steel screws. The optional glass window is secured within the enclosure by the compression of the gasket/fixed frame to the upper shell. Internally, the encapsulated main board and safety barrier board under Ex 'mb' protection type provides intrinsically safe output to the KEYBOARD, HANDSET, HOOK, HANDFREE SPK and MIC, LCD. The external terminations are made via component certified cable glands at Ex 'eb' approved terminal blocks. One waterproof ring is provided on the upper shell to provide ingress protection.

The telephone has been tested in accordance with the test of enclosure section of IEC 60079-0:2017 and meets the requirements of IP66. The equipment utilises two cable entries in the rear of the bottom shell for the use of suitably approved Ex eb IIC Gb (for zone 1) and Ex tb IIIC Db (for zone 21) cable entry devices or blanking elements.

The JREX106-SIP telephone is designed to be powered over the incoming Ethernet connections from a supply conforming to IEEE802.3:2002 or via a DC 12V power supply connected to the power terminal blocks when external loudspeaker and light used.

Input entity parameter for JREX106-SIP telephone:

Ethernet input: Um = DC 57V

Power supply input: Um = 250V rms

The JREX106-AL telephone is designed to be used with PABX/PSTN network or via a DC 12V power supply connected to the terminal blocks when external loudspeaker and light used.

Input entity parameter for JREX106-AL telephone:

PABX/PSTN network input: Um: AC 90V / DC 65V

Power supply input: Um = 250V rms

The following table details the telephone and its associated ambient temperature ranges, temperature classes and surface temperature for dust.

Ambient temperature	Temperature class	Maximum surface temperature
-40°C to +55°C	T5	T95°C
-40°C to +40°C	T6	T80°C

A certified intrinsically safe HEADSET may be connected to the Explosion-proof Telephone fitted with interior terminal blocks and the entity parameters of the terminal blocks are:

JREX106-SIP telephone entity parameters for external HEADSET:

Uo = 5.202V, Io = 0.38A, Po = 0.49W, Co = 71µF (IIC) / 1000µF (IIIC), Lo = 0.24mH (IIC) / 0.98mH (IIIC)

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **CSANe 23ATEX1162X**
Issue 0

JREX106-AL telephone entity parameters for external HEADSET:

Uo = 5.202V, Io = 0.43A, Po = 0.56W, Co = 71µF (IIC) / 1000µF (IIIC), Lo = 0.19mH (IIC) / 0.76mH (IIIC)

The Model Designation is defined as follows: JREX106-**aa-b-cc**

JREX106	**Explosion-proof telephone**
aa = Keyboard function	FK: with keyboard CB: without keyboard
b = Display function	L: with LCD display Empty: without LCD display
cc = Version	AL: Analog telephone SIP: VOIP telephone

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Reports and Certificate History**

Issue	Date	Report number	Comment
0	09 January 2024	R80151904A	The release of the prime certificate.

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

15.1 The non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should be done with a damp cloth.

15.2 All cable entry holes shall be fitted with either a certified cable gland or a certified stopping plug that is suitable for the application.

15.3 The external surface of HANDSET is coated with a conductive coating. Attention shall be paid to avoid the damage of the coating during storage, transportation and use. Additionally, the coating shall be inspected before use, see user instruction.

15.4 The telephone contains shunt Zener diode interfaces, which requires connection to a suitable earth reliably before use in accordance with EN 60079-14.

15.5 The terminal blocks for external 12VDC power supply, loudspeaker and light shall only be fitted with wires that have cross sectional as below and the tighten torque of screws of terminal block is 0.5Nm:

- Solid [mm^2] (AWG): 0.2 - 4 (24 - 12)
- Flexible [mm^2] (AWG): 0.2 - 2.5 (24 - 14)

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **CSANe 23ATEX1162X**
Issue 0

17 **CONDITIONS OF MANUFACTURE**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.3 The Explosion-proof telephone incorporates component certified terminal blocks, certified under KEMA 01ATEX2130U. It is therefore the responsibility of the manufacturer to continually monitor the status of the certifications associated with this device, and they shall inform CSA Group of any modifications to the device that may impinge upon the explosion safety design of their products.

17.4 The encapsulated parts of the apparatus shall be subjected to a visual inspection. No visible damage of the compound shall be evident, such as cracks, exposure of the encapsulated parts, flaking, impermissible shrinkage, discoloration, swelling decomposition or softening, as required by EN 60079-18:2015+A1:2017 clause 9.1.

17.5 Each manufactured equipment shall be subjected to a dielectric strength test at 1500 Vac for at least 1s without dielectric breakdown occurring between input terminal blocks and the surface of the compound or the non-metallic enclosure in accordance with EN 60079-18:2015+A1:2017 Clause 9.2. Alternatively, the test may be carried out at 1800 Vac for at least 100ms.

17.6 Each manufactured equipment shall be subjected to a dielectric strength test at 1500 Vac at least 60 s without dielectric breakdown occurring between circuit and enclosure according to EN IEC 60079-7:2015+A1:2018, Clause 6.1. Alternatively, the test may be carried out at 1800Vac for at least 100ms.

Certificate Annexe

Certificate Number: **CSANe 23ATEX1162X**

Equipment: **Explosion-proof Telephone / JREX106 Series**

Applicant: **J&R Technology Limited**

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
JREX106-000	1 of 1	1.1	18 Dec 23	Assembly Drawing
1063601	1 of 1	1.1	18 Dec 23	Upper shell
1063603	1 of 1	1.1	18 Dec 23	Bottom shell
1061201	1 of 1	1.1	18 Dec 23	Keyboard Panel
1061203	1 of 1	1.1	18 Dec 23	Ground lug
1061204	1 of 1	1.1	18 Dec 23	Potting box
1063604	1 of 1	1.1	18 Dec 23	Handset upper shell
1063605	1 of 1	1.1	18 Dec 23	Handset bottom shell
1065602	1 of 1	1.1	18 Dec 23	Waterproof ring
1065603	1 of 1	1.1	18 Dec 23	Speaker gasket
1067401	1 of 1	1.1	18 Dec 23	Window glass fixed frame
1069804	1 of 1	1.1	18 Dec 23	Buffer silicone gasket
1069805	1 of 1	1.1	18 Dec 23	Horn cover sealing silicone
G300101	1 of 1	1.1	18 Dec 23	Windows glass
1060102	1 of 1	1.1	18 Dec 23	Nameplate (AL)
1061202	1 of 1	1.1	18 Dec 23	Nameplate (SIP)
SD-JREX106-01	1 of 1	1.1	18 Dec 23	Grounding diagram
SD-JREX106-02	1 of 1	1.1	18 Dec 23	Analog telephone glue seal diagram
SD-JREX106-03	1 of 1	1.1	18 Dec 23	SIP telephone glue seal diagram
JR-YF-A106-AL-SCH	1 to 3	1.0	18 Dec 23	JREX106-AL_Schematic
JR-YF-A106-AL-PCB	1 to 9	1.0	18 Dec 23	JREX106-AL_PCB
JR-YF-A106-AL-BOM	1 to 13	1.0	18 Dec 23	JREX106-AL-PCB-BOM
JR-YF-P106-SIP-SCH	1 to 9	1.0	18 Dec 23	JREX106-SIP_Schematic
JR-YF-P106-SIP-PCB	1 to 9	1.0	18 Dec 23	JREX106-SIP_PCB
JR-YF-P106-SIP-BOM	1 to 22	1.0	18 Dec 23	JREX106-SIP-PCB-BOM