



Product Service

# (1) EU-Type Examination Certificate

(2) Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres – **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:



**TPS 20 ATEX 106679 0001 X Rev. 00**

(4) Equipment or Protective System: Explosion-proof Telephone  
Type: KNE5, KNE6, KNE7, KNE8

(5) Manufacturer: Hongkong Koon Technology Limited

(6) Address: Room 1001, Block 1, Building T3, Unit Center, Baoan District,  
518100 Shenzhen, PEOPLE'S REPUBLIC OF CHINA

(7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) TÜV SÜD Product Service GmbH, Notified Body no. 0123, 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 the confidential reports with no. 88.500.18.096.01

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

**EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-11:2012**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe 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:



**II 2G Ex db ib IIB T5 Gb**

Certification Body,

München, 14.02.2020

Ing. Kristof De Gersem, MSc.

:

Page 1 / 5

Certificates without signature shall not be valid. The Certificates may only be circulated in full including its schedule(s). Extracts or alterations are subject to approval by TÜV SÜD Product Service GmbH. In case of dispute, the German text shall prevail. The document is administrated under the following number: EX5A 106679 0001 Rev. 00

Doc Name: Temp-ExNBG-TPS-EU-Type-Cert-Rev. 04

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 München • Germany

TÜV®

(13)

## Schedule

(14)

**EU-Type Examination Certificate no.**

**TPS 20 ATEX 106679 0001 X Rev. 00**

### Certificate History

Revision:	Description:	Report no.:	Issue Date:
Rev. 00	First issue of certificate.	88.500.18.096.01	14.02.2020

(15)

### Description of equipment:

KNE5 and KNE6 are explosion-proof Analog phones. KNE7 and KNE8 are explosion-proof VOIP phones. They are suitable for use in Zone 1 and Zone 2, group IIA and IIB, T5 gas explosive atmospheres.

The equipment, externally powered either by mains supply or telephone line, consists of a flameproof enclosure, a keyboard and a handset. In the flameproof enclosure, an infallible Ex i transformer and Ex i diode safety barriers are mounted to provide intrinsically safe outputs which supplies the keyboard and handset.

### Model designation:

KNE5 and KNE6 are explosion-proof Analog phone which are designed for connecting to the telephone exchange PABX PSTN.

Explosion proof robust telephone for rough ambient conditions in hazardous areas.

KNE7 and KNE8 are explosion-proof VOIP phone which are designed for connecting to the Ethernet according to IEEE802.3. Explosion proof robust telephone for rough ambient conditions in hazardous areas

### Model difference:

1. KNE5: Working with PSTN or PABX analog telephone line, telephone line powered, with external safety ring indicator D21 with 8Ω 0.5W.

2. KNE6: Working with PSTN or PABX analog telephone line, 110Va.c. or 220Va.c. powered, with external safety ring indicator D20 with 8Ω 0.5W and LED 5Vd.c. 0.75W; with built-in amplifier module support external explosion proof horn 8 Ohm 30W.

3. KNE7: Explosion proof VOIP telephone. POE powered, with external safety ring indicator D20 with 8Ω 0.5W and LED 5Vd.c., 0.75W.

Page 2 / 5

Certificates without signature shall not be valid. The Certificates may only be circulated in full including its schedule(s). Extracts or alterations are subject to approval by TÜV SÜD Product Service GmbH. In case of dispute, the German text shall prevail. The document is administrated under the following number: EX5A 106679 0001 Rev. 00

Doc. Name: Temp-ExNBG-TPS-EU-Type-Cert-Rev. 04

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 München • Germany





Product Service

(13)

## Schedule

(14)

**EU-Type Examination Certificate no.**

**TPS 20 ATEX 106679 0001 X Rev. 00**

4. KNEEx8: Explosion proof VOIP telephone. 110Va.c. or 220Va.c. powered, with external safety ring indicator D20 with 8Ω 0.5W and LED 5Vd.c./0.75W; with built-in amplifier module support external explosion proof horn 8 Ohm 30W.

### Technical data:

1. KNEEx5 and KNEEx6 Main technical parameters:

a. Telephone line voltage of 24-48Vd.c.(apply to KNEEx5)

b. DTMF Frequency:

HIGHT: 697 770 852 941

LOW : 1209 1336 1477

c. DTMF frequency tolerance: ±1.5%

d. Power supply 110Va.c./220Va.c.(apply to KNEEx6)

e. Keypad: 15 keys Metal keypad.

f. Hook switch: Steel spring contact.

g. Ambient temperature range: -20°C ≤ Ta ≤ +55 °C.

h. Degree of protection: IP66 (tested according to EN 60529)

i. Type of protection:  II 2G Ex db ib IIB T5 Gb

2. KNEEx7 and KNEEx8 Main technical parameters:

a. Power supply 110Va.c./220Va.c.(apply to KNEEx8)

b. POE power supply: Input 48Vd.c.(apply to KNEEx7)

c. Dry contact: (option)

1 Aux Output, dry contact

Contact Ratings. Load: Resistive load

Rated load:0.3 A at 125 Va.c.; 1 A at 30 Vd.c.

Rated carry current:1A

Max. switching voltage:125 Va.c.,30Vd.c.

Max. switching current: 1A

d. Keypad: 15 keys Metal keypad.

e. Hook switch: Steel spring contact

f. Ambient temperature range: -20°C ≤ Ta ≤ +55 °C.

Page 3 / 5

Certificates without signature shall not be valid. The Certificates may only be circulated in full including its schedule(s). Extracts or alterations are subject to approval by TÜV SÜD Product Service GmbH. In case of dispute, the German text shall prevail. The document is administrated under the following number: EX5A 106679 0001 Rev. 00

Doc Name: Temp-ExNBG-TPS-EU-Type-Cert-Rev 04

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 München • Germany

TÜV®



Product Service

(13)

## Schedule

(14)

**EU-Type Examination Certificate no.**

**TPS 20 ATEX 106679 0001 X Rev. 00**

g. Degree of protection: IP66 (tested according to EN 60529)

h. Type of protection:  II 2G Ex db ib IIB T5 Gb

### Warning label:

WARNING – DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

CAUTION: USE FASTENERS WITH YIELD STRESS  $\geq 420\text{MPa}$

THE SPECIFIC THREAD TYPE AND SIZE OF ENTRY: M25×1.5

### Installation instruction:

See installation instructions provided by the manufacturer and part of this certification.

See also (17) Special conditions for safe use.

(16)

Test report(s): 88.500.18.096.01

### Routine testing:

100% routing test will be done by manufacturer.

1. Static pressure test of enclosure. 0.662MPa, 10s. No damage or deformation which may cause flame proof performance feature is allowed. No leakage is allowed.

2. The correct operation of each component of each completed barrier shall be checked.

3. The resistance of each fuse shall be checked.

4. A dielectric strength test shall be carried out for the transformer. The voltages applied to infallible transformers shall be

- Between input and output windings: 3000V

- Between all the windings and the core or screen: 1200V

The test shall be carried out for 1s.

The applied voltage shall remain constant during the test. The current flowing during the test shall not increase above that which is expected from the design of the circuit and shall not exceed 5mA r.m.s. at any time.

During these tests, there shall be no breakdown of the insulation between windings or between any winding and the core or the screen.





Product Service

(13)

## Schedule

(14)

EU-Type Examination Certificate no.

TPS 20 ATEX 106679 0001 X Rev. 00

### Document List:

File no.:	Description:	Pages:	Rev:	Date:
KNEx5-001	KNEx5 General Assembly drawing	2	V1.0	2019-04-03
KNEx6-001	KNEx6 General Assembly drawing	2	V1.0	2019-04-03
KNEx7-001	KNEx7 General Assembly drawing	2	V1.0	2019-04-03
KNEx8-001	KNEx8 General Assembly drawing	2	V1.0	2019-04-03
KNEx5-Schematic	KNEx5 Schematic	9	V1.0	2019-06-05
KNEx6-Schematic	KNEx6 Schematic	13	V1.0	2019-06-05
KNEx7-Schematic	KNEx7 Schematic	12	V1.0	2019-06-05
KNEx8-Schematic	KNEx8 Schematic	13	V1.0	2019-06-05
-	Transformer	7	-	2019-02-20
-	Current fuse	4	-	2019-12-13
-	Zener diode	3	-	2005-05-10
-	Resistor	12	V.10	2018-12-12
KOON-WI-PDN-021-A0	EU Declaration of conformity (draft)	2	R0	2020-01-13
KOON-WI-PDN-019	KNEx5, KNEx6 Analog Telephone user manual	9	A0	2019-10-15
KOON-WI-PDN-020	KNEx7, KNEx8 VOIP phone user manual	23	A0	2019-10-27

A copy of the full documentation is kept confidentially at TÜV SÜD.

(17) Special conditions for safe use:

1. Ambient temperature range: -20°C to +55°C
2. Repair of the flamepaths is not allowed. It is not accepted that repair in compliance with the values in EN 60079-1.
3. The installation must be installed according the requirements of EN 60079-14: latest version (or its National equivalent standard).
4. The cable entries shall be realised in compliance with EN 60079-14 and that are ATEX 2014/34/EU certified, protection type Ex db, with a minimum IP rating of IP66. The cable entries are excluded from this certification.

(18) Essential health and safety requirements:

Assured by compliance with standards set out in (9).

Page 5 / 5

Certificates without signature shall not be valid. The Certificates may only be circulated in full including its schedule(s). Extracts or alterations are subject to approval by TÜV SÜD Product Service GmbH. In case of dispute, the German text shall prevail. The document is administrated under the following number: EX5A 106679 0001 Rev. 00

Doc. Name: Temp:ExNBG-TPS-EU-Type-Cert-Rev. 04

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 München • Germany

TÜV®