## Limited liability company



## « Testing center "Tester"

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## **TEST PROTOCOL № TR2022-33/5**

| The test was conducted                     | Debugging and testing engineer:   |
|--|---|
| by:  | Y.I. ROMANENKO  |
| Checked                                    | The head of the laboratory:   |
| Checkeu                                    | I.H. KOZHUSHKO  |
| Approved by:                               | Director of VC "VYPROBUVACH" LLC:   |
| Approved by                                | S.V. Voytko   |
| Date of protocol approval:                 | 09.12.2022  |
|  |   |
| Number of pages:                           | 18 pages  |
| Name of the testing laboratory:            | "VYPROBUVACH" LLC   |
| Address, telephone                         | 08300, c. Boryspil, str. 17 Panasa Myrnoho,   |
|  | phone/fax (044) 457-69-22   |
| Basis:                                     | Agreement No. 31-22 dated October 24, 2022,   |
|  | Application letter No. 2507-1 dated July 25, 2022   |
| Address:                                   | PE "VKF "Soznaniye"   |
|  | 08720, Ukraine, Kyiv region, Ukrainka, 20 Dniprovskyi Ave.,   |
|  | office 55   |
| Standards:                                 | TK 3599-001-01394461-04 -U22  |
|  | TK 3599-00 3 -01394461-04 -U22  |
| Non-standardized test                      | Not held  |
| methods:                                   |   |
| The name of the test product               | Coupling cable connecting J L P-CF4 (S) SOZNANIIE serial production of the company "RADPOL" S. A. (Poland). Cable terminal coupling for internal, external installation TLP-CF4 (S) SOZNANIIE, serial production of the company "RADPOL" S.A. (Poland).   |
| Trademark:                                 | RADPOL S.A. ( Poland )  |
| Model and/or type:                         | JLP-CF4 150-240 (S) SOZNANIIE, which is a sample representative of serial production of the company "RADPOL" S.A (Poland).  |
|  | S.A (Poland).  TLP-CF4 150-240 (S) SOZNANIIE, which is a sample representative of serial production of the company "RADPOL" S.A. (Poland).  |
| <b>Serial number</b> (s) of the sample(s): |   |
| Producer:                                  | RADPOL SA; St. Batorego 14, 77-300 Chluchów, Poland   |
| Product                                    | JLP-CF4 150-240 (S) SOZNANIIE - cable couplings for   |
| description:                               | voltage up to 1 kV inclusive, equipped with 4 bolt sleeves, soldered, non-soldered or combined grounding system TLP-CF4 150-240 (S) SOZNANIIE - cable terminal coupling for internal and external installation for voltage up to 1 kV inclusive, equipped with 2 bolt terminals, soldered, non-soldered or combined grounding system. |

|  | F 3.10-01  |
|--|--|
| Abbreviations used in the text of the protocol: The requirement does not apply to the manufactured sample(s): Positive test result: Negative test result: Sampling | V/N P N The samples were provided by the applicant, including Completion list (Passport) for the assembly kit of one connecting clutch heat-shrinkable JLP-CF3,4 (S) SOZNANIIE, mass-produced by the company "RADPOL" SA                             |
|  | (Poland). Completion list (Passport) for the installation kit of one final coupling of internal, external installation of TLP-CF3,4 (S) SOZNANIIE, serially produced by the company "RADPOL" SA (Poland). Technical drawings of the clutch assembly. |
| Sample identification:   |  |
| Date of receiving the  | 25.10.2022   |
| sample(s):   |  |
| Date(s) of testing:  | 01.12.2022 - 02.12.2022  |
| Place of testing:  | 08300, c. Boryspil, str. 17, Panasa Myrnoho  |
| Test methods:  | establishing compliance of sample characteristics with requirements: TK 3599-001-01394461-04 -U22 TK 3599-00 3 -01394461-04 -U22   |
| Test conditions:   | The temperature is 24 °C; The relative humidity of the air is 76%.   |
| Test results:  | positive   |
| Results of tests for compliance with safety requirements:  | given on p. 9 of this protocol   |
| Results of tests for compliance with EMC requirements:   |  |
| Data on measurement errors:  | given on p. 4<br>of this protocol  |

NOTES: The values of the test results apply only to the product sample that I tried. Full or partial copying of the protocol without permission LLC "Testing Center "VYPROBUVACH" IS PROHIBITED.



## NATIONAL ACCREDITATION AGENCY OF UKRAINE

NATIONAL AUTHORITY OF UKRAINE FOR ACCREDITATION

## CERTIFICATE OF ACCREDITATION





Registered in the Register November 19, 2019 For № 20408 valld until November 18, 2024

Date of initial accreditation: November 19, 2014

NATIONAL ACCREDITATION AGENCY OF UKRAINE HEREBY CERTIFIES

COMPETENCE

LIMITED LIABILITY COMPANY testing laboratory
RESPONSIBILITY "EXAMINATION CENTER "EXAMINATION CH"

Location of the legal entity: 08300, Boryspil, str. 17, Panasa Myrny,

Location of the LLC: 08300, Boryspil, str. 17, Panasa Myrny, 93067, Kyiv; St. Vyborzka 103, y 03164, Kyiv, str. Generala Naumov, 17



V. Yanchev

ACCORDING TO THE REQUIREMENTS OF DSTU ISO/IEC 1 7025:2017 (ISO/IEC 17025:2017) IN THE FIELD:

testing of electrical household and similar equipment and component products, electrical installation component parts, manual electromechanical machines, technological equipment for enterprises, regulating equipment for low voltage, cable conductor products, lamps, chemical current sources, means computer equipment, radio equipment, radio electronic equipment household appliances, radio equipment, toys according to safety and quality indicators.

The scope of accreditation is defined in the appendix to this certificate and dominate of the appendix is an integral part of this certificate and dominate of the certificate of the certifi

Acting Chairman

Kyiv, 01133, Generala Almazva street, 18/7 Registered in the accounting journal underNº1134 A

NALU is a signatory of: 1) EA VIA Agreements in the areas of "Testing", "Calibration", "Product Certification", "Certification of personnel", "Certification of management systems" and "Inspection"; 2) ILAC MRA agreements in the fields "Testing", "Calibration" and "Inspection"; 3) IAE MLA Agreements in the areas of "Product Certification", "Certification of personnel", "Certification of management systems".

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## Data on measurement errors

| Measured values during tests | The maximum measurement error is within |  |  |  |
|------------------------------|---|--|--|--|
| Gas pressure                 | ± 2.5 %                                 |  |  |  |
| Temperature                  | ±2.0%                                   |  |  |  |
| Atmospheric pressure         | ±20%                                    |  |  |  |



Cable terminal coupling for internal, external installation TLP-CF4 (S) SOZNANIIE





# Testing equipment and measuring tools

| Name                     | Marking<br>(type) | Factory/or inventory number | Measurement range, division price, error  |
|--------------------------|-------------------|-----------------------------|---|
| 1 Hygrometer             | VIT-1             | b/n                         | 20 - 90%<br>error ±7%   |
| 2 Hygrometer             | eter M-34         |                             | 10 - 100%, $\pm 1.5\%$<br>resolution uncertain<br>#1117-t°-15° $\pm 0.29$<br>20.0° $\pm 0.29$<br>50.0° $\pm 0.27$<br>#1095-t° -15° $\pm 0.32$<br>20.0 $\pm 0.27$<br>50.0 $\pm 0.27$ |
| 3 Stopwatch              | STC-1             | No. 5890183                 | 0 - 999.999 s<br>error ±0.001 s   |
| 4Manometer               | MTP-100           | #6643                       | 0-600kPa<br>body diameter: 100 mm;<br>accuracy class: 2.5.  |
| 5Gas cylinder with argon |                   | No. 95338                   | Capacity 40 l<br>Pressure 200 atm   |
| 6 Argon flow regulator   | AR 40-5           | No. 2101                    | Input pressure 200 atm  |
| 7 Compressor             | ORL 15 AX         | No. 33                      | 15 kW; 8 bar; 2.2 m³/min.   |

## 1. Test objects

#### The following were tested:

Couplings cable connecting brand JLP-CF4 150-240 (S) SOZNANIIE, which are representative samples of couplings serially produced by the company RADPOL S. A. (Poland)-3 pcs.

Cable end couplings for internal, external installation TLP-CF4 150-240 (S) SOZNANIIE, which are representative samples of couplings mass -produced by the company RADPOL S. A (Poland)-3 pcs.

#### Description of the preparation and installation of samples for testing.

No. 1, No. 2, No. 3, No. 4, No. 5, No. 6 were mounted for testing.

Tested samples **No. 1, No. 2, No. 3,** consist of sections of four-wire AABl cable 4x240-1kV in length 1,5 m, on which tested connecting heat-shrink couplings of the type JLP-CF4 150-240 (S) SOZNANIIE are mounted , which are representative samples of couplings manufactured in series by the company RADPOL SA (Poland) . .

Tested samples **No. 4, No. 5, No. 6 consist of sections of AABI four** - core cable 4x240-1kV with 1,2 ma length of TLP-CF4 150-240 (S) SOZNANIIE , which are representative samples of couplings mass-produced by RADPOL SA (Poland). From the side of the cable, from which the gas is supplied, paper seals of the veins are pulled out for guaranteed pressure supply to the inside of the coupling.

Assembly of couplings was performed by representatives of PE "VKF "Soznaniie".

## 2. Purpose, program and methods of testing.

- **2.1.** The purpose of the tests is to check the tightness of cable couplings: connecting heat-shrink type JLP-CF4 150-240 (S) SOZNANIIE, which are representative samples of couplings manufactured in series by RADPOL SA (Poland) according to the requirements of TZ 3599-001-01394461- 04-U22 and final internal and external installation of type TLP-CF4 150-240 (S) SOZNANIIE, which are representative samples of couplings mass-produced by RADPOL SA (Poland) according to the requirements of TZ 3599-003-01394461-04-Y22
- **2.2.** Test program: the tests were carried out to meet the requirements of technical specifications 3599-001-01394461-04-U22, TK 3599-003-01394461-04-U22.
- **2.3.** Test method: the tests were carried out according to the methods specified in Technical Specifications 3599-001-01394461-04-U22, Technical Specifications 3599-003-01394461-04-U22.

### 3. Sampling.

The procedure for selecting samples provided for testing to assess product compliance with the requirements of technical regulations is not provided for by the relevant normative documents. The selection of samples for testing was carried out by the customer.

## 4. Identification of samples.

The procedure for identification of samples provided for testing to assess product compliance with the requirements of technical regulations is not provided for by the relevant regulatory documents. Identification of samples provided for testing was carried out by the customer.

## 5. Technical characteristics and parameters of test objects.

**JLP-CF4 150-240 (S) SOZNANIIE** - cable coupling for 4-core cable with paper insulation with armor or without armor, for voltage up to 1 kV inclusive. Complete with 4-bolt connecting sleeves, soldered, non-soldered or combined grounding system.

**TLP-CF4 150-240 (S) SOZNANIIE** - cable end coupling for internal, external installation on a 4-wire cable with paper insulation with or without armor, for a voltage up to 1 kV inclusive, equipped with 2 bolt terminals, soldered, non-soldered or combined grounding system.

#### Technical characteristics of the cable AABl 4x240-1kV, on which couplings are installed.

AABl cable is a paper-insulated aluminum four-wire conductor with a steel-aluminum protective cover and mylar tape.

#### Application of AABl 4x240-1kV.

**AABl cable** is used for conducting electric lines in the open air, as well as in the ground with low and medium corrosion activity, it is used for stationary laying. Thanks to the steel-aluminum armoring, it is laid with a high probability of mechanical damage. Suitable for use in regions with cold and temperate climates.

| Construction AABl 4x240-1kV                        |   |  |  |  |
|--|---|--|--|--|
| Conductive wire                                    | Aluminum  |  |  |  |
| Insulation   | Oil-soaked                                      |  |  |  |
| Screen   | Conductive paper                                |  |  |  |
| Shell  | Aluminum  |  |  |  |
| Pillow   | Bitumen, crepe paper, mylar tape, PVC film      |  |  |  |
| Armor  | Two steel plates overlapping each other's seams |  |  |  |
| Outer shell Glass yarn is a dense fibrous material |   |  |  |  |
| Scroll   | Twisted insulated wires                         |  |  |  |

#### Structure of AABl 4x240-1kV.

Single-wire aluminum current-conducting core are sectoral in cross section. Each core is insulated with a special paper made of sulfated unbleached cellulose impregnated with a viscous solution. Cable paper bundles are added to the core as a filler. An additional protective element is a paper screen. An electrically conductive screen is located on top of the belt insulation. The inner protective cover is aluminum.

A cushion is placed on the aluminum armor to absorb mechanical impacts, including crushing It contains a mylar tape that protects **the AABI brand cable** from the effects of corrosion. External booking is made of two steel strips, which are laid without gaps and covered with a layer of dense polymer composition.

#### Technical characteristics of AABI 4x240-1kV.

The working temperature of AABl varies in the range from -50°C to +50°C

The permissible temperature of long-term heating of the core is no more than 80  $^{\circ}$ C, in case of overload it is allowed up to 100  $^{\circ}$ C.

Flexibility class - 1.

Outer diameter, 60,5 mm.

## 6. Results of compliance tests.

For samples of cable couplings: JLP-CF4 150-240 (S) SOZNANIIE, which are representative samples of couplings mass-produced by RADPOL SA (Poland) according to the requirements of TZ 3599-001-01394461-04-V22 and TLP-CF4 150- 240 (S) SOZNANIIE, which are representative samples of couplings mass-produced by RADPOL SA (Poland) according to the requirements of TK 3599-003-01394461-04-U22.

| No<br>n/j | Technical requirement         | Test method Parameters trial      |  | Conclusion on<br>compliance of the<br>samples with the<br>requirements of<br>regulatory<br>documentation |  |
|-----------|-------------------------------|-----------------------------------|--|--|--|
| 1         | TK 3599-001-01394461-04-U22   | TK 3599-001-01394461-04-U22       | Gas pressure test<br>294 kPa ( 3 kgf / cm <sup>2</sup> )<br>within 10 min. | P  |  |
| 2         | TK 3599-00 3 -01394461-04-U22 | TK 3599-00 3 -01394461-04-<br>U22 | Gas pressure test<br>294 kPa ( 3 kgf / cm <sup>2</sup> )<br>within 10 min. | P  |  |

#### **RESULTS**

Based on the test results, tested samples of cable couplings: connecting heat-shrink type JLP-CF4 150-240 (S) SOZNANIIE are presented, which are representative samples of couplings mass-produced by RADPOL SA (Poland) - meet the requirements of TZ 3599-001 -01394461-04-U22 and final internal, external installation type TLP-CF4 150-240 (S) SOZNANIIE, which are representative samples of couplings manufactured in series by the company RADPOL SA (Poland) - meet the requirements of TK 3599-003-01394461- 04-U22.

Laboratory engineer: Yu.I. ROMANENKO

Head of the laboratory: I.H. KOZUSHKO

#### Test № 1

Gas pressure test of 294 kPa JLP-CF4 150-240 (S) SOZNANIIE cable connecting heat-shrinkable couplings, which are representative samples of couplings manufactured in series by the company RADPOL SA (Poland), are made in accordance with the requirements of TZ 3599-001-01394461-04-Y22.

| Start date           | 01.12.2022  |
|----------------------|-------------|
| End date             | 01.12.2022  |
|                      |             |
| Relative humidity    | 76%         |
| The temperature is   | 24°C        |
| Atmospheric pressure | 980 mbar    |
| Gas pressure         | 290-310 kPa |

#### Test description.

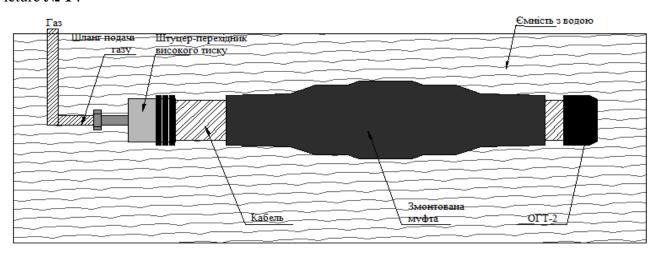
For SOZNANIIE JLP-CF4 150-240 (S) cable connecting heat-shrinkable couplings, which are representative samples of couplings mass-produced by RADPOL SA (Poland).

No 1, No 2, No 3 mounted on a cable segment, completely immersed in water, were supplied with gas under a pressure of at least 294 kPa through a special fitting as shown in Figure № 1

(3 kgf/cm²), and the other end of the coupling was sealed with an OGT-2 terminator to prevent gas leakage. Gas was supplied to the clutch using a compressor. Gas pressure during 10 minutes did not decrease to 2.91 kgf/cm² and did not increase to 3.3 kg/cm².

The absence of bubbles and preservation of the integrity of the samples is a sign of a successful test.

Picture № 1.



The manometer reading at the end of the test was:

| The name of the coupling      | Sample No | Manometer readings      |
|-------------------------------|-----------|-------------------------|
| JLP-CF4 150-240 (S) SOZNANIIE | 1         | 3.0 kgf/cm <sup>2</sup> |
| JLP-CF4 150-240 (S) SOZNANIIE | 2         | 3.1 kgf/cm <sup>2</sup> |
| JLP-CF4 150-240 (S) SOZNANIIE | 3         | 3.1 kgf/cm <sup>2</sup> |

The result of the test: no gas leakage occurred on all samples, the destruction of the couplings was not detected.

#### Test № 2

Gas pressure test of 294 kPa cable end couplings for internal, external installation TLP-CF4 150-240 (S) SOZNANIIE, which are representative samples of couplings manufactured serially by RADPOL S. A. (Poland), carried out in accordance with the requirements of **TK 3599-003-01394461-04-U22.** 

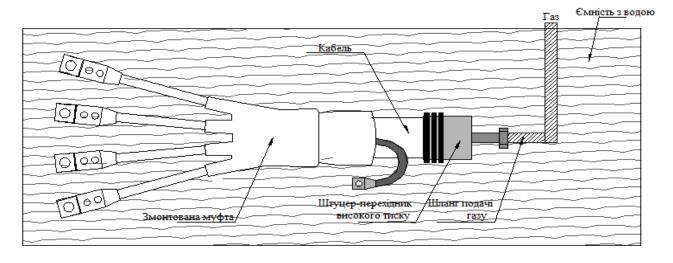
| Start date           | 02.12.2022  |
|----------------------|-------------|
| End date             | 02.12.2022  |
|                      |             |
| Relative humidity    | 76%         |
| The temperature is   | 24°C        |
| Atmospheric pressure | 980 mbar    |
| Gas pressure         | 290-310 kPa |

For TLP-CF4 150-240 (S) SOZNANIIE cable end couplings for internal, external installation, which are representative samples of couplings mass-produced by RADPOL SA (Poland).

**No. 4, No. 5, No. 6** mounted on a cable segment , completely immersed in water, were supplied with gas under a pressure of at least 294 kPa (3 kgf/cm²) through a special fitting, as shown in Figure **No. 2**. Gas was supplied to the clutch using a compressor. Gas pressure during 10 minutes did not decrease to 2.91 kgf/cm² and did not increase to 3.3 kg/cm².

The absence of bubbles and preservation of the integrity of the samples is a sign of a successful test.

Picture No. 2.



The manometer reading at the end of the test was:

| The name of the coupling      | Sample<br>No | Manometer readings      |
|-------------------------------|--------------|-------------------------|
| TLP-CF4 150-240 (S) SOZNANIIE | 4            | 3.0 kgf/cm <sup>2</sup> |
| TLP-CF4 150-240 (S) SOZNANIIE | 5            | 3.1 kgf/cm <sup>2</sup> |
| TLP-CF4 150-240 (S) SOZNANIIE | 6            | 3.0 kgf/cm <sup>2</sup> |

The result of the test: no gas leakage occurred on all samples, the destruction of the couplings was not detected.

## COMPLETE INFORMATION (PASSPORT)

# per kit for the installation of one connecting heat-shrinkable coupling ${\bf JLP-CF~3.4~(S)~SOZNANIIE, serial~production~of~the~company~"~RADPOL~"S.A.~(~Poland~)~.}$

|           | , ,  |          |   | 1 0   |  |   | `  |   |
|-----------|--|----------|---|---|--|---|--|---|
| No<br>n/p | Names of parts and assembly materials  | Unit ex. | JLP<br>CF4<br>16-<br>50(S)<br>SOZN<br>ANIIE | JLP-<br>CF4<br>70-<br>120(S)<br>SOZN<br>ANIIE | JLP-<br>CF4<br>150-<br>240(S)<br>SOZN<br>ANIIE | JLP-CF<br>3 16-<br>50(S)<br>SOZN<br>ANIIE | JLP-CF<br>3 70-<br>120(S)<br>SOZN<br>ANIIE | JLP-CF<br>3 150-<br>240(S)<br>SOZN<br>ANIIE |
|           | Heat-shrinkable glove with adhesive with an insulating sublayer, such as             |          |   |   |  |   |  |   |
|           | AK 4 25-95   | piece    | 2   | _   | -  | -   | -  | -   |
| 1.        | AK 4 35-150  | piece    | -   | 2   | _  | -   | -  | _   |
| 1.        | AK 4 95-300  | piece    | _   | -   | 2  | _   | _  |   |
|           | AK 3 25-120  | piece    | -   | _   | -  | 2   | _  | _   |
|           | AK 3 95-300  | piece    | _   | _   | _  | -   | 2  | 2   |
|           | Tube No. 1 <b>RDK</b> for sealing the coupling                                       | piece    | -   | -   | -  | -   |  |   |
| 2         |  | minon    | 1   |   |  | 1   |  |   |
|           | 95/25 x 1000 <sup>-50</sup> mm   | piece    | 1   | - 1   | - 1  | 1   | - 1  | - 1   |
|           | 105/32x1200 <sup>-50</sup> mm  | piece    | -   | 1   | 1  | -   | 1  | 1   |
|           | RC / RCH 1 earth wire insulation tube  |          |   |   |  |   |  |   |
| 3         | 12.7/6.4x900mm   | piece    | 1   | 1   | -  | 1   | 1  | -   |
|           | 19/9.5x900mm   | piece    | -   | -   | 1  | -   | -  | 1   |
| 4         | Sleeve film  | piece    | 1   | 1   | 1  | 1   | 1  | 1   |
|           | Tube No. 2 <b>RP K H 1</b> for insulation of cable                                   |          |   |   |  |   |  |   |
|           | cores  |          |   |   |  |   |  |   |
| 5         | 22/6x150mm   | piece    | 4   | -   | -  | 3   | -  | -   |
|           | 22/6x250mm   | piece    | 4   | 4   | 4  | 3   | 3  | 3   |
|           | 22/6x320mm   | piece    | -   | 4   | -  | -   | 3  | -   |
|           | 22/6330 мм   | piece    | -   | -   | 4  | -   | -  | 3   |
|           | Cuff tube No. 3 <b>RP K H 1</b> for isolating the                                    |          |   |   |  |   |  |   |
| 6         | contact connection   |          |   |   |  |   |  |   |
| 6         | 30/8x150mm   | piece    | 4   | -   | -  | 3   | -  | -   |
|           | 30/8x200mm   | piece    | -   | 4   | -  | -   | 3  | -   |
|           | 40/16x200mm  | piece    | _   | _   | 4  | -   | -  | 3   |
|           | The grounding wire is tinned copper  |          |   |   |  |   |  |   |
|           | (Plecion cynowana)   |          |   |   |  |   |  |   |
| 7         | cross-section 16 mm2 length850 mm  | piece    | 1   | -   | -  | 1   | -  | -   |
|           | cross-section 16 mm2 length1050 mm   | piece    | -   | 1   | -  | -   | 1  | -   |
|           | cross-section 25 mm2 length1050 mm   | piece    | -   | -   | 1  | -   | -  | 1   |
| 8         | PVC electrical insulating tape   | piece    | 1   | 1   | 1  | 1   | 1  | 1   |
| 9         | The wire is galvanized 1.2 mm  | m        | 2.5   | 2.5   | 2.5  | 2.5                                       | 2.5  | 2.5   |
|           | *Cable sleeves with screw cross-section,   |          |   |   |  | <u> </u>                                  |  |   |
|           | mm2:   |          |   |   |  |   |  |   |
| 10        | 16 - 50  | piece    | 4   | -   | -  | 3   | -  | -   |
|           | 70 - 120   | piece    | -   | 4   | -  | -   | 3  |   |
|           | 150 - 240  | piece    | _   | _   | 4  | _   | -  | 3   |
| 11        | *Solder brand A  | kg       | 0.05  | 0.05  | 0.05   | 0.05                                      | 0.05                                       | 0.05  |
| 12        | *Contact plate (grater)  | piece    | 4   | 4   | 4  | 4   | 4  | 4   |
| thi       | Common pinno (Ginnor)  | piece    | т   | T   | т  | 0.075                                     | 0.075                                      | 0.075                                       |
| rte       | * Solder POS - 30  | kg       | 0.075                                       | 0.075   | 0.075  | 0.073                                     | 0.073                                      | 0.073                                       |
|           | 501dc1 1 O5 - 50   | n.g      | 0.073                                       | 0.073   | 0.073  |   |  |   |
| en        | * PPT spring ( Zacisk spruzynowy) S 1  | piece    | 1   |   |  | 4   |  |   |
| 1.4       |  |          | 4   | 4   | -  |   | 4  | -   |
| 14        | * PPT spring ( Zacisk spruzynowy) S 2  | piece    | -   | 4   | -<br>A   | -   | 4  | 4   |
| 1.5       | * PPT spring ( Zacisk spruzynowy) S 4  | piece    | - 1   | 1   | 1  | 1   | 1  |   |
| 15        | *Soldering fat   | piece    | 2   | 1   | 2  | 2   | 2  | 2   |
| 16        | napkin ( chusteczki czyszczące )   | piece    |   | 2   |  |   |  |   |
| 17        | Mesh for bandaging tape-sealant of the grounding node ( <b>budowlana</b> ) 100x300mm | piece    | 2   | 2   | 2  | 2   | 2  | 2   |
|           | o  |          |   |   |  |   |  |   |

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|      | Tape for sealing the grounding node    |       |     |     |     |     |     |     |  |
|------|--|-------|-----|-----|-----|-----|-----|-----|--|
| 18   | ( Masa zeczyłająca(pancerz))           |       |     |     |     |     |     |     |  |
|      | 25x1.5x200mm                           | piece | 4   | -   | -   | 4   | -   | -   |  |
|      | 25x1.5x300mm                           | piece | -   | 4   | 4   | -   | 4   | 4   |  |
| 19   | Linen threads ( sznurek przewiązkowy ) | m     | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
|      | Sealant under the glove                |       |     |     |     |     |     |     |  |
| 20   | AK ( Palczatka dough)                  |       |     |     |     |     |     |     |  |
| 20   | 40x1x150mm                             | piece | 2   | 2   | -   | 2   | 2   | -   |  |
|      | 40x1x200mm                             | piece | ı   | -   | 2   | -   | -   | 2   |  |
| 21   | Installation instructions              | piece | 1   | 1   | 1   | 1   | 1   | 1   |  |
| 22   | Used gloves                            | coupl | 1   | 1   | 1   | 1   | 1   | 1   |  |
|      |  | e     | 1   | 1   | 1   |     |     |     |  |
| 23   | Carton                                 | piece | 1   | 1   | 1   | 1   | 1   | 1   |  |
| Note | Note: *- delivered to order            |       |     |     |     |     |     |     |  |

## **COMPLETE INFORMATION (PASSPORT)**

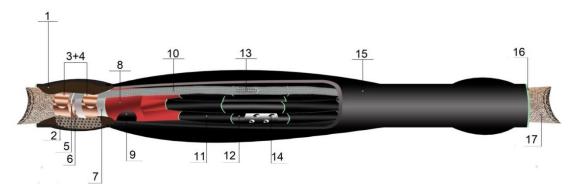
# per kit for installation of one final coupling of internal, external installation TLP-CF3,4 (S) SOZNANIIE, mass-produced by the company "RADPOL" SA ( Poland ).

| AK4 95-300   |    | LI -CF3,4 (5) SOZNANII         |      |              | -           | Ougntity     | ner clutch   |               |  |
|--|----|--------------------------------|------|--------------|-------------|--------------|--------------|---------------|--|
| Materials   Signature   Sign |    |                                | Unit | TI D CE/16   | TI P CE470  |              |              | TI D CE370    | TI D CE3                                     |
| A heat-shrinkable glove with an insulating adhesive layer   Ark 435-150   pic   -   -   1   -   -   -   -   -  |    |                                |      |              |             |              |              |               |  |
| A heat-shrinkable glove with an insulating adhesive layer  And K4 25-90  AK4 35-150  pic  AK4 95-300  pic  AK4 95-300  pic  Ce  AK3 95-300  pic  AK4 3   |    | materials                      | CA.  |              |             |              |              |               |  |
| And K4 25-90   |    | A heat-shrinkable glove with   |      | SOET WILLIAM | SOET A TAIL | SOET WILLIAM | SOET AT HITE | SOET WILLIAMS | SOEM WINDS                                   |
| And K4 25-90   pie   1   -   -   -   -   -   -   |    |                                |      |              |             |              |              |               |  |
| AK4 35-150   |    |                                | nie  | 1            | _           | _            | _            | _             | _  |
| AK4 95-300   | 1. | 1111u 114 25-70                | -    | 1            |             |              |              |               |  |
| AK4 95-300   |    | AK4 35-150                     |      | _            | 1           | _            | _            | _             | _  |
| AK4 95-300   |    | 1114 00 100                    | -    |              | 1           |              |              |               |  |
| AK3 25-120   |    | AK4 95-300                     |      | _            | _           | 1            | _            | _             | _  |
| AK3 25-120   |    |                                | -    |              |             |              |              |               |  |
| AK3 95-300   |    | AK3 25-120                     |      | -            | -           | -            | 1            | -             | -  |
| Heat -shrinkable oil-resistant tube No. 1 RPKH 1 for insulating cable cores   22/6x 800 mm   |    |                                | -    |              |             |              |              |               |  |
| Heat -shrinkable oil-resistant tube   No. 1 RPKH 1 for insulating cable cores  |    | AK3 95-300                     |      | -            | -           | -            | -            | 1             | 1  |
| 2.   |    |                                | -    |              |             |              |              |               |  |
| 2.   |    | Heat -shrinkable oil-resistant |      |              |             |              |              |               |  |
| 22/6x 800 mm   |    |                                |      |              |             |              |              |               |  |
| 22/6x 800 mm   | 2. |                                |      |              |             |              |              |               |  |
| 3 0/8 x 800 mm   |    |                                | pie  | 4            | -           | -            | 3            | -             | -  |
| 3 0/8 x 800 mm   |    |                                | -    |              |             |              |              |               |  |
| A0/16x 800 mm  |    | 3 0/8 x 800 mm                 |      | -            | 4           | -            | -            | 3             | -  |
| Bandaging cuff with an adhesive underlayer for sealing the grounding node RPKH 1   |    |                                | -    |              |             |              |              |               | <u>                                     </u> |
| Bandaging cuff with an adhesive underlayer   For sealing the grounding   For sealing the grounding to grounding   For sealing the grounding to grounding   For sealing the grounding   For sealing the grounding to grounding   For sealing the grounding    |    | 40/16x 800 mm                  | pie  | -            | -           | 4            | -            | -             | 3  |
| 3. adhesive underlayer for sealing the grounding node RPKH 1  40/16x200 mm   |    |                                | ce   |              |             |              |              |               |  |
| for sealing the grounding   node RPKH 1   40/16x200 mm   pie   ce   ce   ce   ce   ce   ce   ce  |    | Bandaging cuff with an         |      |              |             |              |              |               |  |
| node RPKH 1  |    |                                |      |              |             |              |              |               |  |
| 40/16x200 mm   | 3. | for sealing the grounding      |      |              |             |              |              |               |  |
| Ce   Ce   Ce   Ce   Ce   Ce   Ce   Ce  |    | node <b>RPKH 1</b>             |      |              |             |              |              |               |  |
| 63/19 x200 mm  |    | 40/16x200 mm                   | pie  | 1            | -           | -            | 1            | -             | -  |
| So/35x200 mm   |    |                                | ce   |              |             |              |              |               |  |
| Solder POS - 30   Solder POS |    | 63/19 x200 mm                  | pie  | -            | 1           | -            | -            | 1             | -  |
| Insulating heat-shrinkable cuff with an adhesive sub-layer for insulating tips   RPKH 1   30/8 length 100mm   ce   4   -   -   3   -   -   |    |                                | ce   |              |             |              |              |               |  |
| Insulating heat-shrinkable cuff with an adhesive sublayer for insulating tips   pie   30/8 length 100mm   ce   4   -   -   3   -   -   |    | 80/35x200 mm                   | pie  | -            | -           | 1            | -            | -             | 1  |
| 4.   |    |                                | ce   |              |             |              |              |               |  |
| 4.   layer for insulating tips   |    | Insulating heat-shrinkable     |      |              |             |              |              |               |  |
| RPKH 1   30/8 length 100mm   ce   4   -   -   3   -   -     35/12 length 120mm   pie   ce   50/20 length 120mm   pie   ce   -   -   4   -   -   3   -     50/20 length 120mm   pie   -   -   4   -   -   3     5.     Grounding wire tip   Ks (Końcówka kablowa)   |    | cuff with an adhesive sub-     |      |              |             |              |              |               |  |
| 30/8 length 100mm   ce   4   -   -   3   -   -     35/12 length 120mm   pie   -   4   -   -   3   -     50/20 length 120mm   pie   ce   -   -   4   -   -   3     5.     Grounding wire tip     Ks (Końcówka kablowa)                           5.   | 4. | layer for insulating tips      |      |              |             |              |              |               |  |
| 35/12 length 120mm   |    |                                | pie  |              |             |              |              |               |  |
| Ce   |    |                                |      | 4            | -           | -            | 3            | -             | -  |
| Solder POS - 30   Solder POS |    | 35/12 length 120mm             | pie  | -            | 4           | -            | -            | 3             | -  |
| Second   S |    |                                |      |              |             |              |              |               |  |
| Solder POS - 30   Solder POS |    | 50/20 length 120mm             | pie  | -            | -           | 4            | -            | -             | 3  |
| 5. Ks (Końcówka kablowa)  16/8 pie ce 1 1 1 - 1 1 - 2  25/8 pie ce - 1 1 - 1 - 1  The grounding wire is tinned copper (Plecionka miedziana) , length 800 mm with a cross section of 16 mm pie ce with a cross section of 25 mm pie ce with a cross section of 25 mm pie ce ce with a cross section of 25 mm pie ce ce with a cross section of 25 mm pie ce   |    |                                | ce   |              |             |              |              |               |  |
| 16/8   |    |                                |      |              |             |              |              |               |  |
| Ce   | 5. |                                |      |              |             |              |              |               |  |
| 25/8   |    | 16/8                           | pie  | 1            | 1           | -            | 1            | 1             | -  |
| Ce   |    |                                |      |              |             |              |              |               |  |
| 6.       (Plecionka miedziana) , length800 мм       pie ce       1       1       -       1       1       -       -       1       1       -       -       1       -       -       1       -       -       1       -       -       1       -       -       -       1       -       -       -       1       -       -       -       -       1       -       -       -       1       -       -       -       1       -       -       -       1       -       -       -       1       -       -       -       1       -       -       -       1       -       -       -       1       -       -       -       1       -       -       -       1       -       -       -       -       1       -   |    | 25/8                           | -    | -            | -           | 1            | -            | -             | 1  |
| 6. (Plecionka miedziana) , length800 mm with a cross section of 16 mm pie ce with a cross section of 25 mm pie ce 7. * Solder POS - 30 kg 0.05 0.05 0.05 0.05 0.05   |    |                                | ce   |              |             |              |              |               |  |
| 6. (Plecionka miedziana) , length800 mm with a cross section of 16 mm pie ce with a cross section of 25 mm pie ce  |    |                                |      |              |             |              |              |               |  |
| length800 mm   |    |                                |      |              |             |              |              |               |  |
| with a cross section of 16 mm     pie ce     1     1     -     1     1     -       with a cross section of 25 mm     pie ce     -     -     1     -     -     1       7.     * Solder POS - 30     kg     0.05     0.05     0.05     0.05     0.05     0.05  | 6. |                                |      |              |             |              |              |               |  |
| 2  |    |                                |      |              |             |              |              |               |  |
| with a cross section of 25 mm     pie ce     -     -     1     -     -     1       7.     * Solder POS - 30     kg     0.05     0.05     0.05     0.05     0.05     0.05   |    |                                |      | 1            | 1           | -            | 1            | 1             | -  |
| 2 ce 7. * Solder POS - 30 kg 0.05 0.05 0.05 0.05 0.05  |    |                                |      |              |             |              |              |               |  |
| 7. * Solder POS - 30 kg 0.05 0.05 0.05 0.05 0.05   |    |                                | _    | -            | -           | 1            | -            | -             | 1  |
|  |    |                                |      |              |             |              |              |               |  |
| 8.   *Solder brand A   kg   0.03   0.03   0.03   0.03   0.03   |    |                                |      |              |             |              |              |               |  |
|  | 8. | *Solder brand A                | kg   | 0.03         | 0.03        | 0.03         | 0.03         | 0.03          | 0.03   |

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|      |   |                 |      |      |      |      |      | I' 3.10-01 |
|------|---|-----------------|------|------|------|------|------|------------|
| 9.   | *Contact plate (grater)   | pie<br>ce       | 2    | 2    | 2    | 2    | 2    | 2          |
|      | * PPT spring  |                 |      |      |      |      |      |            |
| 10   | S1  | pie<br>ce       | 2    | -    | -    | 2    | -    | -          |
|      | S 2   | pie<br>ce       | -    | 2    | -    | -    | 2    | -          |
|      | S 4   | pie<br>ce       | -    | -    | 2    | -    | -    | 2          |
| 11.  | The wire is galvanized 1.2 mm                                       | m               | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25       |
| 12.  | *Soldering fat  | pie<br>ce       | 1    | 1    | 1    | 1    | 1    | 1          |
| thir | Napkin alcohol (Chusteczka czyszcząca)                              | pie<br>ce       | 2    | 2    | 2    | 2    | 2    | 2          |
| 14.  | PVC tape  | pie<br>ce       | 1    | 1    | 1    | 1    | 1    | 1          |
|      | *Screw tip, mm <sup>2</sup>   |                 |      |      |      |      |      |            |
| 15.  | 16-50   | pie<br>ce       | 4    | -    | -    | 3    | -    | -          |
|      | 70-120  | pie<br>ce       | -    | 4    | -    | -    | 3    | -          |
|      | 150-240   | pie<br>ce       | -    | -    | 4    | -    | -    | 3          |
| 16.  | Linen threads ( Sznurek przewiązkowy)                               | m               | 1.5  | 1.5  | 1.5  | 1.5  | 1.5  | 1.5        |
| 17.  | Sealant under glove ( <b>Masa</b> ca _ pod palczatke) 40/1 x 200 mm | pie             | 1    | 1    | 1    | 1    | 1    | 1          |
| 18.  | Installation instructions   | ce<br>pie<br>ce | 1    | 1    | 1    | 1    | 1    | 1          |
| 19.  | Used gloves   | coup<br>le      | 1    | 1    | 1    | 1    | 1    | 1          |
| 20.  | Carton  | pie<br>ce       | 1    | 1    | 1    | 1    | 1    | 1          |
|      | Notes: * - delivered to order                                       |                 |      |      |      |      |      |            |

APPENDIX  $N_2$  5. Technical drawing of the clutch assembly JLP-CF4 150-240 (S) SOZNANIIE.



1. Tape for sealing the grounding node ( Masa uszczelniająca(pancerz)). 2. Mesh for bandage tape-sealant knot grounding (budowlana) 3. PPT spring. 4. Contact plate (grater). 5. The wire is galvanized. 6. Cable armor. 7. Metal sheath of the cable. 8. Heat-shrinkable glove with AK adhesive underlayer. 9. AK glove sealant (Masa uszczelniająca (palczatka)).10. Tube for insulation of grounding wire № 4 RC/RCH 1. 11. Tube № 2 RPKH 1. for insulation of cable cores. 12. Tube-cuff № 3 RPKH 1. for isolating the contact connection. 13. Copper grounding wire Ludzheni ( Plecionka miedziana cynowana ). 14. Screw cable sleeves. 15. Tube № 1 RDK for sealing the coupling. 16. Hot melt glue. 17. Cable.



1. Screw tip. 2. Insulating heat-shrink cuff with an adhesive sub-layer for insulation of RPKH 1 tips.3. Heat-shrinkable oil-resistant tube №1RPKH 1 for insulating the cores of the cable. 4. Heat-shrinkable glove with adhesive sublayer AK. 5. A screen made of electrically conductive paper. 6. Sealant for the glove (Masa uszczelniająca pod palczatke).7. Cable armor. 8. PPT spring. 9. Contact plate (grater). 10. The wire is galvanized. 11. Cable armor. 12. Bandaging cuff with an adhesive sub-layer for sealing the grounding node. 13. Hot melt glue. 14. Ground wire copper alloy (Plecionka miedziana).15. Cable.