



Confirmation of Product Type Approval

Company Name: UNIKA UNIVERSAL KABLO SAN. VE TIC A.S.

Address: VELIKOY ORGANIZE SANAYI BOLGESI SANAYI MAH. 3.CADDE NO.4 CERKEZKOY
TEKIRDAG 59550 Turkey

Product: Cable, Electric

Model(s): RFOU Type P1, RFOU Type P1/P8, BFOU Type P5, BFOU Type P5/P12, BU Type P17, RU Type P18, RFCU, BFCU, RFOU VFD

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	25-0204915-1-1-PDA	15-MAY-2025	05-MAR-2030
Manufacturing Assessment (MA)	23-6060224	06-OCT-2023	05-OCT-2028
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

Power Cables for marine and offshore applications.

Description

1. RFOU Types P1 & P1/P8 0.6/1 kV halogen free, flame retardant, low smoke, mud resistant cables (conductor: tinned stranded copper class 2, insulation: EPR, inner covering: halogen-free compound, armor: tinned copper wire braid, outer jacket: halogen-free, mud resistant thermoset compound (SHF2 or SHF MUD))

2. BFOU Types P5 & P5/P12 0.6/1 kV, fire resistant, halogen free, flame retardant, low smoke, mud resistant cables (conductor: tinned stranded copper class 2, mica tape: helically applied fire resistant tape, insulation: EPR, inner covering: halogen-free compound, armor: tinned copper wire braid, outer jacket: halogen-free, mud resistant thermoset compound (SHF2 or SHF MUD))

3. BU Type P17 0.6/1 kV fire resistant, halogen free, flame retardant, low smoke cables (conductor: tinned stranded copper class 2, mica tape: helically applied fire resistant tape, insulation: EPR, outer jacket: halogen-free thermoset compound SHF2)

4. RU Type P18 0.6/1 kV halogen free, flame retardant, low smoke cables (conductor: tinned stranded copper class 2, insulation: EPR, outer jacket: halogen-free thermoset compound SHF2)

5. RFCU 0.6/1 kV halogen free, flame retardant, low smoke, mud resistant (optional) cables (conductor: plain or tinned, stranded copper class 2 or 5, insulation: HEPR, inner covering: halogen-free flame

retardant compound, tape: polyester tape, armor: galvanized steel wire braid, tape: polyester tape, outer jacket: mud resistant (optional), thermoset compound (SHF MUD or SHF2))

6. BFCU 0.6/1 kV, fire resistant, halogen free, flame retardant, low smoke, mud resistant (optional) cables (conductor: plain or tinned, stranded copper class 2 or 5, mica tape: helically applied fire resistant mica tape, insulation: HEPR, inner covering: halogen-free flame retardant compound, tape: polyester tape, armor: galvanized steel wire braid, tape: polyester tape, outer jacket: mud resistant (optional), thermoset compound (SHF MUD or SHF2))

7. RFOU VFD 0.6/1 kV halogen free, flame retardant, low smoke, VFD type, mud resistant (optional) cables, designed for variable frequency drives (conductor: plain or tinned, stranded copper class 2 or 5, Insulation: HEPR, filler: halogen free flame retardant compound, tape: polyester tape, tape: metal coated polyester tape, shield: tinned or bare copper wire braid, tape: polyester tape, inner sheath: halogen free EPR extruded compound, tape: polyester tape, armor: tinned or bare copper wire braid, tape: polyester tape, outer jacket: mud resistant (optional), thermoset compound SHF MUD or SHF2, earthing conductors: annealed bare or tinned stranded copper class 2 or 5, insulation: HEPR).

Please refer to the attachment to this Certificate for the sizes of each cable model.

Ratings

Rated Voltage: 0.6/1 kV

Maximum rated conductor temperature: 90 deg C

Service Restrictions

1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
2. This product is not to be used for electric propulsion systems.

Comments

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. UNIKA is the test lab location for all the manufacturer's test reports listed in the "Notes, Drawings and Documentation" section.

Notes, Drawings and Documentation

1. UNIKA High Voltage Tests dated 24 February 2020
2. UNIKA Test report for the cable model BFCU dated 24 March 2020
3. UNIKA Test report for the cable model P1 RFOU dated 24 March 2020
4. UNIKA Test report for the cable model P1/P8 RFOU dated 24 March 2020
5. UNIKA Test report for the cable model P5 BFOU dated 24 March 2020
6. UNIKA Test report for the cable model P5/P12 BFOU dated 24 March 2020
7. UNIKA Test report for the cable model P17 BU dated 24 March 2020
8. UNIKA Test report for the cable model P18 RU dated 24 March 2020
9. UNIKA Test report for the cable model RFCU dated 24 March 2020

10. UNIKA Test report for the cable model RFOU VFD dated 24 March 2020
11. UNIKA Fire Resistivity test report for the cable model BFCU dated 5 March 2020
12. UNIKA Fire Resistivity test report for the cable model P5 BFOU dated 5 March 2020
13. UNIKA Fire Resistivity test report for the cable model P5/P12 BFOU dated 5 March 2020
14. UNIKA Fire Resistivity test report for the cable model P17 BU dated 5 March 2020
15. UNIKA Cold impact test report dated 20 December 2019
16. UNIKA Cold bend test report dated 24 January 2020
17. UNIKA Cold elongation test dated 24 January 2020
18. UNIKA Test report for the cable model P1 RFOU dated 9 October 2019
19. UNIKA Test report for the cable model P1/P8 RFOU dated 10 October 2019
20. UNIKA Test report for the cable model P5 BFOU dated 14 October 2019
21. UNIKA Test report for the cable model P5/P12 BFOU dated 14 October 2019
22. UNIKA Test report for the cable model P17 BU dated 14 October 2019
23. UNIKA Test report for the cable model P18 RU dated 21 October 2019
24. UNIKA Test report for the cable model RFCU dated 21 October 2019
25. UNIKA Test report for the cable model RFOU VFD dated 5 November 2019
26. UNIKA Test report for the cable model BFCU dated 23 October 2019
27. IEC 60092-353, IEC 60092-360 and IEC 60092-350 Standards Gap Analysis
28. Power cables datasheets

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 05/Mar/2030 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

Part 1 – 2025 Edition of ABS Rules for Conditions of Classification 1A-1-4/7.7, 1A-1-A3 and 1A-1-A4, which cover the following:

- 2025 Edition of ABS Rules for Building and Classing Marine Vessels Rules 4-8-3/9.1, 4-8-3/9.4, 4-8-3/9.5, 4-8-3/9.9, 4-8-3/9.17,
- 2025 Edition of ABS Rules for Building and Classing Offshore Units 4-3-4/7.1.1, 4-3-4/7.1.2, 4-3-4/7.1.3, 4-3-4/7.1.4

International Standards

IEC 60092-353 (2024) and the applicable IEC Standards referred to therein (IEC 60092-350 (2020), IEC 60092-360 (2021), IEC 60332-3-22, IEC 60331-1/2 (2018))

NEK 606 (2009) (applicable to cable models: RFOU Type P1, RFOU Type P1/P8, BFOU Type P5, BFOU Type P5/P12, BU Type P17, RU Type P18)

Abnormal Low Temperature Cables only: CSA C22.2 No. 0.3-09 (5.11 & 5.12, -40 deg C Cold Bend / -35 deg C Cold Impact)

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in dark ink, appearing to read 'Joseph W. ...'.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 16-May-2025 5:38

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.

Design Assessment (DA) Certificate Attachment for Component Details

DA Certificate No: 25-0204915-PDA

Entry Date: 6 March 2025

Expire Date: 5 March 2030

Company: UNIKA UNIVERSAL KABLO SAN. VE TIC A.S.

Factory or Works: -

Product/Equipment: Cable, Electric

Model: RFOU Type P1, RFOU Type P1/P8, BFOU Type P5, BFOU Type P5/P12, BU Type P17, RU Type P18, RFCU, BFCU, RFOU VFD

RFOU Types P1 & P1/P8 0.6/1kV halogen free, flame retardant, low smoke, mud resistant cables (conductor: tinned stranded copper class 2, insulation: EPR, inner covering: halogen-free compound, armor: tinned copper wire braid, outer jacket: halogen-free, mud resistant thermoset compound (SHF2 or SHF MUD))

- 1x1.5, 1x2.5, 1x4, 1x6, 1x10, 1x16, 1x25, 1x35, 1x50, 1x70, 1x95, 1x120, 1x150, 1x185, 1x240, 1x300 mm².
- 2x1.5, 2x2.5, 2x4, 2x6, 2x10, 2x16, 2x25, 2x35, 2x50 mm².
- 3x1.5, 3x2.5, 3x4, 3x6, 3x10, 3x16, 3x25, 3x35, 3x50, 3x70, 3x95, 3x120, 3x150, 3x185, 3x240 mm².
- 4x1.5, 4x2.5, 4x4, 4x6, 4x10, 4x16, 4x25, 4x35, 4x50, 4x70, 4x95, 4x120, 4x150, 4x185 mm².
- 5x1.5, 5x2.5, 5x4, 5x6, 5x10, 5x16, 5x25, 5x35, 5x50, 5x70, 5x95 mm².
- 7x1.5, 7x2.5 mm².
- 10x1.5, 10x2.5 mm².
- 12x1.5, 12x2.5 mm².
- 14x1.5, 14x2.5 mm².
- 19x1.5, 19x2.5 mm².
- 24x1.5, 24x2.5 mm².
- 27x1.5, 27x2.5 mm².
- 37x1.5, 37x2.5 mm².

Design Assessment (DA) Certificate Attachment for Component Details

DA Certificate No: 25-0204915-PDA

Entry Date: 6 March 2025

Expire Date: 5 March 2030

Company: UNIKA UNIVERSAL KABLO SAN. VE TIC A.S.

Factory or Works: -

Product/Equipment: Cable, Electric

Model: RFOU Type P1, RFOU Type P1/P8, BFOU Type P5, BFOU Type P5/P12, BU Type P17, RU Type P18, RFCU, BFCU, RFOU VFD

BFOU Types P5 & P5/P12 0.6/1kV, fire resistant, halogen free, flame retardant, low smoke, mud resistant cables (conductor: tinned stranded copper class 2, mica tape: helically applied fire resistant tape, insulation: EPR, inner covering: halogen-free compound, armor: tinned copper wire braid, outer jacket: halogen-free, mud resistant thermoset compound (SHF2 or SHF MUD))

- 1x1.5, 1x2.5, 1x4, 1x6, 1x10, 1x16, 1x25, 1x35, 1x50, 1x70, 1x95, 1x120, 1x150, 1x185, 1x240, 1x300 mm².
- 2x1.5, 2x2.5, 2x4, 2x6, 2x10, 2x16, 2x25, 2x35, 2x50 mm².
- 3x1.5, 3x2.5, 3x4, 3x6, 3x10, 3x16, 3x25, 3x35, 3x50, 3x70, 3x95, 3x120, 3x150, 3x185, 3x240 mm².
- 4x1.5, 4x2.5, 4x4, 4x6, 4x10, 4x16, 4x25, 4x35, 4x50, 4x70, 4x95, 4x120, 4x150, 4x185 mm².
- 5x1.5, 5x2.5, 5x4, 5x6, 5x10, 5x16, 5x25, 5x35, 5x50, 5x70, 5x95 mm².
- 7x1.5, 7x2.5 mm².
- 10x1.5, 10x2.5 mm².
- 12x1.5, 12x2.5 mm².
- 14x1.5, 14x2.5 mm².
- 19x1.5, 19x2.5 mm².
- 24x1.5, 24x2.5 mm².
- 27x1.5, 27x2.5 mm².
- 37x1.5, 37x2.5 mm².

Design Assessment (DA) Certificate Attachment for Component Details

DA Certificate No: 25-0204915-PDA

Entry Date: 6 March 2025

Expire Date: 5 March 2030

Company: UNIKA UNIVERSAL KABLO SAN. VE TIC A.S.

Factory or Works: -

Product/Equipment: Cable, Electric

Model: RFOU Type P1, RFOU Type P1/P8, BFOU Type P5, BFOU Type P5/P12, BU Type P17, RU Type P18, RFCU, BFCU, RFOU VFD

BU Type P17 0.6/1kV fire resistant, halogen free, flame retardant, low smoke cables (conductor: tinned stranded copper class 2, mica tape: helically applied fire resistant tape, insulation: EPR, outer jacket: halogen-free thermoset compound SHF2)

- 1x1.5, 1x2.5, 1x4, 1x6, 1x10, 1x16, 1x25, 1x35, 1x50, 1x70, 1x95, 1x120, 1x150, 1x185, 1x240, 1x300 mm².
- 2x1.5, 2x2.5, 2x4, 2x6, 2x10, 2x16, 2x25, 2x35, 2x50 mm².
- 3x1.5, 3x2.5, 3x4, 3x6, 3x10, 3x16, 3x25, 3x35, 3x50, 3x70, 3x95, 3x120, 3x150, 3x185, 3x240 mm².
- 4x1.5, 4x2.5, 4x4, 4x6, 4x10, 4x16, 4x25, 4x35, 4x50, 4x70, 4x95, 4x120, 4x150, 4x185 mm².
- 5x1.5, 5x2.5, 5x4, 5x6, 5x10, 5x16, 5x25, 5x35, 5x50, 5x70, 5x95 mm².
- 7x1.5, 7x2.5 mm².
- 10x1.5, 10x2.5 mm².
- 12x1.5, 12x2.5 mm².
- 14x1.5, 14x2.5 mm².
- 19x1.5, 19x2.5 mm².
- 24x1.5, 24x2.5 mm².
- 27x1.5, 27x2.5 mm².
- 37x1.5, 37x2.5 mm².

Design Assessment (DA) Certificate Attachment for Component Details

DA Certificate No: 25-0204915-PDA

Entry Date: 6 March 2025

Expire Date: 5 March 2030

Company: UNIKA UNIVERSAL KABLO SAN. VE TIC A.S.

Factory or Works: -

Product/Equipment: Cable, Electric

Model: RFOU Type P1, RFOU Type P1/P8, BFOU Type P5, BFOU Type P5/P12, BU Type P17, RU Type P18, RFCU, BFCU, RFOU VFD

RU Type P18 0.6/1kV halogen free, flame retardant, low smoke cables (conductor: tinned stranded copper class 2, insulation: EPR, outer jacket: halogen-free thermoset compound SHF2)

- 1x1.5, 1x2.5, 1x4, 1x6, 1x10, 1x16, 1x25, 1x35, 1x50, 1x70, 1x95, 1x120, 1x150, 1x185, 1x240, 1x300 mm².
- 2x1.5, 2x2.5, 2x4, 2x6, 2x10, 2x16, 2x25, 2x35, 2x50 mm².
- 3x1.5, 3x2.5, 3x4, 3x6, 3x10, 3x16, 3x25, 3x35, 3x50, 3x70, 3x95, 3x120, 3x150, 3x185, 3x240 mm².
- 4x1.5, 4x2.5, 4x4, 4x6, 4x10, 4x16, 4x25, 4x35, 4x50, 4x70, 4x95, 4x120, 4x150, 4x185 mm².
- 5x1.5, 5x2.5, 5x4, 5x6, 5x10, 5x16, 5x25, 5x35, 5x50, 5x70, 5x95 mm².
- 7x1.5, 7x2.5 mm².
- 10x1.5, 10x2.5 mm².
- 12x1.5, 12x2.5 mm².
- 14x1.5, 14x2.5 mm².
- 19x1.5, 19x2.5 mm².
- 24x1.5, 24x2.5 mm².
- 27x1.5, 27x2.5 mm².
- 37x1.5, 37x2.5 mm².

Design Assessment (DA) Certificate Attachment for Component Details

DA Certificate No: 25-0204915-PDA

Entry Date: 6 March 2025

Expire Date: 5 March 2030

Company: UNIKA UNIVERSAL KABLO SAN. VE TIC A.S.

Factory or Works: -

Product/Equipment: Cable, Electric

Model: RFOU Type P1, RFOU Type P1/P8, BFOU Type P5, BFOU Type P5/P12, BU Type P17, RU Type P18, RFCU, BFCU, RFOU VFD

RFCU 0.6/1kV halogen free, flame retardant, low smoke, mud resistant (optional) cables (conductor: plain or tinned, stranded copper class 2 or 5, insulation: HEPR, inner covering: halogen-free flame retardant compound, tape: polyester tape, armor: galvanized steel wire braid, tape: polyester tape, outer jacket: mud resistant (optional), thermoset compound (SHF MUD or SHF2))

- 1x1.5, 1x2.5, 1x4, 1x6, 1x10, 1x16, 1x25, 1x35, 1x50, 1x70, 1x95, 1x120, 1x150, 1x185, 1x240, 1x300 mm².
- 2x1.5, 2x2.5, 2x4, 2x6, 2x10, 2x16, 2x25, 2x35, 2x50 mm².
- 3x1.5, 3x2.5, 3x4, 3x6, 3x10, 3x16, 3x25, 3x35, 3x50, 3x70, 3x95, 3x120, 3x150, 3x185, 3x240 mm².
- 4x1.5, 4x2.5, 4x4, 4x6, 4x10, 4x16, 4x25, 4x35, 4x50, 4x70, 4x95, 4x120, 4x150, 4x185 mm².
- 5x1.5, 5x2.5, 5x4, 5x6, 5x10, 5x16, 5x25, 5x35, 5x50, 5x70, 5x95 mm².
- 7x1.5, 7x2.5 mm².
- 10x1.5, 10x2.5 mm².
- 12x1.5, 12x2.5 mm².
- 14x1.5, 14x2.5 mm².
- 19x1.5, 19x2.5 mm².
- 24x1.5, 24x2.5 mm².
- 27x1.5, 27x2.5 mm².
- 37x1.5, 37x2.5 mm².

Design Assessment (DA) Certificate Attachment for Component Details

DA Certificate No: 25-0204915-PDA

Entry Date: 6 March 2025

Expire Date: 5 March 2030

Company: UNIKA UNIVERSAL KABLO SAN. VE TIC A.S.

Factory or Works: -

Product/Equipment: Cable, Electric

Model: RFOU Type P1, RFOU Type P1/P8, BFOU Type P5, BFOU Type P5/P12, BU Type P17, RU Type P18, RFCU, BFCU, RFOU VFD

BFCU 0.6/1kV, fire resistant, halogen free, flame retardant, low smoke, mud resistant (optional) cables (conductor: plain or tinned, stranded copper class 2 or 5, mica tape: helically applied fire resistant mica tape, insulation: HEPR, inner covering: halogen-free flame retardant compound, tape: polyester tape, armor: galvanized steel wire braid, tape: polyester tape, outer jacket: mud resistant (optional), thermoset compound (SHF MUD or SHF2))

- 1x1.5, 1x2.5, 1x4, 1x6, 1x10, 1x16, 1x25, 1x35, 1x50, 1x70, 1x95, 1x120, 1x150, 1x185, 1x240, 1x300 mm².
- 2x1.5, 2x2.5, 2x4, 2x6, 2x10, 2x16, 2x25, 2x35, 2x50 mm².
- 3x1.5, 3x2.5, 3x4, 3x6, 3x10, 3x16, 3x25, 3x35, 3x50, 3x70, 3x95, 3x120, 3x150, 3x185, 3x240 mm².
- 4x1.5, 4x2.5, 4x4, 4x6, 4x10, 4x16, 4x25, 4x35, 4x50, 4x70, 4x95, 4x120, 4x150, 4x185 mm².
- 5x1.5, 5x2.5, 5x4, 5x6, 5x10, 5x16, 5x25, 5x35, 5x50, 5x70, 5x95 mm².
- 7x1.5, 7x2.5 mm².
- 10x1.5, 10x2.5 mm².
- 12x1.5, 12x2.5 mm².
- 14x1.5, 14x2.5 mm².
- 19x1.5, 19x2.5 mm².
- 24x1.5, 24x2.5 mm².
- 27x1.5, 27x2.5 mm².
- 37x1.5, 37x2.5 mm².

Design Assessment (DA) Certificate Attachment for Component Details

DA Certificate No: 25-0204915-PDA

Entry Date: 6 March 2025

Expire Date: 5 March 2030

Company: UNIKA UNIVERSAL KABLO SAN. VE TIC A.S.

Factory or Works: -

Product/Equipment: Cable, Electric

Model: RFOU Type P1, RFOU Type P1/P8, BFOU Type P5, BFOU Type P5/P12, BU Type P17, RU Type P18, RFCU, BFCU, RFOU VFD

RFOU VFD 0.6/1 kV halogen free, flame retardant, low smoke, VFD type, mud resistant (optional) cables (conductor: plain or tinned, stranded copper class 2 or 5, Insulation: HEPR, filler: halogen free flame retardant compound, tape: polyester tape, tape: metal coated polyester tape, shield: tinned or bare copper wire braid, tape: polyester tape, inner sheath: halogen free EPR extruded compound, tape: polyester tape, armor: tinned or bare copper wire braid, tape: polyester tape, outer jacket: mud resistant (optional), thermoset compound SHF MUD or SHF2, earthing conductors: annealed bare or tinned stranded copper class 2 or 5, insulation: HEPR)

- 3x25+3x10 mm².
- 3x35+3x16 mm².
- 3x50+3x16 mm².
- 3x70+3x25 mm².
- 3x95+3x35 mm².
- 3x120+3x35 mm².
- 3x150+3x50 mm².
- 3x185+3x70 mm².