



Certificate No. 03-001782/031475

## TYPE APPROVAL CERTIFICATE

This is to certify that this product complies with the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products.

**TYPE AND DESCRIPTION OF PRODUCT:**

**SHIPBOARD INSTRUMENTATION, COMMUNICATION AND CONTROL CABLES  
HALOGEN FREE AND FLAME RETARDANT / FIRE RESISTANT 250 V**

**FMGCG, FMGCH, FMGCCH, FMGCH-FFR, FM2XCH,  
FM2XCH-FFR, FM2XCY-FR, FM2XCCY-FR**

**MANUFACTURER:**

**UNTEL KABLOARI SANAYI VE TICARET A.S.**  
VAT No. ULUCINAR V.D./917001  
6069 Makine O.S.B. 6. Cad. N:4, 41455 DILOVASI-KOCAELI  
**TURKEY**

**THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:**

CRS RULES FOR THE CLASSIFICATION OF SHIPS, PART 12 - ELECTRICAL EQUIPMENT

Construction:	IEC 60092-350 IEC 60092-360 IEC 60092-376
Halogen-free:	IEC 60754-1
Acidity & pH:	IEC 60754-2
Smoke density:	IEC 61034-1 IEC 61034-2
Flame retardance:	IEC 60332-1-2 IEC 60332-3 Cat. A
Fire resistance:	IEC 60331-21
Conductor resistance:	IEC 60228

**FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.**

**APPROVAL IS VALID UNTIL: 2023-07-01**

**Place and date:** Split, 2020-10-22

**Seal** .....

Marinko Popović, dipl.ing.

**NOTE: This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Croatian Register of Shipping of any modification or changes to the product in order to obtain a valid certificate.**

**DETAILED PRODUCT DESCRIPTION:**

Halogen-free, low smoke, flame retardant / fire resistant (FFR type only), insulated instrumentation, communication and control cables

60-250 V maximum conductor temperature 90°C

Cable Type	No of pairs	Cross Sect area [mm <sup>2</sup> ]
FMGCG, FMGCH, FMGCCH, FMGCH-FFR, FM2XCH	1, 2 & 4	0.5 & 0.75
	7, 10, 14, 19 & 24	0.75
FM2XCY-FFR	1, 2, 4, 6, 7, 8, 10, 14, 19 & 24	0.75
FM2XCH-FFR	1, 2, 4, 5, 6, 7, 8, 10, 12, 14, 16, 18, 19, 20, 24 & 37	0.5, 0.75 & 1.5
	<b>No of quads</b>	
	1	0.75
FM2XCCY-FFR	1, 2 & 4	0.5 & 0.75
	7, 10, 14, 19 & 24	0.75
	<b>No of quads</b>	
	1	0.5 & 0.75

**APPLICATION / LIMITATIONS:**

Fixed installations in marine, offshore and industrial use.

**TYPE APPROVAL DOCUMENTATION:**

Catalog UNTEL Marine cables

Test reports:

Report No. 02.2010.LR.03 – 05 Feb2010  
 Report No. 02.2010.LR.09 – 05 Feb2010  
 Report No. 02.2010.LR.10 – 05 Feb2010  
 Report No. 02.2010.LR.11 – 05 Feb2010  
 Report No. 02.2010.LR.17 – 05 Feb2010  
 Report No. 02.2010.LR.18 – 05 Feb2010  
 Report No. 02.2010.LR.22 – 05 Feb2010  
 Report No. 02.2010.LR.23 – 05 Feb2010

**MARKING OF PRODUCT:**

The cable shall be marked on the surface outer sheath, in a durable legible and visible manner, with the following information through the length of cable:

- Voltage grade
- Cable symbol and temperature class
- Number of conductors and conductor size
- Applicable standard(s) to flame retardant and fire resistance if any
- Manufacturer's name or trade mark
- Year of manufacture

**CONDITIONS FOR CERTIFICATION:**

The Society reserves the right to require check tests to be carried out on the cables at any time.