



**TYPE APPROVAL CERTIFICATE**  
No. ELE014823XT/003

**This is to certify** that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	<b>ELECTRIC CABLES</b>
<i>Type</i>	<b>FM2XAH-FFR 150/250 (300)V</b>
<i>Applicant</i>	<b>BIRIKIM KABLO SAN.VE TIC.A.S AKCABURGAZ MAHALLESİ 3109 SOKAK NO.3/3 ESENYURT 34522 Istanbul TURKEY</b>
<i>Manufacturer</i>	<b>BIRIKIM KABLO SAN.VE TIC.A.S</b>
<i>Place of manufacture</i>	<b>AKCABURGAZ MAHALLESİ 3109 SOKAK NO.3/3 ESENYURT 34522 Istanbul TURKEY</b>
<i>Reference standards</i>	<b>IEC 60092-350; IEC 60092-376; IEC 60331-21; RINA Rules for the Classification of Ships; RINA Rules for Testing and Certification of Marine Materials and Equipment.; IEC 60092-360; IEC 60332-1; IEC 60332-3-22 Cat. A; IEC 60754-1; IEC 60754-2; IEC 61034</b>

Issued in **ISTANBUL** on **May 3, 2023**. This Certificate is valid until **May 4, 2028**



RINA Services S.p.A.  
Cinar Kutlar

This certificate consists of this page and 1 enclosure





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Enclosure - Page 1 of 1

FM2XAH-FFR 150/250 (300)V

### Components

Used for communication and instrumentation purpose in electronic systems of marine vehicles.

Rated voltage: 150/250 (300)V

Type: FM2XAH-FFR 150/250 (300)V

Marking: Birikim Kablo "lot" 150/250 (300)V "cross-section mm<sup>2</sup>" IEC 60092/376. IEC 60332-1&3 RINA "meter marking" Made in Türkiye

### Construction:

Conductor:	Plain annealed Stranded CU wires, Class 2
Fire Barrier:	Mica tape
Insulation:	HF XLPE
Core Identification:	White-Grey for 0.75mm <sup>2</sup> , Light Blue-Dark Blue for 0.50mm <sup>2</sup> Other: Black, White (element numbering on both cores)
Lay-up:	HFFR filler + cores stranded together
Inner Covering:	Separating foil
Shielding:	AL-PES tape (with 16x0.19 mm tinned copper drain wire)
Separator:	PES tape
Outer Sheath:	HFFR - Halogen free flame retardant

In accordance with IEC 60092-350; IEC 60092-360; IEC 60092-376; IEC 60331-21; IEC 60332-1/2/3; IEC 60332-3-22 Cat. A; IEC 60754-1/2, IEC 61034.

Maximum conductor temperature: 90°C

Number of cores: 2 x 0.75 + 2 x 0.50 mm<sup>2</sup>  
1/2/4/7/10/12 x 2 x 0.50 mm<sup>2</sup>  
1/2/4/7/10/12 x 2 x 0.75 mm<sup>2</sup>

Test report: Birikim Kablo no.390147990112 dated 03/03/2022.

Technical Specification: Birikim Kablo no. STD/452 R.5 dated 21/02/2023.

ISTANBUL May 03, 2023