



TÜRK LOYDU

TYPE APPROVAL CERTIFICATE

This Certificate consists of 2 pages.

This is to certify that the

**SHIPBOARD
INSTRUMENTATION, CONTROL AND COMMUNICATION CABLE**

With type designations

**FMGCG, FMGCH, FMGCG-FR, FMGCH-FR,
FMGCG EMC, FMGCH EMC, FMGCG-FR EMC, FMGCH-FR EMC**

Manufactured by

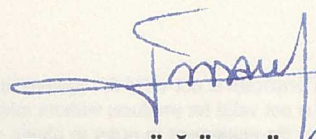
ÜNİKA ÜNİVERSAL KABLO SANAYİ VE TİCARET A.Ş


Is found to comply with

Türk Loydu Rules for the Classification of Steel Ships,
DIN 89159, IEC 60092-376
IEC 60331-21 for fire resistivity
EN 50147-1 and Mild-Std 285 for EMC

Application	: General instrumentation, control and communication Cables for ships
Design	: Voltage class 250 V and Temp. class 90°C Ultra-cold resistance: -40°C cold bending, -35°C cold impact
Sizes	: acc. To DIN 89159, IEC 60092-376
Address of Manufacturer	: Veliköy Sanayi Bölgesi Çerkezköy – Tekirdağ / Türkiye
Place and date	: İSTANBUL / 05.04.2018

Subject to the conditions referred to in the following pages, this certificate is valid until 17.06.2023


Emrah SÖĞÜTÇÜ
New Building Division Manager


Yağız YILDIRIM
Surveyor



Product description: SHIPBOARD INSTRUMENTATION, CONTROL AND COMMUNICATION CABLES

Type Designation : FMGCG, FMGCH, FMGCG-FR, FMGCH-FR, FMGCG-EMC, FMGCH-EMC, FMGCG-FR-EMC, FMGCH-FR-EMC

Materials used :

Conductors (con.) : Stranded copper wire according to IEC 60228

Insulation (ins.) : HEPR according to IEC 60092- 360

Armouring (arm.) : Copper braid and additional cover only for emc cables

Inner Covering (cov.) : Lapped

Outer Sheath (she.): SEI flame retardant rubber for FMGCG and SHF 1 flame retardant/low smoke density/halogen free for FMGCH according to IEC 60092-360

Material for fire resistivity: Fire resistive tape around conductor according to IEC 60331-21

Application/ Limitation (Approval conditions):

Cables with a conductor cross section of 0.75mm² may only be used for general instrumentation, control and communication with a maximum current consumption of up to 6 ampere.

Sizes shall be checked according to DIN 89159 or IEC 60092- 376 standards during routine tests depending to customer request.

Documentation :

Product test reports

Shielding Effectiveness Test Report

Test carried out (and results) :

Type tests according to DIN 89159, IEC 60092 – 376, IEC 60331-21, IEC 60332-3-22 Cat A

Place of test carried out :

ÜNİKA Cable Factory - ÇERKEZKÖY

Marking of product: The product to be marked same as below mentioned

ÜNİKA [type] [size] [volt] [standards]



Yağız YILDIRIM
Surveyor

This certificate is subject to terms and conditions described below:

- Any significant change in design or construction may render this Certificate invalid. Type Approval Certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. This certificate is not valid for products without marking above mentioned. The manufacturer should notify TÜRK LOYDU of any modifications or changes to the equipment in order to obtain valid certificate. This certificate shows that tested specimens as representative of the product complies of the TÜRK LOYDU rules, and relevant international instruments that apply to it.