



TÜRK LOYDU

TYPE APPROVAL CERTIFICATE

This Certificate consists of 2 pages.

This is to certify that the

SHIPBOARD GENERAL INSTRUMENTATION, CONTROL AND COMMUNICATION CABLES

With type designations

FMGCG, FMGCH, FMGCH-FFR

Manufactured by

ÜNTEL KABLOLARI SANAYİ VE TİCARET A.Ş.

Is found to comply with

Türk Loydu Rules Part B Chapter 5 January 2021, Part E Chapter 105 January 2016,
DIN 89159, IEC 60092-376, IEC 60332-3 category A, IEC 60331

Application : General instrumentation, control and communication cables for ships

Design : Voltage class 250 V and Temp. class 85°C

Sizes : acc. to DIN 89159

Address of Manufacturer : Demirciler Köyü, Makine OSB, 6. Cadde, No:4, 41455
Dilovası/KOCAELİ TÜRKİYE

Place and date : İSTANBUL / 23.06.2021

Subject to the conditions referred to in the following pages, this certificate is valid until 22.06.2026.

Emrah SÖĞÜTÇÜ
New Building Division Manager



Product description : SHIPBOARD GENERAL INSTRUMENTATION, CONTROL AND COMMUNICATION CABLES

Type Designation : FMGCG, FMGCH (con. + ins. + cov. + arm. + she.)
FMGCH-FFR (con. + FR cov. + ins. + cov. + arm. + she.)

Materials used :

Conductors (con.) : Stranded copper wire

Fire Resistive covering (FR cov.): mica band

Insulation (ins.) : EPR

Armouring (arm.) : Copper braid

Inner Covering (cov.) : Lapped

Outer Sheath (she.) : SE1 for FMGCG and SHF1 for FMGCH acc. to IEC 60092-360

Application/ Limitation (Approval conditions):

For each new building and in service ships under major modifications, factory acceptance tests (routine tests) for cables shall be carried out before mounted to the ship with the witness of TL surveyor. Cables with a conductor cross section of 0.75 mm² may only be used for general instrumentation, control and communication with a maximum current consumption of up to 6 amper.

Documentation : Product data sheets and test reports.

Test carried out (and results) : Type tests according to DIN 89159, for fire resistive cables according to IEC 60331

Place of test carried out : ÜNTEL Cable Factory – Dilovası Kocaeli

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

ÜNTEL [type] [size] [volt. class] [related standards] [temp. class]



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.