



Confirmation of Product Type Approval

Company Name: 2M KABLO SAN. VE TIC. A.S.

Address: GAZIOSMANPASA OSB MAHALLESİ 4.CADDENO:18 A CERKEZKOY Turkey

Product: Cable, Power, Lighting and Control

Model(s): M2X

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	21-2136839-1-PDA	01-FEB-2022	15-JUL-2026
Manufacturing Assessment (MA)	22-5147135	09-MAR-2022	08-MAR-2027
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

Low voltage power, lighting and control internal cables for Shipboard Installations. Not intended for use as propulsion cables.

Description

Flame retardant halogen-free, single conductor, unarmored, unsheathed power internal cables for shipboard installations (Plain or Tinned, stranded copper conductors class 2 or class 5).

Ratings

Voltage grade: 0.6/1 kV

Insulation: Halogen-free, flame retardant cross linked compound (IEC 60092-351, HF90), Black (other colors upon request)

Maximum conductor operating temperature: 90 deg. C

Lowest ambient temperature for fixed installation: -40 deg. C

Test voltage: 3.5 kV a.c.

Service Restrictions

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.

Comments

1. The installation of single conductor cables are to be in accordance to 4-8-4/21.7 of Marine Vessel Rules 2021.
2. The following cable markings are to be provided in accordance with IEC 60092-353:
 - Indication of origin (manufacturer's name or trade mark) and rated voltage (U₀/ U) and construction (number of cores and cross sectional area of the conductor).
3. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation

Drawing No. 0340-1-22, M2X Cable Data Sheet, Revision: -, Pages: -

-----Revalidation 2021-----

Drawing No. Test Report 2M Kablo - IS3059526, 04.02.2016_Revision: -, Pages: -

Drawing No. TSE Lab Test Report_PRD00074789 M2X 06_kV 1x150, Ozone Resistance_09.04.2016, Revision: -, Pages: -

Drawing No. TSE Lab Test Report - PRD00074789 _IEC 60754-1/2, 04.02.2016, Revision: -, Pages: -

Drawing No. TSE Lab Test Report - PRD00074789 _IEC 60684-2, 08.03.2016, Revision: -, Pages: -

Drawing No. Zwick Roell Test Report, IEC60811-501, 21.01.2016_Revision: -, Pages: -

Drawing No. Correspondence, PDA request form 16-GD1567285-PDA revalidation, Revision: -,

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 15/Jul/2026 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

Rules for Conditions of Classification (2022): 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

Rules for Building and Classing Marine Vessel Rules (2022): 4-8-3/9

Rules for Conditions of Classification - Offshore Units and Structures (2022): 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

Rules for Building and Classing Mobile Offshore Units (2022): 4-3-4/7

Rules for Building and Classing Facilities on Offshore Installations (2022): 3-6/13

Rules for Conditions of Classifications - High-Speed Craft (2022): 1-1-4/11.9, 1-1-A2, 1-1-A3, which covers the following:

Rules for Building and Classing High-Speed Craft (2022): 4-6-4/13.1

Rules for Building and Classing Steel Barges (2022): 4-1-3/9.1

International Standards

IEC 60228 (2004),
IEC 60092-353 (2016),
IEC 60332-1 (2015),
IEC 60332-3-22 (2018) (Category A),
IEC 61034 (2019),
IEC 60754-1/2 (2019),
IEC 60684-2 (2011)

EU-MED Standards
NA

National Standards
NA

Government Standards
NA

Other Standards
NA



A handwritten signature in black ink, appearing to read "James W. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 24-Mar-2022 3:40

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.