

CERTIFICATE NUMBER20-SG1952694-PDAEFFECTIVE DATE10-February-2020EXPIRATION DATE09-February-2025ABS TECHNICAL OFFICESingapore Engineering Services

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

CCG CABLE TERMINATIONS PTY LTD

located at

33-37 FORGE ROAD, SPARTAN IND, SOUTH AFRICA, 1620

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Cable, Glands and Accessories

Model A2 (LSOH), CW (LSOH)(INS)(IE), CX/Z (INS), E1U, E1W (LSOH)(LS)(IE)(INS), E1X/Z, IPLUS, POSI FLEX

This Product Design Assessment (PDA) Certificate remains valid until 09-February-2025 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.

American Bureau of Shipping

Manoraaju, Engineer/ Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

CCG CABLE TERMINATIONS PTY LTD

33-37 FORGE ROAD, SPARTAN IND PO BOX 192, KEMPTON PARK, 1620 VAT NO 4860104209 SOUTH AFRICA South Africa 1620 Telephone: +27 11 394 2021 Fax: +27 11 394 2202 Email: ccg@icon.co.za Web: www.ccgcablegland.co.za

Tier: 2 - PDA Issued

Product:Cable, Glands and AccessoriesModel:A2 (LSOH), CW (LSOH)(INS)(IE), CX/Z (INS), E1U, E1W (LSOH)(LS)(IE)(INS), E1X/Z,
IPLUS, POSI FLEX

Intended Service:

Cables glands for use on ABS Classed Vessels and Offshore Installations in accordance with the listed ABS Rules and International Standards.

Description:

Cable glands for indoor and outdoor use.

Models for armored cable: CW (LSOH)(INS)(IE), CX/Z (INS), E1U, E1W (LSOH)(LS)(IE)(INS), E1X/Z, IPLUS Models for unarmored cable: A2 (LSOH), POSI FLEX

Gland Materials: Brass (Nickel Plated), BS 2874, EN 12164, Aluminium ASTM BS221, Stainless Steel 316/316L

LSOH - Low Smoke Zero Halogen INS - Insulated (Gland is insulated from equipment to prevent system circulating currents.) LS - Lead Seal (Cables with lead sheath) IE - Integral Earth (Gland with earth bolt)

Rating:

Ingress Protection: IP66; IP66/68 (100m) for models: A2 (LSOH), E1U, E1X/Z, E1W (LSOH), POSI FLEX, IPLUS; IP66/68 (2m) for models: E1W with Lead Seal Operating Temperature: -65 deg.C to 120 deg.C

Service Restriction:

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 Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

2. The gland with its accessory is to be assembled strictly in accordance with the fitting instructions supplied with each component by the manufacturer.

3. For installation in safe area only.

Notes/Drawing/Documentation:

Documents: Drawing No. A2, Captive Component Gland, Revision: -, Pages: 2 Drawing No. A2 LSOH, Captive Component Gland, Revision: -, Pages: 2 Drawing No. CW, Captive Component Gland, Revision: -, Pages: 2 Drawing No. CW Insulated, Captive Component Gland, Revision: -, Pages: 2 Drawing No. CW Integrated Earth, Captive Component Gland, Revision: -, Pages: 2 Drawing No. CW LSOH, Captive Component Gland, Revision: -, Pages: 2

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Drawing No. CX/Z, Captive Component Gland, Revision: -, Pages: 2 Drawing No. CX/Z EMC, Captive Component Gland, Revision: -, Pages: 2 Drawing No. E1W LSOH, Captive Component Gland, Revision: -, Pages: 2 Drawing No. E1U, Captive Component Gland, Revision: -, Pages: 2 Drawing No. E1W, Captive Component Gland, Revision: -, Pages: 2 Drawing No. E1W Insulated, Captive Component Gland, Revision: -, Pages: 2 Drawing No. E1W Integrated Earth, Captive Component Gland, Revision: -, Pages: 2 Drawing No. E1W Lead Seal, Captive Component Gland, Revision: -, Pages: 2 Drawing No. E1X/Z, Captive Component Gland, Revision: -, Pages: 2 Drawing No. IPLUS Corrosion Guard, Captive Component Gland, Revision: -, Pages: 2 Drawing No. POSI FLEX, Compression Gland, Revision: -, Pages: 2

Test Report:

Report No. CML 14CA364, IEC 62444 Test Report by CML Ex, Dated: 29 May 2019, Issue: 4, Revision: 4, Pages: 8 Report No. CML 15Y728, IEC 60529 for IPX8 Test by CML Ex, Dated: 04 September 2015, Issue: 0, Revision: 0, Pages: 1

Terms of Validity:

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STANDARDS

ABS Rules:

Rules for Conditions of Classification (2020): 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: 2020 Rules for Building and Classing Marine Vessels: 4-8-3/1.7;

ABS Rules for Conditions of Classification (2020) – High Speed Craft 1-1-4/11.9, 1-1-A2, 1-1-A3, which covers the following:

2020 Rules for Building and Classing High Speed Craft: 4-6-1/11;

Rules for Conditions of Classification (2020) – Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: 2020 Rules for Building and Classing Mobile Offshore Units: 4-3-1/11;

National:

NA

International: IEC 62444:2010

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IEC 60529:1989

Government: NA

EUMED: NA

OTHERS:

NA