



CERTIFICATE NUMBER
15-VC1400800-PDA

DATE
21 Aug 2015

ABS TECHNICAL OFFICE
TIV-MEX-Veracruz Engineering
Services

CERTIFICATE OF DESIGN ASSESSMENT

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

EATON ELECTRICAL GROUP

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: **Circuit Breaker**

Model: **Series G (LG Frame) - LGE, L630E, LGE-C, LGS, L630S, LGS-C, LGH, L630H, LGH-C, LGE-DC, LGS-DC, LGH-DC, LGC, L630C, LGU, L630U, LGX, L630X, LHH, LH400H, Molded Case Switch (Unfused)...**

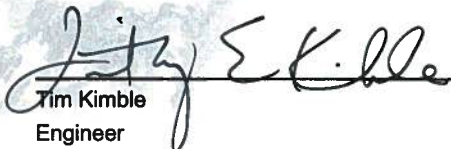
This Product Design Assessment (PDA) Certificate 15-VC1400800-PDA, dated 21/Aug/2015 remains valid until 20/Aug/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING


Tim Kimble
Engineer

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 the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

EATON ELECTRICAL GROUP
1000 CHERRINGTON PARKWAY
Moon Township PA
United States 15108
Telephone: 412-893-3792
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Email: louisfgrahor@eaton.com
Web: WWW.EATON.COM

Tier: 2 - PDA Issued

Product: Circuit Breaker

Model: Series G (LG Frame) - LGE, L630E, LGE-C, LGS, L630S, LGS-C, LGH, L630H, LGH-C, LGE-DC, LGS-DC, LGH-DC, LGC, L630C, LGU, L630U, LGX, L630X, LHH, LH400H, Molded Case Switch (Unfused): LGK-K, L630K, L400K & Motor Circuit Protector HMCPL600

Intended Service:

Marine & Offshore Application - Low Voltage Distribution Systems

Description:

2, 3 & 4 Pole Molded Case Circuit Breaker, Motor Circuit Protectors and Molded Case Switches available with Thermal Magnetic and Electronic Trip Units

Rating:

UL Ratings- Ampere Ratings: 100 A to 600 A @ 40°C Ambient; Voltage: 240, 480 & 600 VAC; 250 & 600 VDC; IEC 60947-2 Ratings- Ampere Ratings: 250 A to 630 A @ 40°C; Voltage: 240, 415 VAC; 250 VDC; Interrupting, Short Time Rating see details as per attached "pdf" Data Sheets.

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.

- (1) For ship applications relative to removable mounting see 4-8-3/5.3.3 (c) of the SV Rules.
- (2) Where used in locations with ambient temperatures greater than 40 °C the ratings(both normal and interrupting) are to be recalibrated/derated as appropriate.
- (3) For Marine use please note that the rated Ultimate Short-circuit Breaking Capacity (Icu) is to be the same as (and not higher than) the rated Short-circuit Service Breaking Capacity (Isc).

Comments:

Duplicate PDA resides with Eaton Corporation - BEAVER.

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

Notes/Drawing/Documentation:

Dwg. 69D4563 Sheet 1 of 2, Rev. 5 " AB DE ION Circuit Breaker, Type LG, 3 Pole Outline"
Dwg. 69D4564 Sheet 1 of 2, Rev. 5 " AB DE ION Circuit Breaker, Type LG, 4 Pole Outline"
File E7819 Vol LG, Sec. 1 and Report issued 2004-04-18, Revised 2008-02-18
File E7819 Vol LG, Sec. 2 and Report issued 2004-04-19, Revised 2009-07-16
File E7819 Vol LG, Sec. 5 and Report issued 2007-05-13, Revised 2009-07-16
File E7819 Vol MCP, Sec. 1 and Report issued 2004-04-18, Revised 2008-02-18
File E7819 Vol MCP Sec. 14 and Report issued 2005-04-25, Revised 2007-02-26
File E7819 Vol LG, Sec. 4 and Report issued 2005-06-14, Revised 2008-02-10
File E59918 Vol. 1 Sec. 18 and Report issued 2008-09-05, Revised 2008-02-10
Table 1-LG Frame Circuit Breaker, UL Interrupting Ratings
KEMA Certificate No. 2038004.01
EATON Brochure CA0810101E.

Terms of Validity:

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Tier: 2 - PDA Issued

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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1 2015 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2015 Steel Vessel 4-8-3/5.3.3, 4-8-2/9.3;

ABS Rules for Conditions of Classifications, Part1, 2015 Offshore Unit and Structures, 1-1-4/9.7, 1-1-A2, 1-1-A3 which covers the following:

2015 Mobile Offshore Drilling Units 6-1-7/13.1.1

National:

ANSI/UL 489 10th Edition ; UL File E7819 (Issued: 19 March 2010, Revised: 16 April 2010), UL File E59918 (Issued: 17 August 1994, Revised: 5 September 2008)

International:

BS/BN 60947-2, KEMA Certificate 2038004.01, 27 August 2008

Government:

NA

EUMED:

NA

OTHERS:

NA



CERTIFICATE NUMBER
15-VC1400800-PDA-DUP

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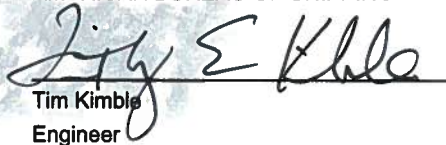
This Product Design Assessment (PDA) Certificate 15-VC1400800-PDA-DUP, dated 21/Aug/2015 remains valid until 20/Aug/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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BEAVER PA
United States 15009
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Fax: 724-773-1363
Email:
Web: www.eatonelectrical.com

Tier: 3 - Type Approved, unit certification not required

Product: **Circuit Breaker**

Model: **Series G (LG Frame) - LGE, L630E, LGE-C, LGS, L630S, LGS-C, LGH, L630H, LGH-C, LGE-DC, LGS-DC, LGH-DC, LGC, L630C, LGU, L630U, LGX, L630X, LHH, LH400H, Molded Case Switch (Unfused): LGK-K, L630K, L400K & Motor Circuit Protector HMCPL600**

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Government:

NA

EUMED:

NA

OTHERS:

NA