



Marine & Offshore
Division

Certificate number: 23393/B0 BV

File number: ACE14/440/03

Product code: 2601D

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to
LEGRAND-FRANCE
MALAUNAY - FRANCE

for the type of product
TERMINAL BLOCKS (LOW VOLTAGE)
SERIE VIKING 3.

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

IEC 60947-7-1 (2009), IEC 60947-7-2 (2009).

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 15 Mar 2021

For BUREAU VERITAS,

At BV LE HAVRE, on 15 Mar 2016,

Frédéric ANDRIEU



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 October 2014

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

1.1 - VIKING 3 SCREW TERMINAL BLOCKS:

| Screw terminal blocks | | | | | CEI / EN 60947 | | | | | | | |
|-----------------------------|---------|-----------------|------------------|---------------------------------|------------------------|--|---|------------------------------|------------------|------------------|------------------|-----------------|
| | | | | | Ue=Ui (V) Uimp (kV) | Rated current (A) | Cross-section (mm ²) | Rated connecting capacity | | | | |
| | | | | | | | | Mini | | Maxi | | |
| Pitch (mm) | Type | Colour | Reference | flexible (mm ²) | rigid | flexible (without ferrule) (mm ²) | flexible (with ferrule) (mm ²) | rigid (mm ²) | | | | |
| 1 junction 1 level | 5 | Grey | 0 37160 | 800 V 8 kV | 24 A | 2,5 ² | 0,2 ² | 0,2 ² | 2,5 ² | 2,5 ² | 4 ² | |
| | | Blue | 0 37100 | | | | | | | | | |
| | | Orange | 0 37120 | | | | | | | | | |
| | | Red | 0 37130 | | | | | | | | | |
| | 6 | 1E / 1O | Grey | 0 37161 | 800 V 8 kV | 32 A | 4 ² | 0,2 ² | 0,2 ² | 4 ² | 4 ² | 6 ² |
| | | | Blue | 0 37101 | | | | | | | | |
| | | | Orange | 0 37121 | | | | | | | | |
| | | | Red | 0 37131 | | | | | | | | |
| | 8 | 1E / 1O | Grey | 0 37162 | 800 V 8 kV | 41 A | 6 ² | 0,2 ² | 0,5 ² | 6 ² | 6 ² | 10 ² |
| | | | Blue | 0 37102 | | | | | | | | |
| | | | Green | 0 37178 | | | | | | | | |
| | | | Grey | 0 37163 | | | | | | | | |
| | 10 | 1E / 1O | Blue | 0 37103 | 800 V 8 kV | 57 A | 10 ² | 2,5 ² | 1,5 ² | 10 ² | 10 ² | 16 ² |
| | | | Grey | 0 37164 | | | | | | | | |
| | | | Blue | 0 37104 | | | | | | | | |
| | | | Green | 0 37198 | | | | | | | | |
| 12 | 1E / 1O | Grey | 0 37165 | 800 V 8 kV | 76 A | 16 ² | 4 ² | 1,5 ² | 16 ² | 16 ² | 25 ² | |
| | | Blue | 0 37105 | | | | | | | | | |
| | | Green | 0 37199 | | | | | | | | | |
| | | Grey | 0 37166 | | | | | | | | | |
| 15 | 1E / 1O | Blue | 0 37105 | 800 V 8 kV | 125 A | 35 ² | 4 ² | 2,5 ² | 35 ² | 35 ² | 50 ² | |
| | | Green | 0 37199 | | | | | | | | | |
| | | Grey | 0 37166 | | | | | | | | | |
| | | Grey | 0 37166 | | | | | | | | | |
| For protection conductor | 5 | Green/Yellow | 0 37170 | 1000V/12kV | 192 A | 70 ² | 16 ² | 2,5 ² | 70 ² | 70 ² | 95 ² | |
| | | G/Y | 0 37171 | | | | | | | | | |
| | | G/Y | 0 37172 | | | | | | | | | |
| | | G/Y | 0 37173 | | | | | | | | | |
| | | G/Y | 0 37174 | | | | | | | | | |
| | | G/Y | 0 37175 | | | | | | | | | |
| 1 junction 2 levels | 6 | Grey | 0 37169 | 500 V 6 kV | 32 A | 4 ² | 0,2 ² | 0,2 ² | 4 ² | 4 ² | 6 ² | |
| | | Blue | 0 37109 | | | | | | | | | |
| | 5 | 2E / 2O | Grey | 0 37167 | 500 V 6 kV | 24 A | 2,5 ² | - | - | 2,5 ² | 2,5 ² | 4 ² |
| | | | Blue | 0 37107 | | | | | | | | |
| 2 junctions 2 levels | 6 | Grey | 0 37168 | 12 / 24 V 500V / 6kV | 32 A | 4 ² | 0,2 ² | 0,2 ² | 4 ² | 4 ² | 6 ² | |
| | | Blue | 0 37108 | | | | | | | | | |
| | | with Led | 0 37156 | | | | | | | | | |
| | | with Diode | 0 37155 | | | | | | | | | |
| 3 junctions 3 levels | 5 | Grey | 0 37151 | 400 V 6 kV | 24 A | 2,5 ² | 0,2 ² | 0,2 ² | 2,5 ² | 2,5 ² | 4 ² | |
| | | Grey + G/Y | 0 37152 | | | | | | | | | |
| Disconnect | 6 | Handle lever | grey / dark grey | 500 V 6 kV | Ith 15A | 2,5 ² | 0,2 ² | 0,2 ² | 2,5 ² | 2,5 ² | 2,5 ² | |
| | | | grey / blue | | | | | | | | | 0 37182 |
| | | orange / orange | 0 37185 | | | | | | | | | |
| | | grey / orange | 0 37184 | | | | | | | | | |
| For fuse 5x20 | 6 | Mini handle | orange / orange | 250 V / 4 kV | 6,3 A | - | - | - | - | - | - | |
| | | Opened block | Grey | | | | | | | | | 0 37180 |
| | | Handle lever | grey / dark grey | | | | | | | | | 0 37181 |

1.2 - VIKING 3 SCREWLESS TERMINAL BLOCKS:

| Screwless terminal blocks | | | | | CEI / EN 60947 | | | | | | | | |
|--------------------------------|------------------------------------|-------------------|-----------------|------------------|------------------------|--------------------|--------------------|---------------------------|--------------------|----------------------------|------------------------------|------------------|------------------|
| | | | | | Ue=Ui (V) Uimp (kV) | Rated current | Cross-section | Rated connecting capacity | | | | | |
| | | | | | | | | flexible | rigid | flexible (without ferrule) | Maxi flexible (with ferrule) | rigid | |
| Pitch (mm) | Type | Colour | Reference | (V) | (A) | (mm ²) | (mm ²) | (mm ²) | (mm ²) | (mm ²) | (mm ²) | | |
| 1 junction 1 level | 5 | 1E/1O | Grey | 0 37260 | 800 V 8 kV | 32A | 4 ² | 0,5 ² | 0,5 ² | 4 ² | 2,5 ² | 6 ² | |
| | | | Blue | 0 37200 | | | | | | | | | |
| | | | Orange | 0 37220 | | | | | | | | | |
| | | 1E/2O | Grey | 0 37240 | | | | | | | | | |
| | | | Blue | 0 37241 | | | | | | | | | |
| | | | Orange | 0 37242 | | | | | | | | | |
| | 2E/2O | Grey | 0 37246 | | | | | | | | | | |
| | | Blue | 0 37247 | | | | | | | | | | |
| | | Grey | 0 37261 | | | | | | | | | | |
| | 6 | 1E/1O | Blue | 0 37201 | 800 V 8 kV | 32 A | 4 ² | 0,5 ² | 0,5 ² | 4 ² | 4 ² | 6 ² | |
| | | | Orange | 0 37221 | | | | | | | | | |
| | | | Grey | 0 37243 | | | | | | | | | |
| | | 1E/2O | Blue | 0 37244 | | | | | | | | | |
| | | | Grey | 0 37269 | | | | | | | | | |
| | | | Blue | 0 37209 | | | | | | | | | |
| 8 | 1E/1O | Grey | 0 37262 | 800 V 8 kV | 41 A | 6 ² | 0,5 ² | 0,5 ² | 6 ² | 6 ² | 6 ² | | |
| | | Blue | 0 37202 | | | | | | | | | | |
| 10 | 1E/1O | Grey | 0 37263 | 800 V 8 kV | 57 A | 10 ² | 0,75 ² | 0,75 ² | 10 ² | 10 ² | 10 ² | | |
| | | Blue | 0 37203 | | | | | | | | | | |
| 12 | 1E/1O | Grey | 0 37264 | 800 V 8 kV | 76 A | 16 ² | 4 ² | 4 ² | 16 ² | 16 ² | 16 ² | | |
| | | Blue | 0 37204 | | | | | | | | | | |
| 2 junctions 2 levels | 5 | 2 x 1E/1O | Grey | 0 37267 | 500 V 6 kV | 32 A | 4 ² | 0,5 ² | 0,5 ² | 4 ² | 2,5 ² | 6 ² | |
| | | | Blue | 0 37207 | | | | | | | | | |
| | 6 | 2 x 1E/1O | Grey | 0 37268 | | | | | | | 4 ² | 4 ² | 6 ² |
| | | | Blue | 0 37208 | | | | | | | | | |
| For protection conductor | 5 | 1E/1O | Green/Yellow | 0 37270 | 800 V 8 kV | - | 4 ² | 0,5 ² | 0,5 ² | 4 ² | 2,5 ² | 6 ² | |
| | | 1E/2O | G/Y | 0 37210 | | | | | | | | | |
| | | 2E/2O | G/Y | 0 37212 | | | | | | | | | |
| | 6 | 1E/1O | G/Y | 0 37271 | | - | 4 ² | 0,5 ² | 0,5 ² | 4 ² | 4 ² | 6 ² | |
| | | 1E/2O | G/Y | 0 37211 | | | | | | | | | |
| | | 2E/2O | G/Y | 0 37279 | | | | | | | | | |
| | 8 | 1E/1O | G/Y | 0 37272 | | - | 6 ² | 0,5 ² | 0,5 ² | 6 ² | 6 ² | 6 ² | |
| | 10 | 1E/1O | G/Y | 0 37273 | | - | 10 ² | 0,75 ² | 0,75 ² | 10 ² | 10 ² | 10 ² | |
| | 12 | 1E/1O | G/Y | 0 37274 | | - | 16 ² | 4 ² | 4 ² | 16 ² | 16 ² | 16 ² | |
| | Disconnect For fuse 5x20 | 6 | Handle lever | grey / dark grey | | 0 37283 | 500 V 6 kV | 15 A | 2,5 ² | 0,5 ² | 0,5 ² | 2,5 ² | 2,5 ² |
| grey / blue | | | | 0 37282 | | | | | | | | | |
| orange / orange | | | | 0 37285 | | | | | | | | | |
| Mini handle | | | grey / orange | 0 37284 | | | | | | | | | |
| | | | orange / orange | 0 37286 | | | | | | | | | |
| Opened block | | | Grey | 0 37280 | | | | | | | | | |
| Handle lever | grey / dark grey | 0 37281 | 250 V / 4 kV | 6,3A | | | | | | | | | |
| Blocks with fonction | 5 | diode 2E/2O | dark grey | 0 37254 | 500 V / 6 kV | 1 A | 4 ² | 0,5 ² | 0,5 ² | 4 ² | 2,5 ² | 4 ² | |
| | 5 | diode 2 levels | dark grey | 0 37255 | 500 V / 6 kV | 1 A | 4 ² | 0,5 ² | 0,5 ² | 4 ² | 2,5 ² | 4 ² | |
| | 5 | Led 2 levels | dark grey | 0 37256 | 12V / 24V | NA | 4 ² | 0,5 ² | 0,5 ² | 4 ² | 2,5 ² | 4 ² | |

2. DOCUMENTS AND DRAWINGS :

- Document and specifications filed in ACE 14/440/01.
- Catalogue LEGRAND page 460 to 463

3. TEST REPORTS :

- LCIE n° 119343-638698,119343-638698A to 119343-638698H.
- LCIE n° 103144-605271,103144-605271 A to 103144-605271 H.
- LCIE n° 87694-580214, 87694-580214A to 87694-580214H & 105362-609041,105362-609041A to 105362-609041H.
- LCIE n° 87336-578588 Cr 2009-10-12, 87336-578588A to 87336-578588G.
- LCIE n° 78980-567664A Cr 2009-10-12, 78980-567664B Cr 2009-10-12, & 101504-600849.
- LCIE n° 87341-578604, 87341-578604A to 87341-578604C & 105363-608790, 105363-608790A to 105363-608790C.
- LCIE n° 87341-578604B, 87692-580239, 105355-609035.
- LCIE n° 87694-580214E, 87695-579161, 105355-609032.

4. APPLICATION / LIMITATION :

According to BV Rules for the Classification of Steel Ships and IEC 60092 series.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above products are to be manufactured, examined and tested by **LEGRAND - France** in accordance with the type described in this certificate.

5.2 - **LEGRAND - France** has declared to Bureau Veritas that the type of product described in this certificate may be manufactured at the following production sites:

LEGRAND - France
Route des Tendos
Fontaine le Bourg 76690
FRANCE

SC MARCA ROMANIA SRL
Cateasca, Sat Coseri Nr 144D
PITESTI
ROMANIA

6. MARKING OF PRODUCT :

6.1 - Trade name.

6.2 - Date of manufacture and serial number.

6.3 - Equipment type or model identification under which it was type-tested

7. OTHERS :

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **LEGRAND - France**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 23393/B0 BV issued on 07.Dec.2010. by the Society.

*** END OF CERTIFICATE ***