



Marine & Offshore

Certificate number: 08133/E0 BV

File number: ACE 02/129/01

Product code: 2631H

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

LOVATO KONCAR d.o.o.

Zagreb - CROATIA

for the type of product

SWITCHES (LOW VOLTAGE)

LOW VOLTAGE ROTARY CAM SWITCHES, Type: GN and GF.

Requirements:

BV Rules for the Classification of Steel Ships.

IEC 60947-1 (2014), IEC 60947-3 (2015)

This certificate is issued to attest that Bureau Veritas Marine & Offshore 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: 10 Jul 2025

For Bureau Veritas Marine & Offshore,

At BV RIJEKA, on 10 Jul 2020,

Slaven Celic



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 Marine & Offshore. 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 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 Marine & Offshore 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 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

LOW VOLTAGE ROTARY CAM SWITCHES

Types:
GN12, GN20, GN25, GN32,
GN40, GN63, GN125,
GF10 and GF20.

Mounting Form: - U Front mounting
- O Rear mounting
- P Switch in plastic case.

| Product Type | Rated Voltage (V) | Maximum Operating Current (A) | Short Circuit (kA) |
|--------------|-------------------|-------------------------------|--------------------|
| | Ui | Ith | Icw per second |
| GN12 | 690 | 16 | 0.2 |
| GN20 | 690 | 20 | 0.25 |
| GN25 | 690 | 25 | 0.4 |
| GN32 | 690 | 32 | 0.8 |
| GN40 | 690 | 40 | 1.0 |
| GN63 | 690 | 63 | 1.6 |
| GN125 | 690 | 125 | 2.1 |
| GF10 | 480 | 10 | 0.1 |
| GF20 | 480 | 20 | 0.25 |

2. DOCUMENTS AND DRAWINGS :

- IEC 60947 Series.
- Pamphlet: N° 74013 (1.2) - N° 74001 (1.2).

3. TEST REPORTS :

- Dekra certificate N° 2161096.01, dated 31.Jul.2013.
- KONCAR PEX-Inc. N°s: 008/97 dated 27/10/1997 - 005/95 dated 25/09/1995 - 014/89 dated 14/09/1989 and 002/98 dated 17/02/1998.
- Tests reports N°34/2240, N°, 34/2241, N°34/2242, and N° 34/2243, all dated 25.Mar.2013.
DEKRA CB Scheme N° NL-49675, dated 30 Jan 2018.
DEKRA test report N° 2214534.50, dated 24 Jan 2018.

4. APPLICATION / LIMITATION :

BV Rules for the Classification of Steel Ships.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above products are to be supplied by **LOVATO KONCAR d.o.o.** in compliance with the type described in this certificate.
5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
5.3 - **LOVATO KONCAR d.o.o.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
5.4 - For information, **LOVATO KONCAR d.o.o.** has declared to Bureau Veritas the following production site(s):

LOVATO KONCAR d.o.o.
Borongajska cesta 81 b
Zagreb
CROATIA

6. MARKING OF PRODUCT :

- Maker's name or trade mark,
- Serial number of the units,
- Equipment type number or model identification under which it was type-tested,
- According to IEC 60947 specifications.

7. OTHERS :

7.1 - It is **LOVATO KONCAR d.o.o.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 08133/D0 BV issued on 22 Jan 2015 by the Society.

***** END OF CERTIFICATE *****