

TYPE APPROVAL CERTIFICATE

Certificate No:
TAE000013G
Revision No:
1

This is to certify:**That the Fused Switch**

with type designation(s)
OS20-160

Issued to

**ABB Oy, Smart Power
VAASA, Finland**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2021-02-25**

This Certificate is valid until **2025-12-31**.

DNV GL local station: **Finland CMC**

Approval Engineer: **Nicolay Horn**



for **DNV GL**

Digitally Signed By: Alonso Pontes, Marta

Location: DNV GL Høvik, Norway

**Marta Alonso Pontes
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **262.1-022138-3**
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Product description

Front or side operated fuses switch in 3 or 4 pole version of type OS_ / OS_G / OS_GJ

Rated insulation voltage, U_i 1000 V
Rated impulse withstand voltage, U_{imp} 12 kV
Degree of protection IP 20 (for OS Mini)
Optional IP 20 (for OS 32G ... 160G)

Type	Rated operational current AC-23A	
	Up to 500 V	690 V
OS Mini Series		
20	20	20
25	25	25
30	30	30
32	32	32
35	35	35
40	40	40
OS32...160G / GJ series		
32G	32	32
50G	50	50
63G	63	63
100G	100	100
125G	125	125
160G	160	160
60GJ	60	60

¹⁾ Rated operational current in accordance with AC23B

Application/Limitation

Switch fuses for installation inside switchboards/enclosures onboard ships and mobile offshore units..

Type Approval documentation

Technical documents:

Part of catalogue "Fusegear Switch fuses OS and OSM" doc. no. OS 1 GB 11_04.
OS40 GB 01_09

Test reports:

9 AFX99-161,	dated 1999-08-12	252753-1	dated 2008-12-12
9 AFX02-089,	dated 2002-04-02	257408-1	dated 2010-05-03
224220-1,	dated 2002-07-16	257412-1	dated 2010-05-21
224279-1,	dated 2002-08-27	265673-1	dated 2011-12-02
224279-2,	dated 2002-08-27	265673-2	dated 2011-12-02
224279-3,	dated 2002-08-27	L15-001	dated 2015-01-07
FI 5424-28	dated 2008-12.15	TA2014-52	dated 2015-01-14

Test Carried out

IEC 60947-1: 2007
IEC 60947-3: 2008
Vibration test, cold test and damp heat test.

Marking of product

ABB OS - type designation.

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Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Assessment to be performed at least 2 and 3,5 year and at renewal.

END OF CERTIFICATE