



TYPE APPROVAL CERTIFICATE

Certificate No:
TAE0000DD
Revision No:
5

This is to certify:

That the Disconnection Switch

with type designation(s)
OT600 - 4000

Issued to

ABB Oy, Smart Power
VAASA, Finland

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft
IEC 60947

Application :

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

Issued at **Høvik** on **2023-05-09**

This Certificate is valid until **2027-12-31**.

DNV local unit: **Finland CMC**

Approval Engineer: **Nicolay Horn**



for DNV

Digitally Signed By: Elter, Frederik Tore
Location: DNV Høvik, Norway

Frederik Tore Elter
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 AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") 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.



Product description

Switch-disconnector OT600 - 4000,

Technical data:

		OT630E	OT600U/ OT800E	OT1000E
Rated insulation voltage U_i (V)		1000	1000	1000
Rated impulse voltage U_{imp} (kV)		12	12	12
Rated operation current AC21A (A)	$\leq 500V$	630	800	1000
	690V	630	800	1000
	1000V	630	800	1000
Rated operation current AC22A (A)	$\leq 500V$	630	800	1000
	690V	630	800	1000
	1000V	630	800	-
Rated operation current AC23A (A)	$\leq 500V$	630	800	1000
	690V	630	800	1000
	1000V	400	400	-
Rated breaking capacity AC23A (A)	$\leq 500V$	5040	6400	10000
	690V	5040	6400	10000
Rated short circuit withstand current I_{cw} (kA)	690 / 1 sec.	20	20	50
Rated short circuit making capacity I_{cm} (kA)	690V (3pole / 4 pole, T1000)	80	80	110/92

		OT1250E	OT800U/ OT1200U/ OT1600E	OT2000E
Rated insulation voltage U_i (V)		1000	1000	1000
Rated impulse voltage U_{imp} (kV)		12	12	12
Rated operation current AC21A / 21B* (A)	$\leq 500V$	1250	1000	-
	690V	1250	1600	2000*
	1000V	1250	1600	2000*
Rated operation current AC22A / 22B* (A)	$\leq 500V$	1250	1600	-
	690V	1000	1600	2000*
	1000V	-	-	2000*
Rated operation current AC23A (A)	$\leq 500V$	1250	1250	-
	690V	1250	1250	-
	1000V	-	-	-
Rated breaking capacity AC23A (A)	$\leq 500V$	10000	10000	-
	690V	10000	10000	-
Rated short circuit withstand current I_{cw} (kA)	690 / 1 sec.	50	50	35 (2P) / 55 (3-4P)
Rated short circuit making capacity I_{cm} (kA)	690V (3pole / 4 pole)	110/92	110/92	

		OT2500E	OT3200E	OT4000E	OT4000E_W8
Rated insulation voltage U_i (V)		1000	1000	1000	1000
Rated impulse voltage U_{imp} (kV)		12	12	12	12
Rated operation current AC21B (A)	$\leq 500V$	-	3200	3800	4000
	690V	2500	-	-	-
Rated operation current AC22B (A)	$\leq 500V$	-	3200	3800	4000
	690V	2500	-	-	-
Rated short circuit withstand current I_{cw} (kA)	690 / 1 sec.	65	65	80	80
Rated short circuit making capacity I_{cm} (kA)	690V (3pole / 4 pole)	176	176	176	220

	OT1600E_-135 with *4)	OT1600E_-135 *5)	OT2500E_-135 *3)
Rated insulation voltage U_i (V)	1500 V (DC) / 1000 V (AC)	1500 V (DC) / 1000 V (AC)	1500 V (DC) / 1000 V (AC)
Rated operational Voltage U_e (V)	1500 V (DC) / 1000 V (AC)	1500 V (DC) / 1000 V (AC)	1500 V (DC) / 1000 V (AC)
Rated impulse voltage U_{imp} (kV)	12	12	12
Rated operation current DC20A (A)	1600 (connection type 1 and 2); 2500 (connection type 3)	1600 (connection type 1 and 2); 2500 (connection type 3)	2500 (connection type 1 and 2); 4000 (connection type 3)
Rated operation current AC20A (A)	1600 (connection type 1 and 2); 2500 (connection type 3) *2)	1600 (connection type 1 and 2); 2500 (connection type 3) *2)	2500 (connection type 1 and 2); 4000 (connection type 3)
Rated short circuit withstand current I_{cw} (kA) – 0.3s	50 (connection type 1 and 2); 65 (connection type 3)	36 (connection type 1 and 2); 50 (connection type 3)	80 (connection type 1 and 2); 100 (connection type 3)
Rated conditional short-circuit current	-	-	-
Max. Let-through Peak current when protected with Fused or Circuit Breaker (kA)	110 (connection type 1 and 2) *1); 140 (connection type 3) and 176 for OT1600E22-135	76 (connection type 1 and 2); 105 (connection type 3)	176 (connection type 1 and 2); 220 (connection type 3)
Max. Let-through Energy when protected with Fused or Circuit Breaker (MA ² s)	88 (connection type 1 and 2) *1); 210 (connection type 3) and 339 for OT1600E22-135	43 (connection type 1 and 2); 115 (connection type 3)	363 (connection type 1 and 2); 616 (connection type 3)

1) Busbars supported in switch fixed contacts both sides (120kA and 154MA2s, connection 2)

2) Not OT1600E22-135

3) With bus bars, Support distance 180mm

4) With bus bars, Support distance 150mm

5) With cables, Support distance 400mm

Application/Limitation

Ingress protection IP20. To be installed inside switchboard / enclosures.

Installation procedures according to the manufacturer's instructions to be followed.

Environmental classes:

Temperature:	D
Humidity:	B
Vibration	A
EMC:	N/A

Type Approval documentation

Technical info:

ABB Oy Catalogue: OT disconnectors 1600...4000A, DC-20 1SCC301023C0201 dated 2019-11

ABB Oy catalogue "Low Voltage Products – Switch-disconnectors OT and OETL (parts)"

Test reports:

SGS investigation test report 22333 dated 2018.12.19 including test report no 294272-1 dated 2018.12.18.

SGS investigation test report 22820 dated 2019.09.12 including test report no 297173-1 dated 2019.09.10.

SGS test reports nos. 249697-1/2 dated 2008-06-18, 260370-1 dated 2010-08-19, 256920-1 dated 2011-05-24, 282077-1 dated 2016-01-04 and 282077-2 dated 2016-05-25.

TRC test reports nos. TA2014-53 dated 2015-01-14 and TA2016-33 dated 2016-10-06.

ABB test reports nos. L15-001 dated 2015-01-07 and L16-006 dated 2016-11-11.

Fimco test reports nos. 240964-1 dated 2006-02-01, 247299-1 / 3 / 5 dated 2007-06-08, TRC test report noTA2008-93 dated 2008-12-19, and ABB test report no. L09-011 dated 2009-05-04. SGS test reports no. 260548-1 dated 2010-08-18, 256919-1 dated 2011-05-24, 266429-3 dated 2012-01-25 & 2012-03-14, 254109-1 dated 2009-08-10 & 256917-1 dated 2011-05-11.

Tests carried out

Type tests in accordance with IEC 60947-3. Environmental tests in accordance with DNV-CG-0339.

Marking of product

ABB Oy – Disconnecting switch – Type designation

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are 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 Routine tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type 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 2, 3.5 year and at renewal.

END OF CERTIFICATE