

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Disconnection Switch

with type designation(s)
OTM 160 2500_D220-230C

Issued to

**ABB Oy, Protection and Connection
VAASA, Finland**

is found to comply with

DNV GL rules for classification – Ships and offshore units

DNV GL rules for classification – High speed and light craft

DNV GL class programme DNVGL-CP-0396 – Type approval – Low-voltage switchgear and controlgear - rated voltage does not exceed 1000V AC or 1500V DC

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2021-11-15**.

Issued at **Høvik** on **2016-11-16**

DNV GL local station: **Turku**

for **DNV GL**

Approval Engineer: **Børre Dan Knutsen**

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Andreas Kristoffersen
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.

Product description

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

Type OTM 160 – 2500_D220-230C as specified in the tables below.

Technical data:

Protection class:	IP20
Operational voltage, U _e	415 V (380 V: OTM_1D220C)
Rated impulse withstand voltage, U _{imp}	6 kV (4kA: OTM_1D220C)
Rated frequency:	50 - 60 Hz

	OTM160_	OTM200_
Rated thermal current I _{th}	160 A	200 A
Rated operational current AC-21A	160 A	200 A
Rated operational current AC-22A	160 A	200 A
Rated operational current AC-23A	160 A	200 A
Rated operational current AC-31B	160 A	200 A
Rated operational current AC-33B	160 A	200 A
Rated short time withstand current I _{cw} , 690 V 1 s.	8 kA	8 kA
Rated short time making capacity I _{cm}	30kA; 415V**)	30kA; 415V**)

OTM250_	OTM315_	OTM400_	OTM630_	OTM800_
250 A	315 A	400 A	630 A	800 A
250 A	315 A	400 A	630 A	800 A
250 A	315 A	400 A	630 A	800 A
250 A	315 A	400 A	630 A	800 A
250 A	315 A	400 A	650 A	720 A
250 A	315 A	400 A	650 A	650 A
8 kA	15 kA	15 kA	20 kA	20 kA
30kA; 415V**)	60kA; 415V**)	60kA; 415V**)	80kA; 415V**)	80kA; 415V**)

OTM1000_	OTM1250_	OTM1600_	OTM2000_	OTM2500_
1000 A	1250 A	1600 A	2000 A	2500 A
1000 A	1250 A	1600 A	2000 A *)	2500 A *)
1000 A	1250 A	1600 A	-	-
1000 A	1250 A	1250 A	-	-
1000 A	1250 A	1600 A	-	-
1000 A	1000 A	1000 A	-	-
50 kA	50 kA	50 kA	55 kA	55 kA
92kA; 380V**)	92kA; 380V**)	92kA; 380V**)	110kA; 415V**)	110kA; 415V**)

*) AC-21B

**)30kA ; 380 (OTM_1D220V)

Application/Limitation

Switch-disconnectors for control and isolation for installation onboard ships and mobile offshore units

Type Approval documentation

Tests carried out

Type tests in accordance to IEC 60947-3 / 2008



Job Id:
Certificate No: **TAE00001AT**

Environmental tests (Vibration, dry heat and damp heat in accordance with DNVGL CG 0339 and shock/vibrations in accordance with IEC60068-2-27 and IEC60068-2-6).

Marking of product

ABB Oy - Type designation - Rated voltage - Rated current

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 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 every second year.

END OF CERTIFICATE