



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. E-9051
This Certificate consists of 4 pages

This is to certify that the
Disconnection Switch
with type designation(s)
OTP_ and OTE_

Manufactured by
ABB Oy, Low Voltage Products
Vaasa, Finland

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det
Norske Veritas' Offshore Standards
IEC 60947-1 (2004)
IEC 60947-3 (1999) + A1:2001 + A2:2005

Application
Plastic Enclosed Safety Switches and Plastic Enclosed Load Break Switches for use
Onboard Ships and Offshore units.

Place and date
Høvik, 2009-06-17
for DET NORSKE VERITAS AS

Marit Laumann

Marit Laumann
Head of Section



Local Office
DNV Helsinki

This Certificate is valid until
2012-06-30

Nicolay Horn
Nicolay Horn
Surveyor *Horn*

Notice: 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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: E-9051
 File No.: 823.30
 Job Id: 262.1-004167-2

Product description

Plastic enclosed safety switches and plastic enclosed load break switches for use onboard ships and offshore units according to type designations as given in the tables below. Switch-disconnectors used in the products are to be according

Plastic Enclosed Safety and Plastic Enclosed Load Break Switches, TYPE OTP _

Rated insulation and operation voltage: 400 V
 Protection class: IP65

Family	Type designation	Type of switch 1)	Switch disconnector	Ie max 400V [A]		Pe max 400V [kW]
				AC 22A	AC 23A	
OTP 16_	OTP 16B_	E	OT 16F_	16	16	7,5
	OTP 16HB_					
	OTP 16A_	S	OT 40_	-	16	7,5
	OTP 16H_					
	OTP 16K_					
	OTP 16T_					
OTP 25_	OTP 25B_	E	OT 25F_	25	20	9
	OTP 25A_	S	OT 63_	-	30	15
	OTP 25T_					
OTP 32_	OTP 32B_	E	OT 40F_	32	23	11
OTP 36_	OTP 36A_	S	OT 80_	-	38	18,5
	OTP 36T_					
OTP 45_	OTP 45B_	E	OT 63F_	45	30	15
OTP 63_	OTP 63B_	E	OT 80F_	63	38	18,5
	OTP 63A_	S	OT 100_	-	63	30
	OTP 63T_					
OTP 75_	OTP 75A_	S	OT 100_	-	80	37
	OTP 75T_					
OTP 90_	OTP 90A_	S	OT 125F_	-	90	45
	OTP 90T_					
OTP 125_	OTP 125B_	E	OT 125F_	125	90	45

1) Type of switch, description:

S Enclosed Safety Switch
 E Enclosed Load Break Switch



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Plastic Enclosed EMC-safety switches TYPE OTE _

Protection class: IP65

Family	Type designation	Type of switch 2)	Switch disconnecter	Ie max 400V [A]		Pe max 400V [kW]
				AC 22A	AC 23A	
OTE 16_	OTE 16T_ , OTE 16A_	S	OT 40_	-	16	7,5
OTE 25_	OTE 25T_ , OTE 25A_	S	OT 63_	-	30	15
OTE 36_	OTE 36T_ , OTE 36A_	S	OT 80_	-	38	18,5
OTE 75_	OTE 75T_ , OTE 75A_	S	OT 100_	-	80	37
OTE 90_	OTE 90T_ , OTE 90A_	S	OT 125F_	-	90	45

2) Type of switch, description:

S Enclosed Safety Switch
 E Enclosed Load Break Switch

Application/Limitation

Temperature class: D
 Vibration class: A
 Enclosure class: B

Installation procedures according to the manufacturer to be followed
 Switch-disconnectors used in the products as listed above are to be in accordance with conditions as given in Type Approval certificate E-9050.

Type Approval documentation

Name of document	Number	Issue date
Technical Brochure, SafeLine Enclosed Switches	OT 3GB,	11/1998
Technical Brochure, SafeLine Safety Switches	OT 2GB,	10/1998
Common test procedures for the shipping approvals of the OT_ range	-	16/09/1998
Vibration test for the OT_ range switch-disconnectors	AUT/TES/742/98,	15/10/1998
Environmental test on safety switches	9 AFX98-239,	28/10/1998
Degree of protection of enclosure	9 AFX98-3 Rev. 1, 30/04/98	30/04/1998
CB Test Certificate for OT and Test reports	FI4854 to FI4861, 248219-1, 248218-1, 249883-1	11/02/2009 and 18-19/02/2008



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Tests carried out

Type tests in accordance with:

IEC 60947-1 / 2004 (CB certificates and test reports)
IEC 60947-3 / 1999 + A1:2001 + A2:2005 (CB certificates and test reports)
IEC 60529 Degree of protection

Environmental tests according to DNV Standard for Certification note 2.4:

3.6 Vibration Test
3.8 Damp Heat Test
3.9 Cold Test

Marking of product

ABB and/or Strömberg - OT - type designation

Certificate retention survey

The scope of the retention/renewal survey 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 survey 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.

Survey to be performed at least every second year.

END OF CERTIFICATE