

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Disconnection Switch**with type designation(s)  
**OTP\_ and OTE\_**

Issued to

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

is found to comply with

**DNV GL rules for classification – Ships and offshore units****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2020-12-31**.Issued at **Høvik** on **2016-06-17**DNV GL local station: **Turku**Approval Engineer: **Nicolay Horn**for **DNV GL**

Digitally Signed By: Laumann, Marit

Location: DNV GL Høvik, Norway

Signing Date: 2016-06-17

**Marit Laumann  
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

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 disconnecter | Ie max 400V [A] |        | Pe max 400V [kW] |
|----------|----------------------------------------------|-------------------|---------------------|-----------------|--------|------------------|
|          |                                              |                   |                     | AC 22A          | AC 23A |                  |
| OTP 16_  | OTP 16B_<br>OTP 16HB_                        | E                 | OT 16F_             | 16              | 16     | 7,5              |
|          | OTP 16A_<br>OTP 16H_<br>OTP 16K_<br>OTP 16T_ | S                 | OT 40_              | -               | 16     | 7,5              |
| OTP 25_  | OTP 25B_                                     | E                 | OT 25F_             | 25              | 20     | 9                |
|          | OTP 25A_<br>OTP 25T_                         | S                 | OT 63_              | -               | 30     | 15               |
| OTP 32_  | OTP 32B_                                     | E                 | OT 40F_             | 32              | 23     | 11               |
| OTP 36_  | OTP 36A_<br>OTP 36T_                         | S                 | OT 80_              | -               | 38     | 18,5             |
| OTP 45_  | OTP 45B_                                     | E                 | OT 63F_             | 45              | 30     | 15               |
| OTP 63_  | OTP 63B_                                     | E                 | OT 80F_             | 63              | 38     | 18,5             |
|          | OTP 63A_<br>OTP 63T_                         | S                 | OT 100_             | -               | 63     | 30               |
| OTP 75_  | OTP 75A_<br>OTP 75T_                         | S                 | OT 100_             | -               | 80     | 37               |
| OTP 90_  | OTP 90A_<br>OTP 90T_                         | S                 | OT 125F_            | -               | 90     | 45               |
| OTP 125_ | OTP 125B_                                    | E                 | OT 125F_            | 125             | 90     | 45               |

1) Type of switch, description:

|   |                            |
|---|----------------------------|
| S | Enclosed Safety Switch     |
| E | Enclosed Load Break Switch |

## 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_ ,<br>OTE 16A_ | S                 | OT 40_              | -               | 16     | 7,5              |
| OTE 25_ | OTE 25T_ ,<br>OTE 25A_ | S                 | OT 63_              | -               | 30     | 15               |
| OTE 36_ | OTE 36T_ ,<br>OTE 36A_ | S                 | OT 80_              | -               | 38     | 18,5             |
| OTE 75_ | OTE 75T_ ,<br>OTE 75A_ | S                 | OT 100_             | -               | 80     | 37               |
| OTE 90_ | OTE 90T_ ,<br>OTE 90A_ | S                 | OT 125F_            | -               | 90     | 45               |

2) Type of switch, description:

|   |                            |
|---|----------------------------|
| S | Enclosed Safety Switch     |
| E | Enclosed Load Break Switch |

## Application/Limitation

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

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                              | OT 3GB,                                                                                  | 05/2012                                                |
| Technical Brochure, SafeLine Safety Switches                       | OT 2GB,                                                                                  | 05/2012                                                |
| Common test procedures for the shipping approvals of the OT_ range | -                                                                                        | 16/09/1998                                             |
| Vibration test for the OT_ range switch-                           | 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                        | FI5929, FI5931-FI5933, FI5936, FI15939M1, FI15945M1, 257441-1 & 2, 257441-3 and 265550-1 | 02.11.2009,<br>03.11.2009<br>20.10.2011,<br>24.10.2011 |

## Tests carried out

Type tests in accordance with:

IEC 60947-1 / 2007 (CB certificates and test reports)  
IEC 60947-3 / 2008 (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

## 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 every second year.

END OF CERTIFICATE