

## Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the LR Type Approval System.

This certificate is issued to:

<b>PRODUCER</b>	ABB Oy, Low Voltage Products
<b>PLACE OF PRODUCTION</b>	P.O. Box 622, Muottitie 2A FIN-65101 VAASA Finland
<b>DESCRIPTION</b>	Switch-Disconnecter-Fuse-see definition in EN60947- 3 or 4 Pole, manually operated
<b>TYPE</b>	OT 600_, OT630_, OT800_, OT1000_, OT1200_, OT1250_, OT1600_  Type Designation key: OT <sup>1</sup> _ <sup>2</sup> 600 <sup>2</sup> _E <sup>3</sup> _22 <sup>4</sup> _H <sup>5</sup> _N3 <sup>6</sup> _W4 <sup>7</sup> _P <sup>8</sup> <sup>2</sup> Switch Size (rated current): 600, 630, 800, 1000, 1200, 1250, 1600A <sup>3</sup> Structure: E, ES or X=Used in IEC types. U=Used in UL and IEC types <sup>4</sup> Number of poles and place of mechanism <sup>5</sup> H=Silver layer 20µ. Blanco=Silver layer 7µ. <sup>6</sup> N3= Neutral bar through the mechanism. Blanco= No neutral bar through the mechanism <sup>7</sup> Blanco=Phase distance normal. W4=Phase distance 140mm. W8=Phase distance 185mm. <sup>8</sup> P=Handle and shaft included. K=Direct handle. Blanco=Without handle and shaft
<b>APPLICATION</b>	Marine, Offshore and Industrial application for use in environmental categories ENV1, ENV2 and ENV3 as defined in LR Test Specification No.1:2002 - where the Test Specification is satisfactory for the intended operation.
<b>ADDITIONAL TESTS</b>	Low Temperature Test: -25°C-16 hrs. Shock Test: Half sine. Peak 11.2g for 11msec.
<b>Certificate No.</b>	10/70014
<b>Issue Date</b>	12 February 2010
<b>Expiry Date</b>	11 February 2015
<b>Sheet</b>	1 of 2

  
Poul Erik Hansen

Copenhagen design Support Centre

Lloyd's Register EMEA  
Strandvejen 104A, DK-2900 Hellerup

"Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract."

## STANDARD

IEC60947-1, EN60947-1  
 IEC60947-3, EN60947-3  
 IEC60068-2-1, Test Ab  
 IEC60068-2-27, Test Ea

## RATINGS

U<sub>e</sub> = 690V/500V, 50-60Hz  
 Rated insulation voltage U<sub>i</sub> = 1000V  
 Rated impulse withstand voltage: U<sub>imp</sub> = 12 kV  
 Conventional free air/(enclosed) thermal current I<sub>th</sub>/I<sub>the</sub> as per table 1 below  
 Utilization cat. AC-21A; AC-22A; AC-23A: as per table below  
 Rated s/c making capacity I<sub>cm</sub>(peak): table below  
 Rated conditional s/c current (rms): at 690V: or 500V see table below  
 Table 1

	OT630_	OT800_/OT600U_	OT1000_	OT1250_	OT1600_
AC21A	690V:630A	690V:800A	690V:1000A	690V:1250A	690V:1600A
AC22A	690V:630A	690V:800A	690V:1000A	690V:1250A	690V:1250A 500V:1600A
AC23A	690V:/630A	690V:800A	690V:1000A	690V:1200A	690V:1200A
I <sub>cw</sub>	20kA-1sec	20kA-1 sec	50kA-1 sec	50kA-1 sec	50kA-1 sec
I <sub>th</sub> /I <sub>the</sub>	630A/630A	800A/800A	1000A	1250A	1600A
I <sub>cw</sub> rms	20kA:1 sec	20 kA-1sec	50kA-1 sec	50kA-1 sec	50kA-1 sec
I <sub>cm</sub>	1000V:80kA	1000V:80kA	690V:110kA /92kA 4pol	690V:110kA /92kA 4pol	690V:110kA /92kA 4pol
I <sub>sc</sub> cond	500V:100kA 690V: 80kA	500V:100kA 690V: 80kA	500V:100kA	500V:100kA	500V:100kA

## CONDITIONS

De-rating of I<sub>the</sub> shall be applied when used in Marine Installation Classed by LR for use in ambient temperatures of 45°C. Rating of the switch is to be rated according to Part 6, Chapter 2, section 5.3 of the Ships Rules. Means of locking in open position and provided with interlocks or padlocks as required.

*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."*

*The Design Appraisal Document No TA10/70014 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

Certificate No. 10/70014  
 Issue Date 12 February 2010  
 Expiry Date 11 February 2015  
 Sheet 2 of 2



Poul Erik Hansen

Copenhagen design Support Centre

Lloyd's Register EMEA  
 Strandvejen 104A, DK-2900 Hellerup

"Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract."