EU RO Mutual Recognition Technical Requirements

CONTROL AND PROTECTIVE SWITCHING DEVICES	Version	0.0
	Adoption Date:	
	Application Date:	1 January 2017
	Tier	5
This document is subject to controlled issue and can be found here: http://www.euromr.org/technical-requirements ***** Uncontrolled if downloaded or printed *****		

1. PRODUCT DESCRIPTION

1.a General description of the product

A switching device (or equipment) capable of operation other than by hand, but with or without local manual operating means. It is to be capable of making, carrying and breaking currents under normal conditions, including specified operating overload conditions and making, carrying for a specified time and breaking currents under abnormal conditions such as those of short circuits.

A Control and Protective Switching Device (CPS) has overload and short circuit protection, these functions being associated and coordinated so as to permit continuity of service at all currents up to its rated service short circuit breaking capacity. A CPS may or may not consist of a single device but is always rated as a unit.

1.b Application limitations

a) Restricted to devices where the main contacts of which are intended to be connected to circuits of rated voltage not exceeding 1000V a.c or 1500V d.c.

b) Restricted to devices where the main contacts of which are intended to be connected to circuits of rated voltage not exceeding 100V a.c or 1500V d.c. and with rated current less than 25 A.

c) Installation on board ships within locations with climatic, biological, chemically active , mechanically active and mechanical environmental conditions not

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exceeding those for which performance has been approved according to IEC 60721-3-6 (1987) + A2 (1996).

1.c Intended use

Motor control units and power supply system characteristics as per IEC 60947-6-2

1.d System context

See 1c.

2. DESIGN EVALUATION

2.a Engineering evaluation requirements

2.a i. Technical Requirements

a) Type, rating and characteristics of CPS for intended applications shall be evaluated;
b) In general, IEC 60947 shall be observed.

2.a.ii. Technical documents to be submitted

IMPORTANT: The English Language shall be used for all submitted documents.

a) All production drawings, operational manuals, assembly drawings shall be submitted to the EU RO for review;
b) Proposed test program and test schedule, description of the test specimens and an explanation of the selected test sample(s) providing evidence that the selected sample meets the most rigorous and demanding requirements;
c) Production descriptions, manuals, data sheets, assembly drawings, dimension drawings that clearly identify the product;
d) Accreditation certificate of the selected test laboratory. Any changes to the scope of the test shall be included in the test reports;
e) Details of the production site(s), production facility inspection report, production specifications and a valid QM certificate according to ISO 9001;
f) After the completion of the testing, the report shall contain:
   - an identification number;

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- all relevant data and test results including the place, date and names of personnel responsible for conducting the test;
- type, batch and serial numbers of the tested products;
- details of the test equipment used including the calibration certificates and serial numbers.

g) Test reports shall be signed and dated by the person(s) responsible for conducting the test and by the attending EU RO witnessing the test.

2.b Type testing requirements

a) Tests according to IACS Unified Requirement E10, Rev. 6 or IEC 60947-1 shall be performed;
b) Test specimens shall be taken from the production line or from stocks†;
c) Tests shall be carried out in the presence of the EU RO Surveyor. In cases where the tests are conducted at Nationally Accredited Laboratories, the presence of the EU RO surveyor may be omitted†.

† For further clarification of witnessing of tests and sampling the test specimen(s), refer to paragraphs 6, 7 and 8 of the EU RO "Design Evaluation Scheme" procedure (Appendix V of EU RO Framework Document for the Mutual Recognition of Type Approval found on http://www.euromr.org/Guidance%20for%20Mutual%20Recognition)

3. PRODUCTION REQUIREMENTS

Refer to EU RO "Product Quality Assurance (PQA)" procedure (Appendix VI of EU RO Framework Document for the Mutual Recognition of Type Approval found on http://www.euromr.org/Guidance%20for%20Mutual%20Recognition)

4. MARKING REQUIREMENTS

Manufacturers of the approved equipment are, in principle, to mark the product before shipment for identification of approved equipment as per referenced standard. In addition, and as a minimum, the following items to be marked at the suitable place:

a) Manufacturer's name or equivalent;
b) Type No. or symbol;

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c) Serial No. and date of manufacture.

5. TYPE APPROVAL CERTIFICATE CONTENT

The EU RO MR Type Approval Certificate shall contain the minimum information as defined in the EU RO Framework Document for the Mutual Recognition of Type Approval - see Appendix I of EU RO MR Type Approval Certificate Information.

The following information is specifically applicable to products relevant to this technical requirement and shall be included on the EU RO MR Type Approval Certificate:

a) Technical data according to the relevant IEC marking;
b) Software version (if applicable);
c) Validity according to the EU RO 'Product Quality Assurance (PQA)' procedure (Appendix VI of EU RO Framework Document for the Mutual Recognition of Type Approval);
d) Reference to approved technical documents;
e) Application and limitations.

6. APPROVAL DATE AND REVISION NUMBER

Date	Revision	Comment
2016-07-01	0.0	Approved by EU RO MR Advisory Board

7. BACKGROUND INFORMATION / REFERENCES

a) EU RO Framework Document for the Mutual Recognition of Type Approval;
b) IACS UR E10, Rev. 6, 'Test Specification for Type Approval'
c) IEC 60721-3-6 AMD 2 'Classification of Environmental Conditions – Part 3: Classification of Groups of Environmental Parameters and Their Severities Section 6: Ship Environment
d) IEC 60947-1 'Low-voltage switchgear and control-gear - Part 1: General rules'
e) IEC 60092-101 'Electrical Installations in Ships – Part 101: Definitions and General Requirements'

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8. MAINTENANCE & CLARIFICATION OF TECHNICAL REQUIREMENTS

Anyone wishing to propose changes to this document or request clarification of technical issues should contact the EU RO MR Group Secretariat in the first instance: Secretariat@euromr.org.

Review and approval of change requests shall follow the EU RO MR Maintenance Process detailed in the EU RO Framework Document for the Mutual Recognition of Type Approval: http://www.euromr.org/Guidance%20for%20Mutual%20Recognition

- END -

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