

TYPE APPROVAL CERTIFICATE

Certificate No:
TAE000024W
Revision No:
2

This is to certify:

That the Pilot Device

with type designation(s)
M

Issued to

ABB Xinhui Low Voltage Switchgear Co., Ltd.
Jiangmen City, China

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

Rated Insulation Voltage:	600 / 690V
Rated voltage/ current:	AC15:120V/8A, 230V/6A, 400V/4A, 690V/2A DC-13: 24V/5A, 125V/1.1A, 250V/0.55A
Degree of protection:	IP66. IP67 & IP69K for MJS only

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

Issued at **Høvik** on **2023-01-16**

for **DNV**

This Certificate is valid until **2027-06-30**.

DNV local unit: **China South NB**

Approval Engineer: **Marcin Tobiasz**

Frederik Tore Elter
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Name and place of manufacturer

ABB Electrification Sweden AB, Motor Starting & Safety Västerås Sweden	ABB Xinhui Low Voltage Switchgear Co, Ltd, Xinhui, China
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Product description

Type: Pilot devices with type name "M".

Various contact combinations and colours enlisted in the manufacturer's catalogue 1SFC151007C0201_RevD of September 2021.

The Pilot devices may be used together with matched additional equipment enlisted in the catalogue 1SFC151007C0201_RevD of September 2021.

1. Pushbutton

Type MP

2. Mushroom pushbutton

Type MPM

3. Double pushbutton

Type MPD

4. Emergency stop / machine stop

Type MPE: Twist-, pull- and key release

Type MPM: Twist- and pull release

5. Selector switch

Type M2SS: Two position selector switch

Type M3SS: Three position selector switch

6. Key operated selector switch

Type M2SSK: Two position key operated selector switch

Type M3SSK: Three position key operated selector switch

7. Pilot light

Type ML1

8. Toggle switch

MTS1: Two position toggle switch

MTS2: Three position toggle switch. Momentary operator

MTS3: Three position toggle switch. Maintained operator

9. Joystick

Type MJS

10. Enclosures and assembled stations

Type MEP

11. Blocks

12. Type MCB: Contact blocks

13. Type MLB: Lamp blocks

14. Type MLBL: LED blocks

15. Type MCBL: Contact blocks

16. Type MDB: Diode blocks

Application/Limitation

The Pilot devices may be used together with matched additional equipment enlisted in the catalogue 1SFC151007C0201_RevD of September 2021. The type approval cover only the equipment listed above with applicable accessories as shown in the below listed test reports.

With Uimp=6kV the max rated voltage is normally 600V when used in a IT (ship) net. All parts are applicable for use in applications with directly earthed systems with voltage of 400/690V.

Type Approval documentation

Catalogue 1SFC151007C0201_RevD of September 2021 (part Pilot devices Modular range).

CB Test Certificate SE-30015M2	Emergency stops, MPM
CB Test Certificate SE-56109M1	Emergency stops, MPE
CB Test Certificate SE-102862	Contact block
Test report 502319	Emergency stops, MPM
Test report 516010-1	Emergency stops, MPM
Test report 803565-1	Emergency stops, MPE
Test report 816397-1	Emergency stops, MPE
Test report 913302	Joystick, MJS (IP66 & IP67)
Test report 913302-2	Joystick, MJS (IP69k)
Test report 2011532STO-001	Contact block

Tests carried out

Type tests in accordance with IEC60947-5-1(2016) or IEC 60947-5-1(2003-11), IEC 60947-5-5(2005-04) for emergency stop, IP tests in accordance with IEC 60529 and DIN 40050 part 9.

Marking of product

Manufacturer's name and Type designation.

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.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE