



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **E-12897**

This is to certify that the
Automatic Fuse

with type designation(s)
S200MUC

Issued to
ABB Stotz-Kontakt GmbH
HEIDELBERG, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application
Automatic Fuse for use in Ships and Offshore Platforms.

This Certificate is valid until **2017-12-31**.

Issued at **Høvik** on **2013-12-12**

DNV local station: **DNV Essen**

Approval Engineer: **Nicolay Horn**

for **Det Norske Veritas AS**

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.
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.

Product description

Miniature Circuit Breakers with the following type designations:

Type S 201MUC: Single pole
 Type S 202MUC: Double pole
 Type S 203MUC: Three pole
 Type S 204MUC: Four pole

Tripping characteristics:	B / C / K / Z
Rated insulation voltage (V AC)	440 (277) *
Rated impulse withstand voltage (kV)	4*
Rated operation voltage (V AC)	133/230, 230/400, 253/440
Frequency (Hz):	50/60
Degree of protection:	IP20
Rated current (A)t:	6 to 63 (B), 0.5 to 63 (C), 0.2 to 63, 0.5 to 63 (Z)
Current setting Characteristic B:	4 x In for ac, 6 x In dc.
Characteristic C:	6.5 x In for ac, 9.75 x In dc.
Characteristic K:	12 x In for ac, 17.5 x In dc.
Characteristic Z:	2.5 x In for ac, 3.75 x In dc.
Breaking capacity Icu:	15 kA (133 V a.c., 1 pole); 10 kA (253 V a.c., 1 pole; ≤ 40 A); 6 kA (253 V a.c., 1 pole; 50, 63 A) 25 kA (230 V a.c., 2, 3, 4 pole); 10 kA (440 V a.c., 2, 3, 4 pole; ≤ 40 A) 6 kA (440 V a.c., 2, 3, 4 pole; 50, 63 A) 20 kA (110 V d.c., 1 pole); 10 kA (220 V d.c., 1 pole); 25 kA (220 V d.c., 2, 3, 4 pole) 10 kA (440 V d.c., 2, 3, 4 pole)
Breaking capacity Ics:	7,5 kA (133 V a.c., 1 pole); 7,5 kA (253 V a.c., 1 pole ≤ 40 A); 6 kA (253 V a.c., 1 pole; 50, 63 A) 18,75 kA (230 V a.c., 2, 3, 4 pole); 7,5 kA (440 V a.c., 2, 3, 4 pole; ≤ 40 A) 6 kA (440 V a.c., 2, 3, 4 pole; 50, 63 A) 10 kA (110 V d.c., 1 pole); 10 kA (220 V d.c., 1 pole); 20 kA (220 V d.c., 2, 3, 4 pole) 10 kA (440 V d.c., 2, 3, 4 pole)

* See Application/Limitation

Application/Limitation

For installation inside switchboards/ enclosures onboard ships and offshore units.

*With $U_{imp}=4kV$ the max. rated voltage is 277 V when used in IT (ship) net. It can be used in applications with directly earthed systems with rated voltage of 277/480 V.

Type Approval documentation

Datasheet « System pro M compac[®] - Miniature Circuit Breaker S 200 M UC for DC and AC applications”.
 VDE test certificate DE1-52085 dated 2013-05-16.

Tests carried out

Type testing according to IEC / EN 60947-2. Vibration test, Dry heat test, Damp heat test and Cold test in according to DNV SfC No. 2.4.

Marking of product

ABB Stotz - Type designation

Periodical assessment

The scope of the Periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems/components/materials.

The main elements of the survey are:

- Inspection of factory samples, selected at random from the production line (where practicable).
- Review of production and inspection routines, including test records from product sample tests and control routines.
- Ensuring that systems/components/materials used comply with type approved documents and/or referenced system/component/material specifications.
- Review of possible changes in design of systems/components/materials, software version and performance, and make sure that such changes do not affect the type approval given.
- Ensuring traceability between manufacturer's product type marking and the type approval certificate.
- Ensuring that type approved documentation is available.

Survey to be performed at least every second year .

END OF CERTIFICATE