



# DET NORSKE VERITAS

## TYPE APPROVAL CERTIFICATE

**CERTIFICATE NO. E-9643**

This Certificate consists of 4 pages

*This is to certify that the*

**Automatic Fuse**

*with type designation(s)*

**S282 UC - B,C,K,Z, S282 - B,C,K, S283 - B,C,K**

*Manufactured by*

**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*

Normally not to be used in main switchboards, unless specially approved with regard to power factor and breaking capacity. For use in a 440 V system the circuit breaker are to be supplied legible marked for this voltage and corresponding data.

*Place and date*

Høvik, 2009-07-14

for DET NORSKE VERITAS AS

Marit Laumann  
Head of Section



Local Office  
DNV Essen

*This Certificate is valid until*

2012-12-31

Nicolay Horn  
Surveyor

Notice: 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.



Cert. No.: E-9643  
 File No.: 825.20  
 Job Id: 262.1-006282-1

## Product description

Type S 282 - double pole

Type S 283 - three pole

Tripping characteristics:	282 UC-B	282 UC-C&K	282 UC-B,C &K
Rated operation voltage (AC)	230 V	230 V	230 V
Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Rated current	6 - 25 A	0.5 - 25 A	32 - 50 A
Breaking capacity Icu/Ics	25/20 kA	25/20 kA	15/10 kA
Making capacity	52.5 kA	52.5 kA	30 kA
Power factor	0.25/0.3	0.25/0.3	0.3/0.5
Rated operation voltage (DC)	230V	230V	-
Rated current	6 - 63A	0.5 - 63A	-
Breaking capacity Icu/Ics	25/20	25/20	-
Time Constant (ms)	15/10	15/10	-

Tripping characteristics:	282 UC-B,C &K	282 UC-Z	282 UC-Z
Rated operation voltage (AC)	230 V	-	-
Frequency	50 - 60 Hz	-	-
Rated current	63 A	-	-
Breaking capacity Icu/Ics	10/7.5 kA	-	-
Making capacity	17 kA	-	-
Power factor	0.5	-	-
Rated operation voltage (DC)	-	250 V	60 V
Rated current	-	4 - 40 A	4 - 40 A
Breaking capacity Icu/Ics	-	25/12.5 kA	50/25 kA
Making capacity Icm	-	25 kA	50 kA
Time Constant (ms)	-	15	15

Tripping characteristics:	282-B	282-C&K	282-K
Rated operation voltage (AC)	230 V	230 V	440 V
Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Rated current	6 - 63 A	0.5 - 63 A	0.5 - 2 A
Breaking capacity Icu/Ics	25/20 kA	25/20 kA	150/150 kA
Making capacity	52.5 kA	52.5 kA	330 kA
Power factor	0.25/0.3	0.25/0.3	0.15
Rated operation voltage (DC)	60V	60V	-
Rated current	6-63A	0.5-63A	-
Breaking capacity Icu/Ics	25/25	25/25	-
Time Constant (ms)	15	15	-





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Tripping characteristics:	283-B	283-B	283-C&K
Rated operation voltage (AC)	230 V	440 V	230 V
Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Rated current	6 - 25 A	6 - 63 A	0.5 - 25 A
Breaking capacity Icu/Ics	20/20 kA	10/7.5 kA	20/20 kA
Making capacity	40 kA	17 kA	40 kA
Power factor	0.3	0.5	0.3

Tripping characteristics:	283-C&K	283-B,C&K	283-K
Rated operation voltage (AC)	440 V	230 V	440 V
Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Rated current	0.5 - 63 A	32 - 63 A	0.5 - 2 A
Breaking capacity Icu/Ics	10/7.5 kA	15/15 kA	150/150 kA
Making capacity	17 kA	30 kA	330 kA
Power factor	0.5	0.3	0.15

Ambient temperature: 45 °C.

### Type Approval documentation

Catalogue A.1050-E-03, drawings 323-2301-2330 cover, 323-2271-2300 housing, 328-2511-2600 fixed contact, 312-7751-7760 movable contact, 328-2531-2540 deion, 338-4201-4600 config. and executions.

ABB test report LSP1302MK, LSP1328MK, LSP1423 & LSP 1342, RINA Reports 5/724-741/94, environmental reports.

ABB test report (resoconto de prova) LSP 2160MK of 1999-12-10.

ABB test report LSP 2160/1/MK of 1999-12-17.

### Tests carried out

Tested according to IEC 60947-2 and environmental tests.

### Marking of product

ABB SACE – type designation – rated voltage – rated current.



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### **Certificate retention survey**

The scope of the retention/renewal survey 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 survey 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.

Survey to be performed at renewal only.

END OF CERTIFICATE