



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. E-4795
This Certificate consists of 4 pages

This is to certify that the
Contactor

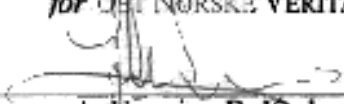
with type designation(s)
BC9 to BC30

Manufactured by
ABB Control
Chassieu Cedex, France

is found to comply with
DET NORSKE VERITAS' RULES FOR CLASSIFICATION OF SHIPS AND MOBILE OFFSHORE UNITS

Application
For installations inside switchboard/enclosures onboard ships and offshore units.

Place and date
Høyvik, 05 October 1998
for DET NORSKE VERITAS AS

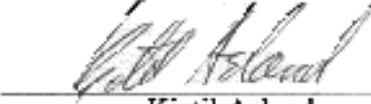


Henning B. Karlsen
Head of Section



Local Office
DNV Lyon

This Certificate is valid until
31 December 2002



Kjetil Asland
Surveyor

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

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 the fees 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-4795
File No.: 823.20

Product description

Contactors with DC operated coil.

Type: BC9, BC16, BC18, BC25, BC30.

Type designation:	Cat.no.
BC 9-30 ...	FPL141 3001R...
BC 16-30 ...	FPL181 3001R...
BC 18-30 ...	GJL222 3001R...
BC 25-30 ...	GJL241 3001R...
BC 30-30-00 ...	GJL281 3001R...
BC 30-30-22 ...	GJL282 3001R...

with accessory: CA5..., TP...DA, TP...IA, VBC 30.

Max. operating voltage	690 V AC or 440 DC
Coil voltage:	12 - 240 V DC

Temp. class:	C (-25 to 55 deg.C)
Humidity class:	A (up to 96% humidity)
Vibration class:	A (5-50 Hz)

Application/Limitation

For installations inside switchboard/enclosures onboard ships and offshore units.

Type Approval documentation

Test report: UL, NEMKO and Canadian Standards Association, BBC and Lloyds register, Brown Boveri publication No. DNG 3089 84 E and Test Certificates Q3-B86.01/02/03/04/05/06/20/21.