

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

PRODUCER ABB STOTZ-KONTAKT GmbH

PLACE OF PRODUCTION Eppelheimer Strasse 82
69123 Heidelberg
Germany

DESCRIPTION Motor Protection Circuit Breaker for drives to 7.5 kW with additional modules

TYPES


Motor Protection Circuit Breaker	MS116-#	# = operational current range I_e from 0.16 - 16.0 A
Auxiliary Switch Modules	HKF1-11 HK1-11 HK1-20 HK1-02	1 normally open , 1 normally closed contact 1 normally open , 1 normally closed contact 2 normally open contacts 2 normally closed contacts
Signal Contact Modules	SK1-11 SK1-20 SK1-02	1 normally open , 1 normally closed contact 2 normally open contacts 2 normally closed contacts
Undervoltage Tripping Modules	UA1-24 UA1-48 UA1-60 UA1-110 UA1-208 UA1-230 UA1-400 UA1-415	24 V 50 Hz 48 V 50 Hz 60V 50 Hz 110V 50Hz/120V 60Hz 208 V 60Hz 230V 50Hz / 240V/60Hz 400V/50Hz 415V/50Hz/480V 60Hz

Certificate No. 04/20033

Issue Date 30 June 2004

Expiry Date 29 June 2009

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Jörn Brüggemann
Hamburg Plan Approval Centre
Lloyd's Register EMEA

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TYPES CONTINUED

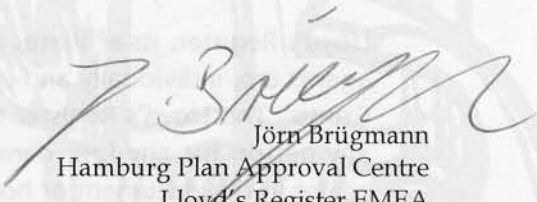
Undervoltage Tripping Modules with auxiliary switch	UA1-HK-24 UA1-HK-48 UA1-HK-60 UA1-HK-110 UA1-HK-208 UA1-HK-230 UA1-HK-400 UA1-HK-415	24V 50Hz 48V 50Hz 60V 50Hz 110V 50Hz/120V 60Hz 208V 60Hz 230V 50Hz/240V 60Hz 400V 50Hz 415V 50Hz/480V 60Hz
Current Working Tripping Modules	AA1-24 AA1-110 AA1-230 AA1-400	20-24V 50/60Hz 110V 50/60Hz 200-240V 50/60Hz 350-415V 50/60Hz

APPLICATION	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 1996.
ADDITIONAL TESTS	Low temperature test (-25°C/16hrs)
SPECIFIED STANDARDS	IEC 947-1 : 1999; IEC 947-2 : 2003; IEC 947-4-1 : 2000; IEC 947-5-1 : 1997
DESIGN CODE	Manufacturer's specification

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."

The Design Appraisal Document No. HEC 10906-04 and its supplementary Type Approval Terms and Conditions form part of this Certificate

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