

Type Approval Extension Certificate

This is to certify that Certificate No. 17/80092(E1) for the undernoted products is amended and renumbered as shown.

This certificate is issued to:

PRODUCER	Danfoss Power Electronics A/S Ulsnaes 1, 6300 Graasten, Denmark
PLACE OF PRODUCTION	AuCom electronics Ltd. 123 Wrights Road PO Box 80208 Christchurch 8440 New Zealand
DESCRIPTION	MCD6 series of Soft Starter for three phase electric motors
TYPE	MCD6 series consist of: MCD6-0020B MCD6-0042B MCD6-0069B MCD6-0108B MCD6-0144B MCD6-0194B MCD6-0287B MCD6-0410B MCD6-0579B MCD6-0034B MCD6-0063B MCD6-0086B MCD6-0129B MCD6-0171B MCD6-0244B MCD6-0323B MCD6-0527B

Certificate No.	19/ 80004(E2)
Issue Date	24 January 2019
Expiry Date	09 October 2021
Sheet	1 of 3



KL Zhang
Shanghai Technical Support Office

*Lloyd's Register Classification Society (China) Co., Ltd
19th Floor, Ocean Towers, 550 Yan An Dong Road, Shanghai 200001*

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RATINGS

Model code:
MCD6-XXXX B XX XXX XX XX:
XXXX: nominal current rating;
B=internal bypass
XX: main supply voltage:
T5=200~525 VAC
T7=380~690 VAC
XXX: Designates frame size:
S1X or S2X
XX: IP Rating
00=IP00
20=IP20
XX: control supply voltage:
CV1: =24V AC/ DC
CV2=110~120 VAC or 220~440 VAC

APPLICATION

Marine applications for use in environmental categories ENV1, ENV2 in the "Equipment on bridge and deck zone" as defined in LR Type Approval System Test Specification No. 1 July 2015.

ADDITIONAL TESTS:

Low temperature tested at -25°C for 16 hours;
Dry heat tested at 60°C for 16 hours;

STANDARDS

IEC 60947-1:2007, incorporating amendment 1: 2010;
IEC 60947-4-2:2011, incorporating corrigendum July 2012;

OTHER CONDITIONS

The approval covers hardware only, software has been tested to the extent required to verify correct operation during type approval tests only.

"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 Classification Society (China) Co., Ltd. of any modification or changes to the equipment in order to obtain a valid certificate."

Certificate No. 19/ 80004(E2)
Issue Date 24 January 2019
Expiry Date 09 October 2021
Sheet 2 of 3


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Lloyd's Register Classification Society China Co Ltd
LRS011.1.2019.06
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The attached Design Appraisal Document No. STS/TA/19/80004(E2), Issue No. 0, dated 24 January 2019 and its supplementary Type Approval Terms and Conditions form part of this Certificate

All other details remain as the previous Certificate No. 17/80092(E1) to which this extension/amendment should be attached.

Certificate No.	19/ 80004(E2)
Issue Date	24 January 2019
Expiry Date	09 October 2021
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Lloyd's Register Classification Society China Co Ltd
LR0311.2016.06

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Part 3
Soft Starter for electric motor

Description of Product					Cert. No.
Producer/ Licence No.	Type	Details of Approval	Application	Remarks	
<p>Danfoss Power Electronics A/S Ulsnaes 1, 6300 Graasten, Denmark</p> <p>Production Place: AuCom electronics Ltd. 123 Wrights Road PO Box 80208 Christchurch 8440 New Zealand</p>	<p>MCD6 series of Soft Starter for three phase electric motors</p> <p>MCD6-0020B; MCD6-0034B; MCD6-0042B; MCD6-0063B; MCD6-0069B; MCD6-0086B; MCD6-0108B; MCD6-0129B; MCD6-0144B; MCD6-0171B; MCD6-0194B; MCD6-0244B; MCD6-0287B; MCD6-0323B; MCD6-0410B; MCD6-0527B; MCD6-0579B;</p>	<p>Model code: MCD6-XXXX B XX XX XX XX: XXXX: nominal current rating; B=internal bypass XX: main supply voltage: T5=200~525 VAC T7=380~690 VAC XXX: Designates frame size: S1X or S2X XX: IP Rating 00=IP00 20=IP20 XX: control supply voltage: CV1: =24V AC/ DC CV2=110~120 VAC or 220~440 VAC</p>	<p>OTHER CONDITIONS The approval covers hardware only, software has been tested to the extent required to verify correct operation during type approval tests only.</p>	<p>Marine applications for use in environmental categories ENV1, ENV2 in the "Equipment on bridge and deck zone" as defined in LR Type Approval System Test Specification No. 1 July 2015.</p> <p>ADDITIONAL TESTS: Low temperature tested at -25°C for 16 hours; Dry heat tested at 60°C for 16 hours;</p> <p>STANDARDS IEC 60947-1:2007, incorporating amendment 1: 2010; IEC 60947-4-2:2011, incorporating corrigendum July 2012;</p>	<p>19/ 80004(E2) Expires: 09 Oct. 2021</p>





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(China) Co., Ltd.**

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Document number STS/TA/19/80004(E2)
Issue number 0

DESIGN APPRAISAL DOCUMENT

Date 24 January 2019	Quote this reference on all future communications STS/TA/KLZ/AUK5262630 /SHI/O-339281
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**LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2015
Issued to: Danfoss Power Electronics A/S
For: MCD6 series of Soft Starter for three phase electric motors
TYPE APPROVAL CERTIFICATE No. 19/80004(E2)**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2015 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

1. Application for type approval(Form 2571), 3rd, Dec. 2018;
2. Request for Marine Services(Form 2502), dated 16th, Jan. 2019;
3. Statement of Unchanged, dated 3rd, Dec. 2018
4. Application letter from AuCom for MCD6 series of Soft Starter, dated 3rd, Dec. 2018
5. Production Quality Assessment Form-5262630 , dated 25th, Jan. 2019
6. LR type approval certificate No.: 17/80092, dated on 27th, December 2017
7. ISO 9001:2008 Certificate No. NZ001625-1, issued by Bureau Veritas, expiry date: 13th, Sep., 2021.

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.



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