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Type Approval Extension Certificate

This is to certify that Certificate No. 09/10058(E1) for the undernoted products is amended and renumbered as shown.

This certificate is issued to:

PRODUCER	Danfoss Drives A/C. DK-6300, Grasstern, Denmark
PLACE OF PRODUCTION	AuCom Electronics Limited 123 Wrights Road, Christchurch, 8440, New Zealand
DESCRIPTION	MCD500 series of Soft Starter for three phase electric motors
TYPE	MCD5-nnnn v-Tw-GxX-yy-CVz Where: - nnnn : Designates the nominal current rating in Amps v : Designates the utilisation category; B= bypassed Tw : Designates the mains supply voltage T5=200~525 V a.c. T7=380~690 V a.c. GxX : Designates the frame size G1X, G2X, G3X or G4X yy : Designates IP rating CVz : Designates the control supply voltage CV1=24 V d.c. CV2=110V a.c. or 220Va.x

Certificate No.	19/80040(E2)
Issue Date	5 August 2019
Expiry Date	4 August 2024
Sheet	1 of 3



LR031.1.2016.06

KL Zhang
Shanghai Technical Support Office

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APPLICATION

Marine and Offshore applications for use in environmental categories ENV2 in the "Bridge and Deck Zone" as defined in LR Type Approval System Test Specification No. 1-2002 where the Test Specification is satisfactory for the intended operation.

ADDITIONAL TESTS:

Low temperature tested at -10°C;
Dry heat tested at 60°C;

STANDARDS

IEC 60947-4-2: Ed. 2.2(2007)
UL 508.17

RATINGS

Type	Motor			Frame size	IP rating	Remark
	Operational Voltage(V)	kW	Operational Current(A)			
MCD5-0021B	T5=200-525V a.c. T7=380~690Va.c.	7.5	21	G1X	20	Control Voltage: CV1=24V d.c. CV2=110 or 220Va.c.
MCD5-0037B		15	37	G1X	20	
MCD5-0043B		18	43	G1X	20	
MCD5-0053B		22	53	G1X	20	
MCD5-0068B		30	68	G1X	20	
MCD5-0084B		37	84	G1X	20	
MCD5-0089B		45	89	G1X	20	
MCD5-0105B		55	105	G1X	20	
MCD5-0131B		60	131	G2X	00	
MCD5-0141B		75	141	G2X	00	
MCD5-0195B		90	195	G2X	00	
MCD5-0215B		110	215	G2X	00	
MCD5-0245B		132	245	G3X	00	
MCD5-0331B		160	331	G3X	00	
MCD5-0396B		185	396	G3X	00	
MCD5-0469B		220	469	G4X	00	
MCD5-0525B		300	525	G4X	00	
MCD5-0632B		315	632	G4X	00	
MCD5-0744B		355	744	G4X	00	
MCD5-0826B		400	826	G4X	00	
MCD5-0961B	500	961	G4X	00		

Certificate No. 19/80040(E2)
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Shanghai Technical Support Office

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OTHER CONDITIONS

1. Suitability of the software and system configuration is subject to a separate plan appraisal according to Lloyd's Register Rules and Regulations when placed on LR classed vessels.
2. The certificate attests to the hardware's suitability for the environmental categories stated.

"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."

The attached Design Appraisal Document No. STS/TA/19/80040(E2), Issue No. 0, dated 5 August 2019 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 09/10058(E1) to which this extension/amendment should be attached.

Certificate No.	19/80040(E2)
Issue Date	5 August 2019
Expiry Date	4 August 2024
Sheet	3 of 3



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Shanghai Technical Support Office

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**Part 3
Soft Starter for electric motor**

Description of Product		Description of Product		Description of Product	
Producer/Licence No.	Type	Details of Approval	Application	Remarks	Cert. No.
Danfoss Drives A/C. DK-6300, Grasstern, Denmark Production Place: AuCom Electronics Limited 123 Wrights Road, Christchurch, 8440, New Zealand	MCD5-0021B MCD5-0037B MCD5-0043B MCD5-0053B MCD5-0068B MCD5-0084B MCD5-0089B MCD5-0105B MCD5-0131B MCD5-0141B MCD5-0195B MCD5-0215B MCD5-0245B MCD5-0331B MCD5-0369B MCD5-0469B MCD5-0525B MCD5-0632B MCD5-0744B MCD5-0826B MCD5-0961B	MCD500 series of Soft Starter for three phase electric motors MCD5-nnnn v-Tw-GxX-yy-CVz nnnn: Designates the nominal current rating in Amps v: Designates the utilisation category; B= bypassed MCD5-nnnn v-Tw-GxX-yy-CVz Tw: Designates the mains supply voltage, T5=200-525 V a.c., T7=380-690 V a.c. GxX: Designates the frame size G1X, G2X, G3X or G4X yy: Designates IP rating CVz: Designates the control supply voltage, CV1=24V d.c. CV2= 110 V a.c. or 220 V a.c.	OTHER CONDITIONS 1. Suitability of the software and system configuration is subject to a separate plan appraisal according to Lloyd's register Rules and Regulations when placed on LR classed vessels. 2. The certificate attests to the hardware's suitability for the environmental categories stated.	Marine and Offshore applications for use in environmental categories ENV2 in the "Bridge and Deck Zone" as defined in LR Type Approval System Test Specification No. 1-2002 where the Test Specification is satisfactory for the intended operation. ADDITIONAL TESTS: Low temperature tested at -10°C; Dry heat tested at 60°C; STANDARDS IEC 60947-4-2: Ed. 2.2(2007) UL 508.17	19/80040(E2) Expires: 4 Aug. 2024



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Kelin Zhang
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(China) Co., Ltd.

Shanghai Technical Support Office

19th Floor Ocean Towers, No. 550 Yan An Dong Road
Shanghai 20001 P.R. China

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Issue number 0

DESIGN APPRAISAL DOCUMENT

Date 5 August 2019	Quote this reference on all future communications STS/TA/KLZ/O-341141
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LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2002

Issued to: AuCom electronics Ltd.

**For: EMX3 series of Soft Starter for three phase electric motors
TYPE APPROVAL CERTIFICATE No. 19/80040(E2)**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

1. Application for type approval(Form 2571), 04th, March. 2019;
2. Request for Marine Services(Form 2502), dated 26th, March 2019;
3. Statement of no change or alteration, dated 1st, July 2019
4. Production Quality Assessment survey report, undated
5. LR type approval certificate No.: 09/10058(E1), dated on 5 August 2014
6. ISO 9001:2015 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.



Kelin Zhang
Shanghai Technical Support Office
KL Zhang

Senior Specialist

Electrical Section

Shanghai Technical Support Office

Lloyd's Register Classification Society (China) Co., Ltd.

Tel.: +86(0)215158 7935

Email: ke-lin.zhang@lr.org

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