

## **Type Approval Certificate Extension**

This is to certify that Certificate No. 10/20001 for the undernoted products is amended and renumbered as shown.

This certificate is issued to:

**PRODUCER** 

ABB STOTZ-KONTAKT GmbH

Eppelheimer Strasse 82 69123 Heidelberg

Germany

PLACE OF

PRODUCTION

Delta Electronics, Inc 31-1 Xingbang Road

Guishan Industrial Zone Taoyuan Country 33370

Taiwan R.O.C.

DESCRIPTION

Programmable logic controller and I/O system

**TYPES** 

AC500-eCo/S500-eCo

Comprising the following modules:

CPUs:

PM554-R-AC (100V and 240V AC), PM-554-T/R (24V DC) PM564-R-AC (100V and 240V AC), PM-564-T/R (24V DC) PM554-T-ETH (24V DC), PM564-T-ETH (24V DC),

PM564-R-ETH (24V DC), PM564-R-ETH-AC (100V and 240V AC)

I/O Modules:

DX561, DC561, DI561, DI562, DO561, DX571, DO571, DI571, DO572

AX561, AI561, AI562, AO561, AI563

Certificate No.

10/20001 (E1)

**Issue Date** 

03 December 2010

**Expiry Date** 

25 January 2015

Sheet

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Hamburg Design Support Centre Lloyd's Register EMEA

Lloyd's Register EMEA 71 Fenchurch Street, London EC3M 4BS

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#### **CONTINUE TYPES**

With pluggable terminal blocks L44440901501, L44441101501, L44460901501, L44461101501, L44470901501, L44471101501

Accessories:

TA562-RS-RTC: Real-time clock adapter with battery (TA560),

Serial communication interface COM2

TA561-RTC: Real-time clock expansion module TA562-RS: Serial communication interface COM2 MC503: SD Memory Card expansion module TA560-Bat: Lithium battery for real time clock

TA566: Wall mounting accessory

Software (firmware): CPUs Version 1.3.x, I/O Modules Version 1.x

APPLICATION

Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 (installation in general power distribution zones) as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – 2002.

ADDITIONAL TEST

Low temperature test (-25°C/16hrs)

**DESIGN CODE** 

Manufacturer's specification

OTHER CONDITIONS

The PLC system AC500-eCo is to be installed in a metal enclosure whose openings have conductive contacts every 0.4 m.

"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. ETS 24079-10 and its supplementary Type Approval Terms and Conditions form part of this Certificate.0,

All other details remain as the previous Certificate No. 10/20001 to which this extension should be attached.

Certificate No.

10/20001 (E1)

Issue Date

03 December 2010

**Expiry Date** 

25 January 2015

Sheet

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Thorsten Wolff Hamburg Design Support Centre Lloyd's Register EMEA

Lloyd's Register EMEA 71 Fenchurch Street, London EC3M 4BS

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Part 3 Control Units

| Control Units  |   | -   |   |   |               |
|--|---|---|---|---|---------------|
| Producer/Licence No.   | Item Description  | Technical Details   | Category/Additional Tests   | Remarks   | Cert. No.     |
| ABB Stotz-Kontakt GmbH Eppelheimer Strasse 82 69123 Heidelberg Germany | Programmable logic controller and I/O system  Type  AC500-eCo/S500-eCo  Comprising the following modules:  CPUs: PM554-R-AC, PM564-R-AC, PM564-R-ETH PM564-T-ETH PM564-T-ETH PM564-T-ETH PM564-T-ETH PM564-R-ETH-AC  I/O Modules: DX561  DC561  DI562  DO561  DI562  DO571  DI571  DO572  AX561  AI561  AI562  AO561  AO561 | Power supply:  100V and 240V ac 24V dc 100V and 240V ac 24V dc 25V dc 26 digital inputs 24 Vdc 8 digital inputs 120-240 Vac 8 relay outputs 120-240 Vac 8 relay outputs 9 digital inputs 120-240 Vac 8 relay outputs 120-240 Vac 8 relay outputs 120-240 Vac 8 relay outputs 2 configurable analog inputs 2 configurable analog inputs 2 configurable analog outputs 2 configurable analog outputs 3 configurable analog outputs 4 configurable analog outputs 5 configurable analog outputs 7 configurable analog outputs 8 configurable analog outputs 9 configurable analog outputs 100 inputs | ENV1, ENV2, ENV3, (2002) For installation in general power distribution zones  Low temperature test | Expiry date: 25 January 2015  The PLC system AC500-eCo is to be installed in a metal enclosure whose openings have conductive contacts every 0.4 m. | 10/20001 (E1) |
|  |   |   |   | JW 02.12.7010   | 0202.21       |
|  |   |   |   |   |               |

Part 3 Control Units

| Producer/Licence No. | Item Description   | Technical Details | Category/Additional Tests | Remarks | Cert. No. |
|----------------------|--|-------------------|---------------------------|---------|-----------|
|                      | With pluggable terminal blocks<br>L44440901501, L44441101501,<br>L44460901501, L44461101501,<br>L44470901501, L44471101501 |                   |                           |         |           |
|                      | Accessories:   |                   |                           |         |           |
|                      | TA562-RS-RTC: Real-time clock adapter with battery (TA560), serial communication interface COM2                            |                   |                           |         |           |
|                      | TA561-RTC: Real-time clock expansion<br>module   |                   |                           |         |           |
|                      | TA562-RS: Serial communication<br>Interterface COM2  |                   |                           |         |           |
|                      | MC503: SD Memory Card expansion<br>Module  |                   |                           |         |           |
|                      | TA560-Bat: Lithiu battery for real time clock<br>TA566: Wall mounting accessory  |                   |                           |         |           |
|                      | Software (firmware):<br>CPUs Version 1.3.x.<br>I/O Modules Version 1.x   |                   |                           |         |           |



# Marine Design Appraisal Document

Lloyd's Register EMEA
Hamburg Design Support Centre
Am Sandtorkai 41
20457 Hamburg, Germany
Telephone +49 (0)40 328107 - 0 Fax +49 (0)40 328107 - 480
Email: hamburg-design-support@lr.org

Date

03 December 2010

Quote this reference on all future communications

HPC 1020113/24070-10/TW/hu

THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2002
ISSUED TO: ABB STOTZ-KONTAKT GMBH
FOR: PROGRAMMABLE LOGIC CONTROLLER AND I/O SYSTEM
TYPE APPROVAL CERTIFICATE NO. 10/20001 (E1)

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.

#### ADDITIONAL APPROVAL DOCUMENTATION

| Approval Services - Request for Quotation AC500-CPUs PM554 and PM564 (8 pages) | 16.06.2010<br>09.07.2010   |
|--|--|
|  |  |
| EMI test report  | 03.06.2010   |
| Climatic test report   | 17.05.2010   |
| SITIIAS test report  | 01.06.2010   |
| Test Protocol Clima Test   | 15.01.2010   |
| Test Protocol Clima Test   | 30.06.2010   |
| Test Protocol Vibration / Shock test   | 11.08.2010   |
| TÜV test report  | 03.09.2010   |
| SITIIAS Test Report  | 01.06.2010   |
| EMI Test Report  | 25.09.2010   |
|  | AC500-CPUs PM554 and PM564 (8 pages)  EMI test report  Climatic test report  SITIIAS test report  Test Protocol Clima Test  Test Protocol Clima Test  Test Protocol Vibration / Shock test  TÜV test report  SITIIAS Test Report |

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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Document no: Issue number

ETS 24070-10

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Lloyd's Register EMEA **Hamburg Design Support Centre** Am Sandtorkai 41 20457 Hamburg, Germany Telephone +49 (0)40 328107 - 0 Fax +49 (0)40 328107 - 480 Email: hamburg-design-support@lr.org

Date 03 December 2010

Quote this reference on all future communications HPC 1020113/24070-10/TW/hu

### 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 EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.

Thorsten Wolff Senior Surveyor

Electrotechnical Systems

Hamburg Design Support Centre

Lloyd's Register EMEA T +49 (0)40 328107-445 E thorsten.wolff@lr.org