

# Type Approval Certificate



[ Programmable Logic Controllers ]

**Initial Approval** 18th April, 2022  
**Manufacturer** ABB AG  
 Eppelheimer Str. 82, DE-69123 Heidelberg, Germany

**Product Description** Type : AC500-eCo / S500-eCo

\* Manufacturing place : ABB STOTZ-KONTAKT GmbH  
 Hauptstraße 14-16,  
 78132 Hornberg, Germany

" See Appendix 1 "

**Approval Condition** " See Appendix 1 "

**THIS IS TO CERTIFY** that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 17th April, 2027

Issued at Busan, Korea on 18th April, 2022



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME22010570670) and certificate No.(HMB39370-AC004).



**KOREAN REGISTER**

*General Manager of  
Marine & Ocean Equipment Team*

**Note :** 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.  
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.  
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.  
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

## Product Description and/or Approval Condition

Date of Issue : 18th April, 2022

### A. Product Description

#### 1. Product Specification

- 1) Power supply : DC 24V
- 2) ABB AC500-eCo Scalable Programmable Logic Controller with S500 I/O-Modules.

Module	Description
[AC500-eCo V3 processor module, programmable logic controller]	
PM5012-T-ETH	1 MB, 6DI/4DO-Transistor, Ethernet, 24 V DC, option slot
PM5012-R-ETH	1 MB, 6DI/4DO-Relay, Ethernet, 24 V DC, option slot
PM5032-T-ETH	2 MB, 12DI/8DO-Transistor/2DC, Ethernet, 24 V DC, 2x option slots
PM5032-R-ETH	2 MB, 12DI/6DO-Relay/2DC, Ethernet, 24 V DC, 2x option slots
PM5052-T-ETH	4 MB, 12DI/8DO-Transistor/2DC, Ethernet, 24 V DC, 3x option slots
PM5052-R-ETH	4 MB, 12DI/6DO-Relay/2DC, Ethernet, 24 V DC, 3x option slots
PM5052-R-ETHL	84 MB, 12DI/6DO-Relay/2DC, Ethernet, 24 V DC, 3x option slots
PM5072-T-2ETH	8 MB, 12DI/8DO-Transistor/2DC, 2x Ethernet, 24 V DC, 3x option slots
PM5072-T-2ETHW	8 MB, 12DI/8DO-Transistor/2DC, 2x Ethernet, 24 V DC, 3x option slots, wide temperature
[Accessories]	
TA5101-4DI	DI module option board, 4DI 24 V DC, spring/cable front
TA5105-4DOT	DO module option board, 4DO-T 24 VDC / 0.5 A, spring/cable front
TA5110-2DI2DOT	DI/DO module option board, 2DI 24 VDC, 2DO-T 24 VDC / 0.5 A, spring/cable front
TA5141-RS232I	RS-232 serial adapter isolated option board, spring/ cable front
TA5142-RS485I	RS-485 serial adapter isolated option board, spring/ cable front
TA5142-RS485	RS-485 serial adapter non isolated option board, spring/cable front
TA5130-KNXPB	KNX address switch option board, 1 push button
TA5131-RTC	Real Time Clock without battery, option board for AC500-eCo Basic CPU
MC5102	Micro memory card with micro memory card adapter
TA5300-CVR	Option board cover, removable plastic part
TA5301-CFA	Cable fixing part accessory
TA5211-TSCL-B	Screw terminal block set for AC500-eCo V3 CPU Basic, screw front
TA5211-TSPF-B	Spring terminal block set for AC500-eCo V3 CPU Basic, spring front
TA5212-TSCL	Screw terminal block set for AC500-eCo V3 Standard and Pro CPU screw front
TA5212-TSPF	Spring terminal block set for AC500-eCo V3 Standard and Pro CPU spring front
TA5220-SPF5	Spring terminal block, removable, 5-pin, spring front, cable front

## Product Description and/or Approval Condition

Date of Issue : 18th April, 2022

Module	Description
TA5220-SPF6	Spring terminal block, removable, 6-pin, spring front, cable front
TA5220-SPF7	Spring terminal block, removable, 7-pin, spring front, cable front
TA5220-SPF8	Spring terminal block, removable, 8-pin, spring front, cable front
TA5220-SPF9	Spring terminal block, removable, 9-pin, spring front, cable front

### 2. Approved Drawings and Documents

#### 1) Datasheets

1SAP136601 Rev. B0, 1SAP136602 Rev. B0, 1SAP136607 Rev. A0,  
 1SAP136609 Rev. B0, 1SAP136610 Rev. A0, 1SAP136611 Rev. A0,  
 1SAP136603 Rev. B0, 1SAP136606 Rev. B0, 1SAP136608 Rev. B0,  
 1SAP136610 Rev. A0, 1SAP136603 Rev. B0,  
 3ADRO10585, 1, en\_US 2021/09/14, 3ADRO10724, 1, en\_US 2021/09/14,  
 3ADRO10727, 1, en\_US 2021/09/14, 3ADRO10728, 1, en\_US 2021/09/14,  
 3ADRO10729, 1, en\_US 2021/09/14, 3ADRO10730, 1, en\_US 2021/09/14,  
 3ADRO10731, 1, en\_US 2021/09/14, 3ADRO10732, 1, en\_US 2021/09/14,  
 3ADRO10733, 1, en\_US 2021/09/14,

### 3. Test Reports, etc.

- 1) EMV: 713231440 dated 13. Dec. 2021
- 2) EMC: FS-2109-450318-009 dated 2021-11-26, FS-2109-450318-008 dated 2021-10-26, 3893-3141 dated 2021-08-23

## B. Approval Condition

### 1. Application & Limitation

- 1) This approval is granted on the basis of the test reports and the approved documentation.
- 2) The manufacturer should inform this Society of all kinds of revisions of the equipment. If the changes are recognized to affect functionality of the approved equipment, type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.
- 3) Degree of protection shall be complied with Rule Pt.6 Ch.1 Sec.2 201.2. (5).
- 4) This certificate covers hardware listed under Product specification.
- 5) The products shall not be installed on open decks.
- 6) When this system is to be installed in the vicinity of a standard or a steering magnetic compass, it should have the minimum safe distance 5 m or more at which it may be mounted from such compasses.

### 2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual product certification is not required.

### 3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

### 4. Others

- 1) Test condition (IACS UR E10 Rev.8)

Test	Condition	Remark
EMC	All locations excluding the bridge and deck zone	-
Temperature	-25 ~ +70 °C	-
Vibration	Acceleration $\pm 0.7g$	-

&lt; End of Certificate &gt;