

# EU RO MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

This Certificate is issued to

**ABB Automation Products GmbH**  
**Heidelberg, Germany**

for

**Computers and Programmable Logic Controllers**

with type designation(s)

**AC500-eCo / S500-eCo**

The product is found to comply with

**EU RO Mutual Recognition Technical Requirements for Computers and Programmable Logic Controllers**

Intended service

**PLC based systems subject to classification requirements**

This Certificate is valid until **2022-12-05**.

Issued at **Hamburg** on **2017-12-06**

DNV GL local station: **Augsburg**

Approval Engineer: **Dariusz Lesniewski**

for **DNV GL**

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**Joannis Papanuskas**  
**Head of Section**



## Product description

AC500-eCo / S500-eCo scalable programmable logic controller system

Type	Description
<b>CPUs (AC500-eCo)</b>	
PM554-TP	128kB, 8DI / 6DO-T, 24V DC
PM554-TP-ETH	128kB, 8DI / 6DO-T, ETH, 24V DC
PM554-RP	128kB, 8DI / 6DO-R, 24V DC
PM554-RP-AC	128kB, 8DI / 6DO-R, 100-240V AC
PM556-TP-ETH	512kB, 8DI / 6DO-T, ETH, 24V DC
PM564-TP	128kB, 6DI / 6DO-T/2AI/1AO, 24V DC
PM564-TP-ETH	128kB, 6DI / 6DO-T/2AI/1AO, ETH, 24V DC
PM564-RP	128kB, 6DI / 6DO-R/2AI/1AO, 24V DC
PM564-RP-ETH	128kB, 6DI / 6DO-R, ETH, 24V DC
PM564-RP-ETH-AC	128kB, 6DI / 6DO-R, ETH, 100-240V AC
PM564-RP-AC	128kB, 6DI / 6DO-R/2AI/1AO, 100-240V AC
PM566-TP-ETH	128kB, 8DI / 6DO-R/2AI/1AO, ETH, 24V DC
<b>I/O-Modules (S500-eCo)</b>	
DX561	8 DO (24V DC, T), 8 DI (24V DC)
DC561	16 DI/DO (24V DC), configurable
DC562	16 DI/DO (24V DC), configurable
DI561	8 DI (24V DC)
DO561	8 DO (24V DC, T)
DO562	16 DO (24V DC, T)
AX561	4 AI, 2 AO (24V DC), configurable
AI561	4 AI configurable
AO561	2 AO configurable
DI562	16 DI (24V DC)
AI562	2 AI, RTD (resistance temp. detector), configurable
DX571	8 DO (24V DC or 100-240V AC, R, 2A), 8DI (24V DC)
DO571	8 DO (24V DC or 100-240V AC, R, 2A)
DI571	8 DI (100-240V AC)
DI572	16 DI (100-240V AC)
DO572	8 DO triac (240V AC)
DO573	16 DO (24V DC or 100-240V AC, R, 2A)
<b>Function Modules (S500-eCo)</b>	
FM562	Function module for servo and stepper motors
<b>Accessories (AC500-eCo / S500-eCo)</b>	
TK503, TK504	Programming Cable
TK506	RS-485 Isolator for COM1 /AC500-eCo)
MC503	SD Memory Card Adaptor
TA561-RTC	Real-time Clock Adaptor
TA562-RS	Serial RS-485 Adaptor
TA562-RS-RTC	Adaptor with Serial RS-485 (COM2) and Real-time Clock
TA560-BAT	Lithium battery for real-time clock
TA566	Wall Mounting Accessory (S500-eCo)
L44440901501	Terminal
L44441101501	Terminal
L44460901501	Terminal
L44461101501	Terminal
L44470901501	Terminal
L44471101501	Terminal
TA563-9, TA563-11	Terminals
TA564-9, TA564-11	Terminals
TA565-9, TA565-11	Terminals

Firmware for AC500-eCo PM5xx: V2.5.x  
Firmware for S500-eCo: V2.0.x

### **Manufactured by**

WELCO TECHNOLOGY (SHENZHEN) LTD.  
WANFENG INDUSTRIAL ESTATE,  
34 THE EAST OF WANZHANG PU,  
SHAJING, BAOAN, SHENZHEN,  
GUANGDONG, P.R.CHINA

### **Application/Limitation**

#### Application:

The Type Approval covers all hardware listed under Product description. The PLC-system ist intended for use in control, monitoring, alarm, and safety functions subject to classification requirements.

#### Limitation:

- Installation on navigation bridge in metal cabinet only
- Not for installation on wheather exposed areas (open deck)

### **Type Approval documentation**

<b>Name</b>	<b>Number</b>	<b>Date</b>
Test report:	paconsult No. 90-2475B	2009-07-06
Test report:	paconsult No. 2-4737 Rev. 1	2012-12-14
Test report:	paconsult No. 16-7720	2016-06-10
Test report:	Paconsult No. 17-9054	2017-10-26
Test report:	Paconsult No. 17-9139	2017-10-04
Test report:	XPQS&II No. 2010H_W032	2010-09-25
Test report:	EMV Rhein-Neckar No. 3893-394f	2009-09-04
Test report:	EMV Rhein-Neckar No. 3893-3124f	2017-11-01
Test report:	EMV Rhein-Neckar No. 071832.191.17 V1.0	2017-09-26
Test report:	ABB No. 110811 AC500eco Emission Ship	2011-07-08
Test report:	SITIIS No. C10-133-WT	2010-06-01
Test report:	CESI Laboratory No. SEC12-0456WM-E-E1	2012-11-28
Test report:	CESI Laboratory No. SEC12-0456WM-E-E2	2012-11-28
Test report:	CESI Laboratory No. SEC13-0728WM-E-E1	2013-10-21
Test report:	CESI Laboratory No. SEC13-0278WM-E-E2	2013-10-21
Test report:	CESI Laboratory No. SEC13-1473WM-E-E1	2014-04-30
Test report:	CESI Laboratory No. SEC13-1473WM-E-E2	2014-04-30
Test report:	CESI Laboratory No. SEC13-1475WM-E-E1	2014-04-30
Test report:	CESI Laboratory No. SEC13-1475WM-E-E2	2014-04-30
Test report:	CESI Laboratory No. SEC15-0182WM-E-E1	2015-05-18
Test report:	CESI Laboratory No. SEC15-0182WM-E-E2	2015-05-18
Test protocol:	ABB D2009004	2009-01-29
Test protocol:	ABB D2009032	2009-06-25
Test protocol:	ABB D2012055	2012-12-23
Test protocol:	ABB D2012014	2012-04-20
Test protocol:	ABB D2012055	2012-12-23
Test protocol:	ABB D2013007	2013-09-30
Test protocol:	ABB D2013008	2013-11-14

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Test protocol:	ABB D2013009	2013-10-29
Test protocol:	ABB D2015003	2015-08-05
Test protocol:	ABB D2016008	2016-08-05
Drawing:	1SAP126601F0001, Rev 1.0	2011-11-08
Drawing:	1SAP126604F0001, Rev 5.0	2015-11-08
Drawing:	1SAP126620F0001, Rev 1.0	2012-04-10
Drawing:	1SAP126621F0001, Rev 1.0	2012-04-10

Document package including circuit diagrams, part lists, PCB lay-outs  
Assembly and operation manual AC500 PLC, dated 2017-05-31  
List of firmware version – eCo CPU, issue 2017-11-07  
S500-eCo FW overview over all released/test versions, issue 2016-11-02

EU RO MR Type Approval PQA Scheme Periodical Assessment Checklist issued at Guangzhou on  
2017-11-26

### Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- date of manufacture
- power supply ratings

### Other Conditions

The units have been verified for compliance with EU Mutual Recognition Technical Requirements for Computers and programmable logic controllers (PLC) Version 0.3, dated 2016-04-01.

Compass Safe Distance according to section 11.2 of IEC 60945, 4<sup>th</sup> edition (2002) has been additionally verified.

Environmental test parameters:

Temperature: 0°C / 70°C

Vibration: 5 - 13,2 Hz / ±1mm  
13.2 - 100 Hz / 0.7 g

EMC: All locations excluded bridge and open deck zone  
Navigation bridge when installed in metal cabinet

Enclosure: IP20

Compass safe distance:

Standard Compass Safe Distance: 71.0 cm


Steering Compass Safe Distance: 35.0 cm

### Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications



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- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed annually and at renewal of this certificate.

END OF CERTIFICATE