

## Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

<b>Manufacturer</b>	<b>ABB AG</b>
<b>Address</b>	Eppelheimer Strasse 82, Heidelberg, 69123, Germany
<b>Place of Production</b>	ABB Stotz-Kontakt GmbH Hauptstr. 12 - 16, Hornberg, 78132, Germany
<b>Type</b>	Control Units
<b>Description</b>	AC500, S500, AC500-XC, S500-XC, AC500-S, AC500-S-XC refer to the Appendix for details
<b>Trade Name</b>	Programmable Logic Controller
<b>Application</b>	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – 2015 for general power distribution zones.
<b>Specified Standard</b>	EN 61131-2 (2007) IACS unified requirements E10 (Rev.8 Feb 2021)
<b>Other Conditions</b>	The product designation of components may be followed by "XC" (extreme condition). Tests were carried out as required for the assigned environmental category if not stated otherwise.

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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.

**Previous Version:** This certificate supersedes certificate number LR2218071TA issued on 26 January 2022 which is hereby cancelled.

The Design Appraisal Document HTS/ETS 42224-22/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

## Appendix

### TYPES

AC500, S500, AC500-XC, S500-XC, AC500-S, AC500-S-XC

Comprising the following modules:

#### CPUs:

PM582

PM585-ETH (FW: V2.x.x),

PM590-ETH, PM590-ARCNET (up to Index A9)

PM591-ETH

PM572, PM573-ETH, PM583-ETH, PM592-ETH

SM560-S (Firmware/FW: V2.x.x)

SM560-S-FD-1 (FW: 2.x.x), SM560-S-FD-4 (FW: 2.x.x)

PM595-4ETH-F, PM595-4ETH-M-XC, PM591-2ETH (FW: V2.x.x)

PM5630-2ETH, PM5650-2ETH, PM5670-2ETH, PM5675-2ETH (FW: V3.x.x)

#### Terminal Bases:

TB511-ETH, TB511-ARCNET,

TB521-ETH, TB521-ARCNET,

TB541-ETH

TB523-2ETH, TF501-CMS, TF521-CMS,

TB5600-2ETH, TB5610-2ETH, TB5620-2ETH

#### I/O-Modules:

AX522

Analogue I/O with 8 channels

AX521

Analogue I/O with 4 channels

AO523

Analogue output

AI523

Analogue input

AC522

Analogue I/O with 8 channels

DI524

Digital inputs

DC532

Digital I/O

DC522

Digital I/O 16 channels

DC523

Digital I/O 24 channels

DX522

Digital inputs/relay outputs

DC551-CS31

Decentralised I/O - Station with CS 31- interface

DX531

Digital inputs/230V relay outputs

DC541

Digital inputs/ digital in-outputs

DA501

Digital I/O module

DA502

Digital I/O module

DO524

Digital output module

DO526	Digital output module
CD522	Encoder and PWM expansion module
PD501	Positioning module/analogue inputs, 24VDC-motor outputs
AI531	Analogue input module
CI501-PNIO	Ethernet bus module
CI502-PNIO	Ethernet bus module
CI511-ETHCAT	Ethernet-bus module
CI512-ETHCAT	Ethernet-bus module
CI521-MODTCP	Communication interface module
CI522-MODTCP	Communication interface module
CI590-CS31-HA	High availability CS31 bus module
CI592-CS31	CS31 bus module with digital and analogue I/O's
TA524	Housing
CI541-DP	PROFIBUS DP bus module
CI542-DP	PROFIBUS DP bus module
CI581-CN	CANopen bus module
CI582-CN	CANopen bus module
CI504-PNIO	PROFINET IO bus module
CI506-PNIO	PROFINET IO bus module
AI581-S	Analogue input module (FW: V3.x)
DI581-S	Digital input module (FW: V3.x)
DX581-S	Digital input/output module (FW: V3.x)
FM502-CMS,	Condition monitoring module
Terminal Units:	TU515, TU516, TU531, TU532, TU541, TU542 TU551-CS31, TU552-CS31, TU507-ETH, TU508-ETH TU509-DP, TU510-DP, TU517, TU518, TU520-ETH, TU582-S
Communication Couplers:	
CM592-DP	Profibus coupler
CM597-ETH	Ethernet coupler
CM598-CN	CanOpen coupler
CM574-RS	Communication module serial
CM579-PNIO	Communication module PROFINET IO
CM589-PNIO	
CM589-PNIO-4	
CM579-ETHCAT	Communication module EtherCAT®
CM588-CN	Communication module CANopen
Accessories:	MC502 memory card