Dear Sirs,

Please kindly note this letter confirms that the below subject product, manufactured by ABB Automation Products GmbH has met satisfactorily relevant requirements of Lloyd’s Register LR Type Approval Procedure, TA 14 and relevant Classification Rules as found applicable.

PRODUCER
ABB Automation Products GmbH
Eppelheimer Strasse 82
69123 Heidelberg
Germany

DESCRIPTION
Programmable Logic Controller

TYPE
AC500, S500, AC700F, S700 F, AC500-XC, S500-XC, AC500-S, AC500-S-XC

Comprising the following modules:

CPUs:
PM571, PM571-ETH, PM571-ARCNET,
PM581, PM581-ETH, PM581-ARCNET, EC581-ARCNET
PM582, PM582-ETH, PM582-ARCNET,
PM585-ETH* (FW: 2.7.x),
PM590*, PM590-ETH*, PM590-ARCNET* (up to Index A9)
PM591*, PM591-ETH*, PM591-ARCNET*
PM572, PM573-ETH*, PM583-ETH*, PM592-ETH*, PM783F-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: V2.7.x)
PM5630-2ETH*, PM5650-2ETH*, PM5670-2ETH*, PM575-2ETH* (FW: V3.1.x)

Terminal Bases:
TB511*, TB511-ETH*, TB511-ARCNET*,
TB521*, TB521-ETH*, TB521-ARCNET*,
TB541, TB541-ETH, TB541-ARCNET
TYPES CONTINUED

TB711
TB523-2ETH*, TF501-CMS*, TF521-CMS*,
TB5600-2ETH*, TB5610-2ETH*, TB5620-2ETH*

I/O-Modules:

DCS05-FBP/DC 705F-FBP  Decentralised I/O - Station with fieldbus interface
AX522/AX 722F  Analogue I/O with 8 channels
AX521/AX 721F  Analogue I/O with 4 channels
AO523/AO 723F  Analogue output
AI523/AI 723F  Analogue input
AC522/AC 722F  Analogue I/O with 8 channels
DI524*/DI 724F  Digital inputs
DC532*/DC 732F  Digital I/O
DC522*/DC 722F  Digital I/O 16 channels
DC523*/DC 723F  Digital I/O 24 channels
DX522/DX 722F  Digital inputs/relay outputs
DC551-CS31  Decentralised I/O - Station with CS 31- interface
DX531/DX 731F  Digital inputs/230V relay outputs
DC541  Digital inputs/ digital in-outputs
DA501/DA 701  Digital I/O module
DA502*  Digital output module
DO524*  Digital output module
DO526*  Digital output module
CD522*/CD 722F  Encoder and PWM expansion module
PD501  Positioning module/analogue inputs,
        24VDC-motor outputs
AI531*/AI 731F  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*  High availability CS31 bus module
CI592*  CS31 bus module with digital and analogue I/O's
TA524/TA 724F  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*, TU505-FBP,
TU506-FBP, TU551-CS31, TU552-CS31, TU507-ETH,
TU508-ETH, TU 705F,
Communication Couplers:
CM572-DP/CM572F-DP, Profibus coupler
CM592-DP*
CM575-DN Device net coupler
CM577-ETH, CM597-ETH*, Ethernet coupler
CM578-CN*, CM598-CN*, CanOpen coupler
CM574-RCOM* Communication module RCOM/RCOM+
CM574-RS* Communication module serial
CM579-PNIO* Communication module PROFINET IO
CM589-PNIO*, CM589-PNIO-4*, Communication module PROFINET IO
CM579-ETHCAT* Communication module EtherCAT®
CM588-CN* Communication module CANopen

Accessories: MC502 memory card

APPLICATION
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.

ADDITIONAL TESTS
Low temperature (-25°C/16 hrs) applies for eXtreme Conditions variants, module name will be followed by “‐XC”

STANDARD
EN 61131-2 (2007)

OTHER CONDITION
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.

PLACE OF PRODUCTION
ABB Stotz-Kontakt GmbH
Hauptstrasse 12-16
78132 Hornberg
Germany

The Design Appraisal Document No. HTS/ETS 39385-20 and its supplementary Type Approval Terms and Conditions form part of this interim LR Type Approval letter.

This approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations and any project related plan approval process as found necessary.

This approval letter is valid until the final certificate will be issued when Lloyd’s Register New global Database is successfully implemented.

Lloyd’s Register is to be notified of any change that may affect the validity of this approval.
We regret any inconvenience caused and hope this letter will find your understanding bridging the gap until the new final LR Type Approval Certificate format will be issued.

Yours sincerely,

[Signature]

Thorsten Wolff
Senior Specialist
Electrotechnical Systems
Hamburg Technical Support Office
Lloyd's Register EMEA
T +49 (0)40 34970010-267
E thorsten.wolff@lr.org