



# 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.

This certificate supersedes certificate number 00/20003 (E6) issued on 14.12.2016 which is hereby cancelled.

This certificate is issued to:

**PRODUCER** maresystems GmbH

**PLACE OF PRODUCTION** Eichkamp 15  
24217 Schönberg  
Germany

**DESCRIPTION** Integrated Automation System

**TYPES** Vista Automation System

Consisting of:

SMU - Substation Management Unit	Type: F802 Software Version of utilisation program: 3.106 operating system: LINUX 2.4.18
SMU - Substation Management Unit	Type: F803 Software Version of utilisation program: 3.106 operating system: LINUX 2.6.30
Interface Converter RS232/TTY	Type: A218
VBI1 - Fieldbus converter; 1 channels	Type: F403
VBI5 - Fieldbus converter; 5 channels	Type: F401
VBI6 - Fieldbus converter; 6 channels	Type: F404
VBI6 Plus - Fieldbus converter; 6 channels	Type: F404; Software Version: 0.200
VBI6 Plus standby - Fieldbus converter; 6 channels	Type: F404; Software Version: 0.200

**Certificate No.** 00/20003 (E7)

**Issue Date** 28 August 2018

**Expiry Date** 16 November 2019

**Sheet** 1 of 4



for Jochen Körner  
Hamburg Technical Support Office  
Lloyd's Register EMEA

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

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DAD - Data Acquisition Display 128 LED's	Type: A205; Software Version: 1.001
DAD - Liquid Crystal Display + 64 LED's	Type: A206; Software Version: 1.001
RCD - Remote Control Display	Type: F506; Software Version: 1.001
ACI 6 - 6 channels; 0 ... 25 mA input	Type: F101; Software Version: 1.52
ACI 6 - Plus Version (with DC/DC converter)	Type: F101; Software Version: 2.009
ACI 6 - Red Version (with additional bus interface)	Type: F101; Software Version: 2.009
ACI 6 - Plus Version Rev. L (with DC/DC converter)	Type: F101; Software Version: 3.001
ACI 6 - Red Version Rev. H (with additional bus interface)	Type: F101; Software Version: 3.001
RCP - Remote Control Panel	Type: F504, F505; Software Version: 1.001
API 6 - 6 channels - Pt 100 Inputs/ 3 wire	Type: F102; Software Version: 1.52
API 6 - 6 channels - Pt 100 - Inputs/ 4 wire	Type: F102; Software Version: 1.50
API 6 - Plus Version (with DC/DC converter)	Type: F102; Software Version: 2.009
API 6 - Red Version (with additional bus interface)	Type: F102; Software Version: 2.009
API 6 - Plus Version Rev. I (with DC/DC converter)	Type: F102; Software Version: 3.001
API 6 - Red Version Rev. E (with additional bus interface)	Type: F102; Software Version: 3.001
ATI 6 - 6 channels Thermocouple Input	Type: F103; Software Version: 1.52
ATI 6 - Plus Version (with DC/DC converter)	Type: F103; Software Version: 2.009
ATI 6 - Red Version (with additional bus interface)	Type: F103; Software Version: 2.009
ATI 6 - Plus Version Rev. L (with DC/DC converter)	Type: F103; Software Version: 3.001
ATI 6 - Red Version Rev. F (with additional bus interface)	Type: F103; Software Version: 3.001
DVI 24 - Voltage; 24 channels binary input	Type: F104; Software Version: 1.20
DCI 24 - NC/NO; 24 binary for contacts	Type: F105; Software Version: 1.20
DCI 24 - Plus Version (with DC/DC converter)	Type: F105; Software Version: 2.05
DCI 24 - Red Version (with additional bus interface)	Type: F105; Software Version: 2.05
DCO 8 - NC/NO; 8 channels relay output	Type: F201; Software Version: 1.13

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ACO 8 - 8 channels; 0 ... 25 mA output	Type: F202; Software Version: 1.10
ACO 8 - Plus Version Rev. D	Type: F202; Software Version: 2.003
ACO 8 - Red Version Rev. D (with additional bus interface)	Type: F202; Software Version: 2.003
DCO 16 - NC/NO; 16 channels relay output	Type: F203; Software Version: 1.11
DCO 16 - Plus Version (with bus interface)	Type: F203; Software Version: 2.001
DCO 16 - Red Version (with two bus interfaces)	Type: F203; Software Version: 2.001
XAS Extension Alarm Panel	Type: F503; Software Version: 3.55
XAS -X XAS - Distribution with XAS Fail Alarm	Type: F902 002A / F902 005A (pluggable)
PPI Parallel Printer Interface	Type: F601; Software Version: 1.09
Printer	Types: DR235N, ML280
Ethernet Switch	Type: D903
Keyboard A316	Type: D501
Keyboard + Trackball ( A317)	Type: D502
SCN Slave Clock Node	Type: F402; Software Version: 1.13
Hub 10BaseT (Hewlett Packard)	Type: HUB
Safety Unit	Type: A314
PCS - Process Control System (Additional) consisting of an LR Type Approved PC System with monitor as application server	System for visualization of process data managing of up to 8192 I/O channels from up to 16 substations. Graphical representation of: - Alarms, alarm history, non accepted alarms, suppressed or disable alarms - Parameter changing; trend pages - Exhaust gas temperature, exhaust gas temperature deviation with slow down function - System diagnosis
Paperless alarm registration	Alarm registration on the visualization-system. Storage of complete alarm list and/or daily alarm reports. In addition the sub system UDP Print (electronic alarm registration) as per specification 1.12.2016, rev 1 is installed.

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<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 - 2002 . All versions for DCI 24 components comply for use in environmental categories ENV1, ENV2, ENV3 and ENV4 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 2002.
<b>ADDITIONAL TESTS</b>	Low temperature test (-15° C/ 16 hours) for components DCI 24 in Plus or Red version and DCO 16 in Plus or Red version.
<b>DESIGN CODE</b>	Vista Alarm Automation System User's Manual, Rev. 9, created 11.11.2002 UDP print, operator's manual, Rev. 1, created 12. 12.2016
<b>OTHER CONDITIONS</b>	For the use of the "paperless" alarm printer a USB stick is required. The utilized USB sticks are to be registered, stored and be made available to a LR Surveyor at any time.  Final functional arrangements are to comply with the appropriate Lloyd's Register Rules and will be subject of the Plan Approval Process.

*"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 attached Design Appraisal Document No. HTS/ETS 37292-18 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No. 00/20003 (E6) to which this extension should be attached.

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