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Certificate No: LR23384559TA Issue Date: 20/10/2023 Expiry Date: 21/12/2027

# **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.

Manufacturer DEIF A/S

**Address** Frisenborgvej 33, Skive, 7800, Denmark

**Place of Production** Exor International SpA

Via Monte Fiorino 9, San Giovanni Lupatoto, 37057, Italy

**Type** Human Machine Interface

**Description** HMIs (Human Machine Interfaces) with display and touchscreen, and plug-in

accessories

**Trade Name** AGI Series (AGI 407, AGI 410, AGI 415, AGI 421) with plug-in modules EXM CAN,

EXM AGIO06

**Application** Marine, Offshore and Industrial application for use in environmental categories

ENV1 and ENV2 as defined in Lloyd's Register Type Approval System, Test

Specification Number 1, 2015.

**Specified Standard** Manufacturer's Specification

**Ratings** See Appendix

**Additional Tests** Compass Safe Distance, according to IEC 60945:2002

**Matteo Roiaz** 

Electrical & Control - Specialist to Lloyd's Register EMEA

A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom



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Compass Safe Distance, according to IEC 60945:2002

	standard	steering	
	compass [m]	compass [m]	
AGI 407	0.85	0.40	
AGI 410	1.15	0.75	
AGI 415	1.80	1.30	
AGI 421	2.20	1.30	

Cold test, IEC 60068-2-1, cl.6: at -25°C, 5 hours Dry Heat test, IEC 60068-2-2, cl.6: at +55°C, 16 hours

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:** 18/00031

The Design Appraisal Document LR23384559DA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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#### **APPENDIX to Certificate no. LR23384559TA**

#### **RATINGS**

Power supply: 24 V dc
Protection Index: IP 66 (front)
IP 20 (rear)

AGI 407<sup>(\*)</sup>

- Display – Colours: 7" TFT 16:9 LED – 16M

- Resolution: 800x480 WVGA

- Touchscreen: True glass projected capacitive, multitouch

- CPU: ARM Cortex-A9 dual core 800 MHz

- Operating System: Linux RT

- Interfaces n.3 Ethernet port

n.2 USB port

n.1 serial port (n.3 using plug-in modules)

SD card slot

n.2 plug-in module slot for system expansion

AGI 410<sup>(\*)</sup>

- Display - Colours: 10.1" TFT 16:9 LED - 16M

- Resolution: 1280x800 WXGA

- Touchscreen: True glass projected capacitive, multitouch

- CPU: ARM Cortex-A9 dual core 800 MHz

- Operating System: Linux RT

- Interfaces n.3 Ethernet port

n.2 USB port

n.1 serial port (n.3 using plug-in modules)

SD card slot

n.2 plug-in module slot for system expansion

AGI 415<sup>(\*)</sup>

- Display - Colours: 15.6" TFT LED - 16M

- Resolution: 1366x768 HD

- Touchscreen: True glass projected capacitive, multitouch

- CPU: ARM Cortex-A9 quad core 800 MHz

- Operating System: Linux RT

- Interfaces n.3 Ethernet port

n.2 USB port

n.1 serial port (n.3 using plug-in modules)

SD card slot

n.2 plug-in module slot for system expansion

(Continues)



### APPENDIX to Certificate no. LR23384559TA

AGI 421<sup>(\*)</sup>

- Display – Colours: 21.5" TFT LED – 16M - Resolution: 1920x1080 HD

Touchscreen: True glass projected capacitive, multitouch
 CPU: ARM Cortex-A9 quad core 800 MHz

- Operating System: Linux RT

- Interfaces n.3 Ethernet port

n.2 USB port

n.1 serial port (n.3 using plug-in modules)

SD card slot

n.2 plug-in module slot for system expansion

**Accessories:** 

EXM CAN<sup>(\*\*)</sup> CAN interface, DB9 CAN connector

EXM AGIO06<sup>(\*\*)</sup> I/O module, compact

8 digital input 6 digital output 1 relay output

(\*) Model name can be followed by 1 or 2 or 3 characters

(\*\*) Model name can be followed by 1 or 2 or 3 or 4 or 5 characters