Certificate No: LR22314662TA
Issue Date: 25/07/2022
Expiry Date: 24/07/2027

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	**CREVIS Co., Ltd.**
Address	29-4 Gigok-ro Giheung-gu Yongin-si,Yongin-si, Gyeonggi-do, 17099, South Korea
Type	Control Units
Description	Programmable Electronic Equipment
Trade Name	FnIO M-Series
Application	Marine and offshore applications for use in environmental category ENV 4 in the “Bridge and Deck Zone” as defined in LR Type Approval System Specification No.1-2021
Specified Standard	Manufacture’s Specification
Ratings	MD9289/M9289/M9386/M9371/M9372/M9373/M9273 (24Vdc) M1808/M1908/M2738/M2744/M2768/M2774/M2788/M3708/M3808/M3918/ M3928/M3938/M3948/M5212/M5222/M5232/M7001/M7002/M12DF/M1418/ M1428/M225F/M226F/M2418/M2428/M2618/M2628/M317F/M319F/M347F/ M349F/M4118/M4158/M4218/M4258/M4428/M4468/M5914(5Vdc)
Additional Tests	Dry Heat test to 70°C for 16 hrs

J.C. Park

Jong-Cheon Park

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Type Approval Certificate

Other Conditions

1. Suitability of the software and configuration are subject to a separate plan appraisal according to the Lloyd's Register Rules and Regulation when placed on LR classed vessels.
2. Type approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.
3. If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.
4. (In case of applications other than marine) The application of the type approval certificate will be limited to the relevant scope of the specified standard and acceptance thereof by the local authorities.

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 Asia of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document LR22314662TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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Appendix

Type	Model Number	Description
Network Adapter	M9371	CODESYS, Programmable IO, Economic type
Network Adapter	M9372	CODESYS, Programmable IO, Standard type
Network Adapter	M9373	CODESYS, Programmable IO, Web visualization type
I/O Module	M9273	MODBUS RS485 Network Adapter
I/O Module	M1808	Digital Input 8 Points, 120Vac, 18RTB
I/O Module	M1908	Digital Input 8 Points, 240Vac, 18RTB
I/O Module	M2738	MOS Relay Output, 8 Points, 240Vdc/ac, 0.5A, 18RTB
I/O Module	M2744	Relay Output 4 Points, 24Vdc/2A, 240Vac/2A, 18RTB
I/O Module	M2768	MOS Relay Output, 8 Points, 24Vdc/ac, 2A, 18RTB
I/O Module	M2774	Form C, Relay Output 4 Points, 24Vdc/2A, 240Vac/2A, 18RTB
I/O Module	M2788	MOS Relay Output, 8 Points, 120Vdc/ac, 1A, 18RTB
I/O Module	M3708	Analog Input, 8 Channels, RTD / Resistance Input, 18RTB
I/O Module	M3808	Analog Input, 8 Channels, Thermocouple / mV Input, 18RTB
I/O Module	M3918	Analog Input, Differential type, 8 Channels, 0~20, 4~20, +/-20mA, 12bit, 18RTB
I/O Module	M3928	Analog Input, Differential type, 8 Channels, 0~5, 0~10, +/-10Vdc, 12bit, 18RTB
I/O Module	M3938	Analog Input, Differential type, 8 Channels, 0~20, 4~20, +/-20mA, 16bit, 18RTB
I/O Module	M3948	Analog Input, Differential type, 8 Channels, 0~5, 0~10, +/-10Vdc, 16bit, 18RTB
I/O Module	M5212	RS232 Serial Interface, 2 Channels, Full Duplex Type, 18RTB
I/O Module	M5222	RS422 Serial Interface, 2 Channels, Full Duplex Type, 18RTB
I/O Module	M5232	RS485 Serial Interface, 2 Channels, Half Duplex Type, 18RTB
Network Adapter	MD9289	MODBUS TCP Network Adapter(Dual Type)
Network Adapter	M9289	MODBUS TCP Network Adapter(Single Type)
Network Adapter	M9386	EtherCAT ID Type Network Adapter(Single Type)
I/O Module	M7001,M7002	Redundancy Power
I/O Module	M12DF	Digital Input 16 Point, Universal (Sink or Source), 24Vdc, 18RTB

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I/O Module	M1418	Digital Input 8 Points, Sink, 24Vdc, Diagnostic, 18RTB
I/O Module	M1428	Digital Input 8 Points, Source, 24Vdc, Diagnostic, 18RTB
I/O Module	M225F	Digital Output 16 Point, Sink, 24Vdc/0.3A, 18RTB
I/O Module	M226F	Digital Output 16 Point, Source, 24Vdc/0.3A, 18RTB
I/O Module	M2418	Digital Output 8 Points, Sink, 24Vdc, Diagnostic, 18RTB
I/O Module	M2428	Digital Output 8 Points, Source, 24Vdc, Diagnostic, 18RTB
I/O Module	M2618	Digital Output 8 Point, Sink, 24Vdc/2A, 18RTB
I/O Module	M2628	Digital Output 8 Point, Source, 24Vdc/2A, 18RTB
I/O Module	M317F	16 Channels Current Input, 0~20mA/4~20mA, 12bit, 18RTB
I/O Module	M319F	16 Channels Current Input, 0~20mA/4~20mA, 16bit, 18RTB
I/O Module	M347F	16 Channels Voltage Input, 0~10Vdc/0~5Vdc/1~5Vdc, 12bit, 18RTB
I/O Module	M349F	16 Channels Voltage Input, 0~10Vdc/0~5Vdc/1~5Vdc, 16bit, 18RTB
I/O Module	M4118	8 Channels Current Output, 0~20mA, 12bit, 18RTB
I/O Module	M4158	8 Channels Current Output, 0~20mA, 16bit, 18RTB
I/O Module	M4218	8 Channels Current Output, 4~20mA, 12bit, 18RTB
I/O Module	M4258	8 Channels Current Output, 4~20mA, 16bit, 18RTB
I/O Module	M4428	8 Channels Voltage Output, 0~10V, 12bit,18RTB
I/O Module	M4468	8 Channels Voltage Output, 0~10V, 16bit, 18RTB
I/O Module	M5914	4 Channels Current Input, 4~20mA, 16bit with Hart, 18RTB

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