



TYPE APPROVAL CERTIFICATE

Certificate No. : MIL20769-EL002 **Initial Approval :** 1st August, 2014
Product : Intrinsically Safe Isolators & Safety Relay
Manufacturer : G.M. International srl
Via G. Mameli, 53-55, I-20852 Villasanta (MB), ITALY

Product Description : Type : D5000 series

" See Appendix 1 "

Approval Condition : " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 31st July, 2024

Issued at Busan, Korea on 12th October, 2020



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No (ME20035185468) and certificate No. (MIL20769-EL002).



KOREAN REGISTER

*General Manager of
Marine & Ocean Equipment Team*

- Note :**
1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Appendix 1

Product Description and/or Approval Condition

Certificate No : MIL20769-EL002

Date of Issue : 12th October, 2020

A. Product Description

1. Product Specification

Type	Description	Datasheet No.
D5011S, D5011D	Repeater Power Supply	DTS0347-9
D5014S, D5014D	Repeater Power Supply	DTS0280-12
D5015SS, D5015SK	Repeater Power Supply	DTS0629-6
D5020S, D5020D	Powered Isolating Driver	DTS0281-12
D5030S, D5030D	Switch/Proximity detector repeater	DTS0282-14
D5031S, D5031D	Switch/Proximity detector repeater	DTS0283-14
D5032S, D5032D	Switch/Proximity detector repeater	DTS0284-14
D5034S, D5034D	Switch/Proximity Interface	DTS0285-12
D5036S, D5036D	Switch/Proximity detector repeater	DTS0615-7
D5037S, D5037D	Switch/Proximity detector repeater	DTS0616-7
D5040S, D5040D	Digital Output Driver	DTS0524-13
D5048S	Digital Output Driver	DTS0286-13
D5049S	Digital Output Driver	DTS0287-13
D5060S	Frequency-Pulse Converter	DTS0328-4
D5062S	Vibration Transducer Interface	DTS0428-13
D5072S, D5072D	Temperature Signal Converter	DTS0288-18
D5072S-087, D5072D-087	Resistance Isolator	DTS0434-11
D5072S-096, D5072D-096	Thermocouple/mV Repeater	DTS0780-5
D5072S-099, D5072D-099	Sink-Out Temperature Converter	DTS0813-4
D5090S	Relay Out Module for 5 A NE Loads	DTS0330-14
D5091S	Relay Out Module for 5 A ND Loads	DTS0327-14
D5093S, D5093D	Loop powered Switch Repeater	DTS0420-14
D5094S	Relay Out Module for 5 A NE/ND Loads	DTS0538-5
D5095S	Relay Out Module for 5 A NE/ND Loads	DTS0636-5
D5096S	Relay Out Module for 5 A NE/ND Loads	DTS0638-6
D5097S	Relay Out Module for 5 A NE/ND Loads	DTS0639-5
D5098S, D5098D	Relay Out Module for 5 A NE Loads	DTS0675-5
D5202S	Power and Diagnostic Module	DTS0421-10
D5212Q	Quadruple Repeater Power Supply	DTS0341-8
D5231E	Switch/Proximity Detector Repeater	DTS0329-11
D5240T	Digital Output Driver	DTS0432-11
D5254S	2/4-Wire Transmitter Trip Amplifier	DTS0368-12
D5263S	Load Cell isolating Repeater	DTS0429-12
D5264S	Load Cell isolating Converter	DTS0430-11
D5273S	Temperature Signal Converter	DTS0417-16
D5290S	10 A Relay Output Module	DTS0336-11
D5290S/SA	10 A Relay Output Module, Safe Area	DTS0376-9
D5290S-078	5 A Relay Output Module	DTS0366-11
D5290S-078/SA	5 A Relay Output Module, Safe Area	DTS0457-9
D5290S-079	5 A Relay Output Module	DTS0367-8
D5290S-080	10 A Relay Output Module	DTS0375-9
D5290S-084	5 A Relay Output Module	DTS0415-8
D5291S	Relay Out Module for 10 A ND Loads	DTS0337-11
D5293S	Relay Out Module for 5 A NE Loads	DTS0339-18
D5294S	Relay Out Module for 5 A NE/ND Loads	DTS0340-19
D5295S	Relay Out Module for 5 A NE/ND Loads	DTS0423-12

2. Approved Drawings and Documents

- 1) Datasheets listed under Product Specification
- 2) Test Plan No. PJP0084 Rev.1 dated 2020-06-18

3. Test Reports, etc.

- 1) Test Reports
 - No. 189935-1TRFEMC Rev.1 (2011-11-23), 189935-2TRFEMC Rev.0 (2011.11.25), 223748TRFENV (2012.11.19), 225629TRFENV (2012.11.21), 402056TRFEMC (2020-09-07)
 - No. TRP179 (2018-06-22)

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B. Approval Condition

1. Application & Limitation

- 1) This Approval is granted on the basis of the test reports and the approved documentation.
- 2) Degree of protection shall be complied with Rule Pt.6 Ch.1 Sec.2 201.2.(5).
- 3) The manufacturer should inform this Society of all kinds of revisions of the equipment. If the changes are recognized to affect functionality of the approved equipment, type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.
- 4) Explosion-proof certification by a notified/recognized Certification Body is not covered by this certificate. Ratings and Special Conditions for Safe Use in hazardous areas are to be obtained from the relevant valid Ex-Certificate.
- 5) The product shall not be installed in the bridge or on open decks.

2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual product certification is not required.

3. Marking

- 1) The product or packing is to be marked with the manufacturer's name and type designation on a suitable position.

4. Others

- 1) Test condition

Test	Condition	Remark
EMC	All locations excluding the bridge and deck zone	Up to 6GHz
Temperature	-25°C ~ +70°C	-
Vibration	Acceleration $\pm 0.7g$	-
Salt Mist	Not applied	-

< End of certificate >