



TYPE APPROVAL CERTIFICATE

No. ELE96721PU

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	Programmable Logic Controller
<i>Type</i>	XGT Series
<i>Applicant</i>	LS ELECTRIC CO., LTD. - CHEON AN PLANT 56, Samseong 4-gil, Mokcheon-eup, Dongnam-gu, 31226 Cheonan-si (Chungcheongbuk-do) REPUBLIC OF KOREA
<i>Manufacturer</i>	LS ELECTRIC CO., LTD. - CHEON AN PLANT
<i>Place of manufacture</i>	56, Samseong 4-gil, Mokcheon-eup, Dongnam-gu, 31226 Cheonan-si (Chungcheongbuk-do) REPUBLIC OF KOREA
<i>Reference standards</i>	RINA Rules for the Classification of Ships - Part C- Machinery, Systems and Fire Protection - Chapter 3 , Section 6, Table 1

Issued in **Busan** on **January 13, 2022**. This Certificate is valid until **December 22, 2024**



RINA Services S.p.A.
Young-Kwang Kim

This certificate consists of this page and 1 enclosure

XGT Series
• Product Description

- XGT Series is a programmable logic controller intended for control and monitoring.

CPU Module

XGK-CPUE	XGK-CPUS	XGK-CPUA	XGK-CPUH	XGK-CPUU
XGK-CPUSN	XGK-CPUHN	XGK-CPUUN		
XGI-CPUE	XGI-CPUS	XGI-CPUH	XGI-CPUU	XGI-CPUU/D
XGI-CPUUN				
XBC-DN32U	XBC-DN32U/DC	XBC-DP32U	XBC-DP32U/DC	XBC-DR28U
XBC-DR28U/DC				
XEC-DN32U	XEC-DN32U/DC	XEC-DP32U	XEC-DP32U/DC	XEC-DR28U
XEC-DR28U/DC				
XBM-DN32H	XBM-DN32HP			
XGR-CPUH/F	XGR-CPUH/T	XGR-DBDH	XGR-DBDF	
XGR-DBDT	XGR-DBSH	XGR-DBSF	XGR-DBST	

Base Unit

XGB-M04A	XGB-M06A	XGB-M08A	XGB-M12A	XGR-M02P
XGB-E04A	XGB-E06A	XGB-E08A	XGB-E12A	XGR-M06P
XGR-E12H	XGR-E12P	XGR-E08P		

Power Module

XGP-ACF1	XGP-ACF2	XGP-AC23	XGP-DC42	
XGR-AC12	XGR-AC22	XGR-AC13	XGR-AC23	XGR-DC42

Digital Input Module

XGI-D21A	XGI-D22A	XGI-D24A	XGI-D28A	XGI-D22B
XGI-D24B	XGI-D28B	XGI-A12A	XGI-A21A	XGI-D21D
XBE-DC08A	XBE-DC16A	XBE-DC16B	XBE-DC32A	

Digital Output Module

XGQ-RY1A	XGQ-RY2A	XGQ-RY2B	XGQ-TR2A	XGQ-TR4A
XGQ-TR8A	XGQ-TR2B	XGQ-TR4B	XGQ-TR8B	XGQ-SS2A
XBE-TN08A	XBE-TN16A	XBE-TN32A	XBE-TP08A	XBE-TP16A
XBE-TP32A	XBE-RY08A	XBE-RY08B	XBE-RY16A	XGQ-RY1D

Digital Input/Output Module

XGH-DT4A	XBE-DR16A	XBE-DN32A		
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Analogue Input Module

XGF-AV8A	XGF-AC8A	XGF-AD8A	XGF-AD4S	XGF-AD16A
XGF-AW4S	XBF-AD04A	XBF-AD04C	XBF-AD08A	

Analogue Output Module

XGF-DV4A	XGF-DC4A	XGF-DV4S	XGF-DC4S	XGF-DV8A
XGF-DC8A	XBF-DV04A	XBF-DV04C	XBF-DC04A	XBF-DC04C

**Analogue Input/Output Module**

XGF-AH6A XBF-AH04A

Thermocouple Input Module

XGF-TC4S XBF-TC04S

RTD Input Module

XGF-RD4A XGF-RD8A XGF-RD4S XBF-RD04A

High Speed Counter Module

XGF-HO2A XGF-HD2A XGF-H08A XBF-HO02A XBF-HD02A

Position Control ModuleXGF-PO3A XGF-PO2A XGF-PO1A XGF-PD3A XGF-PD2A
XGF-PD1A XGF-PO4H XGF-PO3H XGF-PO2H XGF-PO1H
XGF-PD4H XGF-PD3H XGF-PD2H XGF-PD1H XGF-PN8A
XGF-PN8B XBF-PD02A**Temperature Control Module**

XGF-TC4UD XGF-TC4RT XBF-TC04TT XBF-TC04RT

Event Input Module

XGF-SOEA

Data Log Module

XGF-DL16A

Smart I/O ModuleGPL-D22C GPL-D24C GPL-TR2C GPL-TR2C1 GPL-TR4C
GPL-TR4C1 GPL-RY2C GPL-DT4C GPL-DT4C1 GPL-AV8C
GPL-AC8C GPL-DV4C GPL-DC4C GDL-TR2C GDL-TR2C1
GDL-TR4C GDL-TR4C1 GDL-DT4C GDL-DT4C1 GDL-RY2C
GDL-D22C GDL-D24C GRL-TR2C GRL-TR2C1 GRL-TR4C
GRL-TR4C1 GRL-RY2C GRL-DT4C GRL-DT4C1 GRL-D22C
GRL-D24C XEL-BSSRH XEL-BSSRT XEL-BSSRF**Communication Modules****RAPIenet**XGL-EIMT XGL-EIMH XGL-EIMF XOL-EIMT XOL-EIMF
XBL-EIMT XBL-EIMF XBL-EIMH**Ethernet Module**XGL-EFMT XGL-EFMT XGL-ESHF XGL-EH5T XBL-EMTA
XGL-EFMTB XGL-EFMFB XGL-EFMHB XGL-PMEB**Ethernet IP Module**

XGL-EIPT XBL-EIPT

Ethernet Dedicated Module

XGL-EDMF XGL-EDMT



CNET Module

XGL-C22A	XGL-C42A	XGL-CH2A	XGL-C42B
XBL-C41A	XBL-C21A	XGL-C22B	XGL-CH2B

RNET Module

XGL-RMEA

PROFIBUS Module

XGL-PMEA	XGL-PMEC	XGL-PSRA	XGL-PSEA
XBL-PMEC	XBL-PSEA	XGL-PMEB	

Device Net Module

XGL-DMEA	XBL-DSEA	XGL-DMEB
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FNET Module

XGL-FMEA

CANopen Module

XBL-CMEA	XBL-CSEA
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Accessories

XGT-TERA – Terminator
XGT-DMMA – Dummy module

• Reference Documents

- Specification: LSIS's Technical Document Ref. No. 2013-KD007-630-0001 Ver. 2.0 in March, 2019
LSIS's PLC Product List Ver. 1.7 dated 11 April, 2019
LSIS's Specifications and Technical Data, Doc. NO.: 2018-KD007-630-0025 Ver.1.1 in July, 2018
LSIS's Specification No. 20210224 February 2021, System configuration No. 2021-KD007-630-0030 dated 25 July, 2021
- ENV & EMC Test:
ONTECH's Test Report No. R10DR-009 dated 08/11/2008 & No. E10DR-027 dated 10/12/2010
DT&C Laboratory's EMC test report Ref. No. DREETC1903-0053 dated 29 March, 2019
DT&C Laboratory's ENV test report Ref. No. DRCREL1904-0234 dated 1 April, 2019
- Visual inspection & Performance test: LSIS's Test Report No. 2013-KD007-630-0010 Ver.1.0 dated 19/03/2013 attended by RINA Surveyor
- Asbestos-Free Declaration: LSIS Co.,Ltd (Cheon-An Factory) letter dated 19 August, 2021
- ENV & EMC Test for added XGR series modules
DT&C Laboratory's ENV test report Ref. No. DRCREL2112-1008 dated 10 November, 2021
DT&C Laboratory's EMC test report Ref. No. DREETC112-0253 dated 24 November, 2021

• Note/Remark

- RINA annual audit to the Manufacture's production site is required in case of products for which testing of each unit or batch is not required to be attended by the surveyor.
- Traceability of Hardware and Software is to be ensured and evidence is to be available on request.
- The product is subject to the compliance with RINA Rules and Standards mentioned on the certificates.
- Type Approval certifies that a representative sample of the product has been found to meet the applicable design criteria.
- Any modification or change shall not be valid until approval is granted by RINA as a result of due assessment.





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No. ELE96721PU

Enclosure – Page 4 of 4

• **Renewal/Revision**

- 17/04/2013: Certificate No. ELE026513PU

- 10/04/2019: Renewal and Addition 69 modules / New certificate No. ELE22319PU revokes previous certificate.

- 13/01/2022: Addition 8 XGR Series CPU modules / New certificate No. ELE96721PU revokes previous certificate.

BUSAN on 13 January, 2022



RINA Società per azioni
REGISTRO ITALIANO NAVALE Group

Head Office: Via Corsica, 12 16128 Genova - Italy
Tel. +39 010 53851
Fax +39 010 5351000

C.F./P. Iva 03794120109
Cap. Soc. 58.400.000.000 i.v.
R.I. Genova N. 23602/99

Korea Plan Approval & Technical Support Centre

14th Fl, Centum Green Tower, 78 Centum Jungang-Ro
Haeundae-Gu Busan 612-020 Korea

TEL: +82 51 465 5412
FAX: +82 51 465 5535-6
E-MAIL: Segpupc@rina.org



**ATTACHMENT TO
CERTIFICATE Nr. PQA096721PU/001**

Equipment:
XGT Series

Manufacturer
LS ELECTRIC CO., LTD. - CHEON AN PLANT

Place of Manufacturer
56
Samseong 4-gil
Mokcheon-eup
Dongnam-gu
31226 Cheonan-si (Chungcheongbuk-do)
REPUBLIC OF KOREA

Technical documentation

INTERMEDIATE SCHEDULED AND UNSCHEDULED AUDITS			
Due Date	Carried out on	Surveyor's signature	Surveyor's stamp
01/23/2023			
01/23/2024			
01/23/2025			
01/23/2026			

General conditions for the approval

- The initial conditions verified by RINA at the time of the approval are to be maintained
- Any changes to the initial conditions are to be promptly communicated to RINA, which reserves the right to repeat the relevant assessment
- RINA personnel are to be allowed to witness during the performances of activities, upon their request
- The activities are to be carried out in compliance with the RINA Rules and/or other applicable Rules
- RINA may revoke the approval in the case of modifications to requirements or conditions for the approval
- Should the specified regulations or standards be amended during the validity of this certificate, the product is to be reappraised prior to it being placed on board vessels to which the amended regulations or standards apply
- This certificate loses its validity in case the Type Approval certificate is no more valid.



RINA
Dong Hun Lee
RINA Korea & Japan

