



LLOYD'S REGISTER TYPE APPROVAL – DESIGN APPRAISAL DOCUMENT

Issued by: HAMBURG TECHNICAL SUPPORT OFFICE

Issued to: AUTRONICA FIRE AND SECURITY AS

For: FIRE DETECTION SYSTEMS – IR FLAME DETECTOR; BG-201 & BG-301

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure TA14 Version 04 (September 2020) and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

unnumbered	Type Approval Application Checklist	16.09.2024
436997	Request for Marine Services – Type Approval	24.09.2024
TSO/24-013805	Design Appraisal Document of previous certificate no. LR2466210TA	05.06.2024
LR2466210TA	Previous LR Type Approval Certificate of IR Flame Detector BG-201	05.06.2024
PRJ11100445999-2	Production quality assessment (PQA) report of Autronica Fire & Security AS	03.06.2024
900776	Certificate ISO 9001:2015 of Autronica Fire & Security AS (Trondheim, Norway)	03.05.2022
MEDB00006DK	EC-Type Examination Certificate (Module B) for IR Flame Detector BG-301, BG-301-Exia, BG-301-Exic	27.06.2024
MEDB0000941	EC-Type Examination Certificate (Module B) for IR Flame Detector BG-301, BG-301-Exia and BG-301-Exic (isolator)	27.06.2024
2531-CPR-CSP11358	Certification acc. to EN 54-10: 2002 +A1: 2005 and EN 54-17: 2005 +AC:2007 for BG-301, BG-301-Exia and BG-301-Exic	27.06.2024
60.1016898.1	Manufacturer's Declaration of Conformity (EMC, ATEX, MED) for BG-301, BG-301-Exia, BG-301-Exic	01.10.2024
Doc-1005449-4	Product data sheet of AutoFlame IR3 Flame Detector BG-301, BG-301-Exia, BG-301-Exic	24.09.2024
Doc-1005448-4	Technical Handbook of AutoFlame IR3 Flame Detector BG-301, BG-301-Exia, BG-301-Exic	02.09.2024
unnumbered	BG-301 v1.1.2 Release note	undated
unnumbered	BG-301 v1.1.3 Release note	undated
unnumbered	Pdf-file "BOM 116-BG-301 rev1.4.pdf" (Bill of material for BG-301, Rev. 1.4)	20.06.2024
unnumbered	Pdf-file "BOM 116-BG-301-EXIA rev1.5.pdf" (Bill of material for BG-301-Exia, Rev. 1.5)	20.06.2024
unnumbered	Pdf-file "BOM 116-BG-301-EXIC rev1.6.pdf" (Bill of material for BG-301-Exic, Rev. 1.6)	05.09.2024
DNV 23 ATEX 03418X	EU-Type Examination Certificate (ATEX) for IR Flame Detector BG-301-EXIA, Issue 0	22.04.2024
IECEX DNV 23.0068X	IECEX Certificate of Conformity for IR Flame Detector BG-301-EXIA, Issue 0	22.04.2024
DNV 24 ATEX 03424X	EU-Type Examination Certificate (ATEX) for IR Flame Detector BG-301-EXIC, Issue 0	10.09.2024
IECEX DNV 23.0013X	IECEX Certificate of Conformity for IR Flame Detector BG-301-EXIC, Issue 0	10.09.2024
SW documentation:		
Doc-1016844.1	EN 54 Software evaluation checklist for SW version 1.1.1, Rev. 1	25.10.2023

TEST REPORTS

LT/221.1/2024	Test Report (IPX6, IPX7) acc. to IEC 60529: 2013 for BG-301	03.06.2024
LT/307/2024	Test Report (IP6X) acc. to IEC 60529: 2013 for BG-301	08.07.2024
1381/BA/23	Test Report acc. EN 54-10: 2002 +A1: 2005 and EN 54-17: 2005 +AC:2007 for BG-301, BG-301-Exia, BG-301-Exic	22.02.2024

TEST REPORTS (continued)

DPL/003/039/24 Test Report (EMC) acc. to IACS UR E10 Rev. 9: 2023 (partial) for BG-301/Ex 02.2024

DRAWINGS

Doc-1004848, Rev. 5	Circuit diagram AutoFlame Sensor Board BGA-1001	02.04.2024
Doc-1005010 Rev.4	Circuit diagram AutoFlame AL_Com Socket Board BWA-1201	18.01.2023
Doc-1005078 Rev. 7	Assembly drawing BGA-1001	09.12.2022
Doc-1005285.5	Assembly drawing BWA-1200	14.08.2023
Doc-1005361 Rev. 2	Circuit diagram AutoFlame AL_Com Socket Board BWA-1202	30.11.2022
Doc-1016951 Rev. 2	Type Marking - Master for BG-301	10.08.2023



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Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations. Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.