

# Type Approval Certificate



This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 12 377 - 10 HH

Company DURAG GmbH  
Kollastr. 105  
22453 Hamburg, GERMANY

Product Description Flame Detector Device  
Compact Flame Monitor

Type D-LX 200 UA-..; D-LX 200 UAF-..; D-LX 200 IG-.. also versions /MP  
D-LX 720 UA-..; D-LX 720 UAF-..; D-LX 720 IG-.. also versions /MP

Environmental Category C, EMC2

Technical Data / Range of Application Suitable for flame detection of burners and combustion systems for fluid, gaseous or solid fuels and in hot air generators  
D-LX 200 / D-LX 720  
Power Supply: 24 V DC  
Max. Current rating of Output Terminals: 24 V DC, 0.5 A  
Rated Input: 5 W  
Voltage of Systems Circuits: 24 V, 12 V, 6 V, 5 V, 3.3 V  
Flame Failure Response Time: 1second (optionally 2, 3 or 5 seconds selectable by DIP switches)  
Degree of Protection: IP 66 / IP 68 - (/MP: IP67)  
Operation Mode: Permanent Operation  
Flame Sensor: UV or IR  
Flame and Fault Relay: ALD112, 202N-1AC-F-S; PCJ-112D3MH or G5NB1A-E12V  
Software Version: V47\_14, CRC32=0x02090C16

Test Standard Guidelines for the Performance of Type Approvals VI-7-2 Edition 2003;  
Regulations for the Use of Computers and Computer Systems

Documents Test reports: 10-3145 d.29-10-2010; TM82532T Rev. 1.0 d.29-01-2009; C-F 1387-00/09 d.30-01-2009; C-F 1387-01/10 d.2010-11-19; 07/7163-3 d.2007-12-21; 08/8044-7 d.2008-08-06; 03595/2008 d.2008-05-28, 03704/2008 d.20-08-06 ; 4.5/0732/08 d.29-05-2008; Certificate CE-0085BU0114 d.17-04-2009; 11-3573 dated 15-06-2011

Remarks The flame detector is suitable for monitoring of burners and combustion equipments for liquid, gaseous and solid fuels.

Valid until 2015-11-08

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Type Approval Symbol



File No. IA.04

Hamburg, 2011-09-15

Germanischer Lloyd

Marco Rinkel

Andrea Grün

This certificate is issued on the basis of "Guidelines for the Performance of Type Approvals Part 1, Procedure".

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Flame signal amplifier: integrated electronic flame amplifier with automatic gain adjustment and numerical analysis of the flame signal

#### Additional Test Standards:

DIN EN 230:2005-10 and DIN EN 298:2004-01; Article 3 of 90/396/EEC dated 29-06-1990; DIN EN 50156 (VDE 0116-1):2005-03, clause 10.5.5.2x

Tests and Evidence according Requirement Class 4 (Questionnaire dated 20-09-2010)

#### Additional Test Documentation:

Safety Plan D-LX 200\_02-06-08 Rev1.5, V1.5; System document Rev2, V2.0, D-LX200 Software Documentation Rev0\_s, V0\_s, Hardware Documentation Rev.0

Description D-LX 200 dated 22-07-2010

List of Design Variants dated 15-07-2010 and Revision 1 dated 31-08-2011

Drawing LX200.00.02.01.0 dated 11-03-2010; LX720.00.02.01.0 dated 11.03.2010

Manual D-LX 200 and D-LX 720 Version 01-01-2009-1 dated 03-03-2009;

User manual (dlx200 720 MP) dated 15-11-2010

Test report for metal plug (IMP) acc. EN60529:1991 + A1:2000 for IP 67

#### Flame Relay ( version /MP too)

Configuration SIL 3 regarding Z10 09 04 69900 001 dated 05-05-2009 and C-F1387-00/09 dated 19-12-2008 according IEC 61508

D-LX 200 xx-20

D-LX 200 xx-40

D-LX 720 xx-20

D-LX 720 xx-40

Mode of Operation: High demand mode

Valid until 2015-11-08

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Hamburg, 2011-09-15

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