



Certificate

of Approval of Components and Systems

Holder of the Approval:

Fire Fighting Enterprises Ltd.
9 Hunting Gate

GB- Hitchin, Herts, SG4 0TJ

This approval

is valid only for the specified component/system as submitted for the test

■ together with the parts listed in enclosure 1

■ documented in the technical papers acc. to enclosure 2 (n/a for systems)

■ for application in the specified fire protection and security installations.

Use of the subject matter of the approval, is subject to the hints/comments of enclosure 3.

The validity of the approval can be extended upon application. Application for extension shall be submitted six months before expiry of the current approval at the latest.

This certificate may only be reproduced in its present form without any modification including all enclosures. All changes of the underlying conditions of this approval shall be reported at once to the VdS Certification Body enclosing the required documentation.

Any advertising with this VdS approved component/system shall reflect the correct contents of the certificate and shall not violate the trade practice rules.

Approval No.:	No. of pages:	Valid from:	Valid to:
G 297058	5	25.02.2008	24.02.2012

Subject matter of the Approval:

Line-Type Smoke Detector
Type FireRay 2000

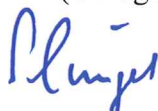
Use:

in Automatic Fire Detection Systems


Basis for approval:

DIN EN 54, Part 12 (12/02) - Line Type Smoke Detectors
VdS 2504 (03/03) - Smoke Detectors, Sect. 5.6
VdS 2344 (12/05) - Procedure Guidelines

Köln (Cologne), 04.04.2008


Schüngel

Managing Director


i.V. Lüttenberg

Head of the VdS Certification Body



DAT-ZE 005/92

VdS Schadenverhütung GmbH
Zertifizierungsstelle
Amsterdamer Str. 174
D-50735 Köln

A company of the German Insurance Association (GDV)
(German federation of insurance companies)

Accredited by the "Deutsche Akkreditierungsstelle Technik (DATech)" as a certification body for the areas of fire protection and security

To Certificate of Approval No. G 297058

Date 04.04.2008

The approved component/system comprises the following parts:

Description of component	Type	Applicant's Registration No.	Approval number of component (only complete for system approval)
Optical line type smoke detector	FireRay 2000		

To Certificate of Approval No. G 297058

Date 04.04.2008

The approved component/system is described as follows:

Type of document	Manufacturer's identification	Date	Number of Pages
VdS Test Report No. BMA 97056, dated 25.02.1998			
VdS Test Report No. BMA 05115, dated 29.09.2005			
Installation instruction	22318.00P(1)	18.07.05	8
Installation guide	22318.00.R	18.07.05	8
Fireray 2000:			
General assembly parts list	OD22310/01	27.08.98	1
General assembly drawing	OD22310/01	27.08.98	1
Control unit:			
General assembly parts list	OD22060/01	27.08.98	1
General assembly drawing	OD22060/01	27.08.98	1
Receiver head:			
General assembly parts list	OD22049/01	20.10.99	1
General assembly drawing	OD22049/00	21.07.98	1
Transmitter head:			
General assembly parts list	OD22043/01	16.07.98	1
General assembly drawing	OD22043/00	20.07.98	1
Control unit P.C.B.:			
General assembly parts list	OD22061	30.09.98	2
General assembly drawing	22061 F	07.11.96	1
Circuit diagram	22014 J	06.11.96	1

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Date 04.04.2008

The approved component/system is described as follows:

Type of document	Manufacturer's identification	Date	Number of Pages
Transmitter P.C.B:			
Assembly parts list	OD22155	22.09.98	1
Transmitter head P.C.B.:			
General assembly drawing	22155.00.H(1)	25.10.99	1
Circuit diagram	23905 A	22.11.96	1
Receiver head cell P.C.B:			
General assembly parts list	22156	07.01.97	1
General assembly drawing	22156.00.H(1)	25.10.99	1
Circuit diagram	23906 A(1)	06.01.97	1
Receiver head amp P.C.B:			
General assembly parts list	OD22157.00J(1)	25.10.99	1
General assembly drawing	4M22157 G	31.10.96	2
Circuit diagram	23907 B	04.06.99	1



Enclosure 3

Sheet 1

To Certificate of Approval No.: G 297058

Date 04.04.2008

Instructions for the application of the approval component/system (see enclosure 1):

The connection of the line type smoke detector type FireRay 2000 may only be done by a shielded cable.

The detector may also be operated in 'Retro Operation' acc. to the projection instructions dated 18.07.2005.

Supply Voltage Range: (11,5 ... 28) V

Relay contacts: (2A/30V) Ω -ic load