

[1] **EC-TYPE EXAMINATION CERTIFICATE**



[2] **Equipment or Protective System intended for use  
in Potentially Explosive Atmospheres  
Directive 94/9/EC**

[3] **EC-Type Examination Certificate Number: DEMKO 06 ATEX 0425693X**

[4] **Equipment or Protective System: Visual Signaling Devices Series WV450XD and WV450XE**

[5] **Manufacturer: Federal Signal Corp.**

[6] **Address: 2645 Federal Signal Dr.  
University Park, IL 60466 USA**

[7] This equipment or protective system and any acceptable variation there to is specified in the schedule to this certificate and the documents therein referred to.

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. 0425693

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
EN50014: 1997 + A1-A2: 1999    EN50018: 2000 + A1: 2002    EN60079-7: 2003

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12] The marking of the equipment or protective system shall include the following:

**II 2 G EEx d IIB + H<sub>2</sub> T3 - T4 -55°C ≤ Tamb ≤ 55°C**  
 **II 2 G EEx de IIB + H<sub>2</sub> T3 - T4 -20°C ≤ Tamb ≤ 55°C**

On behalf of UL International Demko A/S

Herlev, 2006-08-11

Karina Christensen  
Certification Manager

**UL International Demko A/S**

Lyskaer 8, P.O. Box 514  
DK-2730 Herlev, Denmark  
Telephone: +45 44856565  
Fax: +45 44856500

Certificate: 06 ATEX 0425693X

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# Schedule

## EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 06 ATEX 0425693X

### Electrical data:

EEx d IIB+H<sub>2</sub> T4

Model WV450XD05-024X, rated 24-48VDC, 0.87/0.48A, 5 Joule

Model WV450XD10-024X, rated 24-48VDC, 0.91/0.46A, 10 Joule

Model WV450XD15-024X, rated 24-48VDC, 0.94/0.48A, 15 Joule

EEx d IIB+H<sub>2</sub> T3

Model WV450XD05-110X, rated 110VAC, 0.17A, 5 Joule

Model WV450XD10-110X, rated 110VAC, 0.27A, 10 Joule

Model WV450XD15-110X, rated 110VAC, 0.57A, 15 Joule

EEx d IIB+H<sub>2</sub> T3

Model WV450XD05-220X, rated 220-248VAC, 0.12A, 5 Joule

Model WV450XD10-220X, rated 220-248VAC, 0.23A, 10 Joule

Model WV450XD15-220X, rated 220-248VAC, 0.33A, 15 Joule

EEx de IIB+H<sub>2</sub> T4

Model WV450XE05-024X, rated 24-48VDC, 0.87/0.48A, 5 Joule

Model WV450XE10-024X, rated 24-48VDC, 0.91/0.46A, 10 Joule

Model WV450XE15-024X, rated 24-48VDC, 0.94/0.48A, 15 Joule

EEx de IIB+H<sub>2</sub> T3

Model WV450XE05-110X, rated 110VAC, 0.17A, 5 Joule

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EEx de IIB+H<sub>2</sub> T3

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Model WV450XE10-220X, rated 220-248VAC, 0.23A, 10 Joule

Model WV450XE15-220X, rated 220-248VAC, 0.33A, 15 Joule

### Installation instructions

See Instructions Manual and Special conditions for safe use.

### **UL International Demko A/S**

Lyskaer 8, P.O. Box 514  
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Certificate: 06 ATEX 0425693X  
Report: 07CA63309

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# Schedule

## EC-TYPE EXAMINATION CERTIFICATE No. DEMKO 06 ATEX 0425693X

### Routine tests

12.4 Bar (180 psi) enclosure overpressure test at room ambient is to be conducted upon every sample and then visually inspected for any signs of deformity.

[16] Report No.

Project Report No.: 04NK25693 (Hazardous Location Testing)  
07CA63309

### Drawings:

Descriptions	Drawing No.:	Rev. Level:	Date:
WV450XD Assembly	AT8595104A	A1	2008-06-17
WV450XE Assembly	AT8595105A	A1	2008-06-17
110/240 Vac Schematic	AT2581921B	B	2007-12-05
110 Vac, 5 J Layout and Parts List	AT2001921B-01	B	2007-12-06
110 Vac, 10 J Layout and Parts List	AT2001921B-02	B	2007-12-06
110 Vac, 15 J Layout and Parts List	AT2001921B-03	B	2007-12-06
240 Vac, 5 J Layout and Parts List	AT2001921B-04	B	2007-12-06
240 Vac, 10 J Layout and Parts List	AT2001921B-05	B	2007-12-06
240 Vac, 15 J Layout and Parts List	AT2001921B-06	B	2007-12-06
24-48 Vdc, 5 J Schematic	AT2581926A	A	2005-09-30
24-48 Vdc, 5 J Layout and Parts List	AT2001926A-01	A	2005-09-30
24-48 Vdc, 10 J Layout and Parts List	AT2001926A-02	A	2005-09-30
24-48 Vdc, 15 J Layout and Parts List	AT2001926A-03	A	2005-09-30
Flash Tube Assembly	AT8107177A	A3	2005-09-30
Transformer 1 Assembly	AT120518A	A	2005-09-30
Transformer 2 Assembly	AT120C501A (2 pages)	A3	2005-09-30
WV450X Manual	2562015C (12 pages)	C	-



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[17] Special conditions for safe use:

- WARNING – DO NOT OPEN WHEN ENERGIZED. DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT. POTENTIAL ELECTROSTATIC CHARGING HAZARD - This device must only be cleaned with a damp cloth.
- Use wire rated 85°C or higher.

[18] Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Ex standards only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Additional information

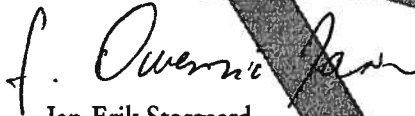
The Series WV450XD and WV450XE has in addition passed the tests for Ingress Protection to IP66 in accordance with EN60529: 1991/A1 2001.

These devices have been additionally evaluated to EN 60079-0:2006 and EN 60079-1:2004 with Corrigendum April 2006 and are now marked with the symbol Ex instead of EEx.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

On behalf of UL International Demko A/S

Herlev, 2008-07-30



Jan-Erik Storgaard  
Certification Manager

### UL International Demko A/S

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