

Translation, original language: German

# (1) EC-TYPE EXAMINATION CERTIFICATE

## (2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC

(3) EC-Type Examination Certificate Number: **KEMA 98ATEX4452 X** Issue Number: 2

(4) Equipment: **Valve Actuator Model Series 42 . .**

(5) Manufacturer: **Norgren GmbH**

(6) Address: **Stuttgarter Straße 120, 70736 Fellbach, Germany**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the 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 test report no. 212487100.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0 : 2006**  
**EN 61241-0 : 2006**

**EN 60079-7 : 2007**  
**EN 61241-1 : 2004**

**EN 60079-18 : 2004**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment 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 according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.


(12) The marking of the equipment shall include the following:



**II 2 G Ex emb II T4 ... T6**  
**II 2 D Ex tD A21 IP66 T130 °C**

This certificate is issued on February 26, 2010 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.

  
T. Pijker  
Certification Manager

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(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 98ATEX4452 X** Issue No. 2

(15) **Description**

Valve actuators for use with mounted valve as released by the manufacturer, Model Series 42 . . .  
The different models of valve actuators are distinguished by type of supply, nominal power, rated voltage and by inclusion of a fuse.

The enclosure of the apparatus provides a protection of at least IP66 in accordance with EN 60529.

Ambient temperature range: -40 °C ... +80 °C

The maximum surface temperature of the enclosure T 130 °C is based on the maximum ambient temperature at the maximum electrical power.

**Electrical data**

Type of supply:	dc or ac
Nominal voltage:	12 ... 250 Vdc
	12 ... 125 Vdc with internal fuse
	25 ... 380 Vac
	25 ... 250 Vac with internal fuse
	24 Vac/dc
Rated power [PB]: (at 20 °C winding temperature)	1,5 W or 2 VA
	5,0 W or 7 VA
	9,1 W or 11 VA
	14,1 W or 16 VA

**Temperature class**

The relation between temperature class, ambient temperature, rated power and nominal power of the valve actuators is shown in following table:

P <sub>max</sub> [W] (rated power)	P <sub>N</sub> [W] (nominal power)	Max. ambient temperature [°C] at temperature class		
		T4	T5	T6
1,5	0,7	--	80	70
5,0	4	80	--	55
9,1	8	65	55	--
14,1	11	50	40	--

**Installation instructions**

In order to assure a type of protection IP66 as per EN 60529, for Valve actuators supplied without cable entry, an Ex e approved cable entry, providing a protection against ingress of IP66, must be installed properly.

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 98ATEX4452 X** Issue No. 2

**Routine tests**

After encapsulation, the valve actuators Model Series 42 . . shall be subjected to the visual inspections as described in clause 9.1 of EN 60079-18 : 2004 and the dielectric tests as described in clause 7.1 of EN 60079-7 : 2007.

(16) **Test Report**

KEMA No. 212487100.

(17) **Special conditions for safe use**

1. Valve actuators without internal fuse must be protected by an external fuse, in accordance with the rated current (max.  $3 \times I_B$ ). De breaking capacity of the fuse must comply with the maximum prospective short circuit current of the supply.  
The fuse of a valve actuator with internal fuse has a breaking capacity of 35 A.
2. A connection cable with a temperature rating  $> 88 \text{ }^\circ\text{C}$  must be used at a rated power and an ambient temperature according to the following table:

$P_B$ (rated power) [W]	ambient temperature [ $^\circ\text{C}$ ]
1,5	$> 68$
5	$> 65$
9,1	$> 62$

for  $P_B = 14,1 \text{ W}$  a cable with standard temperature rating may be used.

(18) **Essential Health and Safety Requirements**

Assured by compliance with the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 212487100.