translation

original language: German

(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: **KEMA 03ATEX1016 X**

(4) Equipment or protective system: **Valve solenoids, Models 14..**

(5) Manufacturer: **IMI Norgren-Herion Fluidtronic GmbH & Co. KG**

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

(7) This equipment or protective system 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 or protective system 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 report no. 2026005.

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

EN 50014 : 1997 **EN 50019 : 2000** **EN 50028 : 1987**

(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 according 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 this certificate.

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

II 2 G EEx me II T4 ... T5

Arnhem, 21 January 2003
KEMA Quality B.V.

T. Pijpker
Certification Manager

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ACCREDITED BY THE DUTCH COUNCIL FOR ACCREDITATION

(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 03ATEX1016 X**

(15) **Description**

The valve solenoids, Models 14... differ in power consumption, models with cable entries or fixed cable and models with built-in fuse.

The valve solenoids models 1430, 1431, 1434, 1435, 1440, 1441, 1444, 1445, 1450, 1451, 1454 and 1455 are provided with a build-in fuse.

The relation between ambient temperature, fluid temperature and temperature class is given in the table below:

Valve solenoid model	Ambient/ fluid temperature	Temperature class
1430 ... 1437	-20 °C ... +80 °C	T4
	-40 °C ... +70 °C	T5
1440 ... 1447	-20 °C ... +80 °C	T4
	-40 °C ... +60 °C	T5
1450 ... 1457	-20 °C ... +60 °C	T4
	-40 °C ... +50 °C	T5

Electrical data

Models 1430 ... 1437

Rated voltage.....	12 – 250 Vdc
	24 – 400 Vac
Rated current.....	0,04 – 1,25 A
Rated power.....	13 W (max. 15 W/ 17,5 VA)

Models 1440 ... 1447

Rated voltage.....	12 – 250 Vdc
	24 – 400 Vac
Rated current.....	0,05 – 1,96 A
Rated power.....	20 W (max. 23,5 W/ 27,5 VA)

Models 1450 ... 1457

Rated voltage.....	12 – 250 Vdc
	24 – 400 Vac
Rated current.....	0,07 – 2,5 A
Rated power.....	28 W (max. 30 W/ 35 VA)

All 24 Vac models may also be supplied with 24 Vdc.
Voltage range of the models with built-in fuse: max. 125 Vdc or 250 Vac.

Installation instructions

Models without cable
The cable entry device shall be in type of explosion protection increased safety "e", suitable for the conditions of use and correctly installed.

Models with permanently connected cable
The free end of the permanently connected unterminated power supply cable shall be connected by using a suitable certified junction box.

Heat resistant cable suitable for at least 100 °C shall be used when the following ambient temperatures are exceeded:

55 °C for models 1430 ... 1437
49 °C for models 1440 ... 1447
46 °C for models 1450 ... 1457

(13) # SCHEDULE

(14) **to EC-Type Examination Certificate KEMA 03ATEX1016 X**

Routine tests

After encapsulation, the valve solenoids shall be subjected to the following routine tests as described in clause 7 of EN 50028 : 1987:

Visual check
The encapsulation shall have no visible defects, such as cracks in the sealing material, exposure of the encapsulated parts, flaking, impermissible shrinkage, discoloration, swelling, decomposition or softening.

Checking the electrical data
The electrical data of the encapsulated equipment shall be checked by measurement of voltage, current and power.

Electrical strength test
The electrical strength test shall be carried out between the supply terminals and the ground terminal of the valve solenoid with a voltage of 1800 V, during 1 minute.

(16) **Report**

KEMA No. 2026005.

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

The ambient temperature range for each valve solenoid type shall be taken from the table under (15) above.

The valve solenoids without internal fuse must have a short circuit protection by means of a fuse with a rating in accordance with the nominal supply current and voltage (max. 3 x In according to IEC 60127-2-1). The breaking capacity of the fuse must be equal or greater than the prospective short circuit current of the supply. The internal fuse of the solenoids has a breaking capacity of 35 A. When the short circuit current is greater than 35 A, suitable measures must be taken.

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

Covered by the standards listed at (9).

(19) **Test documentation**

1.	Certificate of Conformity KEMA Nr. Ex-95.D.8609 X	dated
2.	Description (4 pages)	30.09.2002
3.	Drawing No. 0587944 ZZ	30.09.2002