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# 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 10 ATEX 1006740X**

[4]

Equipment or Protective System: **EMR3 system**

[5]

Manufacturer: **Veeder-Root Co.**

[6]

Address: **125 Powder Forest Drive, Simsbury, CT 06070 USA**

[7]

This equipment or protective system and any acceptable variation thereto are 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. **10CA06740**

[9]

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

**EN 60079-0:2009**  
**EN 60079-25:2004**

**EN 60079-11:2007**  
**EN 60079-26:2007**

[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 1 G    Ex ia IIA T4  
 II (1) G    [Ex ia] IIA

### Certification Manager

Jan-Erik Storgaard

Notified Body

Date of issue: 2010-11-03

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[14]

**Schedule**  
**EC-TYPE EXAMINATION CERTIFICATE No.**  
**DEMKO 10 ATEX 1006740X**  
**Report: SR6994318**

[15] Description of Equipment or protective system

The Electronic Meter Register (EMR3) system consists of an electronic meter register for use in a Gas Group IIA Hazardous Locations, an interconnect box for use in an indoor non-hazardous location, and an optional printer for use in an indoor non-hazardous location. The system is intended to provide a means of electronically controlling the flow and metering of flammable or combustible liquids including LP Gas and fuel oil in a truck or in a stationary application. The interconnect box provides intrinsically safe power to the electronic meter register and has two sets of two relays designed to control solenoid valves to allow liquid to be dispensed when the electronic meter register is activated. Each Interconnect Box has two connection facilities that provide I.S. circuits. A maximum of two I.S. devices can be connected to each Interconnect Box (IB). The IB consists of 4 sets of triplicate zener diodes that are fuse protected. The zener diodes are split into six channels that each have series current limitation (resistors). These channels are faultlessly aggregated to connect to any of the 4 positions in each of the two terminal blocks. Two diode barrier channels are fuse protected and operate at 12.6V maximum. The other two-diode barrier channels are fuse protected and operate at 6.3V maximum. All channels are current limited by 130 ohm, 2 W, 5 % resistors.

The electronic meter register consists of the intrinsically safe Display Head Model 845693-311 and/or Remote Display head Model 845693-321 for use in Gas Group IIA. The display heads can contain or be provided with a pulse generator inside and a temperature probe (331896), a 2 channel quadrature encoder (331884 or 94Q100-B3-00350), an emergency stop switch (846000-021), a corner switch (331770), an optional keypad (331761) can be connected to the display head in the hazardous locations.

Temperature range

The ambient temperature range for the Interconnect Box is -25 °C to +40 °C.  
The ambient temperature range for the Display head, Remote Display Head, optional Keypad, Emergency Switch, Encoder, and Temperature Probe is -40 °C to +60 °C.

Electrical data

Intrinsically safe specifications:

U<sub>m</sub> : 250V

Interconnect Box:

U<sub>o</sub> : 12.6 V  
I<sub>o</sub> : 395 mA  
P<sub>o</sub> : 1.08 W  
L<sub>o</sub> : 650uH  
C<sub>o</sub> : 10.7uF

Display Head:

U<sub>i</sub> : 12.6 V  
I<sub>i</sub> : 395 mA  
P<sub>i</sub> : 1.08 W  
L<sub>i</sub> : 200uH  
C<sub>i</sub> : 10.7uF

Emergency Stop Switch, Optional Keypad, Pulse Encoder, Thermo probe, Corner Switch

U<sub>i</sub> : 12.6 V  
I<sub>i</sub> : 395 mA  
P<sub>i</sub> : 1.08 W  
L<sub>i</sub> : 0.0mH  
C<sub>i</sub> : 0.0uF

Installation instructions

For ambient temperatures below -10 °C and above +60 °C use field wiring suitable for both minimum and maximum ambient temperature.

Mounting instructions

Refer to "Instructions".

Routine tests

None.

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[14]

**Schedule**  
**EC-TYPE EXAMINATION CERTIFICATE No.**  
**DEMKO 10 ATEX 1006740X**  
**Report: SR6994318**

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Report No.  
Project Report No.: 10CA06740 (Hazardous Location Testing)  
SR6994318

Documents:

Description:	Drawing No.:	Rev. Level:	Date:
System Descriptive Document ATEX EMR3,	331940-004	B	2010-09-02
ATEX Safety Certification, EMR3 –IB Box	331671-033	A	2010-08-13
ATEX Safety Certification, EMR3 –Display Head	331671-034	A	2010-08-15

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Special conditions for safe use:  
The devices have not been evaluated for use across a boundary wall.  
The display head, remote display head, thermoprobe, pulse encoder, corner switch and optional keypad all contain aluminium. Care must be taken to avoid ignition hazards due to impact or friction.

[18]

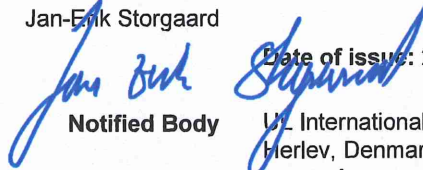
Essential Health and Safety Requirements  
Concerning ESR this Schedule verifies compliance with the ATEX directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Additional information

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.

**Certification Manager**

Jan-Erik Storgaard



Date of issue: 2010-12-03

**Notified Body**

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