

(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 03ATEX1420 X**

(4) Equipment or protective system: **Flowmeter Series LM and MM**

(5) Manufacturer: **Litre Meter Limited**

(6) Address: **50/53 Rabans Close, Rabans Lane Industrial Estate, Aylesbury, Buckinghamshire, HP19 8TG, England**

(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. 2028504.

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

**EN 50014 : 1997    EN 50020 : 2002    EN 50284 : 1999**

(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.

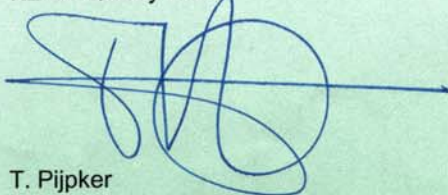
(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment or protective system according to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These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

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



**II 1 G EEx ia IIC T5**

Arnhem, 20 April 2004  
KEMA Quality B.V.



T. Pijker  
Certification Manager

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(13)

## SCHEDULE

(14)

to EC-Type Examination Certificate KEMA 03ATEX1420 X

(15) **Description**

Flowmeter Series LM and MM is a turbine flowmeter that converts a fluid flow rate into an electrical signal. A sensing coil detects the movement of rotor vanes, each having a ferrite implant. The output is a variable frequency pulse, which is proportional to the fluid flow rate.

Ambient temperature range -40 °C ... +60 °C.  
Maximum process temperature 70 °C.

### Electrical data

Supply and output circuit ..... in type of explosion protection intrinsic safety EEx ia IIC,  
(3 terminals or only for connection to a certified intrinsically safe circuit,  
connector pins) with the following maximum values:

$$\begin{aligned} U_i &= 28 \text{ V} \\ I_i &= 110 \text{ mA} \\ P_i &= 1 \text{ W} \\ C_i &= 2 \text{ nF} \\ L_i &= 0,6 \text{ mH} \end{aligned}$$

Output switches ..... in type of explosion protection intrinsic safety EEx ia IIC,  
(terminals TB2-1 and only for connection to a certified intrinsically safe circuit,  
TB2-2 respectively with the following maximum values:  
TB3-1 and TB3-2)

$$\begin{aligned} U_i &= 28 \text{ V} \\ I_i &= 100 \text{ mA} \\ P_i &= 1 \text{ W} \\ C_i &= 0 \text{ nF} \\ L_i &= 0 \text{ mH} \end{aligned}$$

The output switches are infallibly galvanically isolated from each other and from the supply and output circuit.

(16) **Report**

KEMA No. 2028504.

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

Since the body of the flowmeter may contain a plastic surface, measures must be taken to avoid the occurrence of dangerous electrostatic discharges.

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

Covered by the standards listed at (9).

(13)

**SCHEDULE**

(14)

**to EC-Type Examination Certificate KEMA 03ATEX1420 X**

(19)

**Test documentation**dated

|             |                               |            |
|-------------|-------------------------------|------------|
| Drawing No. | IS 5028A, issue 10 (2 sheets) | 25.03.2002 |
|             | IS 5029, issue 5              | 25.03.2003 |
|             | IS 5466, issue 1              | 18.03.2003 |
|             | IS 5031, issue 4              | 13.03.2003 |
|             | IS 5044, issue 4              | 13.03.2003 |
|             | IS 3607, issue 3              | 17.03.2003 |
|             | IS 3607/B, issue 3            | 17.03.2003 |
|             | IS 5214, issue 4              | 18.03.2003 |
|             | IS 5188, issue 5              | 18.03.2003 |
|             | IS 5187, issue 3              | 13.03.2003 |
|             | IS 5186, issue 3              | 13.03.2003 |
|             | IS 5173, issue 4              | 13.03.2003 |
|             | IS 5172, issue 4              | 13.03.2003 |
|             | IS 5171, issue 5              | 18.03.2003 |
|             | IS 5170, issue 4              | 13.03.2003 |
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|             | IS 5497A, issue 1             | 20.05.2003 |
|             | IS 5499, issue 1              | 20.05.2003 |
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