

1. **EC-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC**
3. Reference: **VTT 03 ATEX 067X**
4. Equipment: **MET-series Capacitive level sensor**
Certified types: **KAH/3W, KAR/SA/3W, PA/3W, PAH/3W,
SA/FEP/3W, KAH/2W, KAR/SA/2W,
PA/2W, PAH/2W or SA/FEP/2W**
5. Manufactured by: **Oy Labko Ab**
6. Address: **Labkotie 1
FIN-36240 Kangasala
Finland**
7. This equipment or protective system and any acceptable variations thereto is specified in the schedule and possible supplement(s) to this Certificate and the documents therein referred to.
8. VTT Industrial Systems, notified body number 0537, in accordance with Article 9 of the Council Directive 94/9/EC of 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 system 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 TU026-032751.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with the standards:

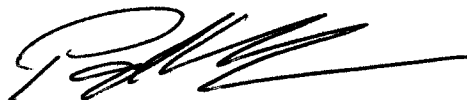
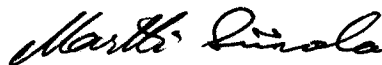
**EN 50014 (1997) +A1&A2
EN 50020 (2002)**

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 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. This certificate does not cover these.
12. The marking of the equipment or protective system shall include the following:

**II 1 G****EEx ia IIB T5/T6
EEx ia IIB T5****/2W-types
/3W-types**

Espoo, 04.07.2003

VTT INDUSTRIAL SYSTEMS
Electrical Ex-ApparatusPaul Lindström
Senior research scientist**1018**
(EN45004, IIlto A)Martti Siirola
Research scientist

13. **Schedule**14. **EC-TYPE EXAMINATION CERTIFICATE VTT 03 ATEX 067X**15. **Description of Equipment**

The MET series capacitive level probes types KAH/3W, KAR/SA/3W, PA/3W, PAH/3W, SA/FEP/3W and .../2W are capacitive level sensors for liquid level gauging. The sensors consist of a separately certified transmitter inside the enclosure and mechanical probe elements. Type .../2W series 2-wire probes are equipped with CBM22 R or CBM22 V type level transmitter certificate VTT 03 ATEX 068U and type .../3W 3-wire probes are equipped with MET3 type transmitter Certificate VTT 03 ATEX 073U. The MET series level probes shall be connected to an intrinsically safe circuit. The enclosure is of light metal aluminium alloy. The metal parts of the enclosure shall be grounded.

Electrical data

The maximum input values of the MET series capacitive level probes type KAH/3W, KAR/SA/3W, PA/3W, PAH/3W, SA/FEP/3W or .../2W are:

| Ui | Ii | Pi | Ci | Li |
|------|--------|--------|------|------------|
| 30 V | 100 mA | 750 mW | 1 nF | 50 μ H |

Documents:

Description of the MET sensors, XA23103_s, 7 pages, dated 03.02.2003
Type plate, KAH/2W,3W, KAR/SA/2W,3W, PA/2W,3W, PAH//2W,3W,
SA/FEP/2W,3W, XK23094_s, 23.01.2003

SA/FEP/2W,3W

Assembly and dimensions, SA/FEP, XK23100_s, 30.01.2003

Insulation, XK23102_s, XK23102_s, 30.01.2003

Centralizer, XK23106_s, 03.02.2003

PA/PAH/2W,3W

Assembly and dimensions, PA, PAH, XK23096_s, 23.01.2003

KAH

Assembly and dimensions, KAH, XK20097_s, 27.01.2003

KAR/SA

Assembly and dimensions, KAR/SA, XK23098_s, 27.01.2003

Insulation guide, XK20095Bs, 27.01.2003

16. **Report No. TUO26-032751**

17. Special conditions for safe use:

The permissible ambient temperature range of the connection box depends on the used separately certified transmitter.

The permissible ambient temperature range is $-25\text{ °C} \leq T_a \leq +60\text{ °C}$ for temperature class T6 and $-25\text{ °C} \leq T_a \leq +70\text{ °C}$ for class T5 with .../2W type level probes.

The permissible ambient temperature range is $-25\text{ °C} \leq T_a \leq +60\text{ °C}$ for temperature class T5 with .../3W type level probes.

The permissible ambient temperature range for the sensor electrodes are:

$-40\text{ °C} \leq T_a \leq +150\text{ °C}$ for the type PA, PAH, PAHP or KAH electrode

$-40\text{ °C} \leq T_a \leq +100\text{ °C}$ for the type KAR/SA electrode

$-40\text{ °C} \leq T_a \leq +110\text{ °C}$ for the type SA/FEP electrode

The enclosure is of light metal so there may be sparks, if the enclosure is subjected to friction or impact.

18. Essential Health and Safety Requirements

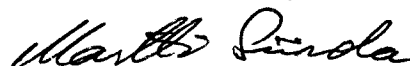
Met by compliance with the standards referred in point 9.

Espoo, 04.07.2003

VTT INDUSTRIAL SYSTEMS
Electrical Ex-Apparatus



Paul Lindström
Senior research scientist



Martti Siirola
Research scientist



1018
(EN45004, II(ite A))

1. SUPPLEMENT TO EC-TYPE EXAMINATION CERTIFICATES

| | |
|-------------------------|-------------------------|
| VTT 02 ATEX 012X | VTT 03 ATEX 067X |
| VTT 02 ATEX 021U | VTT 03 ATEX 068U |
| VTT 02 ATEX 022X | VTT 03 ATEX 073U |
| VTT 03 ATEX 007X | VTT 03 ATEX 075X |
| VTT 03 ATEX 009X | VTT 03 ATEX 088X |
| VTT 03 ATEX 015X | VTT 03 ATEX 089X |
| VTT 03 ATEX 024X | VTT 03 ATEX 090X |
| VTT 03 ATEX 030X | VTT 03 ATEX 094X |

2. Equipment: **Surface level measuring sensors**

Certified types:

**KAH/3W, KAR/SA/3W, PA/3W, PAH/3W, SA/FEP/3W,
KAH/2W, KAR/SA/2W, PA/2W, PAH/2W or SA/FEP/2W
TSSH(S)/3W, MET LPG/3W
TSSH(S)/2W, MET LPG/2W
WBS 500 or WBS 500 RTD
WBS 1000/SETTSH2/SETSA2
WBS 3000
LABKO 3000 or LABKO 3000 LPG
MET3VL, MET3V, MET3R
CBM22 R or CBM22 V
SET/OS2, SET/TSH2, SET/TSHS2, SET/TSH2/VP,
SET/OELO2, SET/TSH2 LPG, SET DM/3 or SET DM/3E,
SET/TSSH2, SET/TSSH2 or SET/SA2, CBS1e, SET/S**

3. Manufactured by: **Labkotec Oy**

4. Address: **Myllyhaantie 6
FI-33960 PIRKKALA
Finland**

5. The manufacturer name Wavin-Labko Oy or Wavin-Labko ltd. or Oy Labko Ab has been changed to Labkotec Oy

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

**EN 60079-0 (2009)
EN 60079-11 (2007)
EN 60079-26 (2007)**

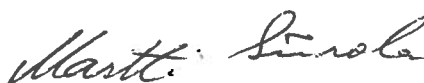
7. The marking of the equipment or protective system shall be according to the standards above.

Espoo, 8.10.2009

VTT Technical Research Centre of Finland



Pertti Kokkonen
Research engineer



Martti Siirola
Research scientist