

Translation

(1) **Certificate of Conformity**

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

(3) **Certificate Number** **TÜV 08 ATEX 554749**

(4) for the equipment: Measuring transducer
for rotation angle 81.4 type PL 1100

(5) of the manufacturer: LABOM Mess- und Regeltechnik GmbH

(6) Address: Im Gewerbepark 13
27795 Hude

Order number: 8000554749

Date of issue: 2008-10-16

- (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) The TÜV NORD CERT GmbH, notified body No. 0044 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), 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 the confidential report No. 08 203 554749.


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

EN 60079-0:2006 EN 60079-11:2007
EN 61241-0:2006 EN 61241-11:2006

(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.

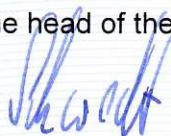
(11) This certificate of conformity relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

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

 II 2 G Ex ib IIC T6/T5/T4 (see schedule)
II 2 D Ex ibD 21 T75 °C/T95 °C/T115 °C/T120 °C (see schedule)

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body



Schwedt

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(13) **SCHEDULE**

(14) **Certificate of Conformity No. TÜV 08 ATEX 554749**

(15) Description of equipment

The measuring transducer for rotation angle 81.4 type PL 1100 is used for evaluation of angle variation in instrument movements for pressures or temperatures.
The measuring signal is linearised and transformed in a 4-20 mA Signal by the evaluation electronics.

The measuring transducer for rotation angle 81.4 type PL 1100 may be installed into the housing of manometers or thermometers according to the test documents of the manufacturer.

Electrical data

Measuring circuit in type of protection Intrinsic Safety Ex ib IIC
(Plug connection at the housing) only for connection to a certified intrinsically safe circuit
Maximum values:
 $U_i = 30 \text{ V}$
 $I_i = 150 \text{ mA}$
 $P_i = 1 \text{ W}$
 The effective internal inductances and capacitances are negligibly small.

At use of the measuring transducer for rotation angle in explosion hazardous areas for category 2D-apparatus, the measuring circuit may also be executed in type of protection intrinsic safety Ex ib IIB.

The marking as well as the permissible ambient temperature range have to be taken from the following tables:

Table 1

Use in explosion hazardous areas for category 2G-apparatus

Marking	Ambient temperature range
II 2 G Ex ib IIC T6	-20°C ... 45 °C
II 2 G Ex ib IIC T5	-20°C ... 65 °C
II 2 G Ex ib IIC T4	-20°C ... 85 °C

Tabelle 2

Use in explosion hazardous areas for category 2D-apparatus

Marking	Ambient temperature range
II 2 D Ex ibD 21 T75 °C	-20°C ... 40 °C
II 2 D Ex ibD 21 T95 °C	-20°C ... 60 °C
II 2 D Ex ibD 21 T115 °C	-20°C ... 80 °C
II 2 D Ex ibD 21 T120 °C	-20°C ... 85 °C

Schedule Certificate of Conformity No. TÜV 08 ATEX 554749

Hint for erection and operation:

Apparatus with marking II 2 D:

The surface temperature was assessed under dust-free conditions at the internal parts of the apparatus (encapsulated electronic units). At dust layers of > 5mm at these parts, the max. permissible surface temperature has to be assessed by the user according to EN 61241-14.

(16) The test documents are listed in the test report No. 08 203 554749.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

Translation

1. SUPPLEMENT

to Certificate No.	TÜV 08 ATEX 554749
Equipment:	Measuring transducer for rotation angle 81.4 type PL 1101
Manufacturer:	LABOM Mess- und Regeltechnik GmbH
Address:	Im Gewerbepark 13 27798 Hude
Order number:	8000396754
Date of issue:	2012-09-11

In future, the measuring transducer for rotation angle 81.4 may be manufactured according to the documents listed in the test report.

The changes refer to

- the hints for erection and operation,
- changes at the hall sensing device module,
- the type designation (new: PL1101) and
- the marking of the apparatus.

In the future, this has to be taken from the tables mentioned below:

Table 1

Use in explosion hazardous areas for category 2G-apparatus

Marking	Ambient temperature range
II 2 G Ex ib IIC T6 Gb	-20°C ... 45 °C
II 2 G Ex ib IIC T5 Gb	-20°C ... 65 °C
II 2 G Ex ib IIC T4 Gb	-20°C ... 85 °C

Table 2

Use in explosion hazardous areas for category 2D-apparatus

Marking	Ambient temperature range
II 2 D Ex ib IIIC T75 °C Db	-20°C ... 40 °C
II 2 D Ex ib IIIC T95 °C Db	-20°C ... 60 °C
II 2 D Ex ib IIIC T115 °C Db	-20°C ... 80 °C
II 2 D Ex ib IIIC T120 °C Db	-20°C ... 85 °C

The "Electrical data" and all other details apply unchanged.

The equipment according to this supplement meets the requirements of these standards:

EN 60079-0:2009 EN 60079-11:2012

1. Supplement to Certificate No. TÜV 08 ATEX 554749

(16) The test documents are listed in the test report no. 12 203 084537.

Hints for erection and operation:

Apparatus with marking II 2 D:

The surface temperature was assessed under dust-free conditions at the internal parts of the apparatus (encapsulated electronic units). At dust layers of > 5mm at these parts, the max. permissible surface temperature has to be assessed by the user according to EN 60079-14.

The measuring transducer for rotation angle 81.4 may be installed into the housing of manometers or thermometers according to the test documents of the manufacturer. By this, a type of protection of min. IP 20 has to be guaranteed.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

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The head of the notified body

A handwritten signature in blue ink, appearing to be "Schwedt".

Schwedt

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