

# CERTIFICATE

## (1) EU-Type Examination

(2) **Equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **DEKRA 13ATEX0142** Issue Number: **2**

(4) Product: **Pressure Transmitter Model LHC-M51 and PPC-M51 and Pressure Sensor LHCS-51 and LHCR-51**

(5) Manufacturer: **Pepperl+Fuchs GmbH**

(6) Address: **Lilienthalstrasse 200, 68307 Mannheim, Germany**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) DEKRA Certification B.V., Notified Body number 0344 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential test report number NL/DEK/ExTR13.0055/02.

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

**EN 60079-0 : 2012 + A11 :2013    EN 60079-11 : 2012    EN 60079-26 : 2015    EN 60079-31 : 2014**

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:



**II 1/2 G    Ex ia IIC T6 ... T3 Ga/Gb or**  
**II 2 G    Ex ia IIC T6 ... T3 Gb and/or**  
**II 1/2 D    Ex ia IIIC T75 °C Da/Db or**  
**II 1/2 D    Ex ta/tb IIIC T75 °C Da/Db**

Date of certification: 21 March 2019

DEKRA Certification B.V.

R. Schuller  
Certification Manager



(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 13ATEX0142**

Issue No. 2

(15) **Description**

Pressure Transmitter Model LHC-M51 and PPC-M51 and Pressure Sensor LHCS-51 and LHCR-51 are used in potentially explosive atmospheres caused by the presence of flammable gases, liquids, vapours or dusts for the measurement of level, flow, differential pressure, over- and under pressure.

The pressure signal at the ceramic or metal sensor is converted into an electrical signal.

The output of the Pressure Transmitter is a 4 - 20 mA current output signal with or without a superimposed HART digital signal, or the transmitter is intended to be connected to a fieldbus system (Profibus PA and Foundation Fieldbus).

The several versions of the Pressure Transmitters differ in type of sensor, type of enclosure, process connection etc.

Optionally the Pressure Transmitters that are intended for application in explosive gas atmospheres, may be provided with a sensor with extension cable.

Ambient temperature range -50 °C to +70 °C.

The relation between temperature class, ambient temperature and process temperature is given in the following table.

temperature class	ambient temperature	process temperature		
		LHCR-51	LHCS-51	LHC-M51, PPC-M51
T6	≤ 40 °C	≤ 80 °C	≤ 80 °C	≤ 80 °C
T4	≤ 70 °C	≤ 85 °C	≤ 80 °C	≤ 125 °C <sup>1)</sup>
T3	≤ 70 °C			≤ 150 °C

NOTE 1: Process temperature with hygienic process connection ≤ 130 °C.

**Electrical data**

Transmitters in type of protection intrinsic safety Ex ia

Interface 4 - 20 mA (with or without HART communication):

Supply and output circuit (terminals + and - or connector):

in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 30 \text{ V}$ ;  $I_i = 300 \text{ mA}$ ;  $P_i = 1 \text{ W}$ ;  $L_i = 0 \text{ mH}$ ;  $C_i = 10 \text{ nF}$ .

(13) **SCHEDULE**

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Interface Profibus PA or Foundation Fieldbus:  
 Supply and data circuit (terminals + and - or connector):  
 in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:  
 $U_i = 24 \text{ V}$ ;  $I_i = 250 \text{ mA}$ ;  $P_i = 1,2 \text{ W}$ ;  $L_i = 10 \text{ }\mu\text{H}$ ;  $C_i = 5 \text{ nF}$ ;

or to an intrinsically safe fieldbus in accordance with FISCO, with the following maximum values:  
 $U_i = 17,5 \text{ V}$ ;  $I_i = 500 \text{ mA}$ ;  $P_i = 5,5 \text{ W}$ ;  $L_i = 10 \text{ }\mu\text{H}$ ;  $C_i = 5 \text{ nF}$ .

Transmitters in type of protection Ex t

$U_{\text{max}} = 45 \text{ V}$  (interface 4 - 20 mA), respectively 32 V (fieldbus interface).

**Installation instructions**

The instructions provided with the product shall be followed in detail to assure safe operation.

(16) **Report Number**

No. NL/DEK/ExTR13.0055/02.

(17) **Specific conditions of use**

None.

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

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/DEK/ExTR13.0055/02.

(20) **Certificate history**

Issue 1 - 216426200	initial certificate
Issue 2 - 222918300	constructional changes, assessment according to newer edition of the standards and display connector removal