

# 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: **KEMA 05ATEX1114 X** Issue Number: **3**

(4) Product: **Two-Wire Temperature Transmitters Type 27HU, Type 27R, Type 27RS, Type 27TS and Type 27U**

(5) Manufacturer: **MG CO., LTD.**

(6) Address: **5-2-55 Minamitsumori, Nishinari-ku, Osaka 557-0063, Japan**

(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 211555600 issue 3.

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

**EN 60079-0 : 2006**

**EN 60079-11 : 2007**

**EN 60079-26 : 2007**

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 G Ex ia IIC T4 ... T6**

Date of certification: 14 November 2023

DEKRA Certification B.V.

R. Schuller  
Certification Manager



Throughout this document, a point is used as the decimal separator.

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(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate KEMA 05ATEX1114 X**

Issue No. 3

(15) **Description**

The Two-Wire Temperature Transmitters Type 27..., for mounting in a suitable enclosure, are used to convert the input signal of a temperature sensor into a 4 - 20 mA current signal. Transmitter Type 27HU additionally provides digital communication (HART protocol). Temperature Transmitters Type 27HU and Type 27U are Universal Transmitters that accept several input sources as mV, thermocouple or resistance; Temperature Transmitters Type 27R and Type 27RS accept a resistance temperature sensor as input source and Type 27TS accepts a thermocouple as input source.

Ambient temperature range:   -40 °C to +80 °C for temperature class T4;  
  -40 °C to +60 °C for temperature class T5;  
  -40 °C to +45 °C for temperature class T6.

**Electrical data**

Supply/output circuit (terminals + and -):  
in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i = 30 \text{ V}$ ;  $I_i = 96 \text{ mA}$ ;  $P_i = 720 \text{ mW}$ ;  $C_i = 1 \text{ nF}$ ;  $L_i = 0 \text{ mH}$ .

Input circuit (terminals 1, 2, 3 and 4):

in type of protection intrinsic safety Ex ia IIC, with the following maximum values:

$U_o = 30 \text{ V}$ ;  $I_o = 24 \text{ mA}$ ;  $P_o = 180 \text{ mW}$ ;  $C_o = 50 \text{ nF}$ ;  $L_o = 40 \text{ mH}$ .

From the safety point of view, the intrinsically safe circuits shall be considered to be connected to earth.

**Installation instructions**

The manufacturers instructions shall be followed in detail to assure safe operation.

The transmitter shall be mounted in an enclosure providing a degree of protection of at least IP20 in accordance with EN 60529. Depending on the environmental conditions this enclosure may be required to provide a higher degree of protection.

If the enclosure is made of light metal, it shall comply with the requirements of clause 8.1.2 of EN 60079-0, taking account of the conditions of use.

(16) **Report Number**

No. 211555600 issue 3.

(17) **Specific conditions of use**

1. If the transmitter is mounted in a non-metallic enclosure and if it is used in an explosive gas atmosphere where the use of equipment of category 1 G is required, it shall be installed such, that electrostatic charging of the enclosure is avoided.
2. If the transmitter is mounted in an enclosure of light metal and if it is used in an explosive gas atmosphere where the use of equipment of category 1 G is required, it shall be installed such, that, even in the event of rare incidents, ignition sources due to impact and friction are excluded.

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate KEMA 05ATEX1114 X**

Issue No. **3**

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

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Test Report No. 211555600 issue 3.