

CERTIFICATE

(1) Type Examination

(2) **Product intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) Type Examination Certificate Number: **DEKRA 19ATEX0072 X** Issue Number: **0**

(4) Product: **2-Wire Programmable Transmitter, Types STT650-S2-0-B-CA0, STT650-T2-0-B-CA0, STT650-S1-0-B-AA0, STT650-T1-0-B-AA0 and 2-wire Transmitter with HART 7 Protocol, Types STT650-S2-0-B-CH0 and STT650-T2-0-B-CH0**

(5) Manufacturer: **Honeywell International Inc.**

(6) Address: **512 Virginia Drive, Fort Washington, PA 19034, USA**

(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., 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 Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential test report no. NL/DEK/ExTR14.0091/01.

(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 60079-15 : 2010

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 Type Examination Certificate relates only to the design and construction of the specified product and not to the manufacturing process and its monitoring.

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



**II 3 G Ex nA [ic] IIC T6 ... T4 Gc or
II 3 G Ex ic IIC T6 ... T4 Gc or
II 3 D Ex ic IIIC Dc**

Date of certification: 14 June 2019

DEKRA Certification B.V.



R. Schuller
Certification Manager

(13) **SCHEDULE**

(14) **to Type Examination Certificate DEKRA 19ATEX0072 X**

Issue No. 0

(15) **Description**

The 2-Wire Programmable Transmitter types STT650-S2-0-B-CA0, STT650-T2-0-B-CA0, STT650-S1-0-B-AA0 and STT650-T1-0-B-AA0, for rail mounting, with one or two independent channels is used to convert the temperature measurement signal of a temperature sensor or a mV signal into a 4 ... 20 mA current signal.

The 2-Wire Transmitters types STT650-S2-0-B-CH0 and STT650-T2-0-B-CH0 with HART 7 protocol, for rail mounting, with one or two independent channels, are used to convert the measurement signal of a temperature sensor or a mV signal into a 4 ... 20 mA current signal with digital communication.

Electrical data

Refer to Annex 1 to this certificate.

Installation instructions

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

(16) **Report Number**

No. NL/DEK/ExTR14.0091/01.

(17) **Specific conditions of use**

If the transmitter is applied in type of protection "Ex nA", it shall be installed in an enclosure that is Ex nA certified according to EN/IEC 60079-15 or "Ex e" certified and suitable for the application and correctly installed.

Electrostatic charges on the transmitters enclosure shall be avoided.

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

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report No. NL/DEK/ExTR14.0091/01.

(20) **Certificate history**

Issue 0 - 223767300 initial certificate

Annex 1 to DEKRA 19ATEX0072 X, issue 0

General product information:

The 2-Wire Programmable Transmitter types STT650-S2-0-B-CA0, STT650-T2-0-B-CA0, STT650-S1-0-B-AA0 and STT650-T1-0-B-AA0 for rail mounting, with one or two independent channels is used to convert the temperature measurement signal of a temperature sensor or a mV signal into a 4 ... 20 mA current signal.

The 2-wire Transmitter with HART 7 Protocol types STT650-S2-0-B-CH0 and STT650-T2-0-B-CH0, for rail mounting, with one or two independent channels is used to convert the temperature measurement signal of a temperature sensor or a mV signal into a 4 ... 20 mA current signal with digital communication.

For Ex ic IIC Dc

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP6X according to EN 60529, and that is suitable for the application and correctly installed.

The surface temperature of the enclosure is equal to the ambient temperature +20 K for a dust layer with a maximum thickness of 5 mm.

Ambient temperature range: -40 °C to +85 °C

For marking Ex nA [ic] IIC T6 ... T4 Gc and Ex ic IIC T6 ... T4 Gc

If the transmitter is applied in type of protection "Ex nA", it shall be installed in an enclosure that is Ex nA certified according to EN 60079-15 or "Ex e" certified and suitable for the application and correctly installed.

Ambient temperature range: -40 °C to +60 °C for temperature class T6

-40 °C to +85 °C for temperature class T4

Electrical data

Types of protection Ex ic and Ex nA:

2-wire Programmable Transmitter (STT650-S2-0-B-CA0 and STT650-T2-0-B-CA0)

Supply and output circuit (terminals 11 - 13, respectively 21 - 23):

in type of protection non sparking Ex nA, with

$U_{max} \leq 35 \text{ Vdc}$, or

supply and output circuit (terminals 11 - 13, respectively 21 - 23):

in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):

$U_i = 35 \text{ V}$; $C_i = 1 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$.

Sensor circuit (terminals 41 ... 44, respectively 51 ... 54), in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):

$U_o = 9.6 \text{ V}$; $I_o = 25 \text{ mA}$; $P_o = 60 \text{ mW}$; $C_o = 2.4 \text{ }\mu\text{F}$; $L_o = 33 \text{ mH}$.

The sensor circuit is not infallibly galvanic isolated from the supply / output circuit. However, the galvanic isolation between the circuits is capable of withstanding a test voltage of 500Vac during 1 minute.

2-wire Programmable Transmitter (STT650-S1-0-B-AA0 and STT650-T1-0-B-AA0)

Supply and output circuit (terminals 11 - 13, respectively 21 - 23):

in type of protection non sparking Ex nA, with

$U_{max} \leq 35 \text{ Vdc}$, or

supply and output circuit (terminals 11 - 13, respectively 21 - 23):

in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):

$U_i = 35 \text{ V}$; $C_i = 1 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$.

Sensor circuit, thermocouple, RTD, resistance or mV (terminals 41 ... 44, respectively 51 ... 54), in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):

$U_o = 5 \text{ V}$; $I_o = 4 \text{ mA}$; $P_o = 20 \text{ mW}$; $C_o = 1000 \text{ }\mu\text{F}$; $L_o = 900 \text{ mH}$.

The sensor circuit is not infallibly galvanic isolated from the supply / output circuit.

Annex 1 to DEKRA 19ATEX0072 X, issue 0

2-Wire Transmitter with HART protocol (STT650-S2-0-B-CH0 and STT650-T2-0-B-CH0)

Supply and output circuit (terminals 11 ... 14, respectively 21 ... 24):

in type of protection non sparking Ex nA, with

$U_{max} \leq 35$ Vdc, or

supply and output circuit (terminals 11 ... 14, respectively 21 ... 24):

in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):

$U_i = 35$ V; $C_i = 1$ nF; $L_i = 10$ μ H.

Sensor circuit, thermocouple, RTD, resistance or mV (terminals 41 ... 44, respectively 51 ... 54), in type of protection intrinsic safety Ex ic IIC or Ex ic IIIC, with the following maximum values (per circuit):

$U_o = 9.6$ V; $I_o = 28$ mA; $P_o = 67$ mW; $C_o = 28$ μ F; $L_o = 45$ mH.

The sensor circuit is not infallibly galvanic isolated from the supply / output circuit. However, the galvanic isolation between the circuits is capable of withstanding a test voltage of 500Vac during 1 minute.