



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx DEK 14.0084X Issue No: 2 Certificate history:
Status: Current Issue No. 2 (2019-06-14)
Date of Issue: 2019-06-14 Page 1 of 4 Issue No. 1 (2017-06-24)
Issue No. 0 (2015-01-12)

Applicant: Honeywell International Inc.
512 Virginia Drive
Fort Washington, PA 19034
United States of America

Equipment: 2-Wire Programmable Transmitter, types STT650-S2-0-A-CA0, STT650-T2-0-A-CA0,
STT650-S1-0-A-AA0, STT650-T1-0-A-AA0, 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-A-CH0, STT650-T2-0-A-CH0, STT650-T2-0-A-CH0, STT650-S2-0-
B-CH0 and STT650-T2-0-B-CH0

Optional accessory:

Type of Protection: Ex Ia

Marking:

Ex ia IIC T6 ... T4 Ga
Ex ia IIIC Da
Ex ia I Ma
Ex nA [ic] IIC T6 ... T4 Gc or
Ex ic IIC T6 ... T4 Gc or
Ex ic IIIC Dc

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:

2019-06-14

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA Certification B.V.
Meander 1051,
6825 MJ Arnhem
The Netherlands





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Manufacturer: **Honeywell International Inc.**
512 Virginia Drive
Fort Washington, PA 19034
United States of America

Additional Manufacturing location(s):

Honeywell Process Solution
Avenida Miguel De La Madrid #8102
Colonia Lote Bravo
Ciudad Juárez, Chihuahua C.P. 32695
Mexico

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

NL/DEK/ExTR14.0091/01

Quality Assessment Report:

NL/DEK/QAR13.0025/04



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The 2-Wire Programmable Transmitter types STT650-S2-0-A-CA0, STT650-T2-0-A-CA0, STT650-S1-0-A-AA0, STT650-T1-0-A-AA0, 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-A-CH0, STT650-T2-0-A-CH0, 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.

Thermal and electrical data

Refer to the Annex of this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

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 IEC 60079-15 or "Ex e" certified and suitable for the application and correctly installed.

Electrostatic charges on the transmitters enclosure shall be avoided.



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DETAILS OF CERTIFICATE CHANGES (for Issues 1 and above):

Addition of Zone 2 evaluation and marking

Annex:

[223767300 Annex 1.pdf](#)



**Annex 1 to Certificate of Conformity IECEx DEK 14.0084X
Annex 1 to NL/DEK/ExTR/14.0091/01**

General product information:

The 2-Wire Programmable Transmitter types STT650-S2-0-A-CA0, STT650-T2-0-A-CA0, STT650-S1-0-A-AA0, STT650-T1-0-A-AA0, 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-A-CH0, STT650-T2-0-A-CH0, 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 marking Ex ia IIC T6 ... T4 Ga

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP20 according to IEC 60529 and that is suitable for the application and correctly installed.

Ambient temperature range: -40 °C to +40 °C for temperature class T6
-40 °C to +60 °C for temperature class T5
-40 °C to +85 °C for temperature class T4

For marking Ex ia IIIC Da and Ex ic IIIC Dc

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP6X according to IEC 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 ia I Ma

The transmitter shall be mounted in an enclosure that provides a degree of protection of at least IP6X according to IEC 60529.

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 IEC 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

Type of protection Ex ia:

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

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

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

$U_i = 30 \text{ V}$; $I_i = 120 \text{ mA}$; $P_i = 0.84 \text{ W}$; $C_i = 1 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$.

Sensor circuit (terminals 41 ... 44, respectively 51 ... 54):

in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, with 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.

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Annex 1 to NL/DEK/ExTR/14.0091/01**

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

Supply and output circuit (terminals 11 - 13, respectively 21 - 23):
in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, only for connection to a certified intrinsically safe circuit, with the following maximum values (per circuit):
 $U_i = 30 \text{ V}$; $I_i = 120 \text{ mA}$; $P_i = 0.84 \text{ W}$; $C_i = 6.2 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$.

Sensor circuit (terminals 41 ... 44, respectively 51 ... 54):
in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, with following maximum values (per circuit):
 $U_o = 30 \text{ V}$; $I_o = 8 \text{ mA}$; $P_o = 60 \text{ mW}$; $C_o = 60.8 \text{ nF}$; $L_o = 35 \text{ mH}$.

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

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

Supply and output circuit (terminals 11 ... 14, respectively 21 ... 24):
in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, only for connection to a certified intrinsically safe circuit, with the following maximum values (per circuit):
 $U_i = 30 \text{ V}$; $I_i = 120 \text{ mA}$; $P_i = 0.84 \text{ W}$; $C_i = 1 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$.

Sensor circuit (terminals 41 ... 44, respectively 51 ... 54):
in type of protection intrinsic safety Ex ia IIC, Ex ia IIIC or Ex ia I, with following maximum values (per circuit):
 $U_o = 9.6 \text{ V}$; $I_o = 28 \text{ mA}$; $P_o = 67.2 \text{ mW}$; $C_o = 3.5 \text{ }\mu\text{F}$; $L_o = 35 \text{ mH}$.

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.

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

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

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.