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 SIR 15.0022X issue No.:1

Certificate history:
Issue No. 1 (2016-5-25)
Issue No. 0 (2015-5-22)

Status: **Current**

Date of Issue: **2016-05-25** Page 1 of 4

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

Electrical Apparatus: **Model SMV800 Series Transmitters**
Optional accessory:

Type of Protection: **Intrinsic Safety, Flameproof, Dust and Type nA**

Marking:

	Ambient Range:
Ex ia IIC T4 Ga	Ex ia IIC: -50°C to 70°C
Ex ia IIC T4 Ga	Ex ia IIC: -50°C to 45°C (When Installed as FISCO)
Ex ic IIC T4 Gc	Ex ic IIC: -50°C to 45°C
Ex d IIC T6...T5 Ga/Gb	Ex d IIC: -50°C to 65°C or -50°C to 85°C
Ex tb IIIC T95°C...T125°C Db	Ex tb IIIC: -50°C to 85°C
Ex nA IIC T4 Gc	Ex nA IIC: -50°C to 85°C
IP66/IP67	

Approved for issue on behalf of the IECEx Certification Body: N Jones

Position: Certification Manager

Signature:
(for printed version)

Date: 2016-05-25

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:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden
Deeside
CH5 3US
United Kingdom

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Manufacturer:

Honeywell 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 Juarez
Chihuahua C.P. 32695
Mexico

Honeywell (Tianjin) Ltd
Building 21 JinBin
Development No 156
Nan Hai Rd TEDA
Tianjin 300457
China

Honeywell Automation India Ltd.
Plot No. 3, Gat No. 181
Village Fulgaon
Tal-Haveli, Pune: 412216
Maharashtra
India

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 electrical 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 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
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"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*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:
GB/SIR/ExTR15.0110/00 GB/SIR/ExTR16.0123/00

Quality Assessment Report:

NL/DEK/QAR11.0062/02 NL/DEK/QAR12.0078/02 NL/DEK/QAR13.0025/02

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The Model SMV 800 Series transmitters are permanently connected devices intended to measure temperature and pressure of an industrial process and provide a digital output signal to communicate the measured value. The digital output signal uses HART, DE, Foundation Fieldbus, or Profibus Protocols. Optionally, the Model SMV 800 Series transmitters are available with no display, a Basic Display, or an Advanced Display which includes an LCD display visible through a window cover. The Top Nameplate conceals three magnetic push buttons for configuration purposes. The Model SMV 800 Series transmitters have been evaluated for the following process connections.

1. A810: -25 to +25 mbar in H2O, -62.5 to 62.5 mbar (100psi); -50°C to +125°C
2. A845: -400 to +400 mbar in H2O, -1000 to 1000 mbar (1500psi); -50°C to +125°C
3. G870: -400 to +400 mbar in H2O, -1000 to 1000 mbar (3000psi); -50°C to +125°C

Refer to ANNEX for additional description and Conditions of Manufacture.

CONDITIONS OF CERTIFICATION: YES as shown below:

The user/installer shall comply with the following:

1. **Intrinsic safety "i" items only** - the enclosure is manufactured from low copper, aluminum alloy. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation, particularly if the equipment is installed in a zone 0 location.
2. **Intrinsic safety "i" items only** - if a charge-generating mechanism is present, the exposed painted metallic part on the enclosure is capable of storing a level of electrostatic charge that could become incendive for IIC gases. Therefore, the user/installer shall implement precautions to prevent the build-up of electrostatic charge, e.g. earthing the metallic part. This is particularly important if the equipment is installed in a zone 0 location. Cleaning of the painted surface shall only be done with a damp cloth.
3. **Flameproof "d" and dust ignition "t" enclosure items only** - if a charge-generating mechanism is present, the exposed painted metallic part on the enclosure is capable of storing a level of electrostatic charge that could become incendive for IIC gases. Therefore, the user/installer shall implement precautions to prevent the build-up of electrostatic charge, e.g. earthing the metallic part. Cleaning of the painted surface shall only be done with a damp cloth.
4. **Non-sparkng "nA" items only** - If a charge-generating mechanism is present, the exposed painted metallic part on the enclosure is capable of storing a level of electrostatic charge that could become incendive for IIC gases. Therefore, the user/installer shall implement precautions to prevent the build-up of electrostatic charge, e.g. earthing the metallic part. Cleaning of the painted surface shall only be done with a damp cloth.

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

Issue 1 – this Issue introduced the following changes:

1 Addition of ferrite beads for EMC protection
2 Update Entity Parameters, the description was amended accordingly.
3 Updated drawings
4 Updated model designation, the description was amended accordingly.

Annex: IECEx SIR 15.0022X Issue 1 Annex.pdf

Annex to: **IECEx SIR 15.0022X Issue 1**

Applicant: **Honeywell, Inc.**

Apparatus: **Model SMV 800 Series Transmitters**

The Model SMV 800 Series transmitters are assessed for (a) Intrinsic Safety "i", (b) Explosionproof / Flameproof "d", Dust Ignitionproof "t" and (c) Non-Incendive type "n" protection methods.

Communication Protocol	**Intrinsic Safety** (Ex ia IIC)	**Intrinsic Safety** (Ex ic IIC)	**Explosion proof and Dust-Ignition proof** (Ex d IIC and Ex tb IIIC)	**Non-Incendive** (Ex nA IIC)
HART/DE	Ui = 30 Vdc, Ii = 225 mA, Pi = 900 mW, Ci = 4 nF, Li = 9 µH, Co = 39 µF, Lo = 4.99 µH	N/A	11 to 42 Vdc, 4 to 20mA	11 to 42 Vdc, 4 to 20mA
Foundation Fieldbus/Profibus	Ui = 30 Vdc, Ii = 225 mA, Pi = 1.0 W, Ci = 0 nF, Li = 0 µH, Co = 39 µF, Lo = 4.99 µH	N/A	9 to 32 Vdc, 25 mA max	9 to 32 Vdc, 25 mA max
Foundation Fieldbus/Profibus (FISCO)	Ui = 17.5 Vdc, Ii = 380 mA, Pi = 5.32 W, Ci = 0 nF, Li = 0 µH, Co = 39 µF, Lo = 4.99 µH	Ui = 17.5 Vdc, Ii = 570 mA; Ci = 0 nF, Li = 0 µH, Co = 39 µF, Lo = 4.99 µH	N/A	N/A
Note: The supplies to the Model SMV 800 Series transmitters are intended to be fully floating, and are not expected to be connected to an earth return.				

Model SMV 800 Series transmitters are a permanently connected device intended for process pressure measurements and remote temperature measurements.

The enclosure consists of epoxy-polyester powder coated painted cast aluminum, stainless steel and glass. The glass lens of the window cover is cemented in place by means of Dow Corning RTV-734 silicone elastomer cement. A total of three Parker Hannifin 2-142 S0604-70 and 2-130 S0604-70 elastomeric red silicone o-rings are provided on the two threaded covers and the threaded sensor adapter. No plastic materials are used for the external enclosure.

The overall physical dimensions of the Model SMV 800 Series transmitters are 110 mm x 125.9 mm x 198.8 mm (L x W x H). The mass is approximately 3.8 kg. The free internal volume of the equipment is 280 cm^3 with two solid covers installed. The free internal volume of the equipment is 288 cm^3 with one solid cover and one window cover installed.

The model designation is as follows:

- SMa-b-c-defghi-j-k-lmn-opq-r-stv-w-x

Where:

a = A810, A845, or G870 (Process Ambient Span)
b= S1, S2 (Temperature Sensor input)
c= 0, (Digital Output)
d = 1, 2, 3, 4, 5, 6, 7, 8, A, B, C, D, E, F, G, H, J, or K (Materials of Construction)
e = 1, 2, 3, or 4 (Fill Fluid)
f = A or H (Process Connections)
g = C, S, N, K, M, D, or B(Bolt Materials)
h = 1, 2, 3, 4, 5, or 6 (Vent/Drain Type/Location)
i = A, B, or C (Gasket Material)
j = 1, 2, or 3(Head/Connect Orientation)
k = B (Agency Approval, B=CSA Approved for Canadian and USA)
l = A, B, C, D, E, F, G, or H (Electronic housing material and entry type)
m = H, D, F, or P (Output/Protocol)

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n = 0, A, D, E, H, or J (Customer Interface Selections)
o = 1, 2, 3, or 4 (Application Software)
p = 1, 2, 3, 4, 5, or 6 (Output Limit, Failsafe & Write Protect Settings)
q = S or C (General Configuration)
r = A, B, C, D, E, F, G, or H (Accuracy and Calibration Settings)
s = 0, 1, 2, 3, 4, 5, 6, or 7 (Mounting Bracket)
t = 0, 1, or 2 (Customer Tag)
v = A0, A2, A6, A7, A8, or A9 (Conduit Plugs & Adapters)
w = Two digit alphanumeric code (General options that do not impact certification)
x = Four digit alphanumeric code (Factory identification)

Conditions of Manufacture

The Manufacturer shall comply with the following:

i. **Intrinsic safety "i" items only** - in accordance with IEC 60079-11:2011 clause 10.3, each manufactured sample of the equipment shall be subjected to an electric strength test using a test voltage of 500 Vac applied between all input terminals and the enclosure for 60 seconds. Alternatively, a voltage of 20% higher may be applied for 0.1 s. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

ii. **Intrinsic safety "i" items only -** each manufactured sample shall withstand a pressure test of 1.5 times the maximum working pressure on meterbody.

iii. **Flameproof "d" and dust ignition "t" enclosure items only –** each manufactured sample shall withstand a pressure test of 1.5 times the maximum working pressure on meterbody.

iv. **Non-sparking "nA" items only** - in accordance with IEC 60079-15:2010 clause 23.2.1, each manufactured sample of the equipment shall be subjected to an electric strength test using a test voltage of 500 Vac applied between all input terminals and the enclosure for 60 seconds. Alternatively, a voltage of 20% higher may be applied for 0.1 s. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

v. **Non-sparking "nA" items only** Each manufactured sample shall withstand a pressure test of 1.5 times the maximum working pressure on meterbody.

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