



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.:	IECEx SIR 15.0022X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 4	Issue 3 (2020-09-11)
Date of Issue:	2020-11-04		Issue 2 (2018-12-20)
Applicant:	Honeywell, Inc. 512 Virginia Drive Fort Washington, PA 19034 United States of America		Issue 1 (2016-05-25)
Equipment:	Model SMV800 Series Transmitters		Issue 0 (2015-05-22)
Optional accessory:			
Type of Protection:	Intrinsic Safety ia & ic, Flameproof db, Dust Protection by Enclosure and Type ec		
Marking:	Refer to the Annexes		

Approved for issue on behalf of the IECEx
Certification Body:

Neil Jones

Position:

Certification Manager

Signature:
(for printed version)

Date:

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 www.iecex.com or use of this QR Code.



Certificate issued by:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
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United Kingdom

sira
CERTIFICATION





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

Additional manufacturing locations: **Honeywell Automation India Ltd.**
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Village Fulgaon
Tal-Haveli, Pune: 412216
Maharashtra
India

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

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-26:2014-10 Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga
Edition:3.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

This Certificate **does not** indicate compliance with 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 Reports:

[GB/SIR/ExTR15.0110/00](#)
[GB/SIR/ExTR20.0170/00](#)

[GB/SIR/ExTR16.0123/00](#)
[GB/SIR/ExTR20.0193/00](#)

[GB/SIR/ExTR18.0234/00](#)

Quality Assessment Reports:

[NL/DEK/QAR11.0062/06](#)

[NL/DEK/QAR12.0078/05](#)

[NL/DEK/QAR13.0025/05](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Model SMV800 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, Profibus or MODBUS Protocols. Optionally, the Model SMV800 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.

Refer to the Annexe for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to the Annexe



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

This issue, Issue 4, recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. Recognise corrections / additions to the manufacturer's combined IECEx / ATEX label drawing.
2. Addition of Specific Conditions of Use that were missing in the previous certificate.
3. Addition of clarification regarding process temperatures for each type of protection.
4. Recognise corrections / additions to the manufacturer's manual / instructions document.
5. Addition of gap assessment on Ex Components that are not certified to the latest standards.
6. Addition of a new Condition of Manufacture.
7. Recognise corrections / additions to the manufacturer's control drawing to fix Ex ic entity parameters.

Annex:

[IECEx SIR 15.0022X Issue 4 Annex.pdf](#)

Annex to: IECEx SIR 15.0022X Issue 4
 Applicant: Honeywell, Inc.
 Apparatus: Model SMV 800 Series Transmitters



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 85°C
Ex ic IIC T4 Gc	Ex ic IIC: -50°C to 45°C (When Installed as FISCO)
Ex db IIC T6...T5 Ga/Gb	Ex db IIC: -50°C to 65°C or -50°C to 85°C
Ex tb IIIC T95°C...T115°C Db	Ex tb IIIC: -50°C to 85°C
Ex ec IIC T4 Gc	Ex ec IIC: -50°C to 85°C
IP66/IP67	

Equipment

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, Profibus or MODBUS 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 process ambient span: -25 to +25 in H2O / -62.5 to 62.5 mbar, maximum working pressure: 100psi; -50°C to +115°C (+125°C for types of protection "ia", "ic" and "db")
2. A845 process ambient span: -400 to +400 in H2O / -1000 to 1000 mbar, maximum working pressure: 1500psi; -50°C to +115°C (+125°C for types of protection "ia", "ic" and "db")
3. G870 process ambient span: -400 to +400 in H2O / -1000 to 1000 mbar, maximum working pressure: 3000psi; -50°C to +115°C (+125°C for types of protection "ia", "ic" and "db")
4. G880 process ambient span: -800 to +800 in H2O / -2000 to 2000 mbar, maximum working pressure: 3000psi; -50°C to +115°C (+125°C for types of protection "ia", "ic" and "db")
5. G890 process ambient span: -2000 to +2000 in H2O / -5000 to 5000 mbar, maximum working pressure: 3000psi; -50°C to +115°C (+125°C for types of protection "ia", "ic" and "db")

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

Communication Protocol	Intrinsic Safety (Ex ia IIC)	Intrinsic Safety (Ex ic IIC)	Explosion proof and Dust-Ignition proof (Ex db IIC and Ex tb IIIC)	Non-Incendive (Ex ec IIC)
HART/DE	U _i = 30 Vdc, I _i = 225 mA, P _i = 900 mW, C _i = 4 nF, L _i = 9 µH, C _o = 39 µF, L _o = 4.99 µH	U _i = 30 Vdc, I _i = 225 mA, C _i = 4 nF, L _i = 9 µH, C _o = 39 µF, L _o = 4.99 µH	11 to 42 Vdc, 4 to 20mA	11 to 42 Vdc, 4 to 20mA
Foundation Fieldbus/Profibus	U _i = 30 Vdc, I _i = 225 mA, P _i = 1.0 W, C _i = 0 nF, L _i = 0 µH, C _o = 39 µF, L _o = 4.99 µH	U _i = 30 Vdc, I _i = 225 mA, C _i = 0 nF, L _i = 0 µH, C _o = 39 µF, L _o = 4.99 µH	9 to 32 Vdc, 25 mA max	9 to 32 Vdc, 25 mA max

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 Applicant: Honeywell, Inc.
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Communication Protocol	Intrinsic Safety (Ex ia IIC)	Intrinsic Safety (Ex ic IIC)	Explosion proof and Dust-Ignition proof (Ex db IIC and Ex tb IIIC)	Non-Incendive (Ex ec IIC)
Foundation Fieldbus/Profibus (FISCO)	Ui = 17.5 Vdc, li = 380 mA, Pi = 5.32 W, Ci = 0 nF, Li = 0 µH, Co = 39 µF, Lo = 4.99 µH	Ui = 17.5 Vdc, li = 570 mA; Ci = 0 nF, Li = 0 µH, Co = 39 µF, Lo = 4.99 µH	N/A	N/A
MODBUS	N/A	N/A	9.5 to 30Vdc 30mA max	9.5 to 30Vdc 30mA max
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 permanently connected devices 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 cm³ with two solid covers installed. The free internal volume of the equipment is 288 cm³ 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, G870, G880, or G890 (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 = C, D, W, 1, 8 or 9 (Agency Approval, C=ATEX, D=IECEX, W= ATEX/IECEX MODBUS, 1=ATEX/IECEX, 8=ATEX-MODBUS, 9=IECEX-MODBUS)
- l = A, B, C, D, E, F, G, or H (Electronic housing material and entry type)
- m = H, D, F, P or M (Output/Protocol)
- 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, 6, 7 or 8 (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)

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 Apparatus: Model SMV 800 Series Transmitters



- 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)

Note that the model designation may begin with a capital letter 'Y', followed by 'SMG870...'. The 'Y' indicates special models (not affecting certification), pointing to equivalent SMG890 models. See Honeywell document 34-SM-00-11_SMG890_Addendum.pdf in the Miscellaneous Documents folder for this project.

Specific Conditions of Use

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. The applicable temperature class, ambient temperature (Ta) range and process temperature (Tp) range of the equipment when installed with type protection "Ex ia" and "Ex ic" are as follows:

Protection type	Temperature Class	
	T4	
Ex ia	Ta = -50°C to 70°C or -50°C to 45°C Tp = -40 to 125°C	
Ex ic	Ta = -50°C to 85°C or -50°C to 45°C Tp = -40 to 125°C	

4. **Flameproof "db" 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.
5. The applicable temperature class, ambient temperature (Ta) range and process temperature (Tp) range of the equipment when installed with type protection "Ex db" are as follows:

Protection type	Temperature Class		
	T4	T5	T6
Ex db	Ta = -50 to 85°C Tp = -40 to 125°C	Ta = -50 to 85°C Tp = -40 to 100°C	Ta = -50°C to 65°C Tp = -40 to 85°C

6. **Dust ignition "tb" enclosure and non-sparking "ec" 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.
7. The applicable temperature class, ambient temperature (Ta) range and process temperature (Tp) range of the equipment when installed with type protection "Ex tb" and "Ex ec" are as follows:

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Protection type	Temperature Class
	T95°C...115°C/T4
Ex tb and Ex ec	Ta = -50 to 85°C Tp = -40 to 115°C

Conditions of Manufacture

The Manufacturer shall comply with the following:

1. **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.
2. **Intrinsic safety “i” items only** - each manufactured sample shall withstand a pressure test of 1.5 times the maximum working pressure on meterbody.
3. **Flameproof “db” and dust ignition “tb” enclosure items only** – each manufactured sample shall withstand a pressure test of 1.5 times the maximum working pressure on meterbody.
4. **Non-sparking “ec” items only** - In accordance with IEC 60079-7:2017 clause 7.1, 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. Each manufactured sample shall withstand a pressure test of 1.5 times the maximum working pressure on meterbody.
5. The products covered in this report incorporate previously certified components. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these components, and the manufacturer shall inform CSA/Sira of any modifications of the components that may impinge upon the explosion safety design of their products.

Full Certificate Change History

Issue 1 – this Issue introduced the following changes:

- i. Addition of ferrite beads for EMC protection
- ii. Update Entity Parameters, the description was amended accordingly.
- iii. Updated drawings
- iv. Updated model designation, the description was amended accordingly.

Issue 2 – this Issue introduced the following changes:

- i. Addition of the MODBUS communication protocol with new terminal module and communication.
- ii. Modification to the product model designation.
- iii. Updated the FISCO (FF) label 50091228.
- iv. The introduction of standard IEC 60079-7:2015 was recognized, the marking being updated accordingly. (Standard IEC 60079-15 and marking Ex nA were removed)
- v. Addition of “ic” protection concept for Hart/DE and FF/Profibus models.
- vi. Added a T4 rating for the HART/DE/FF/Profibus communication protocols.
- vii. Following appropriate assessment, standards IEC 60079-1:2007 and EN 60079-26:2007 were replaced with IEC 60079-1:2014 and IEC 60079-26:2015 respectively. Marking was amended accordingly.

Date: 04 November 2020

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Form 9530 Issue 1

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- viii. The description was amended to recognise all the above changes.
- ix. Addition of the process temperature in the Specific Conditions of Use.
- x. Updated Non-sparking "ec" in the Conditions of Manufacture.

Issue 3 – this Issue introduced the following changes:

- i. The upper limit of the surface temperature range and the maximum process temperature have been reduced by 10°C to ensure that the equipment remains compliant with the type of protection 'tb'; the marking was amended accordingly.
- ii. Addition of two new models, the SMG880 and SMG890; the description was amended accordingly.
- iii. Recognise changes to the product series' model designation.
- iv. Addition of one new manufacturer's drawing.
- v. Recognise updates to nine manufacturer's drawings.
- vi. Following appropriate assessment, standard IEC 60079-0:2011 was replaced with IEC 60079-0:2017.

Issue 4 – this Issue introduced the following changes:

- i. Recognise corrections / additions to the manufacturer's combined IECEx / ATEX label drawing.
- ii. Addition of Specific Conditions of Use that were missing in the previous certificate.
- iii. Addition of clarification regarding process temperatures for each type of protection.
- iv. Recognise corrections / additions to the manufacturer's manual / instructions document.
- v. Addition of gap assessment on Ex Components that are not certified to the latest standards.
- vi. Addition of a new Condition of Manufacture.
- vii. Recognise corrections / additions to the manufacturer's control drawing to fix Ex ic entity parameters.