1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **BAS 98ATEX2168X** Issue: **32**

4 Equipment: **EMXX and EM5 Solenoids**

5 Applicant: **Emerson Automation Fluid Control & Pneumatics Italy S.r.l.**

6 Address: Strada per Cernusco 19
20041 Bussero
Italy

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018+AC:2020 EN 60079-18:2015 A/C:2018

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 2GD
Ex mb IIC Tx Gb
Ex mb IIIC Tz°C Db
(T_a = -40°C to yy°C)

Where: x is the assigned temperature class
yy is the maximum ambient temperature range
z is equal to the maximum surface temperature permitted by the temperature class i.e. T6 = T85°C, T5 = T100°C, T4 = T135°C and T3 = T200°C

Signed: Michelle Halliwell

Title: Director of Operations

PRODUCTS RvA C 652

13 DESCRIPTION OF EQUIPMENT

The type EMXX and EM5 solenoids comprise of a coil of polyurethane/polyamide enamelled copper wire wound on a polyphenylene sulphide bobbin. The bobbin is mounted onto a PCB, which in turn is mounted onto a mild steel yoke assembly. The electrical supply to the solenoid is via an internal cable supported by the encapsulant and an optional cable gland arrangement. The cable has an earth conductor that is terminated onto the yoke assembly by means of a solder tag on all options except those for the Type EMXX for use in option 3 on 24V d.c. or below, which do not require an earth connection.

Thermal protection is provided by means of a non-resetting thermal fuse connected in series with supply conductor and the coil winding. The thermal fuse is soldered onto the PCB and has an operating temperature of 165°C ±3°C. There is an optional suppression diode which, when used, results in a T3 temperature class for the coil on all units. The solenoid also has an alternative construction that does not have an earth washer; the earth is provided by a spring clip that forces the coil cable assembly onto the solenoid operator bonnet.

The complete assembly is encapsulated using HYSOL Type MH6-0504 mineral filled glass fibre reinforced epoxy moulding compound.

EMXX Solenoids - the EMXX solenoids are selected from the range listed below:

Watts	Voltage	Ambient -40°C to yy°C	T Class, TDust
Up to 4.05 W	Up to 440 V a.c.	65°C	T3, T200°C
4.05 W to 10.5W	Up to 440 V a.c.	65°C	T3, T200°C
Up to 11.2 W	Up to 240 V d.c.	65°C	T4, T135°C
Up to 11.2 W	Up to 240 V d.c.	65°C	T3, T200°C
11.2 W to 19.7 W	Up to 240 V d.c.	40°C	T4, T135°C
Up to 1.7 W	Up to 240 V d.c.	65°C	T6, T85°C
≤19.7 W	Up to 240 V d.c.	70°C	T3, T200°C

(Note: All are Insulation Class F and have a Maximum Allowable Fluid Temperature of 90°C)

EM5 Solenoids - the dimensions are reduced overall to form the EM5 solenoids, which are selected from the range listed below:

Watts	Voltage	Ambient -40°C to yy°C	T Class, TDust
Up to 5 W	Up to 440 V a.c.	60°C	T4, T135°C
Up to 3.5 W	Up to 240 V d.c.	40°C	T5, T100°C
Up to 3.5 W	Up to 240 V d.c.	40°C	T3, T200°C
Up to 3.5 W	Up to 240 V d.c.	60°C	T4, T135°C
Up to 3.5 W	Up to 240 V d.c.	60°C	T3, T200°C
3.5 W to 6.9 W	Up to 240 V d.c.	65°C	T3, T200°C
6.9 W - 22.0 W	Up to 240 V d.c.	40°C	T3, T200°C
Up to 10 W	Up to 440V 50/60 Hz	65°C	T3, T200°C

(Note: All are Insulation Class F and have a Maximum Allowable Fluid Temperature of 90°C)

SCHEDULE

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Other manufacturing sites

ASCO CONTROLS BV, Neonstraat 3, 6718 WX EDE, The Netherlands.
Ascoval Industria e Commercio Ltda, Rua Goiatuba Nº. 81 - Jardim Mutinga 06465-010 - Barueri - SP - Brazil
Emerson Process Management Chennai Private Limited (Fluid Control and Pneumatics), Plot No. P 45, 8th Avenue, Domestic Tariff Area, Mahindra World City, Tamil Nadu, Chengalpattu, 603004, India
ASCO Valve (Shanghai) Co. Ltd, No 480 Xin Miao, No 3 Road, Xin Qiao Town, Song Jiang District, Shanghai 201612, PR China.
Emerson Automation Fluid Control & Pneumatics Italy IT, Strada per Cernusco 19, 20041 Bussero (MI), Italy
Emerson Automation Fluid Control & Pneumatics Poland Sp. z.o.o, Kurczaki 132, 93-331, Lodz, Poland.
Emerson Asia Pacific Private Limited Block 4008 Ang Mio Kio Avenue 10 #04-08/10/17/22 Techplace 1, Singapore 569625.
ASCO JOUCOMATIC Limited, 2 Pit Hey Place, West Pimbo, Skelmersdale, Lancashire, WN8 9PG
ASCO SAS 53 rue de Beauce 28110 Luce France
ASCO NUMATICS GmbH Otto-Hahn Str 7-11 75248 Ölbronn-Dürn Germany
Emerson Automation Fluid Control & Pneumatics Iberia SA Poligono Brazomar s/n Castro Urdiales 39700 Spain
ASCO L.P. 160 Park Avenue Florham Park New Jersey 07932 USA
ASCO L.P. 1561 Columbia Highway Aiken South Carolina 29801 USA
ASCOTECH S.A de C.V. Circuito del Progreso #27 Parque Industrial Progreso Mexicali Baja California 21190 Mexico
ASCO L.P. 360 THELM SANDUSKY Michigan 48471 USA
ASCO Japan Co. Ltd 1-20 Takahata-cho Nishinomiya Hyogo 663-8202 Japan

Variation One - This variation introduced the following change:

An increase in dimensions, of the Type EM6 solenoid, to form the EMXX solenoids which are selected from the range listed in the table above.

Variation Two - This variation introduced the following change:

A reduction in overall dimensions, of the Type EM6 solenoid, to form the EM5 solenoids which are selected from the range listed in the table above.

Supplementary BAS98ATEX2168X/1 - This variation introduced the following changes:
Variation One

To permit the modifications to the label and cable cut back dimensions that do not affect certification.

To record an increase in maximum permitted ambient for the EM5 10W solenoids to 65ºC, as noted in the table above.

Supplementary BAS98ATEX2168X/2 - This variation introduced the following changes:
Variation One

Allows for a small printed circuit board to be introduced to simplify assembly of the cable and thermal fuse to the solenoid coil. An alternative and simplified cable insert is incorporated in the design. An optional suppression diode is introduced which, when used, results in a T3 temperature class for the coil.

Variation Two

Allows for the addition of alternative cable supplier, APEX Cables Limited, cable tables 30753HT and 30754HT.

Supplementary BAS98ATEX2168X/3 - This variation introduced the following changes:
Variation One

Allows for the addition to the range of the EMXX solenoids of a unit rated at up to 1.7W and up to 240V d.c. This arrangement has a T6 rating at a maximum ambient of 65ºC, as noted in the table above.

Variation Two

Allows for the addition of alternative cable entry inserts as defined on the drawings for the EM5, EM6, and EMXX solenoids; it also allows for the use of an optional heat shrink sleeve covering the cable sheath/cable insert joint.

Variation Three

Allows for the addition of a suppression diode on the types EM5 and EMXX which is added to the printed circuit board already included. When the diode option is used the temperature class for all units is limited to T3.

Variation Four

Allows for the addition of an alternative cable supplier Concordia for items 1 and 5, the 3 core and 4 core cables, but with identical specification and the removal of detailed cut back dimensions from the certification documents.

Variation Five

The removal of drawings GV-135003 issue B and GV-129131 issue A from the schedule of the certificate. These drawings deal with the label details for the valve itself. These drawings become certificate related drawings.

Variation Six

Allows for the fitting of a modified combined certification label.

Supplementary BAS98ATEX2168X/4 - This variation introduced the following changes:
Variation One

To allow the use of an alternative cable entry insert resulting in an increase in the width of the coil assembly.

Supplementary BAS98ATEX2168X/5 - This variation introduced the following changes:
Variation 5.1

To allow the use of an alternative supplier.

Variation 5.2

To allow an increase in operating power from 9.25W to 10.5W on the EMXX model, as noted in the table above.

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Sira Variation 1 - This variation introduced the following changes:

i. The standard EN 50281-1-1:1999 to be included in section 9 that lists the documents used to ensure compliance with the Essential Health and Safety requirements; in consequence the label will include the following marking required by Directive 94/9/EC to show that the equipment is suitable for use in the presence of combustible dust:

 II 2 D (TXXX°C) - where XXX is equal to the maximum surface temperature permitted by the temperature class

ii. The flying lead to be obtained from an alternative supplier.

Sira Variation 2 - This variation introduced the following change:

i. The introduction of an alternative construction that does not have an earth washer; the earth is provided by a spring clip that forces the coil/cable assembly onto the solenoid operator bonnet.

Sira Variation 3 - This variation introduced the following changes:

i. An increase in size of the outer encapsulant moulding around the cable entry on the EM5, EMXX and EM5X solenoids to provide greater strength at this point.
ii. Alternative coil fixing arrangements on the EM5 solenoid.
iii. The use of revised nameplates.
iv. Addition to the range of solenoids with loose conductor supply leads.
v. Minor drawing changes.

The above modifications resulted in the addition of the following additional:

Special Condition of Safe Use:
"The loose supply conductors are to be suitably protected from mechanical damage."

Conditions of Certification/Manufacture:
"An electric strength test in accordance with clause 7.2 of EN 50028:1987 shall be carried out at 1000V + 2 Un, or 1500V, which ever is the greater, for 60 seconds on the encapsulated solenoid. Alternatively, if this test voltage is multiplied by 1.2 times, it may be applied for between 3 to 5 seconds. The exposed metal surface of the solenoid shall be connected earth. The voltage shall be applied between the coil circuit joined together and earth."

Sira Variation 4 - This variation introduced the following changes:

i. An alternative EM5 a.c. solenoid with the following rating:

Nominal watts (W)	Ambient temperature range	Max fluid temp.	Temperature class	Surface temperature
≤5 a.c.	-40°C to +60°C	90°C	T4	135°C

ii. An additional temperature class and maximum ambient for the EMXX solenoid:

Nominal watts (W)	Ambient temperature range	Max fluid temp.	Temperature class	Surface temperature
≤19.7 d.c.	-40°C to +70°C	90°C	T3	200°C

iii. Additional electrical insulation.

Sira Variation 5 - This variation introduced the following changes:

i. The use of alternative types of flying leads.

Sira Variation 6 - This variation introduced the following changes:

i. The use of an alternative cable supplier and the amendment of drawing note 3 to clarify the alternative cable outer sheath colours.

Sira Variation 1 on Re-issue of 13 April 2006 - This variation introduced the following changes:

i. The recognition of minor drawing modifications; these changes are essentially administrative and do not affect the aspects of the product that are relevant to explosion safety.
ii. The option to use of alternative flying leads with a different, external sheath colour.
iii. The introduction of optional alternative flying leads, these include certain flying leads that are used within liquid fuel metering pumps, dispensers and remote pumping units.

The above modifications resulted in the addition of the following additional:

Special Condition of Safe Use:
"The EMXX & EM5 Solenoids are only suitable for use within liquid fuel metering pumps, dispensers and remote pumping units when they are fitted with cables that marked with either H05V2V2-F or H05V2V5-F"

Conditions of Certification/Manufacture:
"The flying leads of the EMXX and EM5 Solenoids that are intended to be used with liquid fuel metering pumps, dispensers and remote pumping units shall be made from cables that marked with either H05V2V2-F or H05V2V5-F."

Sira Variation 1 on Re-issue of 25 May 2007 - This variation introduced the following changes:

i. The use of an alternative polyurethane insulated cable type FLRYY 2C x 1 mm^2 within EMXX & EM5 solenoids rated 12VDC and 24VDC; the cable is not intended to be used with solenoids intended for use in liquid fuel metering pumps, dispensers and remote pumping units applications.
ii. Permit the manufacturer of the equipment at the following, additional, manufacturing site:

Asco Asia – Shanghai, No8, Hua Min Road, Xin Qiao, Song Jiang District, Shanghai 201612, China

Sira Variation 2 on Re-issue of 25 May 2007 - This variation introduced the following change:

i. Permit the manufacturer of the equipment at the following, additional, manufacturing site:

ASCO Valve Manufacturing Inc, 1561 Columbia Highway, Aiken, South Carolina, 29801, USA
ASCO Valve Inc., 50 Hanover Road, Florham Park New Jersey 07932 USA
Ascotech, S.A. de C.V., Circuito del Progresso, Mexicali, Baja California, 21190, Mexico

Sira Variation 3 on Re-issue of 25 May 2007 - This variation introduced the following change:

i. Permit the manufacturer of the equipment at the following, additional, manufacturing site:

ASCO NUMATICS SIRAI S.r.l, Strada per Cernusco 19, 20041 Bussero (Milano), Italy

Sira Variation 4 on Re-issue of 25 May 2007 - This variation introduced the following changes:

i. Permit the manufacturer of the equipment at the following, additional, manufacturing site:
ASCO Joucomatic Sp.z.o.o., Kurczaki 130, 93-331, Lodz, Poland

ii. An increase in the maximum ambient temperature associated with the 6.9 W (maximum) construction to 65°C.
iii. The use of an alternative flying lead type H03V2V2-F.

Sira Variation 5 on Re-issue of 25 May 2007 - This variation introduced the following changes:

i. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest EN 60079 series of standards, the documents previously listed, EN 60079-0:2006, EN 60079-18:2004, EN 61241-0:2006, and EN 61241-18:2004, , were replaced by IEC 60079 0:2011 Ed. 6* and EN 60079-18:2009; EN 13617-1:2006 and PAS 022:1997 remain extant, the markings are updated as shown:

II 2GD
Ex mb IIC Tx Gb
Ex mb IIIC Tz°C Db
(T_a = -40°C to yy°C)

* Assessment has been carried out against the IEC standard which gives the latest technical knowledge. This standard will in due course be followed by the updated versions of the EN standards

ii. The address of two alternative manufacturing locations was changed from:

- **Ascoval Industria e Commercio Ltda**, was changed from Rodovia Pres. Castelo Branco, Km 20 - Jardim Santa Cecilia 06465-300 Barueri – SP – Brazil to Rua Goiatuba Nº. 81 - Jardim Mutinga - CEP 06465-010 - Barueri - SP - Brazil
- **Asco Asia** was changed from No.8 Hua Min Road, Xin Qiao, Song Jiang District, Shanghai, 201612, China to No.480, Xin Miao No.3 Road, Xiao Qiao Town, Song Jiang District, Shanghai 201612, P.R China

Sira Variation 6 on Re-issue of 25 May 2007 - This variation introduced the following change:

i. A change of the Manufacturer's name and address on the certificates:

- **Asco (India) Ltd**, was changed from 147 Karapakkan Village, Chennai – 600 096, Tamil Nadu, India to **ASCO Numatics (India) Pvt Ltd.**, 57, Kundrathur Main Road, Chennai – 602 101, Tamil Nadu, India

Sira Variation 7 on Re-issue of 25 May 2007 - This variation introduced the following changes:

i. To recognise the currently two approved configurations of model EMXX solenoids as design options 1 and 2. The introduction of a further three alternative design options 2A, 2B & 3 as detailed on drawing number 118610.
ii. Changes to drawing number 118610, sheet 1 of 2, note 5, which provides clarification/revision of the manufacturing process.
iii. The recognition of EN 60079-0:2012 as a replacement to IEC 60079-0:2011 Ed 6 previously listed in the certificate.

Sira Variation 8 on Re-issue of 25 May 2007 - This variation introduced the following changes:

i. To align the corresponding IECEx and ATEX certificates IECEx SIR 06.0109X and BAS98ATEX2168X and drawings.
ii. To permit use of an alternative marking system. This utilises SCOTCH 3M – 7818 – Thermal transfer polyester, using digital printing and over lamination.

iii. On the Type EMXX only - To permit use of an alternative "Yoke" (142416-001) in lieu of "Yoke" (142417-001) in Option 3 only. This is used for 24V d.c. or below, hence uses two core cable as no earth connection to the yoke is required.
The description is amended from "The cable has an earth conductor that is terminated onto the yoke assembly by means of a solder tag." To "The cable has an earth conductor that is terminated onto the yoke assembly by means of a solder tag on all options except those for the Type EMXX for use in option 3 on 24V d.c. or below, which do not require an earth connection."
iv. On the Type EMXX only - To permit use of an alternative thermal fuse (426285-001) in lieu of thermal fuse (115223-001) in Options 2A, 2B and 3.
v. To record the manufacturers name changed from: Asco ASIA-Shanghai, to Asco Valve (Shanghai) Co. Ltd.
vi. To record that the manufacturers, address at Asco Valve (Shanghai) Co. Ltd is corrected to read: No.480, Xin Miao No.3 Road, Xin Qiao Town, Song Jiang District, Shanghai, 201612, P.R China.

Sira Variation 9 on Re-issue of 25 May 2007 - This variation introduced the following changes:

i. EC Type Examination Certificate in accordance with 94/9/EC updated in accordance with Directive 2014/34/EU. (In accordance with Article 41 of Directive 2014/34/EU, Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such Type Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)
ii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012 and EN 60079-18:2009 were replaced by EN 60079-0:2012+A11:2013 and EN 60079-18:2015.
iii. The manufacturing location ASCO CONTROLS BV, Industrielaan 21, Postbus 3, 3925 ZG Scherpenzeel, The Netherlands, was updated to ASCO CONTROLS BV, Neonstraat 3, 6718 WX EDE, The Netherlands.
iv. Recognition of a further alternative manufacturing location ASCO ASIA, Block 4008, Ang Mo Kio Avenue 10, #04-08/10/17/22, Techplace 1, S(569625) was introduced.

Conditions of Certification/Manufacture updated to correct the standard reference following the standards upgrade.

Sira Variation 10 on Re-issue of 25 May 2007 - This variation introduced the following changes:

i. Correction of administrative/typographical errors in the general arrangement drawing and perform a scheduled drawing reconciliation.
ii. Permit change of ASCO logo on the product label drawings and perform a scheduled drawing reconciliation.
iii. Removal of standards EN 13617-1:2004 and PAS022:1997 from the certificate, which are deemed not applicable to the solenoid.

Sira Variation 11 - This variation introduced the following change:

i. The certificate holders name and address was changed:

From:	To:
ASCO JOUCOMATIC Limited	**Emerson Automation Fluid Control & Pneumatics Italy IT**
2 Pit Hey Place	Strada per Cernusco 19
West Pimbo	20041 Bussero (Milano)
Skelmersdale	Italy
Lancashire WN8 9PG	

ii. Update of controlled drawings to note the change of certificate applicant and other associated changes

Sira Variation 12 - This variation introduced the following changes:

i. update sticker (label) drawings, 542076, 542077 and 542578.
ii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012+A11:2013 was replaced by EN IEC 60079-0:2018+AC:2020, EN 60079-18:2015 was replaced by EN 60079-18:2015 A/C:2018 the other standards remain unchanged.

Sira Variation 13 - This variation introduced the following changes:

i. Modifications to the marking label and manufacturer's instructions.
ii. Replace the existing manufacturing site in India with a new location.
iii. Removing references to equipment's suitability for use in liquid fuel dispensers, fuel metering pumps, remote pumping units and vapour recovery systems; resulting in an update to the certificate description, SCoU and COM.

CSANe Variation 14 - This variation introduced the following changes:

i. To change the below address in the list of manufacturing locations:

From:	To:
ASCO Numatics (India) Pvt. Ltd, Plot No P 45, 8th Avenue, Domestic Tariff Area, Mahindra World City, Chengalpet Taluk, Kanchipuram - Tamil Nadu 603002, India.	Emerson Process Management Chennai Private Limited (Fluid Control and Pneumatics), Plot No. P 45, 8th Avenue, Domestic Tariff Area, Mahindra World City, Tamil Nadu, Chengalpattu, 603004, India

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	8 July 1998	98(C)0433	The release of the prime certificate of Type EM6 Solenoid; which includes Variation One and Two that introduce the Type EMXX and EM5 solenoids, respectively.

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Issue	Date	Report number	Comment
1	17 December 1998	98(C)0883	The introduction of Supplementary BAS98ATEX2168X/1: which includes Variation One.
2	17 August 1999	99(C)0071	The introduction of Supplementary BAS98ATEX2168X/2; which includes Variation One and Two.
3	20 August 2000	N/A	The introduction of Supplementary BAS98ATEX2168X/3; which includes Variation One, Two, Three, Four, Five and Six.
4	28 September 2000	N/A	The introduction of Supplementary BAS98ATEX2168X/4; which includes Variation One.
5	3 July 2001	01(C)0301	The introduction of Supplementary BAS98ATEX2168X/5; which includes Variation 5.1 and 5.2.
6	3 January 2003	R52A9530A	The introduction of Sira Variation 1.
7	15 May 2003	53V9882	The introduction of Sira Variation 2.
8	10 February 2004	R53V10570A	The introduction of Sira Variation 3.
9	30 June 2004	R52A11750A	The introduction of Sira Variation 4.
10	13 September 2004	R51V12405A	The introduction of Sira Variation 5.
11	16 September 2005	R51A13905A	The introduction of Sira Variation 6.
12	31 October 2005	R51V12405B	Re-issue of Variation 5 dated 13 September 2004 and to permit report number R51V12405A to be replaced by report number R51V12405B; due to a material change of the internal insulation material from PVC to silicone.
13	13 April 2006	R51A14805A	Re-issue of prime certificate dated 08 July 1998 to remove the EM6 solenoid and associated drawings, and to include all the supplements and variations into one new prime certificate and give a definitive drawing list, summarising all BASEEFA supplements, and Sira variations preceding this date.
14	21 November 2006	R51A15527A	The introduction of Sira Variation 1 on Re-issue of 13 April 2006.
15	14 December 2006	R51L15207B	Re-issue of certificate issued on 13 April 2006 to include Sira Variation 1 dated 21 November 2006 & introduce changes described in report number R51L15207B. The following have been updated in accordance with the update: Standards; Markings; Description – manufacturing sites and ranges specified for EMXX & EM5; Drawings; Conditions of Certification/Manufacture and Special Conditions of Safe Use.

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Issue	Date	Report number	Comment
16	25 May 2007	R51E16205A	Re-issue of certificate issued on 14 December 2006 to introduce changes described in report number R51E16205A. The following have been updated in accordance with the update: Standards; Markings; Description – manufacturing sites and ranges specified for EMXX & EM5; Drawings; and Special Conditions of Safe Use with relation to UV.
17	23 April 2008	R51L18075A	The introduction of Sira Variation 1 on Re-issue of 25 May 2007.
18	28 January 2010	R21260A/00	The introduction of Sira Variation 2 on Re-issue of 25 May 2007.
19	04 August 2010	R22847A/00	The introduction of Sira Variation 3 on Re-issue of 25 May 2007.
20	18 May 2011	R23474A/00	The introduction of Sira Variation 4 on Re-issue of 25 May 2007.
21	21 August 2012	R25897A/00	The introduction of Sira Variation 5 on Re-issue of 25 May 2007.
22	15 April 2013	R30508A/00	The introduction of Sira Variation 6 on Re-issue of 25 May 2007.
23	8 July 2014	R70004738A	The introduction of Sira Variation 7 on Re-issue of 25 May 2007.
24	27 June 2016	R70054012A	The introduction of Sira Variation 8 on Re-issue of 25 May 2007.
25	07 December 2017	R70163941A	The introduction of Sira Variation 9 on Re-issue of 25 May 2007.
26	27 November 2018	R70194496A	The introduction of Sira Variation 10 on Re-issue of 25 May 2007.
27	15 October 2019	653	• Transfer of certificate BAS98ATEX2168X from Sira Certification Service to CSA Group Netherlands B.V. • All previously issued certification was rationalised into a single certificate, Issue 27, Issues 0 to 26 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.
28	23 April 2020	R80037352A	The introduction of Sira Variation 11
29	24 May 2021	R80063035A	The introduction of Sira Variation 12.
30	07 November 2022	N/A	Re-issued to correct the standards shown in section 9.
31	17 May 2023	R80149395A	The introduction of Sira Variation 13.
32	13 May 2024	R80206014AA	The introduction of CSANe Variation 14

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

15.1 The solenoids shall be connected to a supply protected by a fuse capable of interrupting the prospective short circuit current.

15.2 When installed, the free end of the permanently connected, integral cable shall be suitably terminated. The leads of solenoids that are supplied with an integral cable that does not have the additional cable glanding feature shall also be suitably protected from mechanical damage.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF MANUFACTURE**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.3 An electric strength test in accordance with clause 9.2 of EN 60079-18:2015 shall be carried out at 1000V + 2 Un, or 1500 V, whichever is the greater, for 60 seconds on the encapsulated solenoid. Alternatively,if this test voltage is multiplied by 1.2 times, it may be applied for at least 100 ms. The exposed metal surface of the solenoid shall be connected to earth. The voltage shall be applied between the coil circuit joined together and earth.

17.4 Solenoids will normally be supplied with an electrostatic warning label.

Certificate Annexe

Certificate Number: **BAS98ATEX2168X**

Equipment: **EMXX and EM5 Solenoids**

Applicant: **Emerson Automation Fluid Control & Pneumatics Italy S.r.l.**

Issue 0 to 15 (The lists of previously collected drawings were reviewed and revised, refer to Issue 13)

Issue 15

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
108864	1	AB	13 Nov 2006	Harmonised Cable For IECEx & ATEX Solenoid Operators
118231	1	U	13 Nov 2006	Solenoid Type EMXX (General Assembly)
118610	1	AB	13 Nov 2006	Coil/Cable Assembly for EMXX Solenoid Operator
129657	1	M	13 Nov 2006	Coil/Cable Assembly for EM5 Solenoid Operator
129682	1	M	13 Nov 2006	Type EM5 Encapsulation
284582	1	B	13 Nov 2006	3 & 4 Core Cable For IECEx & ATEX Solenoid Operators
144220	1	B	13 Nov 2006	Warning Label
144215	1	B	13 Nov 2006	Product Label

Issue 16

Drawing	Sheets	Rev.	Date	Title
118231	1 of 1	V	09 May 07	Solenoid Type EMXX (General Assembly)

Issue 17

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
118610	1 of 1	AC	10 Dec 07	Solenoid Type EMXX (General Assembly)
129657	1 of 1	N	10 Dec 07	Solenoid Type EM5 (General Assembly)
294117	1 of 1	-	10 Dec 07	PU cable for Type EMXX & EM5 Solenoids

Issue 18

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
144243	1 to 2	C	27 Jan 10	Nameplate

Issue 19

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
144243	1 to 2	E	14 Jul 10	Nameplate

Issue 20

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
129682	1 of 1	N	10 May 11	Type EM5 Encapsulation Solenoid Operator
129657	1 of 1	P	10 May 11	Coil/Cable Assembly for EM5 Solenoid Operator
427601	1 of 1	A	10 May 11	Type H03V2V2-F Cable
144244	1 & 2	D	10 May 11	Nameplate

Issue 21

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
432707	1 & 2	-	04 Jul 12	Nameplate PV
432708	1 & 2	-	04 Jul 12	Nameplate PV EM5
118231	1 of 1	W	24 Jul 12	Type EMXX
129682	1 of 1	P	24 Jul 12	Type EM5

Issue 22

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
432707	1 of 2	-	26 Mar 13	Nameplate
432707	2 of 2	-	26 Mar 13	Nameplate
432708	1 of 2	-	26 Mar 13	Nameplate

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
432708	2 of 2	-	26 Mar 13	Nameplate

Issue 23

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
118610	1 of 2	AD	28 Apr 14	EMXX Coil/Cable assembly
118610	2 of 2	AD	28 Apr 14	EMXX Coil/Cable assembly
118231	1of 1	AA	28 Apr 14	EMXX general assembly

Issue 24

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
144215	1 of 1	D	19 May 16	Product Label
144220	1 of 1	D	19 May 16	Warning Label
118231	1 of 1	AC	23 May 16	Solenoid Type EMXX (General Assembly)
432707	1 of 2	E	19 May 16	Nameplate
432707	2 of 2	E	19 May 16	Nameplate
432708	1 of 2	E	27 May 16	Nameplate
432708	2 of 2	E	27 May 16	Nameplate

(The following drawings have been removed)

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
144243	1 to 2	E	04 Aug 2010	Nameplate
144244	1 of 1	B	04 Aug 2010	Nameplate

Issue 25

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
432708	1 to 2	H	27 Nov 17	Nameplate, PV EM5
432707	1 to 2	G	27 Nov 17	Nameplate, PV
118231	1 of 1	AD	27 Nov 17	Solenoid EMXX, Type EMXX Encapsulation 'm' Solenoid Operator IP67
129682	1 of 1	T	27 Nov 17	Type EM5 Encapsulation 'm' Solenoid Operator IP67

Issue 26

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
118610	1 to 1	AF	15 Nov 18	Solenoid EMXX, Type EMXX Encapsulation 'm' Solenoid Operator IP67
432707	1 to 2	K	12 Oct 18	Nameplate, PV
432708	1 to 1	L	12 Oct 18	Nameplate, PV EM5
432709	1 to 2	K	12 Oct 18	Nameplate, PV EM5X

Issue 27. No new drawings were introduced

Issue 28

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
542076	1 of 1	AA	15 Apr 20	Nameplate PV
542077	1 of 1	AA	15 Apr 20	Nameplate PV EM5
118610	1 to 2	AG	15 Apr 20	EMXX Coil/Cable Assembly
118231	1 of 1	AE	15 Apr 20	Solenoid Type EMXX
108864	1 of 1	AC	15 Apr 20	Cable PVC
129657	1 of 1	PA	15 Apr 20	Coil/Cable Assembly

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
129682	1 of 1	TA	15 Apr 20	Solenoid EM5
284582	1 of 1	BA	15 Apr 20	Cable EMXX/EM5/EM5X
294117	1 of 1	AB	15 Apr 20	Cable PU
427601	1 of 1	AB	15 Apr 20	Cable PVC

The following drawings are removed as a result of this variation.

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
432707	1 to 2	KA	03 Dec 19	Nameplate PV
432708	1 to 2	LA	03 Dec 19	Nameplate PV EM5

Issue 29

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
*542076	1 to 2	AC	22 MAR 21	Nameplate PV
*542077	1 to 2	AC	22 MAR 21	Nameplate PV EM5

Issue 30. No new drawings were introduced.

Issue 31

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
542076	1 of 1	AE	02 May 2023	Nameplate, PV
542077	1 of 1	AE	02 May 2023	Nameplate, PV, EM5

Issue 32

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
542076	1 of 1	AF	24 April 24	Nameplate, PV, II2GD EXMIIIC DB IP67
542077	1 of 1	AF	24 April 24	Nameplate, PV, EM5, II2GD EXMBIIIC DB IP67