1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 08ATEX5106X** Issue: **4**

4 Equipment: **SX024DC, SX024DC(CS), SX110AC, SX230AC Solenoid Coils**

5 Applicant: **Stolway Pty Ltd**

6 Address: Warehouse 2
91-95 Montague St
Wollongong
NSW 2500
Australia

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 60079-0:2006 EN 60079-18:2004 EN 60079-26:2007

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:

Type SX024DC and SX024DC(CS),

II 1 G
Ex ma IIC T4 IP66
(Ta = -40°C to +60°C)

Types SX110AC and SX230A

II 2 G
Ex mb IIC T4 IP66
(Ta = -40°C to +60°C)

Project Number 80021400

Signed: J A May

Title: Director of Operations

CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
Netherlands

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 08ATEX5106X**
Issue 4

13 **DESCRIPTION OF EQUIPMENT**

The SX024DC, SX110AC, SX230AC Solenoid Coils have identical structure but different windings, in that the number of turns and wire diameter cater for maximum rated voltages of 24 VDC, 120 VAC 50/60 Hz and 240 VAC 50/60 Hz, as indicated by their part numbers. For each of the coils, its winding is completely enclosed with encapsulation within a metallic case. Connection to the coils is by an integral cable of double insulation. When energized, the coil actuates a plunger that operates a valve.

Each of the coils has been provided with two thermal fuses complying with IEC 60691, this permanently disconnects the power to the winding once the internal temperature within the compound exceeds a preset limit. The type SX024DC and SX024DC(CS) can be installed and operated in Zone 0 while the types SX110AC and SX230AC can be installed and operated in Zone 1 hazardous areas.

Variation 1 - This variation introduced the following change:

i. The introduction of the SX024DC(CS) solenoid coil, the Special Conditions for Safe Use were amended to include this new coil.

Variation 2 - This variation introduced the following change:

i. Change of applicant and manufacturer name from “Stolway Holdings Pty Ltd/RE Environmental/Refrigeration Engineering Pty Ltd” to “Stolway Pty Ltd”. Change of corresponding logo artwork.
ii. Replacing all external power leads from “0.75mm 24/0.2mm PVC/PVC 250v GRADE POWER” to “1.5mm² Cu/EPR/CPE 300/500V CABLE OR EQUIVALENT”.

Variation 3 - This variation introduced the following change:

i. The Applicant’s and Certificate holders address was changed from 9 Charcoal Close Unanderra 2526 Australia to Warehouse 2 91-95 Montague St Wollongong NSW 2500 Australia.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report no.	Comment
0	11 February 2008	R51L17197A	The release of the prime certificate.
1	29 March 2010	R22051A/00	The introduction of Variation 1.
2	29 June 2017	R70136213A	This Issue covers the following changes: • EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. *(In accordance with Article 41 of Directive 2014/34/EU, EC 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 EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)* • The introduction of Variation 2.

CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem Netherlands

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 08ATEX5106X**
Issue 4

Issue	Date	Report no.	Comment
3	31 October 2019	0868	Transfer of certificate Sira 08ATEX5106X from Sira Certification Service to CSA Group Netherlands B.V.
4	27 April 2020	R80021400A	The introduction of Variation 3.

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

15.1 The following input parameters shall be taken into account during installation and use:

Type SX024DC	Type SX024DC(CS)	Type SX110AC	Type SX230AC
Ui = 26.4 V d.c.	Ui = 26.4 V d.c.	Um = 132 V rms	Um = 250 V rms

15.2 The free end of the integral supply cable shall be suitably terminated.

15.3 The integral supply cable fitted to the Types SX024DC and SX024DC(CS) Solenoid Coils is not protected by intrinsic safety (EN 60079-11) and therefore, when used in a Zone 0 situation, the user/installer shall ensure that this cable is protected in a manner that is acceptable subject to approval at national level according to clause 9.2 of EN 60079-14:2003.

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.

CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem Netherlands

Certificate Annexe

Certificate Number: **Sira 08ATEX5106X**

Equipment: **SX024DC, SX024DC(CS), SX110AC, SX230AC Solenoid Coils**

Applicant: **Stolway Pty Ltd**

Issue 0

Number	Sheet	Rev.	Date (Sira Stamp)	Description
60102-1000	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX230AC General Arrangement
60102-1001	1 of 1	4	17 Jan 08	Ex ma Solenoid Coil – SX024DC General Arrangement
60102-1002	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX110AC General Arrangement
60102-5700	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX230AC
60102-5701	1 of 1	2	01 Feb 08	Label Details Ex ma Solenoid – SX024DC
60102-5702	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX110AC

Issue 1

Number	Sheets	Rev.	Date (Sira stamp)	Title
60102-1003	1 of 1	0	30 Mar 10	Ex ma Solenoid Coil SX024DC(CS)
60102-5703	1 of 1	1	30 Mar 10	Ex ma Solenoid Coil SX024DC(CS) Label

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
60102-1000	1 of 1	5	15 Jun 17	Ex mb Solenoid Coil – SX230AC General Arrangement
60102-1001	1 of 1	5	15 Jun 17	Ex ma Solenoid Coil – SX024DC General Arrangement
60102-1002	1 of 1	5	15 Jun 17	Ex mb Solenoid Coil – SX110AC General Arrangement
60102-1003	1 of 1	2	15 Jun 17	Ex ma Solenoid Coil SX024DC(CS)
60102-5700	1 of 1	3	15 Jun 17	Label Details Ex mb Solenoid – SX230AC
60102-5701	1 of 1	3	15 Jun 17	Label Details Ex ma Solenoid – SX024DC
60102-5702	1 of 1	3	15 Jun 17	Label Details Ex mb Solenoid – SX110AC
60102-5703	1 of 1	3	15 Jun 17	Ex ma Solenoid Coil SX024DC(CS) Label

Issue 3. No new drawings were introduced

Issue 4

Number	Sheets	Rev.	Date (Sira stamp)	Title
60102-5700	1 of 1	4	20 Apr 20	Label Details Ex mb Solenoid – SX230AC
60102-5701	1 of 1	4	20 Apr 20	Label Details Ex ma Solenoid – SX024DC
60102-5702	1 of 1	4	20 Apr 20	Label Details Ex mb Solenoid – SX110AC
60102-5703	1 of 1	4	20 Apr 20	Label Details Ex ma Solenoid – SX024DC(CS)

CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
Netherlands

1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 08ATEX5106X** Issue: **3**

4 Equipment: **SX024DC, SX024DC(CS), SX110AC, SX230AC Solenoid Coils**

5 Applicant: **Stolway Pty Ltd**

6 Address: 9 Charcoal Close
Unanderra
NSW 2526
Australia

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 60079-0:2006 EN 60079-18:2004 EN 60079-26:2007

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:

Type SX024DC and SX024DC(CS),

II 1 G
Ex ma IIC T4 IP66
(Ta = -40°C to +60°C)

Types SX110AC and SX230A

II 2 G
Ex mb IIC T4 IP66
(Ta = -40°C to +60°C)

Project Number 0868

Signed:

Title: Director of Operations

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem,
Netherlands

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 08ATEX5106X**
Issue 3

13 DESCRIPTION OF EQUIPMENT

The SX024DC, SX110AC, SX230AC Solenoid Coils have identical structure but different windings, in that the number of turns and wire diameter cater for maximum rated voltages of 24 VDC, 120 VAC 50/60 Hz and 240 VAC 50/60 Hz, as indicated by their part numbers. For each of the coils, its winding is completely enclosed with encapsulation within a metallic case. Connection to the coils is by an integral cable of double insulation. When energized, the coil actuates a plunger that operates a valve.

Each of the coils has been provided with two thermal fuses complying with IEC 60691, this permanently disconnects the power to the winding once the internal temperature within the compound exceeds a preset limit. The type SX024DC and SX024DC(CS) can be installed and operated in Zone 0 while the types SX110AC and SX230AC can be installed and operated in Zone 1 hazardous areas.

Variation 1 - This variation introduced the following change:

i. The introduction of the SX024DC(CS) solenoid coil, the Special Conditions for Safe Use were amended to include this new coil.

Variation 2 - This variation introduced the following change:

i. Change of applicant and manufacturer name from “Stolway Holdings Pty Ltd/RE Environmental/Refrigeration Engineering Pty Ltd” to “Stolway Pty Ltd”. Change of corresponding logo artwork.
ii. Replacing all external power leads from “0.75mm 24/0.2mm PVC/PVC 250v GRADE POWER” to “1.5mm² Cu/EPR/CPE 300/500V CABLE OR EQUIVALENT”.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	11 February 2008	R51L17197A	The release of the prime certificate.
1	29 March 2010	R22051A/00	The introduction of Variation 1.
2	29 June 2017	R70136213A	This Issue covers the following changes: • EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. *(In accordance with Article 41 of Directive 2014/34/EU, EC 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 EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)* • The introduction of Variation 2.
3	31st October 2019	0868	• Transfer of certificate **Sira 08ATEX5106X** from Sira Certification Service to CSA Group Netherlands B.V..

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem Netherlands

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 08ATEX5106X
Issue 3

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

15.1 The following input parameters shall be taken into account during installation and use:

Type SX024DC	Type SX024DC(CS)	Type SX110AC	Type SX230AC
Ui = 26.4 V d.c.	Ui = 26.4 V d.c.	Um = 132 V rms	Um = 250 V rms

15.2 The free end of the integral supply cable shall be suitably terminated.

15.3 The integral supply cable fitted to the Types SX024DC and SX024DC(CS) Solenoid Coils is not protected by intrinsic safety (EN 60079-11) and therefore, when used in a Zone 0 situation, the user/installer shall ensure that this cable is protected in a manner that is acceptable subject to approval at national level according to clause 9.2 of EN 60079-14:2003.

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.

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem Netherlands

Certificate Annexe

Certificate Number: **Sira 08ATEX5106X**

Equipment: **SX024DC, SX024DC(CS), SX110AC, SX230AC Solenoid Coils**

Applicant: **Stolway Pty Ltd**

Issue 0

Number	Sheet	Rev.	Date (Sira Stamp)	Description
60102-1000	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX230AC General Arrangement
60102-1001	1 of 1	4	17 Jan 08	Ex ma Solenoid Coil – SX024DC General Arrangement
60102-1002	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX110AC General Arrangement
60102-5700	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX230AC
60102-5701	1 of 1	2	01 Feb 08	Label Details Ex ma Solenoid – SX024DC
60102-5702	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX110AC

Issue 1

Number	Sheets	Rev.	Date (Sira stamp)	Title
60102-1003	1 of 1	0	30 Mar 10	Ex ma Solenoid Coil SX024DC(CS)
60102-5703	1 of 1	1	30 Mar 10	Ex ma Solenoid Coil SX024DC(CS) Label

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
60102-1000	1 of 1	5	15 Jun 17	Ex mb Solenoid Coil – SX230AC General Arrangement
60102-1001	1 of 1	5	15 Jun 17	Ex ma Solenoid Coil – SX024DC General Arrangement
60102-1002	1 of 1	5	15 Jun 17	Ex mb Solenoid Coil – SX110AC General Arrangement
60102-1003	1 of 1	2	15 Jun 17	Ex ma Solenoid Coil SX024DC(CS)
60102-5700	1 of 1	3	15 Jun 17	Label Details Ex mb Solenoid – SX230AC
60102-5701	1 of 1	3	15 Jun 17	Label Details Ex ma Solenoid – SX024DC
60102-5702	1 of 1	3	15 Jun 17	Label Details Ex mb Solenoid – SX110AC
60102-5703	1 of 1	3	15 Jun 17	Ex ma Solenoid Coil SX024DC(CS) Label

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem,
Netherlands

1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 08ATEX5106X** Issue: **2**

4 Equipment: **SX024DC, SX024DC(CS), SX110AC, SX230AC Solenoid Coils**

5 Applicant: **Stolway Pty Ltd**

6 Address: 9 Charcoal Close
Unanderra
NSW 2526
Australia

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

8 Sira Certification Service, notified body number 0518 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 60079-0:2006 EN 60079-18:2004 EN 60079-26:2007

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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:

Type SX024DC and SX024DC(CS),

II 1 G
Ex ma IIC T4 IP66
(Ta = -40°C to +60°C)

Types SX110AC and SX230A

II 2 G
Ex mb IIC T4 IP66
(Ta = -40°C to +60°C)

Project Number 70136213

C Ellaby
Deputy Certification Manager

Sira Certification Service
Unit 6 Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom
Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 08ATEX5106X**
Issue 2

13 **DESCRIPTION OF EQUIPMENT**

The SX024DC, SX110AC, SX230AC Solenoid Coils have identical structure but different windings, in that the number of turns and wire diameter cater for maximum rated voltages of 24 VDC, 120 VAC 50/60 Hz and 240 VAC 50/60 Hz, as indicated by their part numbers. For each of the coils, its winding is completely enclosed with encapsulation within a metallic case. Connection to the coils is by an integral cable of double insulation. When energized, the coil actuates a plunger that operates a valve.

Each of the coils has been provided with two thermal fuses complying with IEC 60691, this permanently disconnects the power to the winding once the internal temperature within the compound exceeds a preset limit. The type SX024DC and SX024DC(CS) can be installed and operated in Zone 0 while the types SX110AC and SX230AC can be installed and operated in Zone 1 hazardous areas.

Variation 1 - This variation introduced the following change:

i. The introduction of the SX024DC(CS) solenoid coil, the Special Conditions for Safe Use were amended to include this new coil.

Variation 2 - This variation introduced the following change:

i. Change of applicant and manufacturer name from “Stolway Holdings Pty Ltd/RE Environmental/Refrigeration Engineering Pty Ltd” to “Stolway Pty Ltd”. Change of corresponding logo artwork.
ii. Replacing all external power leads from “0.75mm 24/0.2mm PVC/PVC 250v GRADE POWER” to “1.5mm² Cu/EPR/CPE 300/500V CABLE OR EQUIVALENT”.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report no.	Comment
0	11 February 2008	R51L17197A	The release of the prime certificate.
1	29 March 2010	R22051A/00	The introduction of Variation 1.
2	29 June 2017	R70136213A	This Issue covers the following changes: • EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. *(In accordance with Article 41 of Directive 2014/34/EU, EC 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 EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)* • The introduction of Variation 2.

Sira Certification Service
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Hawarden, CH5 3US, United Kingdom
Tel: +44 (0) 1244 670900
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Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 08ATEX5106X**
Issue 2

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

15.1 The following input parameters shall be taken into account during installation and use:

Type SX024DC	Type SX024DC(CS)	Type SX110AC	Type SX230AC
Ui = 26.4 V d.c.	Ui = 26.4 V d.c.	Um = 132 V rms	Um = 250 V rms

15.2 The free end of the integral supply cable shall be suitably terminated.

15.3 The integral supply cable fitted to the Types SX024DC and SX024DC(CS) Solenoid Coils is not protected by intrinsic safety (EN 60079-11) and therefore, when used in a Zone 0 situation, the user/installer shall ensure that this cable is protected in a manner that is acceptable subject to approval at national level according to clause 9.2 of EN 60079-14:2003.

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 Sira 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 A routine dielectric strength test between the coil connections and the external metallic case shall be carried out at 1500 V r.m.s. for 60 s, as specified in Clause 8.2.4 of EN 60079-18:2004; there shall be no breakdown. Alternatively, the test voltages may be increased by 1.2 times and tested for 100 ms as stated in clause 9.2 of IEC 60079-18: 2004.

Sira Certification Service
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Hawarden, CH5 3US, United Kingdom
Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

Certificate Annexe

Certificate Number: **Sira 08ATEX5106X**

Equipment: **SX024DC, SX024DC(CS), SX110AC, SX230AC Solenoid Coils**

Applicant: **Stolway Pty Ltd**

Issue 0

Number	Sheet	Rev.	Date (Sira Stamp)	Description
60102-1000	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX230AC General Arrangement
60102-1001	1 of 1	4	17 Jan 08	Ex ma Solenoid Coil – SX024DC General Arrangement
60102-1002	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX110AC General Arrangement
60102-5700	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX230AC
60102-5701	1 of 1	2	01 Feb 08	Label Details Ex ma Solenoid – SX024DC
60102-5702	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX110AC

Issue 1

Number	Sheets	Rev.	Date (Sira stamp)	Title
60102-1003	1 of 1	0	30 Mar 10	Ex ma Solenoid Coil SX024DC(CS)
60102-5703	1 of 1	1	30 Mar 10	Ex ma Solenoid Coil SX024DC(CS) Label

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
60102-1000	1 of 1	5	15 Jun 17	Ex mb Solenoid Coil – SX230AC General Arrangement
60102-1001	1 of 1	5	15 Jun 17	Ex ma Solenoid Coil – SX024DC General Arrangement
60102-1002	1 of 1	5	15 Jun 17	Ex mb Solenoid Coil – SX110AC General Arrangement
60102-1003	1 of 1	2	15 Jun 17	Ex ma Solenoid Coil SX024DC(CS)
60102-5700	1 of 1	3	15 Jun 17	Label Details Ex mb Solenoid – SX230AC
60102-5701	1 of 1	3	15 Jun 17	Label Details Ex ma Solenoid – SX024DC
60102-5702	1 of 1	3	15 Jun 17	Label Details Ex mb Solenoid – SX110AC
60102-5703	1 of 1	3	15 Jun 17	Ex ma Solenoid Coil SX024DC(CS) Label

Sira Certification Service
Unit 6 Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom
Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 08ATEX5106X** Issue: **1**

4 Equipment: **SX024DC, SX024DC(CS), SX110AC, SX230AC Solenoid Coils**

5 Applicant: **Stolway Holdings Pty Ltd / RE Environmental / Refrigeration Engineering Pty Ltd**

6 Address: 9 Charcoal Close
Unanderra
NSW 2526
Australia

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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 60079-0:2006 EN 60079-18:2004 EN 60079-26:2007

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC 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:

Type SX024DC and SX024DC(CS),

II 1 G
Ex ma IIC T4 IP66
(Ta = -40°C to +60°C)

Types SX110AC and SX230A

II 2 G
Ex mb IIC T4 IP66
(Ta = -40°C to +60°C)

Project Number 22051
C. Index 24

C Ellaby
Certification Officer

Sira Certification Service
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Email: info@siracertification.com
Web: www.siracertification.com

SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 08ATEX5106X**
Issue 1

13 **DESCRIPTION OF EQUIPMENT**

The SX024DC, SX110AC, SX230AC Solenoid Coils have identical structure but different windings, in that the number of turns and wire diameter cater for maximum rated voltages of 24 VDC, 120 VAC 50/60 Hz and 240 VAC 50/60 Hz, as indicated by their part numbers. For each of the coils, its winding is completely enclosed with encapsulation within a metallic case. Connection to the coils is by an integral cable of double insulation. When energized, the coil actuates a plunger that operates a valve.

Each of the coils has been provided with two thermal fuses complying with IEC 60691, this permanently disconnects the power to the winding once the internal temperature within the compound exceeds a preset limit. The type SX024DC and SX024DC(CS) can be installed and operated in Zone 0 while the types SX110AC and SX230AC can be installed and operated in Zone 1 hazardous areas.

Variation 1 - This variation introduced the following change:

i. The introduction of the SX024DC(CS) solenoid coil, the Special Conditions for Safe Use were amended to include this new coil.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report no.	Comment
0	11 February 2008	R51L17197A	The release of the prime certificate.
1	29 March 2010	R22051A/00	The introduction of Variation 1.

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

15.1 The following input parameters shall be taken into account during installation and use:

Type SX024DC	Type SX024DC(CS)	Type SX110AC	Type SX230AC
Ui = 26.4 V d.c.	Ui = 26.4 V d.c.	Um = 132 V rms	Um = 250 V rms

15.2 The free end of the integral supply cable shall be suitably terminated.

15.3 The integral supply cable fitted to the Types SX024DC and SX024DC(CS) Solenoid Coils is not protected by intrinsic safety (EN 60079-11) and therefore, when used in a Zone 0 situation, the user/installer shall ensure that this cable is protected in a manner that is acceptable subject to approval at national level according to clause 9.2 of EN 60079-14:2003.

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Rake Lane, Eccleston, Chester, CH4 9JN, England
Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com

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 CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 A routine dielectric strength test between the coil connections and the external metallic case shall be carried out at 1500 V r.m.s. for 60 s, as specified in Clause 8.2.4 of EN 60079-18:2004; there shall be no breakdown. Alternatively, the test voltages may be increased by 1.2 times and tested for 100 ms as stated in clause 9.2 of IEC 60079-18: 2004.

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Certificate Annexe

Certificate Number: **Sira 08ATEX5106X**

Equipment: **SX024DC, SX024DC(CS), SX110AC, SX230AC Solenoid Coils**

Applicant: **Stolway/RE Environmental/Refrigeration Engineering Pty Ltd**

Issue 0

Number	Sheet	Rev.	Date (Sira Stamp)	Description
60102-1000	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX230AC General Arrangement
60102-1001	1 of 1	4	17 Jan 08	Ex ma Solenoid Coil – SX024DC General Arrangement
60102-1002	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX110AC General Arrangement
60102-5700	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX230AC
60102-5701	1 of 1	2	01 Feb 08	Label Details Ex ma Solenoid – SX024DC
60102-5702	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX110AC

Issue 1

Number	Sheets	Rev.	Date (Sira stamp)	Title
60102-1003	1 of 1	0	30 Mar 10	Ex ma Solenoid Coil SX024DC(CS)
60102-5703	1 of 1	1	30 Mar 10	Ex ma Solenoid Coil SX024DC(CS) Label

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1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 08ATEX5106X** Issue: **0**

4 Equipment: **SX024DC, SX110AC, SX230AC Solenoid Coils**

5 Applicant: **Stolway Holdings Pty Ltd/RE Environmental/Refrigeration Engineering Pty Ltd**

6 Address: 9 Charcoal Close
Unanderra
NSW 2526
Australia

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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 60079-0:2006 EN 60079-18:2004 EN 60079-26:2007

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC 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:

Type SX024DC

II 1 G
Ex ma IIC T4 IP66
(Ta = -40°C to +60°C)

Types SX110AC and SX230A

II 2 G
Ex mb IIC T4 IP66
(Ta = -40°C to +60°C)

Project Number 51L17197A
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Certification Officer

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13 DESCRIPTION OF EQUIPMENT

The SX024DC, SX110AC, SX230AC Solenoid Coils have identical structure but different windings, in that the number of turns and wire diameter cater for maximum rated voltages of 24 VDC, 120 VAC 50/60 Hz and 240 VAC 50/60 Hz, as indicated by their part numbers. For each of the coils, its winding is completely enclosed with encapsulation within a metallic case. Connection to the coils is by an integral cable of double insulation. When energized, the coil actuates a plunger that operates a valve.

Each of the coils has been provided with two thermal fuses complying with IEC 60691, this permanently disconnects the power to the winding once the internal temperature within the compound exceeds a preset limit. The type SX024DC can be installed and operated in Zone 0 while the types SX110AC and SX230AC can be installed and operated in Zone 1 hazardous areas.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	11 February 2008	R51L17197A	The release of the prime certificate.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

15.1 The following input parameters shall be taken into account during installation and use:

Type SX024DC	Type SX110AC	Type SX230AC
Ui = 26.4 V d.c.	Um = 132 V rms	Um = 250 V rms

15.2 The free end of the integral supply cable shall be suitably terminated.

15.3 The integral supply cable fitted to the Type SX024DC Solenoid Coil is not protected by intrinsic safety (EN 60079-11) and therefore, when used in a Zone 0 situation, the user/installer shall ensure that this cable is protected in a manner that is acceptable subject to approval at national level according to clause 9.2 of EN 60079-14:2003.

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 CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 A routine dielectric strength test between the coil connections and the external metallic case shall be carried out at 1500 V r.m.s. for 60 s, as specified in Clause 8.2.4 of EN 60079-18:2004; there shall be no breakdown. Alternatively, the test voltages may be increased by 1.2 times and tested for 100 ms as stated in clause 9.2 of IEC 60079-18: 2004.

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Certificate Annexe

Certificate Number: Sira 08ATEX5106X

Equipment: SX024DC, SX110AC, SX230AC Solenoid Coils

Applicant: Stolway/RE Environmental/Refrigeration Engineering Pty Ltd

Issue 0

Number	Sheet	Rev.	Date (Sira Stamp)	Description
60102-1000	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX230AC General Arrangement
60102-1001	1 of 1	4	17 Jan 08	Ex ma Solenoid Coil – SX024DC General Arrangement
60102-1002	1 of 1	4	17 Jan 08	Ex mb Solenoid Coil – SX110AC General Arrangement
60102-5700	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX230AC
60102-5701	1 of 1	2	01 Feb 08	Label Details Ex ma Solenoid – SX024DC
60102-5702	1 of 1	2	01 Feb 08	Label Details Ex mb Solenoid – SX110AC

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Solenoid Coil:
Instructions for Safe Installation Use and Maintenance

60102-CIO-001-R01

Date of Issue: 20th April 2020

Solenoid Coil:
Instructions for Safe Installation Use and Maintenance

Solenoid Coil: Instructions for Safe Installation Use and Maintenance

1. INTRODUCTION

These safety instructions refer to installation, operation and maintenance of Zone 1 explosion proof solenoid coil types: SX230AC, SX110AC and Zone 0 explosion proof solenoid coil types: SX024DC, SX024DC(CS).

The solenoid coils are certified to IEC Ex and ATEX schemes and carrying the following markings:

Manufacturer: Stolway Pty Limited

From Serial No: 38020A onwards

Certificate Numbers: IECEx TSA 07.0060X and Sira 08ATEX5106X

Marking: Ex ma IIC T4 IP66 Ta = -40/+60^{o}C CE "nnnn" Ex II 1 G
Models: SX024DC, SX024DC(CS)

Ex mb IIC T4 IP66 Ta = -40/+60^{o}C CE "nnnn" Ex II 2 G
Models: SX230AC, SX110AC

Note: "nnnn" refers to notified body providing quality.

IMPORTANT NOTE TO CUSTOMERS:

THESE INSTRUCTIONS MUST BE ISSUED OR DISTRIBUTED TO EACH INSTALLER OR END USER OF EACH SOLENOID COIL.

2. UTILISATION FACTORS

The solenoid coils are designed to be installed in an ambient temperature range from -40º C to +60º C.

POWER SUPPLY - OPERATIONAL RATINGS

MODEL	VOLTAGE	FREQUENCY
SX230AC:	198-250v ac Lower-Upper limits (50Hz), 220v-250v ac Lower-Upper limits (60Hz)	50 – 60Hz
SX110AC:	110-120v ac +/- 10%	50 – 60Hz
SX024DC & SX024DC(CS):	24v dc ± 10%.	Not Applicable

Degree of Ingress Protection: IP66.

3. INSTALLATION

The solenoid coil comes complete with 6 metres of double insulated cable. The cable is then protected by a flexible steel conduit or sheathing. The termination and protection of this cable must be installed as per the appropriate national or international standards for hazardous areas (typically IEC 60079-14) according to the zone into which it is being installed.

No special tools are required for installing the solenoid coil.

Note: If the coils are subject to direct sunlight, it is recommended that a sun shade is fitted over the coils in regions where ambient temperatures can exceed +40^{o}C. This is to prevent the possibility of trips of the internal thermal fuse (see section 4 below).

WARNING

THE ELECTRICAL INSTALLATION & FAULT FINDING OF THE EQUIPMENT MUST BE PERFORMED BY COMPETENT PERSONNEL FAMILIAR WITH INSTALLATION AND TECHNIQUES ASSOCIATED WITH EXPLOSION PROTECTED EQUIPMENT.

ISOLATE POWER PRIOR TO OPENING ANY ENCLOSURE IN ORDER TO GLAND & TERMINATE THE SOLENOID POWER CABLE.

Earthing Connection

There is no earthing or bonding requirements for this piece of apparatus.

4. FAULT FINDING

The solenoid coil is fitted with internal temperature protection devices set at 128^{o}C +0/-4^{o}C to maintain the explosion protection technique. The devices are fitted to ensure the maximum temperature classification of 135ºC is not exceeded.

When measured with a multimeter, the resistance of a healthy coil at 25^{o}C should be as follows:

SX230AC:	364Ω ± 5%.
SX110AC:	63.5Ω ± 5%.
SX024DC:	48.4Ω ± 5%
SX024DC(CS):	38Ω ± 5%

If the coil stops operating, check the resistance of the winding, if it is open circuit, this means the thermal fuse has tripped due to over-temperature. Check the surface temperature of the coil casing (noting the sun shade recommendation in section 3).

5. MAINTENANCE

There are no serviceable parts or adjustments associated with the solenoid coil due to the safety devices being encapsulated. If the coil malfunctions a new coil should be purchased.

No attempt should be made to repair a faulty solenoid coil, contact the manufacturer for further information.

6. SERVICE AND SPARE PARTS

Please contact Stolway for any service or spare parts requirements. Contact details are as follows:

Stolway Pty Limited
Warehouse 2
91-95 Montague St
Wollongong
NSW 2500
Australia
Telephone: +61 (0)2 4262 3000
Facsimile: +61 (0)2 4262 3001
E-mail: spares@stolway.com.au
Internet: www.stolway.com.au

9 Charcoal Close (PO Box 1197)
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Tel +61 (0)2 4262 3000
Fax +61 (0)2 4262 3001
E-Mail info@stolway.com.au
Internet www.stolway.com.au

EU Declaration of Conformity

Product: Solenoid Coils

Model/Type: SX024DC, SX024DC(CS), SX110AC, SX230VAC

From Serial No: 38020A onwards

Manufacturer: Stolway Pty Limited

Address: 9 Charcoal Close
Unanderra NSW 2527
Australia

This declaration is issued under the sole responsibility of the manufacturer.

The object of the declaration described above is in conformity with the ATEX Directive 2014/34/EU.

Conformity is shown by compliance with the applicable requirements of the following documents:

EN 60079-0:2006 *Electrical apparatus for explosive atmospheres - Part 0: General requirements*

EN 60079-18:2004 *Electrical apparatus for explosive atmospheres - Part 18: Construction, test and marking of type protection encapsulation "m" electrical apparatus*

EN 60079-26:2007 *Explosive atmospheres. Equipment with equipment protection level (EPL) Ga*

EU Type-Examination Certificate: Sira 08ATEX5106X

Notified Body: Sira Certification Service, notified body number 0518

Marking: Ex ma IIC T4 IP66 Ta = -40/+60°C Ex mb IIC T4 IP66 Ta = -40/+60°C

CE 0518 Ex II 1 G CE 0518 Ex II 2 G

Models: SX024DC, SX024DC(CS) Models: SX230AC, SX110AC

Signed For and On Behalf Of: Stolway Pty Limited

Place of Issue: Australia

Date of Issue: 3rd July 2017

Name: Aidan Donaghy

Position: General Manager

Signature:

Stolway Pty Limited
ACN 059 064 676
ABN 15 059 064 676
RTA AU07408