1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 04ATEX1267X** Issue: **10**

4 Equipment: **ASM170 Range of Control Stations**

5 Applicant: **Pepperl+Fuchs GmbH**

6 Address: Lilienthalstrasse 200, 68307 Mannheim, Germany

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 60079-0:2009 EN 60079-1:2007 EN 60079-31:2009

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 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:

Either: II 2 G D
Ex d IIB T6 Gb
Ex tb IIIC T76°C Db
(Tamb -20°C or -40°C to +50°C)

Or: II 2 G D
Ex d IIB T5 Gb
Ex tb IIIC T87°C Db
(Ta = -20°C or -40°C to +55°C)

When the component approved breather drain is fitted the following information applies:

Either: II 2 G D
Ex d IIB T5 Gb
Ex tb IIIC T86°C Db
(Tamb -20°C or -40°C to +50°C)

Or: II 2 G D
Ex d IIB T5 Gb
Ex tb IIIC T91°C Db
(Ta = -20°C or -40°C to +55°C)

Note: When intrinsically safe equipment is installed, the symbols for the type of protection provided is added to the certification coding e.g. Ex d [ia IIC Ga] IIB T6 Gb.

Project Number 27035

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Deputy Certification Manager

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13 **DESCRIPTION OF EQUIPMENT**

The ASM170 Control Stations comprise an ASM170 flameproof enclosure (approved by certificate number Sira 00ATEX1189U, coded Ex d IIB Gb) that is fitted with various, optional, internal configurations, as detailed below:

Type Designation	Description
ASM170 Distribution Board	Incorporating: • Up to three rows of twenty, single pole MCBs rated at between 3 A and 63 A, up to 500 V. The total power dissipation shall not exceed 200 W.
ASM170 Switch Distribution Board	Incorporating: • The single, rotary actuator mechanism that has been approved as part of the equipment covered by certificate numbers Sira 02ATEX1307 and Sira 02ATEX1332. • Sixty, single pole MCBs rated between 3 A and 63 A or a combination of multi-pole MCBs not exceeding the volume of sixty, single pole MCBs. • A 4-pole isolator rated at 100 A max 500 V. The total power dissipation shall not exceed 200 W.
ASM170 Terminal Box	Incorporating: • Up to four rails of Weidmuller WDU or SAKD 2.5N type terminals. The total power dissipation shall not exceed 200 W. The maximum current shall not exceed 15 A.
ASM170 Switch Disconnector	Incorporating: • The single, rotary actuator mechanism that has been approved as part of the equipment covered by certificate numbers Sira 02ATEX1307 and Sira 02ATEX1332. • Switch disconnector and rotary switch type SOCOMEC: 3/4/6 pole sirco40-500A or equivalent, rating up to 415 V, 500 A depending upon the switch type fitted. The total power dissipation shall not exceed 200 W.
ASM170 Control Panel	Incorporating: • The single, rotary actuator mechanism that has been approved as part of the equipment covered by certificate numbers Sira 02ATEX1307 and Sira 02ATEX1332. • The pilot light window assemblies approved by certificate number Sira 00ATEX1182U. • The push button actuator mechanism that has been approved as part of the equipment covered by certificate numbers Sira 02ATEX1312 and Sira 02ATEX1332. • Various internal equipment, as defined on drawing ASM170/NB/08 The total power dissipation shall not exceed 200 W.
ASM170 D.O.L. Starter	Incorporating: • The push button actuator mechanism that has been approved as part of the equipment covered by certificate numbers Sira 02ATEX1312 and Sira 02ATEX1332. • A Kraus Naimer Contactor, 30 kW, 3 Pole, rating up to 660 V, 140 A or equivalent. The total power dissipation shall not exceed 200 W.
ASM170 Star Delta Starter	Incorporating: • The push button actuator mechanism that has been approved as part of the equipment covered by certificate numbers Sira 02ATEX1312 and Sira 02ATEX1332. • A Kraus Naimer Contactor, 75 kW, 3 Pole, rating up to 660 V, 160 A or equivalent. The total power dissipation shall not exceed 200 W.

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Variation 1 - This variation introduced the following changes:

i. The acknowledgement of changes associated with the component approved enclosure and the recognition of the fact that this enclosure may now be manufactured from any grade of stainless steel.

Variation 2 - This variation introduced the following change:

i. The acknowledgement of changes associated with the component approved enclosure and the recognition of the fact that this enclosure may now be manufactured from the following materials:
   - Cast stainless steel to BS3100 grade 316C16.
   - Cast iron to BS.1452 grade 180.
   - Cast aluminium BS.1490 grade LM25-TF

Variation 3 - This variation introduced the following changes:

i. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest series of standards, the documents originally listed in section 9, EN 50014:1997 (amendments A1 to A2), EN 50018:2000 (Amendments A1) and EN 50281-1-1:1998, were replaced by IEC 60079-0:2007, EN 60079-1:2007, EN 61241-0:2006 and EN 61241-1:2004, the markings in section 12 were updated accordingly.

Variation 4 - This variation introduced the following change:

i. An alternative design of the rotary/button switch operators was allowed to be fitted.

Variation 5 - This variation introduced the following change:

i. The following applicant company name **and address** change:

From:	**To:**
Walsall Limited.	Pepperl + Fuchs GmbH
Cornwallis Road	Lilienthalstrasse 200
West Bromwich	68307 Mannheim
West Midlands B70 7DX	Germany

ii. The use of alternative label materials.
iii. The addition of a Datamatrix code on the label.

Variation 6 - This variation introduced the following changes:

i. the marking was changed to reflect the assessments used to justify the issue of the IECEx certification associated with these products:

From:	**To:**
Ex d IIB T6 Gb	Ex d IIB T5 Gb
Ex tb IIIC T76°C Db	Ex tb IIIC T87°C Db

ii. The minimum ambient temperature associated with some of these Control Station options was lowered from -20°C to -40°C; in consequence, the condition of certification dealing with pressure testing was revised and a new condition restricting the application of the -40°C limit was introduced.

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Variation 7 - This variation introduced the following changes:

i. The option to increase the ambient temperature range from +50°C to +55°C was approved; the marking section is amended accordingly.
ii. When equipment with intrinsically safe inputs/outputs as defined in EN 60079-11 is installed, the symbols for the type of protection provided may be added to the certification coding e.g. Ex d [ia IIC Ga] IIB T6 Gb.

Variation 8 - This variation introduced the following changes:

i. Following appropriate re-assessment to demonstrate compliance with the requirements of of newer standards, the documents previously listed in section 9, IEC 60079-0:2007, EN 61241-0:2006 and EN 61241-1: 2004, were replaced by those currently listed, the markings in section 12 were updated accordingly.
ii. The recognition of the option to install a component approved breather drain (Sira 12ATEX1016U).
iii. The marking was clarified, this takes into account the restrictions involved with installing the optional breather drain and the recognition of the Intrinsic Safety details introduced in Issue 8.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	18 November 2004	R51A12107A	The release of the prime certificate.
1	13 January 2005	R51A12107B	Re-issued to allow report number R51A12107B to replace report number R51A12107A.
2	28 February 2008	R59A17402A	This Issue covers the following changes: • All previously issued certification was rationalised into a single certificate, Issue 2, Issues 0 and 1 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format. • The introduction of Variation 1.
3	17 June 2008	R51A18388A	The introduction of Variation 2.
4	30 June 2008	R51A16981R3CC	The introduction of Variation 3
5	27 January 2010	N.A.	Typographical errors were corrected.
6	22 March 2010	R20870A/00	The introduction of Variation 4.
7	17 August 2010	R22473A/R22474A	The introduction of Variation 5.
8	21 October 2010	R22461A/00	The introduction of Variation 6.
9	17 October 2011	R23218D/00	The introduction of Variation 7.
10	11 January 2013	R23218D/01 R27035A/00	This Issue covers the following changes: • Report R23218D/01 replaced R23218D/00. • The introduction of Variation 8.

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

15.1 The maximum constructional gap (i_C) is less than that required by Table 1 of EN 60079-1: 2007 therefore, as a result of any maintenance and/or repair, the following gaps shall be maintained:

Flamepath	Maximum gap (mm)
Flange joint between Enclosure/Cover	0.15

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 Each ASM 170 Control station shall be subjected to a routine overpressure test for at least 10 s as required by clause 16.1 of EN 60079-1: 2007, the pressure to be applied is detailed below; there shall be no permanent deformation or damage to the enclosure:
Minimum ambient temperature -20°C: 11.1 bar
Minimum ambient temperature -40°C: 13.1 bar

17.4 The total power dissipation of the ASM170 Control stations shall not exceed 200 W.

17.5 The -40°C ambient shall not be applied to enclosures that employ a window.

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Certificate Annexe

Certificate Number: **Sira 04ATEX1267X**

Equipment: **ASM170 Range of Control Stations**

Applicant: **Pepperl+Fuchs GmbH**

sira CERTIFICATION

Issue 0

Drawing	Sheet	Rev.	Date	Description
ASM170/NB/04	1 of 1	B	18 Nov 03	Enclosure Type ASM170 Distribution Board
ASM170/NB/05	1 of 1	B	18 Nov 03	Enclosure Type ASM170 Switch Distribution Board
ASM170/NB/06	1 of 1	B	18 Nov 03	Enclosure Type ASM170 with Terminals
ASM170/NB/07	1 of 1	B	18 Nov 03	Enclosure Type ASM170 with Switch Disconnector and Rotary Switch
ASM170/NB/08	1 of 5	B	18 Nov 03	Enclosure Type ASM170 Control panel without Power and Protection
ASM170/NB/08	2 of 5	B	18 Nov 03	Enclosure Type ASM170 Control Panel with Power and Protection
ASM170/NB/08	3 of 5	B	18 Nov 03	Enclosure Type ASM170 Control Panel Fitted with Printed Circuit Board without Protection
ASM170/NB/08	4 of 5	-	13 May 03	Enclosure Type ASM170 Control panel Cover Drilling Detail
ASM170/NB/08	5 of 5	-	13 May 03	Enclosure Type ASM170 Control Panel Technical Specification
ASM170/NB/09	1 of 1	B	18 Nov 03	Enclosure Type ASM170 Dol Starter
ASM170/NB/10	1 of 1	B	18 Nov 03	Enclosure Type ASM170 Star-Delta Starter
ASM170/NB/11A*	1 of 1	A	26 Oct 04	Example ASM170 Control Label

* This drawing was amended by Sira on 27 October 2004.

Issue 2 (No new drawings were introduced.)

Issue 3 (No new drawings were introduced.)

Issue 4 (This is a rationalised list of drawings that replaces all the foregoing)

Drawing	Sheet	Rev.	Date	Description
ASM170/NB/04	1 of 1	B	18 Nov 03	Enclosure Type ASM170 Distribution Board
ASM170/NB/05	1 of 1	B	18 Nov 03	Enclosure Type ASM170 Switch Distribution Board
ASM170/NB/06	1 of 1	B	18 Nov 03	Enclosure Type ASM170 with Terminals
ASM170/NB/07	1 of 1	B	18 Nov 03	Enclosure Type ASM170 with Switch Disconnector and Rotary Switch
ASM170/NB/08	1 of 5	B	18 Nov 03	Enclosure Type ASM170 Control panel without Power and Protection
ASM170/NB/08	2 of 5	B	18 Nov 03	Enclosure Type ASM170 Control Panel with Power and Protection
ASM170/NB/08	3 of 5	B	18 Nov 03	Enclosure Type ASM170 Control Panel Fitted with Printed Circuit Board Without protection
ASM170/NB/08	4 of 5	-	18 Nov 03	Enclosure Type ASM170 Control panel Cover Drilling Detail
ASM170/NB/08	5 of 5	-	18 Nov 03	Enclosure Type ASM170 Control Panel Technical Specification
ASM170/NB/09	1 of 1	B	18 Nov 03	Enclosure Type ASM170 Dol Starter
ASM170/NB/10	1 of 1	B	18 Nov 03	Enclosure Type ASM170 Star-Delta Starter
ASM170/NB/11	1 of 1	B	13 Jun 08	Example ASM170 Control Label

Issue 5 (No new drawings were introduced.)

Issue 6

Drawing	Sheet	Rev.	Date	Description
EXDO/NB/01	1 to 3	-	09 Mar 10	Flameproof/Weatherproof Operator

Issue 7

Drawing	Sheet	Rev.	Date	Description
260-5412	1 of 1	-	17 Aug 10	Example Certification Label

Issue 8

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
ASM170/NB/11	1 of 1	C	20 Oct 10	Example ASM170 Control Label

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Certificate Annexe

Certificate Number: **Sira 04ATEX1267X**

Equipment: **ASM170 Range of Control Stations**

Applicant: **Pepperl+Fuchs GmbH**

Issue 9

Drawings	Sheets	Rev.	Date (Sira stamp)	Title
254-5857	1 of 1		17 Oct 11	ASM 170 Certification Label

Issue 10

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
254-6713	1 of 1	A	29 Nov 12	ASM 170 enclosure fitted with PV type breather drain
254-5857A	1 of 1	A	29 Nov 12	ASM 170 certification label ATEX & IECEx
ASM170/NB/04	1 of 1	D	29 Nov 12	Enclosure Type ASM 170 with switch disconnector and rotary switch

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