



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 00ATEX2217** Issue: **11**

4 Equipment: **I.S. WindObserver Power Supply Unit 1360**

5 Applicant: **Gill Instruments Limited**

6 Address: **Saltmarsh Park
67 Gosport Street
Lymington
Hampshire SO41 9EG
UK**

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 60079-0:2012/A11:2013 EN 60079-11:2012

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:



II (1) GD
[Ex ia Ga] IIC
[Ex ia Da] IIIC
(Ta = -30°C to +60°C)

Project Number 70136916


N Jones
Certification Manager

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13 DESCRIPTION OF EQUIPMENT

The I.S. WindObserver Power Supply Unit 1360 is designed to provide an intrinsically safe supply and signal connections to a model 1360 I.S. Anemometer certified as Sira 00ATEX2218. The equipment comprises a printed circuit board that accommodates; an intrinsically safe transformer, opto isolators and voltage clamping, current and power limiting circuitry. A DIN rail accommodates the terminals. The PCB and terminals are housed inside a metal enclosure that affords a degree of ingress protection of at least IP20. The connections to the certified Anemometer are made via connector J2 to DIN rail mounted terminals 21 to 26.

Non-Hazardous area connections

Terminals marked E, L and N and Terminals 1 to 20:

$U_m = 250 \text{ Vrms}$.

Terminals 1 to 20 enable the equipment signal circuits to connect to low power RS422 and RS232 non-hazardous area circuits respectively.

Hazardous area connections

Terminals 21 to 26

$U_o = 11.55 \text{ V}$

$I_o = 162 \text{ mA}$

$P_o = 0.417 \text{ W}$

$C_i = 0$

$L_i = 0$

Cable parameters

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the load connected to each separate circuit listed above must not exceed the following values.

Group	Capacitance (μF)	Inductance (μH)	L/R Ratio ($\mu\text{H}/\Omega$)
IIC	1.59	800	90
IIB	10.8	3200	360
IIA	43	6400	720

Variation 1 - This variation introduced the following change:

- i. The recognition of minor drawing modifications; these changes were administrative and do not affect the aspects of the product that are relevant to explosion safety.

Variation 2 - This variation introduced the following changes:

- i. An alternative washer was allowed to be used on the IIC I.S. Electronics PCB assembly.
- ii. The removal of the fibre washer used on the Outdoor Galvanic Isolated PCI Final assembly was recognised.
- iii. The rivet bush was removed from the parts list.

Variation 3 - This variation introduced the following change:

- i. The recognition of minor drawing modifications; these changes were administrative and do not affect the aspects of the product that are relevant to explosion safety.

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Variation 4 - This variation introduced the following changes:

- i. Following appropriate re-assessment to demonstrate compliance with the requirements of the EN 60079 series of standards, the documents originally listed in section 9, EN 50014:1997 plus Amendments 1 and 2, EN 50020:1994, EN 50284:1999 and EN 50281-1-1:1998, were replaced by those currently listed, the markings in section 12 were updated accordingly and the condition was modified to recognise the application of the latest standards.
- ii. The ambient temperature range was changed from -20°C to +40°C to -30°C to +40°C.

Variation 5 - This variation introduced the following change:

- i. The introduction of an alternative pillar and fixing components was recognised.

Variation 6 - This variation introduced the following changes:

- i. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest technical knowledge, the documents originally listed in section 9, EN 60079-0:2009, EN 60079-11:2007 and IEC 61241-11:2005, were replaced by those currently listed, the markings in section 12 were updated accordingly and the Condition of Certification was modified to recognise the application of the latest standards.
- ii. A new label was allowed to be fitted; this label recognises the additional marking required for the IECEx certification also associated with these products.
- iii. The recognition of minor drawing changes that are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.
- iv. Drawing number 1360-C-009 Rev. 1 was reinstated.

Variation 7 - This variation introduced the following change:

- i. To recognise that the IS WindObserver Power Supply Unit 1360 may be used with either the Model 1360 IS Anemometer (Sira 00ATEX 2218) or IS II Anemometer Part 1360-00-097 (Sira 15ATEX2014)

Variation 8 - This variation introduced the following change:

- i. Upgrade the upper certified ambient temperature from +40°C to +60°C. No changes have been made to the products.
- ii. EN 60079-0:2012 has been replaced by EN 60079-0:2012/A11:2013.

Variation 9 - This variation introduced the following change:

- i. Circuit diagram 1360-C-009 has been modified to mark resistors R44 and R46 as "MUST NOT FIT".
- ii. Parts list 1360-10-003 has been modified to include R45 (zero ohm link).
- iii. Terminals T19 and T20 have been moved to the safe area side of the terminal rail. Wiring label drawing 1360-30-039 has been modified to reflect this change. The description was amended accordingly.

Variation 10 - This variation introduced the following change:

- i. Cover Plate drawing 1360-M-037 has been modified to add a note regarding surface of cover plate being free of scratches. No changes have been made to the products.



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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	19 December 2000	R52A7045A	The release of the prime certificate.
1	8 March 2001	R52A7045A	Re-issued to amend the list of certified drawings.
2	10 September 2001	R52A8120A	The introduction of Variation 1.
3	4 September 2007	R52A17115A	The introduction of Variation 2.
4	22 October 2009	R21032A	This Issue covers the following changes: <ul style="list-style-type: none">All previously issued certification was rationalised into a single certificate, Issue 4, Issues 0 to 3 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 3.
5	4 March 2010	R21571A/00	The introduction of Variation 4.
6	19 October 2011	R25877A/00	The introduction of Variation 5.
7	29 January 2014	R32015A/00	The introduction of Variation 6.
8	26 February 2015	R70015851A	The introduction of Variation 7.
9	13 October 2016	R70091747A	This Issue covers the following changes: <ul style="list-style-type: none">EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(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.)</i>The introduction of Variation 8.
10	27 March 2017	R70123556A	The introduction of Variation 9.
11	05 June 2017	R70136916A	The introduction of Variation 10.

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

None

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.

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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 The Power supply unit transformer, T1, is subject to routine tests at voltages of 2500 V between input and output windings, 1000 V rms between windings and core, and 1500 V between the winding supplying I.S. circuit and the other output winding, in accordance with clause 11.2 of EN 60079-11: 2012.

Certificate Annexe



Certificate Number: Sira 00ATEX2217
Equipment: I.S. WindObserver Power Supply Unit 1360
Applicant: Gill Instruments Ltd

Issue 0 to 6 (The drawings listed with these Issues were rationalised and have been superseded by those detailed in Issue 5)

Issue 7

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
1360-10-003	3 to 3	01F	09 Jan 14	I.S. PCI PCB Assembly (Galvanic Isolation)
1360-M-036	1 of 1	05	29 Jan 14	I.S. PCI Box Nameplate
1360-10-041	1 of 1	02	16 Oct 09	I.S. PCI Box Lid Assembly
1360-M-037	1 of 1	1	08 Dec 00	Cover Plate
1360-M-038	1 of 1	1	08 Dec 00	DIN Rail Machined
1360-30-039	1 of 1	03	16 Oct 09	Wiring Label
1360-M-009	1 of 1	1C	16 Oct 09	I.S. PCI PCB Manufacturing Details
1360-T-009	1 of 1	1	06 Dec 00	IS Anem PSU PCB Tracking Details
1360-M-001	1 of 1	02	21 Feb 01	I.S. Transformer Assembly
1360-10-011	1 of 1	01	08 Dec 00	DIN Rail Sub Assembly
1360-10-012	1 of 1	03	28 Aug 07	IIC I.S. Electronics PCB Assembly parts list
1360-00-013	1 of 1	06	22 Sep 11	Outdoor Galvanic Isolated PCI Final Assembly parts list
1360-G-028	1 & 2	03	03 Sep 01	I.S. Wind Observer II System Diagram
1360-C-009	1 of 1	1	15 Dec 00	Intrinsically Safe Power & Communications Interface

Issue 8 No new drawings were introduced.

Issue 9

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
1360-10-003	1 to 3	01G	03 Oct 16	I.S. PCI PCB Parts List (Galvanic Isolation)
1360-M-036	1 of 1	06	03 Oct 16	I.S. PCI Nameplate

Issue 10

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
1360-C-009	1 of 1	1H	15 Mar 17	Intrinsically Safe Power & Communications Interface
1360-10-003	1 to 3	01H	15 Mar 17	I.S. PCI PCB Assembly (Galvanic Isolation)
1360-30-039	1 of 1	04	15 Mar 17	Wiring Label

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Drawing	Sheets	Rev.	Date (Sira stamp)	Title
1360-M-037	1 of 1	02	22 May 17	Cover Plate

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