1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 09ATEX2147X** Issue: **1**

4 Equipment: **3300 Series and 8300 Series Position Monitors**
3600 Series and 8600 Series Control Monitors

5 Applicant: **Westlock Controls Ltd** **Westlock Controls Corporation**

6 Address:

22 Chapman Way Tunbridge Wells Kent TN2 3EF UK	280 Midland Avenue Saddle Brook NJ 07662 USA

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:

Original Products		**LG2 Enclosure only (plastic)**
EN 60079-0:2006	EN 61241-0:2006	EN 60079-0:2006
EN 60079-11:2007	EN 61241-1:2004	EN 60079-31:2009

IEC 60079-0:2007 (used for guidance in respect of marking)

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:

II •GD
Ex ia II , T ƒ G „
Ex t IIIC T135°C Da IP6X
Tamb: -...°C to + † °C

(*LG2 plastic enclosure only*)
Ex tb IIIC T135°C Db IP6X

- • 1G*D or 2G*D dependent on the specification of the devices that are fitted the LG2 plastic enclosure is only permitted in Group II Cat 2 environments.
- , IIB or IIC dependent on the specification of the devices that are fitted
- ƒ The temperature class is dependent on the specification of the devices that are fitted.
- „ Ga or Gb dependent on the specification of the devices that are fitted and enclosure material/size.
- ... The minimum ambient temperature is dependent on devices that are fitted and is not lower than -40°C.
- † The maximum ambient temperature is dependent on devices that are fitted and is limited to +55°C for LG1 plastic enclosures and +60°C for metal or LG2 enclosures.

Project Number 27011

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Certification Manager

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13 **DESCRIPTION OF EQUIPMENT**

The 3300, 3600, 8300 and 8600 Series Valve Monitors are constructed from a 2-part aluminium, stainless steel or Grilamid TR 90 UV materials depending on the option/part number type selected. The enclosure contains a number of different types of proximity switches/sensors, simple mechanical type switches, solenoid valves or optional CS Transmitter/RS Transmitter depending on the build/model option selected. A terminal strip(s) is internally mounted to facilitate the electrical wiring between the internal electrical parts and the external cables. External electrical connections are made to the screw type terminals with access for the cables being provided by a number of cable glands arranged on the bottom part of the enclosure. In addition to the foregoing, internal, electrical parts, the 3600 and 8600 Series are fitted with a number of external, pneumatic parts operated by the internal solenoids/valves.

Some versions have a single metallic shaft that emerges from the top and the bottom faces of the enclosure, a polycarbonate or Grilamid beacon may optionally be fitted to this shaft that on top of the enclosure. This visual indicator provides symbols or words that indicate the 'open' or 'closed' position or direction of flow; the state of the valve is further visibly enhanced by the use of different background colours for the words or symbols.

Proximity switches/sensors

These are Ex approved devices certified under the following certificates:

PTB 01 ATEX 2191
KEMA 02ATEX 1090X
PTB 00ATEX 2048X
PTB 00ATEX 2049X
PTB 00ATEX2032X
PTB 99ATEX2219X

Mechanical switches

The simple mechanical switch types are either MAGNUM XT90 Proximity Switch (Reed Switches SPDT or SPST) or V3 Micro Mechanical Switches (SPDT or SPST).

Solenoid valves

These are Ex approved devices certified under the following certificates that may be fitted to the 3600 and 8600 Series Valve Monitors:

DMT 01ATEX E 026X
IBExU 01ATEX1060X
BAS 01ATEX1391X

Optional CS Transmitter/RS Transmitter

These devices may be fitted to all Series Valve Monitors.

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Variation 1 - This variation introduced the following change:

i. The introduction of a new re-designed LG2 enclosure for dust protection Group IIIC 'Ex tb' was approved a Special Condition for Safe Use was introduced as a result of this change.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	28 August 2009	R52L17470E R52L17470F	The release of prime certificate.
1	17 May 2012	R27011A/00	The introduction of Variation 1.

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

15.1 The 3300, 3600, 8300 and 8600 Series Monitors may contain one or more devices covered by the following certificates, the installer shall confirm which certified devices are contained within the 3300, 3600, 8300 and 8600 Series Monitors and ensure compliance with the appropriate certificate (for example, with reference to input parameters).:

Number	Description
PTB 01ATEX2191	Certificate for IFM inductive proximity switch type NE****, NF****, NG****, NI****, NN****, NT****, NS****
KEMA 02ATEX1090X including Amendment 1	Certificate for Turck two-wire proximity sensors type group 'A'
PTB 00ATEX2048X including Supplements 1,2 and 3	Pepperl & Fuchs cylindrical inductive sensors, types NC.... & NJ....
PTB 00ATEX2049X including Supplement 1	Pepperl & Fuchs SN sensors, type NJ...
PTB 00ATEX2032X including Supplements 1 and 2	Pepperl & Fuchs cuboidal inductive sensors, type NJ...
PTB 99ATEX2219X	Pepperl & Fuchs Indicators Slot-type Indicators Types: SJ and SC
DMT 01ATEX E 026X	Piezo valve (Hoerbiger) Type: P8 381 RF-N*S*
IBExU 01ATEX1060X	Piezo valve (ASCO) Type: 63000###
BAS 01ATEX1391X	Solenoid (RGS Ltd) Type: EP000/ia

15.2 The various devices (switches, sensors and transmitters) shall be treated as separate intrinsically safe circuits.

15.3 When the enclosure is manufactured from aluminium ignition sources due to impact and friction sparks may occur. This shall be considered when the monitor is being installed, particularly in locations that specifically require Group II, Category 1G equipment.

15.4 The maximum dust layer shall be no greater than 5mm (T_5 135°C).

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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 Routine dielectric strength testing required at 500 V r.m.s. per clause 10.3 of EN 60079-11:2007. The voltage shall be increased steadily to the specified value in a period of not less than 10 s and then maintained for at least 60 s. The applied voltage shall remain constant during the test. The current flowing during the test shall not exceed 5 mA r.m.s. at any time. The test shall be conducted between the equipment enclosure and the connections for all fitted apparatus.

17.4 The 8300 and 8600 Series Position Monitor that have a Grilamid TR 90 UV plastic enclosure are not suitable for use in explosive dust environments and therefore shall not bear any markings relating to dust applications.

17.5 The products covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.

17.6 The manufacturer shall take all reasonable steps to ensure that the user/installer complies with the special conditions for certification associated with these products, in addition, the manufacturer shall provide the user/installer with an appropriate copy of the certificate for each certified device that is fitted in the device.

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Certificate Annexe

Certificate Number: Sira 09ATEX2147X

Equipment: 3300 Series and 8300 Series Position Monitors
3600 Series and 8600 Series Control Monitors

Applicant: Westlock

Issue 0

Number	Sheet	Rev.	Date (Sira stamp)	Description
MS-060801UK	1 to 3	A	30 Apr 09	3300 Ex ia ATEX / IEC Approval Drawing
MS-070801UK	1 to 3	A	30 Apr 09	3600 Ex ia ATEX / IEC Approval Drawing
MS-070802UK	1 to 3	A	30 Apr 09	8300 Ex ia ATEX / IEC Approval Drawing
MS-070803UK	1 to 5	A	30 Apr 09	8600 Ex ia ATEX / IEC Approval Drawing
LB-020901UK	1 to 3	-	24 Aug 09	3300, 3600, 8300 & 8600 ATEX / IECEx Ex ia Label Master

The following drawings describing the Westlock CS Transmitter are also included:

Number	Sheet	Rev.	Date (Sira stamp)	Description
SC-10128	1 of 1	F2	30 Apr 09	CS Surface Mount (Schematic)
EL-30264	1 of 1	J	30 Apr 09	PCB Assembly CS Surface Mount PCB

Issue 1

Number	Sheets	Rev.	Date (Sira stamp)	Description
MS-070802UK	1 to 5	B	11 May 12	8300 Ex ia ATEX / IEC APPROVAL DRAWING
MS-070803UK	1 to 6	B	11 May 12	8600 Ex ia ATEX / IEC APPROVAL DRAWING
LB-020901UK	1 to 6	A	11 May 12	ATEX / IECEx Ex ia LABEL MASTER

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