



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 03ATEX1269U** Issue: **5**

4 Component: **GPCB General Purpose Contact Block and GPCB-RS Rotary Switch**

5 Applicant: **Walsall Ltd**

6 Address: Cornwallis Road
West Bromwich
West Midlands
B70 7DX
UK

7 This component and any acceptable variation thereto are 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 component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of a component 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 60079-1: 2007 EN 60079-7: 2007
IEC 60079-0: 2007 (Used for reference in respect of Marking)

10 The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any special conditions or safe use are listed in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

12 The marking of the component shall include the following:



II 2 G
Ex de IIC Gb Tamb -20°C to +55°C or
Ex de IIC Gb Tamb -40°C to +55°C or
Ex de IIC Gb Tamb -45°C to +55°C

C Ellaby
Certification Officer

Project Number 51A16981
C. Index 18

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Sira Certification Service

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



SCHEDULE

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13 DESCRIPTION OF COMPONENT

The type GPCB general purpose contact block is a contact break switch rated at 420 V/20 A Max housed in moulded base unit with lid. The switched contacts operate a maximum of eight terminals are able to connect to conductors between 1 mm² and 2.5 mm² in size. The internal contacts are switched by one or two push rods protruding through the lid. Alternatively an additional housing can be placed on top of the lid to allow the push rods to be cam operated. This is then known as a type GPCB-RS rotary switch. The lid and housing (when applicable) are fastened to the base by four screws. Two of the screws, that are diagonally opposite pass through the walls of the base to additionally secure the contact block to the enclosure in which it is installed.

Variation 1 - This variation introduced the following change:

- i. Resistors were allowed to be fitted inside the General Purpose Contact Block, these units are rated at 24 V, 2 A maximum per contact.

Variation 2 - This variation introduced the following change:

- i. Two, 5 x 20 mm fuses were permitted to be fitted inside the General Purpose Contact Block in place of the contacts, in this case, the contact block is provided with a cover without an operating rod. The unit is rated up to 250 V, 16 A each circuit, and is known as a General Purpose Contact Block Fuse Unit. The fuses may be replaced by solid links to provide a neutral link unit.

Variation 3 - This variation introduced the following change:

- i. The General Purpose Contact Block enclosure was allowed to be fitted with a plain cover and four terminals containing a 0.5 W resistor, two Type 1N4002 Diodes and a 5 V transorb, thus forming a General Purpose Contact Block Suppression Module rated at 24 Vdc, 360 mA.

Variation 4 - This variation introduced the following change:

- i. An alternative, lower ambient temperature, -45°C, was recognised, in consequence, Special Conditions for Safe Use and Conditions of Certification have been amended.

Variation 5 - 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 (A1 and A2), EN 50018:2000 (A1) and EN 50019:2000, were replaced by those currently listed, the markings in section 12 were updated accordingly and the conditions were modified to recognise the requirements of the latest standards and to clarify the specific requirements where necessary.
- ii. The rating in the description has been amended to recognise that the current capability has been increased from 16 A to 20 A.
- iii. The upper ambient temperature limit has been increased from +50°C to +55°C; the marking and conditions being modified accordingly.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

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14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	4 July 2003	R51A9812A	The release of the prime certificate.
1	29 August 2003	R53A10650A	The introduction of Variation 1.
2	10 January 2008	R51A17571A	This Issue covers the following changes: <ul style="list-style-type: none">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 2.
3	22 January 2008	R51A16837A	<ul style="list-style-type: none">The introduction of Variation 3.Clauses 15.3 and 17.4 were amended so that they apply to the full range of products and are not specific to particular devices.
4	14 April 2008	R51A17901A	The introduction of Variation 4.
5	14 January 2009	R51A16981R3AF	The introduction of Variation 5.

15 SPECIAL CONDITIONS FOR SAFE USE

- 15.1 The minimum creepage and clearance distances between the break switch and adjacent exposed faces of equipment, enclosure walls and covers shall be appropriate for its rated voltage in accordance with EN 60079-7:2007.
- 15.2 The insulation material supporting the terminals shall not be exposed to temperatures that are outside the ambient range of -45°C to +55°C.
- 15.3 The GPCB General Purpose Contact Block or GPCB-RS Rotary Switch should be securely fitted into the supplementary enclosure using the two fixing screws provided. The associated fixing holes shall be at least one full thread deeper than the protruding fixing screw.

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 An electrical strength test of 1830 V rms shall be applied between terminals, isolated terminals and live parts for at least 60 s and no more than 63 s as required by clause 7.1 of EN 60079-7:2007.
- 17.4 When GPCB General Purpose Contact Block or GPCB-RS Rotary Switches are labelled for use in an ambient of -40°C, they shall be subjected to a routine overpressure test of 10.125 bar for at least 10 s as required by clause 16.1 of EN 60079-1:2007. There shall be no permanent deformation or damage to the enclosure.
- 17.5 When GPCB General Purpose Contact Blocks or GPCB-RS Rotary Switches are labelled for use in an ambient of -45°C, they shall be subjected to a routine overpressure test of 11.6 bar for at least 10 s as required by clause 16.1 of EN 60079-1:2007. There shall be no permanent deformation or damage to the enclosure.

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Certificate Annexe

Certificate Number: Sira 03ATEX1269U
Component: GPCB General Purpose Contact Block and GPCB-RS Rotary Switch
Applicant: Walsall Ltd



Issue 0

Drawing	Sheet	Rev.	Date	Title
GPCB-NB-01	1 of 1	0	17 Sep 02	Contact block
GPCB-NB-02	1 of 1	0	22 May 03	Contact block label
GPCB-NB-03	1 of 1	0	17 Sep 02	Cam adaptor housing and label
GPCB/CD/03	1 of 1	0	23 May 03	Cam housing spring

Issue 1

Drawing	Sheet	Rev.	Date	Title
GPCB/NB/04	1 of 1	-	13 Aug 03	Details of contact block when used to house resistors

Issue 2

Drawing	Sheet	Rev.	Date	Title
GPCB/NB/06	1 of 1	0	17 Dec 07	Details of contact block when used to house fuses

Issue 3

Drawing	Sheet	Rev.	Date	Title
GPCB/NB/05	1 of 1	A	15 Jan 08	Details of contact block suppression module

Issue 4

Drawing	Sheet	Rev.	Date	Description
GPCB-NB-03	1 of 1	1	26 Mar 08	Cam Housing and Label Details
GPCB\NB\02	1 of 1	1	10 Apr 08	Label details for contact block

Issue 5

Drawing	Sheet	Rev.	Date	Description
GPCB-NB-02	1 of 1	2	13 Oct 08	Contact block label
GPCB-NB-03	1 of 1	2	13 Oct 08	Cam adaptor housing and label

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