



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:

IECEx TSA 08.0037U

issue No.:0

Certificate history:

Status:

Current

Date of Issue:

2009-06-30

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Applicant:

Flameproof Engineering Pty Ltd
Unit 18, 276 New Line Road
Dural NSW 2158
Australia

Electrical Apparatus:
Optional accessory:

CSS series Control, Switch and Signal Operators

Type of Protection:

Ex d, tb

Marking:

Flameproof Engineering
CSS Series 1000 or CSS Series 2000
Ex d IIC Gb
Ex tb IIC Db, IP66/IP67
IECEx TSA 08.0037U

*Approved for issue on behalf of the IECEx
Certification Body:*

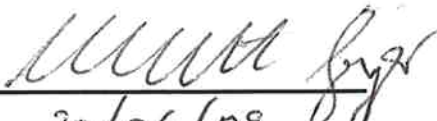
Robbie Geyer

Position:

Director

*Signature:
(for printed version)*

Date:


30/06/09

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia





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Manufacturer: **Flameproof Engineering Pty Ltd**
Unit 18, 276 New Line Road
Dural NSW 2158
Australia

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure 't'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

AU/TSA/ExTR08.0050/00
AU/TSA/ExTR09.0023/00

Quality Assessment Report:
AU/TSA/QAR09.0001/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The CSS series of control switch operators and single spindle pushbuttons are comprised of 2 families of components, designed and manufactured by Flameproof Engineering Pty Ltd. The CSS-1000 switch operator assembly consists of stainless steel bushing, stainless steel operating rod metallic operating handle. Handle is secured to the operating rod by steel rolled pin. Marking on handle is done either by engraving or laser marking. Steel bushing is fitted in the enclosure with M16x1.5-6g or M20x1.5-6g thread forming threaded joint and loctite is provided for securing threaded joint. Fibre washer is provided for ingress protection. Switch actuator and switch is attached to operating rod and positioned inside the enclosure. The CSS-2000 pushbutton assembly consists of external body in aluminium alloy or stainless steel, stainless steel operating rod, stainless steel bushing and metal mounting latch for contact block. Pushbutton body has thread of M32x1.5 –6g. Push buttons are fitted in the enclosure by threaded joints and fibre washer is provided for ingress protection. Upper portion of push button body is engraved or laser marked for identification and certification marking. Lower part is shaped as required to attach a contact block for mounting latch. Use of Switch operators and Push buttons are restricted due to inherent limitation of parts fitted to Ex components, which are as given below.

Thermal Characteristics of non-metallic material			
Ex Component	Non-metallic Part	Where used	Thermal Characteristics
Switch operators	Silicone O ring	Operating rod and steel bushing	COT - 65 °C to + 250 °C
Push buttons	Silicone O ring	Operating rod and steel bushing	COT - 65 °C to + 250 °C
Switch operators	Fibre Washer	Steel bush head and Enclosure	COT up to + 300 °C
Push buttons	Fibre Washer	Steel body head and Enclosure	COT up to + 300 °C

Push buttons and switch operators may be fitted in the Ex d or Ex t / tD enclosures.
Explosion protection Ex t depends upon seals and gaskets hence product limitation depends upon its thermal limitations

Thermal limitation of Push buttons and Switch operators				
Item	Thermal endurance to heat and cold Test		Product limitation for temperature	
	Heat	Cold	High	Low
Switch Operators	125 °C	- 27.5 °C	105 °C	- 20 °C
Push buttons	125 °C	- 27.5 °C	105 °C	- 20 °C

Explosion protection Ex d and Ex t does not depend upon plastic head of push button, however manufacturer specify continuous operating temperature of plastic head is + 70 °C

CONDITIONS OF CERTIFICATION: NO



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 08.0037U	Issue No.:	0
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Drawing list pertaining to Issue 0 of this Certificate:

Document No.	Sheets	Document Title	Issue	Date (yyyy/mm/dd)
CSS-0000-0001-01	1	CSS series of control, switch and signal operators	2	2009/06/01
CSS-0000-0002-01	1	CSS series of control, switch and Signal operators	2	2009/06/01
CSS-0000-0000-01	3	Technical Note	2	2009/03/01

Certificate issued by:



TestSafe Australia
919 Londonderry Road
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