IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEx ITA 10.0023X**

Status: **Current**

Issue No: 5

Date of Issue: 2020-01-31

Certificate history:

Issue 4 (2019-04-18)
Issue 3 (2018-07-30)
Issue 2 (2015-06-19)
Issue 1 (2012-02-02)
Issue 0 (2011-01-05)

Applicant: **B&R Ex Systems Pty. Ltd**
Unit 12 100 Belmore Road
Riverwood, NSW, 2210
Australia

Equipment: **TBK/CBK Series Enclosures & TBS/CBS Series Enclosures**

Optional accessory:

Type of Protection: **Increased Safety 'e', Flameproof 'd', Type of Protection 'n', Encapsulation 'm', Protection by Enclosure 't'**

Marking:
Ex e IIC T6 Gb
Ex d e IIC T6 Gb
Ex nA IIC T6 Gc
Ex tD A21/22 T80°C, DIP A21/22 T80°C, Ex t IIIC T80°C Db

-20°C ≤ Ta ≤ +55°C

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

Position: **Certification Authority**

Signature: (for printed version)

Date: 2020-01-31

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 www.iecex.com or use of this QR Code.

Certificate issued by:

Ex Testing and Certification Pty Ltd
1/30 Kennington Drive
Tomago NSW 2322
Australia

TESTING & CERTIFICATION

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Manufacturer:
B&R Ex Systems Pty. Ltd.
Unit 12 100 Belmore Road
Riverwood, NSW
Australia 2210
Australia

Additional manufacturing locations:

B&R Enclosures Sdn. Bhd.
No. 38, 38-1, 40, 42, Jalan Suria Puchong 4
Pusat Perniagaan Suria Puchong
47110 Puchong, Selangor
Malaysia

B&R Gulf LLC
Factory No 12, Modon Building
King Salman Road, Industrial Area 03
Dammam
Saudi Arabia

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 equipment 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 60079-0:2007-10 Edition:5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-1:2003 Edition:5	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-15:2005-03 Edition:3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
IEC 60079-18:2009 Edition:3	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"
IEC 60079-31:2008 Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7:2006-07 Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0:2004 Edition:1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1:2004 Edition:1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"
IEC 61241-1-1:1999 Edition:2	Electrical apparatus for use in the presence of combustible dust - Part 1-1: Electrical apparatus protected by enclosures and surface temperature limitation - Specification for apparatus

This Certificate **does not** indicate compliance with 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:

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Test Reports:

AU/ExTC/ExTR20.0004/00 AU/ITA/ExTR10.0016/00 AU/ITA/ExTR12.0001/00
AU/ITA/ExTR15.0015/00

Quality Assessment Reports:

AU/EXTC/QAR18.0001/01 AU/EXTC/QAR19.0001/00 AU/ITA/QAR10.0007/06

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The TBK/CBK series and the TBS/CBS series are general purpose Control/Terminal Enclosures that are manufactured from stainless steel. The covers are retained by hinges with a heavy duty square key turnbuckle lock for the TBK/CBK series and captive screws for the TBS/CBS series. All the metal parts are anti-corrosive. The TBK/CBK series is available with the option of either a sloping roof or a flat top. The joint is designed between the cover and body to mount the neoprene / EDPM gasket, which secure degree of protection IP66 and IP67. Components with IP65 rating may be installed in the apparatus with the appropriate marking. Meant primarily for use in explosive gas and dust atmospheres, but also has applications in non-hazardous environments.

The cable entries can be set on the top, bottom, left, right side or rear. This can be via either clearance holes in the wall of the enclosure or using a gland plate version. Enclosures with sloping roofs do not have the option for entries in the top. Mounting brackets are fitted to the TBS/CBS series and as an option for the TBK/CBK series.

The TBK/CBK series has the option of two sizes glass windows mounted in the cover, 298mm x 218mm and 198mm x 118mm.

Refer to the Annexe for further details.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to the Annex for details.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Refer to the Annex for details.

Annex:

IECEx ITA 10.0023X-5 - Certificate Annex_Final.pdf

Description: (continued from certificate)

TBS/CBS series				
Catalogue No.	Height (mm)	Width (mm)	Depth (mm)	Number of cover screws
TBS/CBS F*CS11/S	112	90	90	4
TBS/CBS F*CS12/S	159	90	90	4
TBS/CBS F*CS13/S	205	90	90	6
TBS/CBS F*CS14/S	250	90	90	6
TBS/CBS F*CS16/S	343	90	90	6
TBS/CBS F*010108	150	150	77	4
TBS/CBS F*020212	200	200	117	4
TBS/CBS F*030212	300	200	117	4
TBS/CBS F*040212	400	200	117	6
TBS/CBS F*060212	600	200	117	6

TBK/CBK series			
Catalogue No.	Height (mm)	Width (mm)	Depth (mm)
TBK/CBK S*030215	300	200	150
TBK/CBK S*030420	300	400	200
TBK/CBK S*040315	400	300	150
TBK/CBK S*040420	400	400	200
TBK/CBK S*040620	400	600	200
TBK/CBK S*040630	400	600	300
TBK/CBK S*060420	600	400	200
TBK/CBK S*060630	600	600	300
TBK/CBK S*080620	800	600	200
TBK/CBK S*080630	800	600	300
TBK/CBK S*100620	1000	600	200
TBK/CBK S*120830	1200	800	300
TBK/CBK F*030215	300	200	150
TBK/CBK F*030315	300	300	150
TBK/CBK F*030415	300	400	150
TBK/CBK F*030420	300	400	200
TBK/CBK F*040315	400	300	150
TBK/CBK F*040320	400	300	200
TBK/CBK F*040420	400	400	200
TBK/CBK F*040620	400	600	200
TBK/CBK F*040630	400	600	300
TBK/CBK F*050420	500	400	200
TBK/CBK F*060420	600	400	200
TBK/CBK F*060620	600	600	200
TBK/CBK F*060630	600	600	300
TBK/CBK F*080620	800	600	200
TBK/CBK F*080630	800	600	300
TBK/CBK F*100620	1000	600	200
TBK/CBK F*100630	100	600	300
TBK/CBK F*120830	1200	800	300

Power Dissipation Tables

Table 1

TBS/CBS series		
Catalogue No.	Wattage dissipation for +40°C ambient (W)	Wattage dissipation for +55°C ambient (W)
TBS/CBS F*CS11/S	21.3	11.8
TBS/CBS F*CS12/S	21.2	12
TBS/CBS F*CS13/S	21.3	12.3
TBS/CBS F*CS14/S	21.3	12.5
TBS/CBS F*CS15/S	21.4	13.0
TBS/CBS F*CS16/S	21.3	12.3
TBS/CBS F*010108	21.3	12.3
TBS/CBS F*020212	21.5	13.5
TBS/CBS F*030212	22.0	14.6
TBS/CBS F*040212	22.7	15.8
TBS/CBS F*060212	24.8	18.6

Table 2

TBK/CBK series		
Catalogue No.	Wattage dissipation for +40°C ambient (W)	Wattage dissipation for +55°C ambient (W)
TBK/CBK S*030215	22.4	15.2
TBK/CBK S*030420	26.9	20.9
TBK/CBK S*040315	25.2	19.2
TBK/CBK S*040420	30.2	24.3
TBK/CBK S*040620	39.4	32.4
TBK/CBK S*040630	49.5	40.4
TBK/CBK S*060420	39.4	32.4
TBK/CBK S*060630	73.3	57.7
TBK/CBK S*080620	79.5	62.0
TBK/CBK S*080630	104.2	78.8
TBK/CBK S*100620	108.1	81.3
TBK/CBK S*120830	279.1	188.5
TBK/CBK F*030215	22.4	15.2
TBK/CBK F*030315	23.6	17.1
TBK/CBK F*030415	25.2	19.2
TBK/CBK F*030420	26.9	20.9
TBK/CBK F*040315	25.2	19.2
TBK/CBK F*040320	26.9	20.9
TBK/CBK F*040420	30.2	24.3
TBK/CBK F*040620	39.4	32.4
TBK/CBK F*040630	49.5	40.4
TBK/CBK F*050420	34.4	28.1
TBK/CBK F*060420	39.4	32.4
TBK/CBK F*060620	56.6	45.7
TBK/CBK F*060630	73.3	57.7
TBK/CBK F*080620	79.5	62.0

TBK/CBK series		
Catalogue No.	Wattage dissipation for +40°C ambient (W)	Wattage dissipation for +55°C ambient (W)
TBK/CBK F*080630	104.2	78.8
TBK/CBK F*100620	108.1	81.3
TBK/CBK F*100630	142.3	103.6
TBK/CBK F*120830	279.1	188.5

Nomenclature
TBS denotes Terminal Box Screw CBS denotes Control Box Screw
TBK denotes Terminal Box Key CBK denotes Control Box Key
F denotes Flat top (replaced by S for Sloping roof)
* denotes protection technique utilised eg. E = Ex e, T = Ex t, N = Ex n

Specific Conditions of Use pertaining to Issue 0 of this Certificate:

1. When internal wiring is installed by manufacturer, a dielectric strength test shall be conducted on the apparatus in accordance to IEC 60079-7 clause 6.1
2. The schedule of limitations of the suitably separately certified components included in the equipment shall be adhered.
3. Components that penetrate the walls of the enclosure shall have suitable separate certification for IP65, IP66 or IP67 as required by the marking of the complete enclosure
4. Only suitable separately certified cable glands, breathing/draining devices and blanking elements are utilized with the apparatus and all unused entries are suitably blanked.
5. Cells and batteries shall be incorporated into the apparatus when marked for explosive dust atmospheres only. If other protection concepts are also part of the marking, then cells and batteries shall not be installed in the apparatus.
6. The cells and batteries shall only be button type primary cells. Where the cells/batteries are connected to another voltage source, the manufacturer shall verify that the batteries are not subjected to a charging current.
7. Any special conditions for battery replacements such as tools, disconnection criteria, etc. specified by the manufacturer of the device that incorporates batteries, shall be clearly marked adjacent to where the battery is located and list all requirements necessary for correct replacement. For example, details of the battery manufacturer, part number, type of electrochemical system, nominal voltage / rated capacity. The cover of the enclosure shall be suitably marked where special conditions are applicable.

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Annexe

Annexe for Certificate No.:	IECEx ITA 10.0023X	Issue No.:	5

Drawing list pertaining to Issue 0 of this Certificate:

Manufacturer's Documents

Title:	Drawing No.:	Pages	Rev. Level:	Date:
TBK/CBK #* SERIES WITH REMOVABLE GLAND PLATES ENCLOSURE ASSEMBLY CERTIFICATION DRAWING	CERT-TBK/CBK-001/1		6	2010-12-21
TBK/CBK #* SERIES CLEAN SKIN ENCLOSURE ASSEMBLY CERTIFICATION DRAWING	CERT-TBK/CBK-001/2		6	2010-12-21
B&R Ex IEC Ex e, Ex I, Ex n, Ex t, Ex d TBS/CBS & TBK/CBK #* SERIES TERMINAL/CONTROL BOX RATING LABEL CERTIFICATION DRAWING	CERT-TB/CB-001		6	2011-11-24
TBS/CBS F* SERIES ENCLOSURES ASSEMBLY CERTIFICATION DRAWING	CERT-TBS/CBS-001		4	2010-12-21
TBK/Cbk #* SERIES ENCLOSURES C&C STANDARD HANDLE PRESENTATION DRAWING	CERT-TBK/CBK-001/4		5	2010-12-16
Stainless Steel Enclosures for Incorporating Terminal and Control Gear	PS-ENCSS-001		9	2015-03-12

Variations permitted by Issue 2 of this certificate:

- Addition of a new silicone based material for the door and gland plate seals suitable for ingress protection rating of IP66.
- Entries from the rear of the enclosure have been added to the equipment description.
- Breathing and draining devices have been added to the allowable equipment
- The protection type shown on the certificate "Restricted Breathing" has been replaced with "Non-sparking" in order to correct an error in the certificate.
- Description of equipment has been corrected for errors
- The conditions of certification have been clarified, grammatically corrected and collated and the history regarding previous issues has been removed.
- The drawing list has been collated and the history regarding previous issues has been removed. Refer to previous issues of the certificate for the issue history.

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Annexe

Annexe for Certificate No.:	IECEx ITA 10.0023X	Issue No.:	5

Drawings Associated with the Issue 2 of this Certificate:

Manufacturer's Documents

Title:	Drawing No.:	Pages	Rev. Level:	Date:
Stainless Steel Enclosures for Incorporating Terminal and Control Gear	PS-ENCSS-001	56	9	2015-03-12

Variations permitted by Issue 3 of this certificate:

Added an additional manufacturing location of B&R Sdn. Bhd. At Malaysia to this certificate.

Specific Conditions of Use pertaining to Issue 3 of this certificate:

There are no variations to the earlier conditions.

Drawings Associated with the Issue 3 of this Certificate:

There are no drawings associated with this issue of the certificate.

Variations permitted by Issue 4 of this certificate:

Added an additional manufacturing location of B&R Gulf LLC in Kingdom of Saudi Arabia to this certificate.

Specific Conditions of Use pertaining to Issue 4 of this certificate:

There are no variations to the earlier conditions.

Drawings Associated with the Issue 4 of this Certificate:

There are no drawings associated with this issue of the certificate.

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Annexe

Annexe for Certificate No.:	IECEx ITA 10.0023X	Issue No.:	5

Variations permitted by Issue 5 of this certificate:

The variations have been assessed in ExTC report AU/ExTC/ExTR20.0004/00

Marking label has been updated to remove cable range and lug information and to add information regarding an extended ambient temperature range of -20°C ≤ T_{amb} ≤ +55°C. All the drawings have been updated to reflect the new marking label drawing revision.

Specific Conditions of Use pertaining to Issue 5 of this certificate:

There are no variations to the earlier conditions.

Drawings Associated with the Issue 5 of this Certificate:

Manufacturer's Documents

Title:	Drawing No.:	Pages	Rev. Level:	Date:
B&R Ex IEC Ex e, Ex n, Ex t, Ex d, TBS/CBS & TBK/CBK #* SERIES TERMINAL/ CONTROL BOX RATING LABEL CERTIFICATION DRAWING	CERT-TB/CB-001	1 of 1	7	2019-11-12
TBK/CBK #* SERIES CLEAN SKIN ENCLOSURES ASSEMBLY CERTIFICATION DRAWING	CERT-TBK/CBK-001/2	1 of 1	7	2019-11-27
TBK/CBK #* SERIES with REMOVABLE GLAND PLATES ENCLOSURES ASSEMBLY CERTIFICATION ASSEMBLY	CERT-TBK/CBK-001/1	1 of 1	7	2019-11-27
TBS/CBS F* SERIES ENCLOSURES ASSEMBLY CERTIFICATION DRAWING	CERT-TBS/CBS-001	1 of 1	5	2019-11-27
Stainless Steel Enclosures for Incorporating Terminal and Control Gear	PS-ENCSS-0001	56	10	2019-11-26