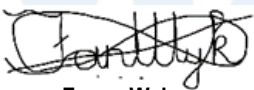





Mining And Surface Certification (Pty) Ltd

2015/021934/07

THIS CERTIFICATE IS ISSUED AS AN I.A. CERTIFICATE IN TERMS OF THE MINE HEALTH AND SAFETY ACT, ACT NO 29 OF 1996 (AND REGULATIONS), THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993) AND REGULATION 17 OF THE ELECTRICAL MACHINERY REGULATIONS

IA CERTIFICATE	MASC MS/21-8119U	Issue	1
Issue Date	30 May 2022	Expiry Date	30 May 2025
*Based on Certificate No	IECEX FTZU 12.0007U	Issue / Variations / Amendment	2
Requested by	ZEST WEG Group, 6 Laneshaw Street, Longlake Ext 4, Johannesburg, South Africa		
Manufacturer	WEG DRIVES & CONTROLS - AUTOMAÇÃO Ltda Av. Prefeito Waldemar Grubba 3000 - Vil a Lalau Jaraguá do Sul 89.256-900 Catarina Brazil		
Description	The type BTWI*, BTWY * range of rail mounted terminals consist of one-layer current bar and allow to connect up to two conductors. Feed-through terminal assemblies are mounted into moulded insulation housing from material polyamide 66. Terminals has got spring type connection, push-in technology, which allows easier connection of conductor and averting self-loosing. For technical parameters see Annex to IECEX FTZU 12.0007U Issue 2.		
Equipment	Range of rail mounted terminals	Type	BTWI*, BTWY *
MARKING: Original marking as per certificate ** remains applicable. IA number must be added.	Type Ex Marking IA Number Warnings	Range of rail mounted terminals BTWI*, BTWY * Ex eb I Mb Ex eb IIC Gb MASC MS/21-8119U See Base Certificate - IECEX FTZU 12.0007U	
Compliance: The equipment as described above has been allocated the rating <u>Explosion Protected Ex eb I Mb & Ex eb IIC Gb</u> utilizing the SANS/IEC Standards: <ul style="list-style-type: none"> SANS (IEC) 60079-0: 2019 Explosive atmospheres - Part 0: Equipment - General Requirements SANS (IEC) 60079-7: 2019 Explosive atmospheres - Part 7: Equipment protection by increased safety "e" <i>Note: This certificate covers only the listed standards and does not imply compliance to any other standard, related or inferred. It is up to the manufacturer to ensure that the product complies to all relevant standards for the application.</i>			
Special conditions of safe use "X": <ul style="list-style-type: none"> See "Annex A" below 			
Conditions of manufacture: <ul style="list-style-type: none"> See "Annex A" below 			
 F. van Wyk TECHNICAL OFFICER		 M. Erasmus TECHNICAL SPECIALIST	
<small>This certificate covers all units sold as long as the QAR/QAN remains valid. According to the relevant requirements of the MHS Act and the OHS Act, production units of explosion protected equipment are required to comply with third party quality assurance (an approved mark scheme or batch testing by an accredited test laboratory).</small>			

Apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:
 SANS 10086 requirements;
 Any conditions mentioned in the above certificate;
 Any relevant requirements of the MHS Act;
 Any restrictions and conditions enforced by the chief inspector of mines, principal inspector (Group I equipment) or chief inspector of factories (Group II equipment).

This certificate may only be reproduced in full
 The certificate is not transferable and remains the property of the issuing body.

IA CERTIFICATE: MASC MS/21-8119U

Equipment: Range of rail mounted terminals BTWI*, BTWY *

ANNEX A

This document is based on and must be read in conjunction with certificate IECEx FTZU 12.0007U.	
Description (According to Base Certificate *)	
"Refer to description in Base Certificate * (and any applicable schedules/issues/variatioins)."	
Standard compliance	See Base Certificate *
Schedule of limitations (U)	<ul style="list-style-type: none"> • Allowed service temperature range is from -60 °C to +85 °C. • The end terminals type BTWY 2,5S; BTWY 2,5P and BTWY 2,5 shall be covered with associated end plate to achieve rated voltage 500V. Rated voltage of the terminals type BTWY 2,5S; BTWY 2,5P and BTWY 2,5 without end plate is 320V. • See Instruction Manual No. 10006108358
Conditions of manufacture	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 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.
Conditions of Certification	<ul style="list-style-type: none"> • This IA Certificate covers all units sold from the date of this document to the expiry date of this certificate. • As per ARP 0108 a maximum three yearly review is required on this IA Certificate (30 May 2025). • The apparatus must be additionally marked with the MASC marking details above. • This approval only covers the equipment as certified above and does not include any scheduled additions or variations / amendments / new issues to the certificate(s), made after the above date. • The equipment does not need to be re-tested when used on the conditions and with such restrictions as prescribed by the certificate on which this IA Certificate is based and any other conditions in this IA Certificate. • The certification on which this IA Certificate is based must remain valid. • The extent of the requirements in the ARP 0108 (or regulations), SANS 10108 and any other applicable regulations on the certification of the equipment must remain unchanged. • The Ex quality assurance notification/report for the equipment must remain valid.
Conclusion:	<ul style="list-style-type: none"> • From the above and the selective examination of the documentation, nothing contrary to the requirements of the applicable standards was found, provided that the equipment / component is used as described in the above document / certificate and according to the MASC conditions below. A MASC IA certificate is issued based on the work done as per the Base Certificate *. • The routine tests for production units according to the Base Certificate * must be complied with (if applicable).

This document is issued based on Mining And Surface Certification's Standard Contract terms and conditions available on request.

While every endeavour is made to ensure that a test / assessment / inspection is representative and accurately performed, and that a report / certificate is accurate in the quoted results and conclusions drawn from the test / assessment / inspection, MASC or its directors/employees shall in no way be liable for any error made in carrying out the test / assessment or for any erroneous statement, whether in fact or in opinion, contained in a report / certificate issued pursuant to a test / assessment / inspection.

MASC takes no responsibility for any non-conformances, exclusions or any results / assessments / inspections not in compliance with the standards. By marking the equipment in accordance with the documentation / standard, the manufacturer / applicant attests on his own responsibility that the equipment / installation has been designed and constructed in accordance with the applicable requirements of the relevant standards and documentation, that the routine verifications / routine tests have been correctly completed and the equipment / installation complies with the documentation and standard(s).

This document is only for use and application in South Africa. It is issued based on National interpretations and accepted practices.

This document may only be reproduced in full.
This certificate is not transferable and remains the property of the issuing body.
This document will not be supported by MASC for certification purposes outside the borders of South Africa.

Mining And Surface Certification (Pty) Ltd Reg No: 2015/021934/07
Directors: Roelof Viljoen & Francois du Toit
Unit #5, Lelyta Park, 45 Jurg Avenue, Hennopspark Ext 87, Centurion, 0157
P.O. Box 14344, Clubview, 0014
Tel: 012 653 2959 ♦ Fax: 086 605 8568
e-mail: info@masc-ex.co.za



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

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx FTZU 12.0007U**

Page 1 of 4

Certificate history:

Status: **Current**

Issue No: 2

Issue 1 (2018-10-25)

Issue 0 (2012-04-13)

Date of Issue: 2020-01-24

Applicant: **WEG DRIVES & CONTROLS - AUTOMAÇÃO Ltda**
Av. Prefeito Waldemar Grubba
3000 - Vil a Lalau
Jaraguá do Sul 89.256-900 Catarina
Brazil

Ex Component: Range of rail mounted terminals BTWI *, BTWY *

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Increased safety**

Marking: Ex eb IIC Gb

Ex eb I Mb

Approved for issue on behalf of the IECEx
Certification Body:

Dipl. Ing. Lukáš Martinák

Position:

Head of the Certification Body

Signature:
(for printed version)

Date:

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:

**Fyzikálne technický zkusební ústav
(Physical -Technical Testing Institute)
Pikartská 7, 71607 Ostrava - Radvanice
Czech Republic**





IECEx Certificate of Conformity

Certificate No.: **IECEx FTZU 12.0007U**

Page 2 of 4

Date of issue: 2020-01-24

Issue No: 2

Manufacturer: **WEG DRIVES & CONTROLS - AUTOMAÇÃO Ltda**
Av. Prefeito Waldemar Grubba
3000 - Vil a Lalau
Jaraguá do Sul 89.256-900 Catarina
Brazil

Additional
manufacturing
locations:

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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

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:

Test Reports:

[CZ/FTZU/ExTR12.0005/00](#)

[CZ/FTZU/ExTR12.0005/01](#)

[CZ/FTZU/ExTR12.0005/02](#)

Quality Assessment Report:

[CZ/FTZU/QAR11.0005/01](#)



IECEx Certificate of Conformity

Certificate No.: **IECEx FTZU 12.0007U**

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Date of issue: 2020-01-24

Issue No: 2

Ex Component(s) covered by this certificate is described below:

The type BTWI *, BTWY * range of rail mounted terminals consist of one layer current bar and allow to connect up to two conductors. Feed-through terminal assemblies are mounted into moulded insulation housing from material polyamide 66. Terminals has got spring type connection, push-in technology, which allows easier connection of conductor and averting self loosening.

For technical parameters see Annex to IECEx FTZU 12.0007U Issue 2.

SCHEDULE OF LIMITATIONS:

1. Allowed service temperature range is from -60 °C to +85 °C.
2. The end terminals type BTWY 2,5S; BTWY 2,5P and BTWY 2,5 shall be covered with associated end plate to achieve rated voltage 500V. Rated voltage of the terminals type BTWY 2,5S; BTWY 2,5P and BTWY 2,5 without end plate is 320V.
3. See Instruction Manual No. 10006108358



IECEx Certificate of Conformity

Certificate No.: **IECEx FTZU 12.0007U**

Page 4 of 4

Date of issue: 2020-01-24

Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 4:

1. Evaluation according to the new edition of the standard IEC 60079-0:2017.
2. Component Ex marking has been extended of group I, protection level EPL Mb.
3. Updated the Schedule of limitations.
4. Extension of the product range by terminals types BTWY 2,5S; BTWY 2,5P; BTWY 2,5 and BTWY 2,5T.

Annex:

[Annex_to_Certificate_IECEx_FTZU_12_0007_Issue_No_2.pdf](#)

Electrical Apparatus: **Range of rail mounted terminals types: BTWI *, BTWY ***

Technical parameters:

Terminal blocks type	Max. rated voltage [V]	Max. current in case of max. cross-section [A]	Cross-section of conductors [mm ²] solid / stranded	Resistance across the terminal with rated conductor cross-section [μΩ]
BTWI 6	800	36	0,5-6	< 600
BTWI 10	800	50	0,5-10	< 300
BTWY 2,5S	320 / 500V*	18	0,5-2,5	< 650
BTWY 2,5P	320 / 500V*	18	0,5-2,5	< 650
BTWY 2,5	320 / 500V*	18	0,5-2,5	< 650

- The range also includes three earth terminals marked: BTWI 6T, BTWI 10T and BTWY 2,5T.
- Temperature rises in case of max. current and nominal cross section did not exceed 40K.
- Two stranded conductors secured with single compression type ferrule can be installed in one terminal. The maximum allowed cross section for the terminal block shall not be exceeded.
- * The end terminals type BTWY 2,5S, BTWY 2,5P and BTWY 2,5 shall be covered with associated end plate to achieve rated voltage 500V. Rated voltage of the terminals type BTWY 2,5S, BTWY 2,5P and BTWY 2,5 without end plate is 320V.