



TSODS

OVERSPEED DETECTION SYSTEM

Certifications

17:01:23

2024-07-12

Home



SDM A **RUNNING**

3000 rpm
Trip Speed

2497 rpm
Peak Speed

5 rpm/s
Peak Acceleration

SDM B **RUNNING**

3000 rpm
Trip Speed

2497 rpm
Peak Speed

5 rpm/s
Peak Acceleration

SDM C **RUNNING**

3000 rpm
Trip Speed

2497 rpm
Peak Speed

4 rpm/s
Peak Acceleration

Reset

Start

Home

Monitor

History

Test

Configuration

Certificate



Functional
Safety

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ID 0600000000

No.: 968/FSP 2669.00/24

Product tested	Safety-related overspeed detection system	Certificate holder	Beijing Consen Technologies Co., Ltd. No.7 Anxiang Street, Area B Tianzhu Airport Economic Development Zone, Shunyi District Beijing, 101318 P.R. China
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Type designation	TSODS, details see the actual "Revision List"
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Codes and standards	IEC 61508 Parts 1-7:2010	IEC 61131-2:2017 (clauses 5.2.1, 5.3, 5.4, 7)
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Intended application	The safety-related overspeed detection system TSODS complies with the requirements of the relevant standard SC 3 / SIL 3 acc. to IEC 61508.
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Hence it is suitable for use in safety related applications up to SIL 3 acc. to IEC 61508 for Overspeed Detection System (ODS), where the safe state and demand state is the de-energized state.

The product was also reviewed in reference to the application requirements of EN IEC 62061:2021, API 670:2014 clause 4 and clause 8, and API 612:2020 clause 7.7 during the assessment and can be used in application as such.

The EMC requirements were assessed according to IEC 61326-3-1:2017, IEC 61000-6-7:2014, IEC 61000-6-2:2016.

Specific requirements	The instructions of Safety Manual and User Manual must be considered.
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The issue of this certificate is based upon an evaluation in accordance with the Certification Program CERT FSP1 V3.0:2020 in its actual version, whose results are documented in Report No. 968/FSP 2669.00/24 dated 2024-06-05. This certificate is valid only for products, which are identical with the product tested. Issued by the certification body accredited by DAkkS according to DIN EN ISO/IEC 17065. The accreditation is only valid for the scope listed in the annex to the accreditation certificate D-ZE-11052-02-00.

TÜV Rheinland Industrie Service GmbH
Bereich Automation
Funktionale Sicherheit
Am Grauen Stein, 51105 Köln

Köln, 2024-06-05

Certification Body Safety & Security for Automation & Grid

Steffens

Dipl.-Ing. Thomas Steffens



Certificate of Compliance

Certificate: 80151343

Master Contract: 303472

Project: 80151343

Date Issued: 2023-09-07

Issued To: Beijing Consen Technologies Co., Ltd.
NO.7 Anxiang Street, Area B,
Tianzhu Airport
Economic Development Zone
Shunyi District
Beijing, Beijing, 101318
China

Attention: Yuebin Wang

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: *Magnus Chen*
Magnus Chen



PRODUCTS

CLASS - C225206 - PROCESS CONTROL EQUIPMENT Process Control Equipment
CLASS - C225286 - PROCESS CONTROL EQUIPMENT Certified to US Standards

Safety-Related Overspeed Detection System, Model TSODS, Rated DC 24V, 1.8A.

Note:

1. Equipment has only been tested for electrical and mechanical safety. No evaluation of functional safety and performance characteristics have been performed.
2. The electrical separations between the different DC circuits or between the DC circuits and the earthed enclosure have not been evaluated.



Certificate: 80151343

Project: 80151343

Master Contract: 303472

Date Issued: 2023-09-07

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3. These products are intended to be installed and serviced only by trained service personnel.
4. A suitable fire, electrical and mechanical enclosure with IP54 or TYPE 3/4/4X rating shall be provided in end use.
5. Environmental Conditions: Temperature: -20 °C to 60 °C, Altitude: 3000 m, 10 to 95% relative humidity (RH) noncondensing.

APPLICABLE REQUIREMENTS

- | | |
|---|---|
| CAN/CSA-C22.2 No. 61010-1-12
UPD1: 2015, UPD2: 2016, AMD1:
2018 | - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements |
| UL Std. No. 61010-1 (3 rd Edition)
(2012), AMD1:2018 | - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements |
| CAN/CSA-C22.2 No. 61010-2-201-
18 | - Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 2-201: Particular requirements for control equipment |
| UL 61010-2-201(2 nd Edition) | - Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 2-201: Particular requirements for control equipment |

Notes:

Products certified under Class C225206, C225286 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





Supplement to Certificate of Compliance

Certificate: 80151343

Master Contract: 303472

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
80151343	2023-09-07	cCSAus Regular safety Certification of Safety-Related Overspeed Detection System, model TSODS.



Certificate of Compliance

Certificate: 80152071

Master Contract: 303472

Project: 80152071

Date Issued: 2023-11-10

Issued To: Beijing Consen Technologies Co., Ltd.
NO.7 Anxiang Street, Area B,
Tianzhu Airport Economic Development Zone
Shunyi District, Beijing, 101318
China

Attention: Yuebin Wang

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: Morton Ma
Morton Ma



PRODUCTS

CLASS - C321806 - INDUSTRIAL CONTROL EQUIPMENT - Miscellaneous Apparatus - For Hazardous Locations

CLASS - C321886 - INDUSTRIAL CONTROL EQUIPMENT - Miscellaneous Apparatus - For Hazardous Locations-Certified to U.S. Standards

Class I, Division 2, Groups A, B, C and D T4

TSODS safety-related overspeed detection system intend to be used for explosive atmospheres and the rating is 19VDC - 32VDC (Rated DC 24V, 1.8A), Temp. Code is T4 based on $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$.



Certificate: 80152071

Project: 80152071

Master Contract: 303472

Date Issued: 2023-11-10

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 61010-1-12 UPD1: 2015, UPD2: 2016, AMD1: 2018	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
CAN/CSA-C22.2 No. 61010-2-201-18	Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 2-201: Particular requirements for control equipment
CAN/CSA C22.2 No. 213-17+ UPD 1 (2018) + UPD 2 (2019) + UPD 3 (2021)	Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III, Division 1 and 2 hazardous (classified) locations
UL Std. No. 61010-1 (3 rd Edition) (2012), AMD1:2018	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements
UL 61010-2-201(2 nd Edition)	Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 2-201: Particular requirements for control equipment
ANSI/UL 121201-2021, Ninth Edition	Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III, Division 1 and 2 hazardous (classified) locations

CONDITIONS OF ACCEPTABILITY

- i. Equipment has only been tested for electrical and mechanical safety. No evaluation of functional safety and performance characteristics have been performed.
- ii. The electrical separations between the different DC circuits or between the DC circuits and the earthed enclosure have not been evaluated.
- iii. These products are intended to be installed and serviced only by trained service personnel.
- iv. A suitable fire, electrical and mechanical enclosure with IP54 or TYPE 3/4/4X rating shall be provided in end use.
- v. Environmental Conditions: Temperature: -20 °C to 60 °C, Altitude: 3000 m, 10 to 95% relative humidity (RH) noncondensing.
- vi. There is a reset switch(DTS-62V-V) on the surface of model MCM02 which can not be touched when an explosive atmosphere is present.
- vii. The RS485 port(DB9), USB port and SD card slot of model MCM01 or MCM02 can not connect or disconnect when an explosive atmosphere is present.
- viii. Field wiring must utilize wiring methods suitable for Class I, Division 2 Hazardous Locations in accordance with the Canadian Electrical Code or National Electrical Code as applicable. The wiring methods also shall consider suitable ingress protection for final electrical installation.



Supplement to Certificate of Compliance

Certificate: 80152071

Master Contract: 303472

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
80152071	2023-11-10	Original cCSAus Certification on TSODS safety-related overspeed detection system. WMTC for Beijing Consen and CQC(Guangzhou) lab.

(1) TYPE EXAMINATION CERTIFICATE



(2) Equipment and Protective Systems intended for use in
Potentially Explosive Atmosphere - **Directive 2014/34/EU**

(3) Type-Examination Certificate Number

TÜV 23 ATEX 9021 X

Issue: 00

(4) Equipment: **Safety-Related Overspeed Detection System, Model TSODS**
(5) Manufacturer: **Beijing Consen Technologies Co.,Ltd.**
(6) Address: **No.7 Anxiang Street, Area B, Tianzhu Airport Economic Development Zone, Shunyi District, Beijing 101318, P.R.China**

(7) This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The TÜV Rheinland Zertifizierungsstelle für Explosionsschutz of TÜV Rheinland Industrie Service GmbH, in accordance with Article 21 of the Council Directive 2014/34/EU of 26th February 2014, certifies this product which has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report GC/Ex9021.00/23

(9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

EN IEC 60079-0: 2018

EN IEC 60079-7:2015/A1:2018

EN IEC 60079-15:2019

(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 Type Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.

(12) The marking of the equipment shall include the following:



II 3 G Ex ec nC IIC T4 Gc
(Ta range: -20°C~+60°C)

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2023-11-06

Dipl.-Ing. Klaus Peter Graffi



This Type Examination Certificate without signature and stamp shall not be valid.

This Type Examination Certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the
TÜV Rheinland Industrie Service GmbH TÜV Rheinland Group Am Grauen Stein 51105 Köln
Tel. +49 (0) 221 806-0 Fax. + 49 (0) 221 806 114

C E R T I F I C A T E

of Conformity

EC Council Directive 2014/30/EU

Electromagnetic Compatibility



Registration No.: AE 50598433 0001

Report No.: CN22639M 001

Holder: Beijing Consen Technologies Co., Ltd.
NO.7 Anxiang Street, Area B,
Tianzhu Airport Economic Development Zone,
Shunyi District
101318 Beijing
P.R. China

Product: Control Unit
(Safety-Related Overspeed Detection System)

Identification: Type Designation: TSODS
Serial No.: Engineering Sample
Remark: Refer to test report CN22639M 001 for details.

Tested acc. to: EN IEC 61326-1:2021
EN IEC 61000-6-2:2019
EN IEC 61000-6-4:2019

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex I of Council Directive 2014/30/EU. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to the a.m. Directive.



Date 28.08.2023

Certification Body

Wang Gang

Gang Wang

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

CE The CE marking may only be used if all relevant and effective EC Directives are complied with. **CE**

C E R T I F I C A T E
of Conformity
EC Council Directive 2014/53/EU
of Radio Equipment



Registration No.: AT 50599354 0001

Report No.: CN22F66X 001

Holder: Beijing Consen Technologies Co., Ltd.
NO.7 Anxiang Street, Area B,
Tianzhu Airport Economic Development Zone,
Shunyi District
101318 Beijing
P.R. China

Product: Control Unit
(Safety-Related Overspeed Detection System)

Identification: Type Designation: TSODS
Continued on page2.

Tested acc. to: EN 62479:2010
EN 61010-1:2010+A1
EN IEC 61010-2-201:2018
EN IEC 61326-1:2021

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. This is to certify that the tested sample is in conformity with all provisions of Article 3 of Council Directive 2014/53/EU. This certificate does not imply assessment of the production and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate as part of the technical documentation and in combination with the EC Declaration of Conformity.



Certification Body

Date 30.08.2023

Mai Miao

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

Phone:(+49/221)806-1371 Fax:(+49/221)806-3935 e-mail: cert-validity@de.tuv.com <http://www.tuv.com/safety>

CE The CE marking may only be used if all relevant and effective EC Directives are complied with. **CE**

C E R T I F I C A T E
of Conformity
EC Council Directive 2014/53/EU
of Radio Equipment



Registration No.: AT 50599354 0002

Report No.: CN22F66X 001

Holder: Beijing Consen Technologies Co., Ltd.
NO.7 Anxiang Street, Area B,
Tianzhu Airport Economic Development Zone,
Shunyi District
101318 Beijing
P.R. China

Product: Control Unit
(Safety-Related Overspeed Detection System)

Identification: As page 0001.
Serial No.: A003527307-002, A003527307-004
Remark: Refer to test report CN22F66X 001 for details.

Tested acc. to: EN 301489-1 V 2.2.3:2019
EN 301489-17 V 3.2.4:2020
EN 300328 V 2.2.2:2019
EN IEC 61000-6-2:2019
EN IEC 61000-6-4:2019

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. This is to certify that the tested sample is in conformity with all provisions of Article 3 of Council Directive 2014/53/EU. This certificate does not imply assessment of the production and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate as part of the technical documentation and in combination with the EC Declaration of Conformity.



Certification Body

Date 30.08.2023

Mai Miao

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

Phone: (+49/221)806-1371 Fax: (+49/221)806-3935 e-mail: cert-validity@de.tuv.com <http://www.tuv.com/safety>

CE The CE marking may only be used if all relevant and effective EC Directives are complied with. **CE**

CERTIFICATE of Conformity



Registration No.: AK 50599398 0001

Report No.: CN238KOH 001

Holder: Beijing Consen Technologies Co., Ltd.
NO.7 Anxiang Street, Area B,
Tianzhu Airport Economic Development Zone,
Shunyi District
101318 Beijing
P.R. China

Product: Control Unit
(Safety-Related Overspeed Detection System) ®

Identification: Type Designation: TSODS
Serial No. : N.A.

Remark: Refer to test report CN238KOH 001 for details.

Tested acc. to: 2011/65/EU (RoHS)
863/2015/EU Annex II/03.15

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Certification Body

Date 28.08.2023



A handwritten signature in black ink, appearing to be "Ying Xie".
Ying Xie

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

C E R T I F I C A T E
of Conformity



Registration No.: AK 50599356 0001

Report No.: CN22065Z 001

Holder: Beijing Consen Technologies Co., Ltd.
NO.7 Anxiang Street, Area B,
Tianzhu Airport Economic Development Zone,
Shunyi District
101318 Beijing
P.R. China

Product: Control Unit
(Safety-Related Overspeed Detection System)

Identification: Type Designation: TSODS
Serial No.: A003527307-001
Remark: Refer to test report CN22065Z 001 for details.

Tested acc. to: FCC 47 CFR Part 15, Subpart B:2021
ICES-003 Issue 7:2020

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.



Certification Body

Date 30.08.2023

Mai Miao

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

C E R T I F I C A T E
of Conformity



Registration No.: AK 50599405 0001

Report No.: CN225AEH 001

Holder: Beijing Consen Technologies Co., Ltd.
NO.7 Anxiang Street, Area B,
Tianzhu Airport Economic Development Zone,
Shunyi District
101318 Beijing
P.R. China

Product: Control Unit
(Safety-Related Overspeed Detection System)

Identification: Type Designation: TSODS
Serial No.: A003513290-001 to 002
Remark: Refer to test report CN225AEH 001 for details.
G3 harsh level fulfilled.

Tested acc. to: ANSI/ISA 71.04-2013

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.



Certification Body

Date 28.08.2023


Xuhua Liu

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg