



Certificates



Device platform RAPTOR

ET-208

SERIES 200 Operator Interfaces



THE STRONGEST LINK.

HW-Rev. ET-208-TX-*-DC:	01.00.15
HW-Rev. ET-208-TX-*-AC:	01.00.25
HW-Rev. ET-208-TX-W00-DC-GLN:	01.00.32
HW-Rev. ET-208-TX-W00-AC-GLN:	01.00.40

Certificates version:	01.00.13
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Disclaimer

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We reserve the right to change our products and their specifications at any time, provided it is in the interest of technical progress. The information in the current manual (in the internet and on CD / DVD / USB stick) or in the operating instructions included with the HMI device applies.

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1 Preface

 **NOTICE**

This document contains all valid certificates for the HMI devices of the SERIES 200 - device platform RAPTOR.

All certificates are also available on R. STAHL's website and on the CDs / DVDs / USB sticks included in the delivery and a copy can also be ordered from R. STAHL HMI Systems GmbH.


2 ATEX EC type examination certificate



Translation

(1) EC-Type Examination Certificate

- (2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC
- (3) No. of EC-Type Examination Certificate: **BVS 15 ATEX E 042 X**
- (4) Equipment: **Operator Terminal type ET-208**
- (5) Manufacturer: **R. STAHL HMI Systems GmbH**
- (6) Address: **Im Gewerbegebiet Pesch 14, 50767 Köln, Germany**
- (7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.
- (8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment 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 atmospheres, given in Annex II to the Directive. The examination and test results are recorded in the Test and Assessment Report BVS PP 15.2075 EG.
- (9) The Essential Health and Safety Requirements are assured by compliance with:
- | | |
|-----------------------------------|------------------------------------|
| EN 60079-0:2012 + A11:2013 | General requirements |
| IEC 60079-5:2015 | Powder filling "p" |
| EN 60079-7:2007 | Increased Safety "e" |
| EN 60079-11:2012 | Intrinsic Safety "i" |
| EN 60079-31:2009 | Protection by Enclosure "t" |
- (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 appendix to this certificate.
- (11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment shall include the following:

 **II 2G Ex e ib q [ib] IIC T4 Gb**
II 2D Ex tb ib [ib] IIIA T115°C Db

DEKRA EXAM GmbH
 Bochum, dated 2015-04-22

Signed: Dr. Eickhoff

 Certification body

Signed: Leiendecker

 Special services unit



Page 1 of 4 of BVS 15 ATEX E 042 X
 This certificate may only be reproduced in its entirety and without any change.

DEKRA EXAM GmbH, Dinnendahlstrasse 9, 44809 Bochum, Germany,
 telephone +49.234.3696-105, Fax +49.234.3696-110, zs-exam@dekra.com



- (13) Appendix to
- (14) **EC-Type Examination Certificate**
BVS 15 ATEX E 042 X
- (15) 15.1 Subject and type

Operator Terminal type ET-208-TX-W00-**-GL
 └── AC supply
 DC supply

15.2 Description

The Operator Terminals type ET-208-TX-W00-**-GL serve as human machine interface in areas requiring EPL Gb or Db.

The terminals consist of a metallic enclosure with a glass panel integrated in its front cover. Behind this glass panel there is a display with touch-screen.

The enclosure is carried out in type of protection „q“ respective „tb“ and contains a power supply module, a CPU-module as well as the display. The touch-screen is intrinsically safe, level of protection Ex ib.

The terminals are supplied via terminals which are located in two separate terminal boxes on the back side of the enclosure. The terminal box in type of protection intrinsic safety contains an intrinsically safe USB interface and an intrinsically safe interface for connection to an external keyboard. The second terminal box is in type of protection „e“ respective „tb“ and serves to connect the supply circuit as well as the non-intrinsically safe data circuits.

A heating within the enclosure in type of protection „q“ resp. „tb“ assures functionality if the device is used in temperatures from -40 °C up to -10 °C.

The terminal can also be used in explosive dust atmospheres requiring equipment group IIIB or IIIC. Therefor it has to be integrated in the wall of an enclosure fulfilling all applicable requirements of IEC 60079-0 and IEC 60079-31. A minimum degree of protection of IP65 according to IEC 60529 shall be ensured.

The Operator Terminal can also be integrated in a wall of an enclosure in type of protection Increased Safety "e".

Only suitable cable entries and blind plugs are used.

15.3 Parameters

15.3.1 Non-Intrinsically safe circuits

15.3.1.1 Power supply input, connection via terminal block X1
for type ET-208-TX-W00-AC-GL:
 Terminals X1 (L, N)

Rated voltage	AC	115 / 230	V
Rated current		≤ 2	A
Rated power			
Heater off		18	VA
Heater on		36	VA
Max. input voltage	U _m AC	253	V

for type ET-208-TX-W00-DC-GL:
 Terminals X1 (+, -)

Rated voltage	DC	24	V
Rated current		≤ 1.6	A
Rated power			
Heater off		12	W
Heater on		22	W
Max. input voltage	U _m AC	253	V



Page 2 of 4 of BVS 15 ATEX E 042 X
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15.4.1.2 Com1 RS-422 interface
 Connection via terminal block X2, terminals X2 (1, 2, 3, 4)

Rated voltage		5	V
Max. input voltage	U_m	30	V

15.3.1.3 Com2 RS-422 interface
 Connection via terminal block X3, terminals X3 (1, 2, 3, 4)

Rated voltage		5	V
Max. input voltage	U_m	30	V

15.3.1.4 Ethernet TP interface
 Connection via terminal block X5, terminals X5 (1, 2, 3, 4)

Rated voltage		5	V
Max. input voltage	U_m	30	V

15.3.1.5 USB interface
 Connection via terminal block X4, terminals X4 (1, 2, 3, 4)

Rated voltage		5	V
Max. input voltage	U_m	30	V

Terminal X4.5 shall not be connected inside explosive areas!

15.3.2 Intrinsically safe circuits level of protection Ex ib IIC resp. Ex ib IIIA

15.3.2.1 Intrinsically safe USB circuit
 Connection via terminal block X7 or USB-socket X8. X7 and X8 shall not be used at the same time.

Terminal block X7:
 Terminals 1(VBUS), 2(D-), 3(D+) and 4(GND)
 Terminal 5 (shield) is intended for the connection of a cable shield.

Max. output voltage	U_o	DC	5.45	V
Max. output current	I_o		755	mA
Max. output power	P_o		2.5	W

Maximum permissible (combined) values for external capacitance C_o and external inductance L_o in accordance with the following tables:

for group IIC:

L_o [μ H]	4.8	1.8
C_o [μ F]	4.7	27.7

for group IIB resp. group III:

L_o [μ H]	49.8	19.8	9.8
C_o [μ F]	20.7	51.7	107.7



Page 3 of 4 of BVS 15 ATEX E 042 X
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15.3.2.2 Intrinsically safe interface for the connection of a keyboard
 Connection via terminal block X9, terminals 1...12 and 13 (GND)

Max. output voltage	U_o	DC	4.96	V
Max. output current	I_o		60	mA
Linear output characteristics				
Max. output power	P_o		75	mW

Maximum permissible (combined) values for external capacitance C_o and external inductance L_o in accordance with the following tables:

for group IIC:

L_o [μ H]	100	50	20
C_o [μ F]	6.7	8.5	11.9

for group IIB resp. group III:

L_o [μ H]	100	50	20
C_o [μ F]	42	49	95

15.3.3 Ambient temperature range	T_a -40 °C...+65 °C
temperature class	T4
max. surface temperature with thermofuse limited to	115 °C

(16) Test and Assessment Report

BVS PP 15.2075 EG as of 2015-04-22

(17) Special conditions for safe use

- 17.1 The intrinsically safe circuits are connected to earth. Along the intrinsically safe circuits, potential equalization must exist. Maximum overvoltage category II according to IEC 60664- 1 is permitted for the non-intrinsically safe circuits.
- 17.2 For use in explosive gas atmospheres the terminal may be built in the wall of an enclosure fulfilling all relevant clauses of IEC 60079-0. The terminal itself fulfills all mechanical requirements according to IEC 60079-0 and the degrees of protection IP65 according to IEC 60529 if mounted according to the user's manual.

We confirm the correctness of the translation from the German original.
 In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH
 44809 Bochum, 2015-04-22
 BVS-Hk/Ma A 20130842



 Certification body






 Special services unit



Page 4 of 4 of BVS 15 ATEX E 042 X
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 telephone +49.234.3696-105, Fax +49.234.3696-110, zs-exam@dekra.com

3 IECEX certificate

		<h2 style="margin: 0;">IECEX Certificate of Conformity</h2>	
<p>INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres <small>for rules and details of the IECEX Scheme visit www.iecex.com</small></p>			
Certificate No.:	IECEX BVS 15.0039X	Page 1 of 4	<u>Certificate history:</u> Issue 0 (2015-04-28)
Status:	Current	Issue No: 1	
Date of Issue:	2022-02-03		
Applicant:	R. STAHL HMI Systems GmbH Adolf-Grimme-Allee 8 50829 Köln Germany		
Equipment:	Operator Terminal type ET-208		
Optional accessory:			
Type of Protection:	Equipment protection by intrinsic safety "i", Equipment dust ignition protection by enclosure "t", Equipment protection by powder filling "q", Equipment protection by increased safety "e"		
Marking:	Ex eb ib q [ib] IIC T4 Gb Ex tb ib [ib] IIIA T115°C Db		
Approved for issue on behalf of the IECEX Certification Body:		Dr Franz Eickhoff	
Position:		Lead Auditor and officially recognised expert	
Signature: (for printed version)			
Date: (for printed version)			
<ol style="list-style-type: none"> 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:			
DEKRA Testing and Certification GmbH Certification Body Dinnendahlstrasse 9 44809 Bochum Germany		On the safe side.	



IECEX Certificate of Conformity

Certificate No.: **IECEX BVS 15.0039X** Page 2 of 4
 Date of issue: 2022-02-03 Issue No: 1

Manufacturer: **R. STAHL HMI Systems GmbH**
 Adolf-Grimme-Allee 8
 50829 Köln
 Germany

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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0
- [IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2
- [IEC 60079-5:2015](#) Explosive atmospheres –Part 5: Equipment protection by powder filling "q"
Edition:4.0
- [IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Report:

[DE/BVS/ExTR15.0036/01](#)

Quality Assessment Report:

[DE/BVS/QAR06.0007/13](#)



IECEx Certificate of Conformity

Certificate No.: **IECEx BVS 15.0039X**

Page 3 of 4

Date of issue: 2022-02-03

Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Subject and type

See Annex

Description

The Operator Terminals type ET-208-TX-W00-**-GL serve as human machine interface in areas requiring EPL Gb or Db.

The Terminals consist of a metallic enclosure with a glass panel integrated in its front cover. Behind this glass panel there is a display with touch-screen.

The enclosure is carried out in type of protection „q“ respective „tb“ and contains a power supply module, a CPU-module as well as the display. The touch-screen is intrinsically safe, level of protection Ex ib. The Operator Terminals are supplied via terminals which are located in two separate terminal boxes on the back side of the enclosure. The first terminal box contains an intrinsically safe USB interface and an intrinsically safe interface for the connection of an external keyboard. The second terminal box is in type of protection „eb“ respective „tb“ and serves to connect the supply circuit as well as the non-intrinsically safe data circuits. A heating within the enclosure in type of protection „q“ resp. „tb“ assures functionality if the device is used in temperatures from -40 °C up to -10 °C. The terminal can also be used in explosive dust atmospheres requiring equipment Group IIIB or IIIC. Therefore it has to be integrated in the wall of an enclosure fulfilling all applicable requirements of IEC 60079-0 and IEC 60079-31. A minimum degree of protection of IP65 according to IEC 60529 shall be ensured. The Operator Terminal can also be integrated in a wall of an enclosure in type of protection Increased Safety „eb“. Only suitable cable entries and blind plugs are used.

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The intrinsically safe circuits are connected to earth. Along the intrinsically safe circuits, potential equalization must exist. Maximum overvoltage category II according to IEC 60664- 1 is permitted for the non-intrinsically safe circuits.
2. For use in explosive gas atmospheres the terminal may be built in the wall of an enclosure fulfilling all relevant clauses of IEC 60079-0. The terminal itself fulfills all mechanical requirements according to IEC 60079-0 and the degrees of protection IP65 according to IEC 60529 if mounted according to the user's manual.



IECEX Certificate of Conformity

Certificate No.: **IECEX BVS 15.0039X**

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Date of issue: 2022-02-03

Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Updating to the current versions of IEC 60079-0 and IEC 60079-7

Modification of marking: "eb" instead of "e"

Change of applicants address

Annex:

[BVS_15_0039x_RStahl_Annex1_1.pdf](#)



IECEX Certificate of Conformity



Certificate No.: IECEx BVS 15.0039 X Issue No. 1
Annex
 Page 1 of 3

Subject and type

Operator Terminal type ET-208-TX-W00-**-GL
 └── AC supply
 DC supply

Parameters

Non-Intrinsically safe circuits

1 Power supply input, Connection via terminal block X1

for type ET-208-TX-W00-AC-GL:

Terminals X1 (L, N)

Rated voltage		AC	115 / 230	V
Rated current			≤ 2	A
Rated power				
Heater off			18	VA
Heater on			36	VA
Max. input voltage	U _m	AC	253	V

for type ET-208-TX-W00-DC-GL:

Terminals X1 (+, -)

Rated voltage		DC	24	V
Rated current			≤ 1.6	A
Rated power				
Heater off			12	W
Heater on			22	W
Max. input voltage	U _m	AC	253	V



IECEX Certificate of Conformity



Certificate No.: IECEX BVS 15.0039 X Issue No. 1
Annex
 Page 2 of 3

2. Com1 RS-422 interface			
Connection via terminal block X2, terminals X2 (1, 2, 3, 4)			
Rated voltage		5	V
Max. input voltage	U_m	30	V
3. Com2 RS-422 interface			
Connection via terminal block X3, terminals X3 (1, 2, 3, 4)			
Rated voltage		5	V
Max. input voltage	U_m	30	V
4. Ethernet TP interface			
Connection via terminal block X5, terminals X5 (1, 2, 3, 4)			
Rated voltage		5	V
Max. input voltage	U_m	30	V
5. USB interface			
Connection via terminal block X4, terminals X4 (1, 2, 3, 4)			
Rated voltage		5	V
Max. input voltage	U_m	30	V
Terminal X4.5 shall not be connected inside explosive areas!			

Intrinsically safe circuits level of protection Ex ib IIC resp. Ex ib IIIA

1. Intrinsically safe USB circuit

Connection via terminal block X7 or USB-socket X8. X7 and X8 shall not be used at the same time.

Terminal block X7:
 Terminals 1(VBUS), 2(D-), 3(D+) and 4(GND)
 Terminal 5 (shield) is intended for the connection of a cable shield.

Max. output voltage	U_o	DC	5.45	V
Max. output current	I_o		755	mA
Max. output power	P_o		2.5	W

Maximum permissible (combined) values for external capacitance C_o and external inductance L_o in accordance with the following tables:

for Group IIC:

L_o [μ H]	4.8	1.8
C_o [μ F]	4.7	27.7

for Group IIB resp. Group III:

L_o [μ H]	49.8	19.8	9.8
C_o [μ F]	20.7	51.7	107.7



IECEx Certificate of Conformity



Certificate No.: IECEx BVS 15.0039 X Issue No. 1

Annex

Page 3 of 3

2. Intrinsically safe interface for the connection of a keyboard
Connection via terminal block X9, terminals 1...12 and 13 (GND)

Max. output voltage	U_o	DC	4.96	V
Max. output current	I_o		60	mA
Linear output characteristics				
Max. output power	P_o		75	mW

Maximum permissible (combined) values for external capacitance C_o and external inductance L_o in accordance with the following tables:

for Group IIC:

L_o [μ H]	100	50	20
C_o [μ F]	6.7	8.5	11.9

for Group IIB resp. Group III:

L_o [μ H]	100	50	20
C_o [μ F]	42	49	95

<u>Ambient temperature range</u>	T_a	-40 °C...+65 °C
Temperature class		T4
Max. surface temperature with thermofuse limited to		115 °C

4 EAC certificate

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ ЕАЭС RU C-DE.HA91.B.00166/20

Серия **RU** № **0287220**

ОРГАН ПО СЕРТИФИКАЦИИ Орган по сертификации продукции Общества с ограниченной ответственностью Сертификационный центр «ЭНДЬЮРЕНС». Место нахождения (адрес юридического лица) и адрес места осуществления деятельности: 115114, Россия, город Москва, 2-й Павелецкий проезд, дом 5, строение 1, этаж 5, помещение VII, комната 11. Регистрационный номер аттестата аккредитации RA.RU.11HA91, дата регистрации аттестата аккредитации 23.11.2018; номер телефона: +7 (495) 799-07-93; адрес электронной почты: info@ccendce.com

ЗАЯВИТЕЛЬ Общество с ограниченной ответственностью «Р. ШТАЛЬ». Место нахождения (адрес юридического лица) и адрес места осуществления деятельности: 129085, Россия, Москва, улица Звездный бульвар, дом 21, строение 1, этаж 6, помещение I, комната 12. Основной государственный регистрационный номер: 5087746541493. Номер телефона: +7(495)616-32-52, адрес электронной почты: info@stahl.ru.com.

ИЗГОТОВИТЕЛЬ R. Stahl HMI Systems GmbH. Место нахождения (адрес юридического лица) и адрес места осуществления деятельности по изготовлению продукции: 50829, Koeln, Adolf-Grimme-Allee, 8, Германия.

ПРОДУКЦИЯ Взрывозащищенные терминалы типов ET-208, T-Ex (ET-##7*-*-*), MT-##7*-*-. Продукция изготовлена в соответствии с технической документацией предприятия-изготовителя R. Stahl HMI Systems GmbH. Серийный выпуск.

КОД ТН ВЭД ЕАЭС 8471 90 000 0


СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ Технического регламента Таможенного союза ТР ТС 012/2011 "О безопасности оборудования для работы во взрывоопасных средах".


СЕРТИФИКАТ СООТВЕТСТВИЯ ВЫДАН НА ОСНОВАНИИ Протокола испытаний № А0082.1.СТ/20 от 10.08.2020 Испытательный центр промышленной продукции Федерального государственного унитарного предприятия "Российский федеральный ядерный центр - Всероссийский научно-исследовательский институт экспериментальной физики" (ФГУП "РФЯЦ-ВНИИЭФ"), аттестат аккредитации № RA.RU.21ME17; Акта о результатах анализа состояния производства № 0084-СС/А от 11.09.2019; документов предоставленных заявителем в качестве доказательства соответствия требованиям ТР ТС 012/2011: инструкции по эксплуатации I_ET_208_ru_V_01_0, OI_MT_xx7_ru_V_01_02_15, OI_ET_xx7_ru_V_01_03_16; комплект конструкторской документации. Схема сертификации 1с.


ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Стандарты, в результате применения которых на добровольной основе обеспечивается соблюдение требований технического регламента, указаны в Приложении (бланк № 0734461). Условия, сроки хранения и эксплуатации указаны в инструкциях по эксплуатации. Описание конструкции и средств обеспечения взрывозащиты, а также иная информация, идентифицирующая продукцию, указаны в Приложении (бланки №№ 0734462, 0734463, 0734464, 0734465, 0776203, 0776204). Настоящий сертификат соответствия выдан взамен сертификата соответствия № ЕАЭС RU C-DE.HA91.B.00145/20.

СРОК ДЕЙСТВИЯ С 06.11.2020 **ПО** 11.08.2025

ВКЛЮЧИТЕЛЬНО

Руководитель (уполномоченное лицо) органа по сертификации _____
 (подпись)  **Версейко Александр Юрьевич** (Ф.И.О.)

Эксперт (эксперт-аудитор) _____
 (эксперты (эксперты-аудиторы)) _____
 (подпись)  **Зубрев Евгений Олегович** (Ф.И.О.)



АО «Юпитер», Москва, 2020 г., «Б», ТЗ № 934

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

Лист 1

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.HA91.B.00166/20

Серия **RU** № **0734461**

Сведения о стандартах, применяемых на добровольной основе для соблюдения требований технического регламента Таможенного союза ТР ТС 012/2011 "О безопасности оборудования для работы во взрывоопасных средах"

Обозначение стандартов	Наименование стандартов
ГОСТ 31610.0-2014 (IEC 60079-0:2011)	Взрывоопасные среды. Часть 0. Оборудование. Общие требования.
ГОСТ Р МЭК 60079-5-2012	Взрывоопасные среды. Часть 5. Оборудование с видом взрывозащиты "кварцевое заполнение оболочки "q"
ГОСТ Р МЭК 60079-7-2012	Взрывоопасные среды. Часть 7. Оборудование. Повышенная защита вида "е"
ГОСТ 31610.11-2014 (IEC 60079-11:2011)	Взрывоопасные среды. Часть 11. Оборудование с видом взрывозащиты "искробезопасная электрическая цепь "i"
ГОСТ 31610.15-2014/IEC 60079-15:2010	Взрывоопасные среды. Часть 15. Оборудование с видом взрывозащиты "н"
ГОСТ 31610.28-2012/IEC 60079-28:2006	Взрывоопасные среды. Часть 28. Защита оборудования и передающих систем, использующих оптическое излучение
ГОСТ IEC 60079-31-2013	Взрывоопасные среды. Часть 31. Оборудование с защитой от воспламенения пыли оболочками "t"

Руководитель (уполномоченное
лицо) органа по сертификации

Эксперт (эксперт-аудитор)
(эксперты (эксперты-аудиторы))


(подпись)

(подпись)



Вервейко Александр Юрьевич
(Ф.И.О.)

Зубов Евгений Олегович
(Ф.И.О.)

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

Лист 2

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.HA91.B.00166/20

Серия **RU** № **0734462**

1. НАЗНАЧЕНИЕ И ОБЛАСТЬ ПРИМЕНЕНИЯ

Взрывозащищенные терминалы типов ET-208, T-Ex (ET-##7*-*-*) , MT-##7*-* (далее по тексту - терминалы) предназначены для управления и визуализации процессов управления различными устройствами и объектами.

Область применения – взрывоопасные зоны помещений и наружных установок в соответствии с присвоенной маркировкой взрывозащиты, требованиями ГОСТ IEC 60079-14-2013 и отраслевых Правил безопасности, регламентирующих применение данного оборудования во взрывоопасных зонах.

2. ОСНОВНЫЕ ТЕХНИЧЕСКИЕ ДАННЫЕ

2.1 Структура условного обозначения терминалов

2.1.1 Структура условного терминалов типа ET-208

ET-208-TX-W00-**-GL*

1

1 = Тип питающего тока (AC = переменный ток; DC = постоянный ток)

*-дополнительные символы, не влияющие на взрывозащиту

2.1.2 Структура условного терминалов типа T-Ex (ET-##7*-*-*)

Терминал

T-Ex ** - ** - ** (ET-##7*-*-*) или T-Ex ** - ** - ** -R2 (ET-##7*-*-*)

12 34 56 a b c d 12 34 56 a b c d

1 = размер дисплея (22 = 22" дисплей; 24 = 24" дисплей; 24WU = 24WU" дисплей)

2 = дополнительные символы, не влияющие на конструкцию и взрывозащиту

3 = типа системы (IP/PC = панельный ПК/Тонкий клиент; KVM/ DVII/DVI2/DVI3 = KVM система

4 = дополнительные символы, не влияющие на конструкцию и взрывозащиту

5 = тип интерфейса (CAT/ CAT*/CAT-FO/TX/2TX = медный интерфейс; MM/MM*/MM-FO/SX = многорежимный оптоволоконный интерфейс; SM/SM*/SM-FO/LX = однокрежимный оптоволоконный интерфейс)

*-дополнительные символы, не влияющие на взрывозащиту

6 = дополнительные символы, не влияющие на конструкцию и взрывозащиту

a = Тип системы и дисплей

1-й символ = тип системы (4 = панельный ПК; 5 = тонкий клиент (thin client); 6 = KVM система)

2-й символ = размер дисплея (6 = 22" дисплей; 7 = 24" дисплей; 8 = 24WU" дисплей)

b = дополнительные символы, не влияющие на конструкцию и взрывозащиту

c = тип интерфейса (CAT/CAT*/CAT-FO/TX/2TX = медный интерфейс; MM/MM*/MM-FO/SX = многорежимный оптоволоконный интерфейс; SM/SM*/SM-FO/LX = однокрежимный оптоволоконный интерфейс)

*-дополнительные символы, не влияющие на взрывозащиту

d = дополнительные символы, не влияющие на конструкцию и взрывозащиту

Клавиатура

T-Ex * - ** - ** * (KBDi-USB-**-*)

1 2 3 4 a b

1 = дополнительные символы, не влияющие на конструкцию и взрывозащиту

2 = KB = клавиатура

3 = тип дополнительного встроенного устройства управления (ТВ * = трекбол; М = мышь; Р = тачпад; J = джойстик)

*-дополнительные символы, не влияющие на взрывозащиту

4 = дополнительные символы, не влияющие на конструкцию и взрывозащиту

a = тип дополнительного встроенного устройства управления (ТВ * = трекбол; М = мышь; Р = тачпад; J = джойстик)

*-дополнительные символы, не влияющие на взрывозащиту

b = дополнительные символы, не влияющие на конструкцию и взрывозащиту

Руководитель (уполномоченное лицо) органа по сертификации

(подпись)
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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

Лист 3

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.HA91.B.00166/20

Серия RU № 0734463

Блок передачи

T-Ex -KVM* - ** - * (KVM - * - *** *)

1 2 3 a b c

1 = дополнительные символы, не влияющие на конструкцию и взрывозащиту
 2 = тип интерфейса (CAT/ CAT* - медный интерфейс; MM/MM*/MM-FO = многорежимный оптоволоконный интерфейс; SM/SM*/SM-FO = одnoreжимный оптоволоконный интерфейс)

*-дополнительные символы, не влияющие на взрывозащиту

3 = дополнительные символы, не влияющие на конструкцию и взрывозащиту

a = дополнительные символы, не влияющие на конструкцию и взрывозащиту

b = тип интерфейса (CAT/ CAT* - медный интерфейс; MM/MM*/MM-FO = многорежимный оптоволоконный интерфейс; SM/SM*/SM-FO

*-дополнительные символы, не влияющие на взрывозащиту

c = дополнительные символы, не влияющие на конструкцию и взрывозащиту

2.1.3 Структура условного терминалов типа MT-##7*.*

MT - ## 7 * . * *

1 2 3 4

1 = Технология

1 символ = тип системы (4 = панельный ПК; 5 = тонкий клиент (thin client); 6 = KVM система)

2 символ = размер дисплея (6 = 22" дисплей; 7 = 24" дисплей; 8 = 24WU" дисплей)

2 = дополнительные символы, не влияющие на конструкцию и взрывозащиту

3 = тип интерфейса (CAT/ CAT*/CAT-FO/TX/2TX = медный интерфейс; MM/MM*/MM-FO/SX = многорежимный оптоволоконный интерфейс; SM/SM*/SM-FO/LX = одnoreжимный оптоволоконный интерфейс)

*-дополнительные символы, не влияющие на взрывозащиту

4 = дополнительные символы, не влияющие на конструкцию и взрывозащиту

2.2 Основные технические данные терминалов

2.2.1 Основные технические данные терминалов типа ET-208 приведены в таблице 2.1

Таблица 2.1

Наименование параметра	Значение
Ех-маркировка по ГОСТ 31610.0-2014 (IEC 60079-0:2011)	1Ex e ib q [ib] IIC T4 Gb X Ex tb ib [ib] IIIA T115°C Db X
Диапазон температур окружающей среды при эксплуатации, °C	от минус 40 до плюс 65
Степень защиты оболочками по ГОСТ 14254-2015 (IEC 60529:2013)	IP54/IP65
Параметры питания (терминал X1) для модели ET-208-TX-W00-AC-GL	
Номинальное напряжение переменного тока, В	115/230
Максимальное допустимое напряжение питания, В	253
Номинальный ток, не более, А	2
Номинальная потребляемая мощность, ВА	18 (при отключенном обогревателе) 36 (при включенном обогревателе)
Параметры питания (терминал X1) для модели ET-208-TX-W00-DC-GL	
Номинальное напряжение постоянного тока, В	24
Максимальное допустимое напряжение питания, В	253
Номинальный ток, не более, А	1,6
Номинальная потребляемая мощность, ВА	12 (при отключенном обогревателе) 22 (при включенном обогревателе)
Параметры интерфейсов Com1 RS-422 (терминал X2), Com2 RS-422 (терминал X3), Ethernet TP (терминал X5), USB (терминал X4)	
Номинальное напряжение, В	5
Максимальное допустимое напряжение, В	30
Параметры искробезопасного USB интерфейса (подключение через терминал X7 или USB-разъем X8. X7 и X8 не должны использоваться одновременно.)	
Максимальное выходное напряжение Uo, В	5,45

Руководитель (уполномоченное
лицо) органа по сертификации

(подпись)

Эксперт (эксперт-аудитор)
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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

Лист 4

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.HA91.B.00166/20

Серия **RU** № **0734464**

Наименование параметра	Значение
Максимальный выходной ток I _о , мА	755
Максимальная выходная мощность P _о , Вт	2,5
Предельно допустимые комбинированные значения внешней индуктивности/ёмкости	4,8мкГн / 4,7мкФ или 1,8мкГн / 27,7мкФ
- для подгруппы ПС	49,8мкГн / 20,7мкФ или 19,8мкГн / 51,7мкФ или 9,8мкГн / 107,7мкФ
- для подгруппы ПВ и группы ПШ	
Искробезопасный интерфейс для подключения клавиатуры (подключение через терминал X9)	
Максимальное выходное напряжение U _о , В	4,96
Максимальный выходной ток I _о , мА	60
Максимальная выходная мощность P _о , мВт	75
Предельно допустимые комбинированные значения внешней индуктивности L _о и ёмкости C _о	100мкГн / 6,7мкФ или 50мкГн / 8,5мкФ или 20мкГн / 11,9мкФ
- для подгруппы ПС	100мкГн / 42мкФ или 50мкГн / 49мкФ или 20мкГн / 95мкФ
- для подгруппы ПВ и группы ПШ	

2.2.2 Основные технические данные терминалов типа Т-Ех (ЕТ-##7*.-**.*) приведены в таблице 2.2

Таблица 2.2

Наименование параметра	Значение
Ех-маркировка по ГОСТ 31610.0-2014 (IEC 60079-0:2011)	IEx e q [ia op is Ga] IIC T4 Gb X
- дисплеи типов Т-Ех -##*, Т-Ех -##*-R2 (ЕТ-##7*.-**.*)	Ex tb IIC [ia op is Da] T110°C Db X
- клавиатура с трекболом типа Т-Ех *-КВ-ТВ* (KBDi-USB-TV-*), клавиатура с тачпадом типа Т-Ех *-КВ-Р* (KBDi-USB-P-*), клавиатура с мышью Т-Ех *-КВ-М* (KBDi-USB-M-*), клавиатура с джойстиком Т-Ех *-КВ-Ж* KBDi-USB-J-*),	0Ex ia IIC T4 Ga X, Ex ia ПШ T110°C Da X
- блоки передачи типов Т-Ех -KVM*-ММ* (KVM -*.-ММ*), Т-Ех -KVM*-SM* (KVM -*.-SM*)	[Ex op is Ga] IIC [Ex op is Da] ПШ
Диапазон температур окружающей среды при эксплуатации, 0С	от минус 30 до плюс 60
Степень защиты оболочками по ГОСТ 14254-2015 (IEC 60529:2013)	
- дисплей для Т-Ех -##*-R2 (ЕТ-##7*.-**.*)	IP65
- дисплей для Т-Ех -##* (ЕТ-##7*.-**.*)	IP64
- клавиатуры с трекболом	IP20
Параметры интерфейса "PWR" (терминал X10)	
Диапазон рабочих напряжений, В	20...240 постоянного или переменного тока
Номинальный ток, А	5
Номинальная мощность, Вт	150
Параметры интерфейса "USB" (терминал X13)	
Номинальное напряжение, В	5 + 10%
Параметры интерфейса "12V" (терминал X14)	
Номинальное напряжение, В	12 + 10%
Параметры интерфейса "CAT7 1" (терминал X16)	
Номинальное напряжение, В	5 + 10%
Параметры интерфейса "SER" (терминал X97)	
Номинальное напряжение, В	15 + 10%
Параметры интерфейса "CAM" (терминал X101)	
Номинальное напряжение, В	5 + 10%
Параметры интерфейса "AUD" (терминал X105)	
Номинальное напряжение, В	100 + 10%
Максимально допустимое напряжение терминалов X10, X13, X14, X16, X97, X101, X105, В	250

Руководитель (уполномоченное лицо) органа по сертификации

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы))

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Вервейко Александр Юрьевич

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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

Лист 5

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.НА91.В.00166/20

Серия RU № 0734465

Наименование параметра	Значение
Искробезопасные параметры клавиатуры (коннектор X11), трекбола (коннектор X12), интерфейса USBi (коннектор X24), интерфейса USB2i (коннектор X25)	
Максимальное входное напряжение U_i , В	5,5
Максимальный входной ток I_i , А	3
Максимальная входная мощность P_i , Вт	2
Максимальная внутренняя индуктивность, L_i , мкГн	пренебрежимо мала
Максимальная внутренняя ёмкость C_i , мкФ	пренебрежимо мала
Максимальное выходное напряжение U_o , В	5,5
Максимальный выходной ток I_o , мА	309
Максимальная выходная мощность P_o , мВт	629
Максимальная внешняя индуктивность L_o , мкГн	40
Максимальная внешняя ёмкость C_o , мкФ	50
Параметры интерфейса "FO1" (терминал X18) и выходные параметры блока передачи данных (терминал X70)	
Длина волны, нм	
- для T-Ex-##*-MM* ((ET-##7 *- MM/MM*/MM-FO/SX -*)) и блока передачи T-Ex-KVM*-MM* (KVM - * - MM/MM*/MM-FO*)	850
- для T-Ex-##*-SM* ((ET-##7 *- SM/SM*/SM-FO/LX -*)) и блока терминала T-Ex-KVM*-SM (KVM - * - SM/SM*/SM-FO*)	1310
Номинальная оптическая мощность, мВт	0,22
Максимальная оптическая мощность, в условиях неисправности, мВт	35
Параметры клавиатуры с трекболом типа T-Ex *-KB-TV* (KBDi-USB-TV* - *) (терминалы X72, X73), клавиатуры с мышью типа T-Ex *-KB-M* (KBDi-USB-M - *) (терминалы X72, X94), клавиатуры с тачпадом типа T-Ex *-KB-P* (KBDi-USB-P- *) (терминал X72, X95)	
Максимальное входное напряжение U_i , В	5,5
Максимальный входной ток I_i , А	1
Максимальная входная мощность P_i , мВт	650
Максимальная внутренняя индуктивность, L_i , мкГн	пренебрежимо мала
Максимальная внутренняя ёмкость C_i , мкФ	20
Параметры клавиатуры с джойстиком типа T-Ex *-KB-J* (KBDi-USB-J - *) (терминалы X72, X96)	
Максимальное входное напряжение U_i , В	5,5
Максимальный входной ток I_i , А	1
Максимальная входная мощность P_i , мВт	650
Максимальная внутренняя индуктивность, L_i , мкГн	пренебрежимо мала
Максимальная внутренняя ёмкость C_i , мкФ	40

2.2.3 Основные технические данные терминалов типа MT-##7*-* приведены в таблице 2.3

Таблица 2.3

Наименование параметра	Значение
Ех-маркировка по ГОСТ 31610.0-2014 (IEC 60079-0:2011)	2Ex nA nR [ia op is Ga] IIC T4 Gc X Ex tc IIIC [ia op is Da] T110°C Dc X
Диапазон температур окружающей среды при эксплуатации, °С	от минус 30 до плюс 60
Степень защиты оболочками по ГОСТ 14254-2015 (IEC 60529:2013)	IP66
Параметры интерфейса "PWR" (терминал X10)	
Диапазон рабочих напряжений, В	20...240 постоянного или переменного тока
Номинальный ток, А	5
Номинальная мощность, Вт	150
Параметры интерфейса "USB" (терминал X13)	
Номинальное напряжение, В	5 + 10%
Параметры интерфейса "12V" (терминал X14)	
Номинальное напряжение, В	12 + 10%
Параметры интерфейса "CAT7 1" (терминал X16)	

Руководитель (уполномоченное
лицо) органа по сертификацииЭксперт (эксперт-аудитор)
(эксперты (эксперты-аудиторы))

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3/2/2020
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ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

Лист 6

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.HA91.B.00166/20

Серия **RU** № **0776203**

Наименование параметра	Значение
Номинальное напряжение, В	5 + 10%
<i>Параметры интерфейса "SER" (терминал X97)</i>	
Номинальное напряжение, В	15 + 10%
<i>Параметры интерфейса "SAM" (терминал X101)</i>	
Номинальное напряжение, В	5 + 10%
<i>Параметры интерфейса "AUD" (терминал X105)</i>	
Номинальное напряжение, В	100 + 10%
Максимально допустимое напряжение терминалов X10, X13, X14, X16, X97, X101, X105, В	250
<i>Искробезопасные параметры клавиатуры (коннектор X11), трекбола (коннектор X12), интерфейса USB1i (коннектор X24), интерфейса USB2i (коннектор X25)</i>	
Максимальное входное напряжение U_i , В	5,5
Максимальный входной ток I_i , А	3
Максимальная входная мощность P_i , Вт	2
Максимальная внутренняя индуктивность L_i , мкГн	пренебрежимо мала
Максимальная внутренняя ёмкость C_i , мкФ	пренебрежимо мала
Максимальное выходное напряжение U_o , В	5,5
Максимальный выходной ток I_o , мА	309
Максимальная выходная мощность P_o , мВт	629
Максимальная внешняя индуктивность L_o , мкГн	40
Максимальная внешняя ёмкость C_o , мкФ	50
<i>Параметры интерфейса "FO1" (терминал X18)</i>	
Длина волны, нм	
- для МТ-##7*- MM/MM*/MM-FO/SX	850
- для МТ-##7*- SM/SM*/SM-FO/LX	1310
Номинальная оптическая мощность, мВт	0,22
Максимальная оптическая мощность, в условиях неисправности, мВт	35

3. ОПИСАНИЕ КОНСТРУКЦИИ И СРЕДСТВ ОБЕСПЕЧЕНИЯ ВЗРЫВОЗАЩИТЫ

3.1 Описание конструкции

3.1.1 Терминалы оператора ET-208 состоят из металлического корпуса со стеклянной панелью, встроенной в переднюю крышку. За стеклянной панелью находится дисплей с сенсорным экраном. Корпус содержит модуль питания, модуль центрального процессора и дисплей. Терминалы подключаются к внешним цепям через клеммы, которые расположены в двух отдельных клеммных коробках на задней стороне корпуса терминала. Первая клеммная коробка содержит искробезопасный интерфейс USB и искробезопасный интерфейс для подключения к внешней клавиатуре. Вторая клеммная коробка служит для подключения цепей питания, а также неискробезопасных цепей. Внутри корпуса терминала используются обогрев для обеспечения функционирования устройства при работе ниже минус 10 °С. Ввод кабелей в устройство происходит с помощью кабельных вводов.

3.1.2 Терминалы типа T-Eх (ET-##7*.-**.*) состоят из корпуса с блоком дисплея, блока клавиатуры, трекбола, мыши, джойстика и дополнительного блока передачи данных, который устанавливается за пределами взрывоопасной зоны. Устройства управления могут использоваться независимо от дисплея. На задней стенке корпуса устройства располагается клеммная коробка для подключения к внешним цепям. Ввод кабелей осуществляется с помощью кабельных вводов. Внутри корпуса устройства размещаются элементы электронной схемы, центральный процессор, блок питания.

3.1.3 Терминалы типа МТ-##7*.-* состоят из корпуса с дисплеем. Внутри корпуса располагаются элементы электронной схемы устройства. Подключение к внешним цепям происходит через клеммную коробку. Ввод кабелей в устройство происходит с помощью кабельных вводов.

Подробное описание конструкции терминалов приведено в технической и эксплуатационной документации изготовителя.

3.2 Описание средств обеспечения взрывозащиты

3.2.1 Взрывозащищенность терминалов типа ET-208 обеспечивается видами взрывозащиты "кварцевое заполнение оболочки "q" по ГОСТ Р МЭК 60079-5-2012, повышенная защита вида "е" по ГОСТ Р МЭК 60079-7-2012, "искробезопасная электрическая цепь "i" по ГОСТ 31610.11-2014 (IEC 60079-11:2011), защитой от воспламенения пыли оболочками "t" по ГОСТ IEC 60079-31-2013 и выполнением конструкции в соответствии с ГОСТ 31610.0-2014 (IEC 60079-0:2011).

Руководитель (уполномоченное лицо) органа по сертификации

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы))

(подпись)
(подпись)



Вервейко Александр Юрьевич

(Ф.И.О.)

Зубрев Евгений Олегович

(Ф.И.О.)

ЕВРАЗИЙСКИЙ ЭКОНОМИЧЕСКИЙ СОЮЗ

ПРИЛОЖЕНИЕ

Лист 7

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.НА91.B.00166/20

Серия RU № 0776204

3.2.2 Взрывозащищенность терминалов типа Т-Ех (ЕТ-##7*-***-*) обеспечивается видами взрывозащиты "кварцевое заполнение оболочки "q" по ГОСТ Р МЭК 60079-5-2012, повышенная защита вида "е" по ГОСТ Р МЭК 60079-7-2012, искробезопасная электрическая цепь "i" по ГОСТ 31610.11-2014 (IEC 60079-11:2011), искробезопасным оптическим излучением "op is" по ГОСТ 31610.28-2012/IEC 60079-28:2006, защитой от воспламенения пыли оболочками "t" по ГОСТ IEC 60079-31-2013 и выполнением конструкции в соответствии с ГОСТ 31610.0-2014 (IEC 60079-0:2011).

3.2.3 Взрывозащищенность терминалов типа МТ-##7*-** обеспечивается видами взрывозащиты "n" по ГОСТ 31610.15-2014/IEC 60079-15:2010, искробезопасная электрическая цепь "i" по ГОСТ 31610.11-2014 (IEC 60079-11:2011), искробезопасным оптическим излучением "op is" по ГОСТ 31610.28-2012/IEC 60079-28:2006, защитой от воспламенения пыли оболочками "t" по ГОСТ IEC 60079-31-2013 и выполнением конструкции в соответствии с ГОСТ 31610.0-2014 (IEC 60079-0:2011).

4. СПЕЦИАЛЬНЫЕ УСЛОВИЯ ПРИМЕНЕНИЯ «X» и ШКАЛА ОГРАНИЧЕНИЙ

4.1 Знак X в маркировке взрывозащиты терминалов типа ЕТ-208 означает специальные условия применения, заключающиеся в следующем:

- искробезопасные цепи должны быть заземлены. По всей длине искробезопасных цепей должно быть обеспечено выравнивание потенциалов;
- для использования во взрывоопасных газовых средах терминалы должны быть установлены в корпус, отвечающий требованиям ГОСТ 31610.0 (IEC 60079-0).

4.2 Знак X в маркировке взрывозащиты терминалов типа Т-Ех (ЕТ-##7*-***-*) означает специальные условия применения, заключающиеся в следующем:

- по всей длине искробезопасных цепей между блоком индикации и блоком клавиатуры/трекбола должно быть обеспечено выравнивание потенциалов;
- блок клавиатуры/трекбола не должен использоваться в местах, где существует риск заряда, создающий распространяющиеся кистевые разряды.

4.3 Знак X в маркировке взрывозащиты терминалов типа МТ-##7*-** означает специальные условия применения, заключающиеся в следующем:

- по всей длине внешних искробезопасных цепей между блоками, например клавиатурой или трекболом, должно быть обеспечено выравнивание потенциалов.

5. МАРКИРОВКА

Маркировка, наносимая на оборудование, должна включать следующие данные:

- наименование изготовителя или его зарегистрированный товарный знак;
- наименование изделия;
- Ех-маркировку;
- диапазон температур окружающей среды при эксплуатации;
- единый знак обращения продукции на рынке Евразийского экономического союза, утвержденный Решением Комиссии Таможенного союза от 15.07.2011 № 711, при условии соответствия оборудования требованиям всех Технических регламентов Таможенного союза и Технических регламентов ЕАЭС, действие которых распространяется на заявленное оборудование;
- специальный знак взрывобезопасности «Ех», согласно Приложению 2 Технического регламента Таможенного союза 012/2011 «О безопасности оборудования для работы во взрывоопасных средах»;
- дату выпуска и порядковый номер изделия по системе нумерации предприятия-изготовителя;
- номер сертификата соответствия и наименование органа по сертификации;
- другие данные, которые должен отразить изготовитель, если это требуется технической документацией.

Внесение в конструкцию и техническую документацию изменений, влияющих на показатели взрывобезопасности оборудования, должны быть согласованы с ОС ООО СЦ «ЭНДЬЮРЕНС».

Руководитель (уполномоченное
лицо) органа по сертификации

Эксперт (эксперт-аудитор)
(эксперты (эксперты-аудиторы))

(подпись)
(подпись)



Вервейко Александр Юрьевич

(Ф.И.О.)

Зубрев Евгений Олегович

(Ф.И.О.)

5 Indian certification

5.1 PESO certificate



Government of India
Ministry of Commerce & Industry
Petroleum & Explosives Safety Organisation (PESO)
5th Floor, A-Block, CGO Complex, Seminary Hills,
Nagpur - 440006

E-mail : explosives@explosives.gov.in
Phone/Fax No : 0712 -2510248, Fax-2510577

Approval No : A/P/HQ/TN/104/6230 (P541910)

Dated : 11/08/2022

To,

M/s. R. STAHL HMI SYSTEMS GmbH,
Adolf-Grimme-Allee 6,Köln
50829
GERMANY

Sub : Approval of Intrinsically Safe, Sand Filled, Increased Safety Type Electrical Equipments under Petroleum Rules 2002. under Petroleum Rules 2002- Regarding.

Sir(s),

Please refer to your letter No. OIN1110266 dated 28/07/2022 on the subject.

The following Ex electrical equipment(s) manufactured by you according to IEC 60079-0 : 2017, IEC 60079-11 : 2011, IEC 60079-5 : 2015, IEC 60079-7 : 2017, standards and covered under DEKRA Testing and Certification GmbH Test reports mentioned below is/are approved for use in Zone 1 of Gas IIC hazardous areas coming under the the Petroleum Rules, 2002 administered by this Organization.

Sr. No	Description	Safety Protection	Equipment reference Number	Test Agency			Drawing no
				Name	Certificate No.	Certificate Date	
1	Operator Terminal type ET-208	Ex eb ib q [ib] IIC T4 Gb	P541910/1	DEKRA Testing and Certification GmbH	IECEX BVS 15.0039X Issue No 1	03/02/2022	13100004
2	Keyboard with pointing device Type KB2-Z1-...	Ex ia IIC T4 Gb	P541910/2	DEKRA Testing and Certification GmbH	IECEX BVS 20.0065X Issue No 0	19/10/2020	10591300
3	Keyboard with pointing device Type KB2-Z1-...	Ex ib IIC T4 Gb	P541910/3	DEKRA Testing and Certification GmbH	IECEX BVS 20.0065X Issue No 0	19/10/2020	10591300

This Approval is granted subject to observance of the following conditions:-

- 1)The design and construction of the equipment shall be strictly in accordance with description, condition and drawings as mentioned in the DEKRA Testing and Certification GmbH Test Reports referred to above.
- 2)The equipment shall be used only with approved type of accessories and associated apparatus.
- 3)Each equipment shall be marked either by raised lettering cast integrally or by plate attached permanently to the main structure to indicate conspicuously:-
 - (a) Name of the manufacturer
 - (b) Name and number by which the equipment is identified.
 - (c) Number & date of the test report of the DEKRA Testing and Certification GmbH applicable to the equipment.
 - (d) Equipment reference number of this letter by which use of apparatus is approved.
 - (e) Protection level.
- 4) A certificate to the effect that the equipment has been manufactured strictly in accordance with the drawing referred to in the DEKRA Testing and Certification GmbH Test report and is identical with the one tested and certified at DEKRA Testing and Certification GmbH shall be furnished with each equipment.
- 5) The customer shall be supplied with a copy of this letter, an extract of the conditions and maintenance schedule, if any, recommended by DEKRA Testing and Certification GmbH in their test reports and copy of instructions booklet detailing operation & maintenance of the equipment so as to maintain its Flame Proof characteristics.
- 6) The After sales service and maintenance of subject equipment shall be looked after by your representative R. STAHL PRIVATE LIMITED, Plot No 5, Malrosapuram Main Road

Conditions of the Approval:-

The approval for above equipment is subject to validity of IECEX Quality Assessment Report No. DE/BVS/QAR06.0007.

This approval also covers the permissible variations as approved under the DEKRA Testing and Certification GmbH test reports referred above. This approval is liable to be cancelled if any of the conditions of the approval is violated or not complied with. The approval may also be amended or withdrawn at any time, if considered necessary in the interest of safety.

The field performance report from actual users/your customers of the subject equipment may please be collected and furnished to this office for verification and record on annual basis.
The Approval is Valid upto 31/12/2026

Yours faithfully,

(A.B. Tamgadge)
Dy. Chief Controller of Explosives
For Chief Controller of Explosives
Nagpur

Copy to :
1. Jt. Chief Controller of Explosives, South Circle Office, CHENNAI
2. R. STAHL PRIVATE LIMITED, Plot No.5, Malrosapuram Main Road

for Chief Controller of Explosives
Nagpur

(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

This is System Generated document. Signature is not required.

Digitally signed by A B TAMGADGE
Reason: Approval No. : A/P/HQ/TN/104/6230
Location:Nagpur [P541910]
Date:2022.08.11 05:58:25 +05:30

5.2 BIS certificate



भारतीय मानक ब्यूरो

(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)

BUREAU OF INDIAN STANDARDS


(Ministry of Consumer Affairs, Food & Public Distribution,
Govt. of India)

मानक भवन, 9 बहादुर शाह जफ़र मार्ग, नई दिल्ली - 110002
Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi - 110002
दूरभाष / Phone: +91-11-23230856/2323010131/23233375/23239402
ई-मेल / E-mail: registration@bis.gov.in
वेबसाइट / Website: <https://bis.gov.in/>, <https://www.crsbis.in/BIS/>

Our Ref: Registration/CRS 2021-4525/R-41201782

Date:08-09-2021

Subject : Licence Document

MANUFACTURING UNIT :	R.Stahl Hmi Systems Gmbh ADOLF-GRIMME-ALLEE 8, 50829 COLOGNE COLOGNE,Germany-50829 office@stahl-hmi.de 49221768061000	
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Dear Sir,

1. With reference to your Application, we are pleased to inform you that it has been decided to grant you licence as per details given below :

Product Category :	Automatic Data Processing Machine
Product Name :	INTELLIGENT PANEL (ADPM)
IS NO :	IS 13252(PART 1):2010/ IEC 60950-1 : 2005
Brand (As Declared by Manufacturer) :	STAHL
Model :	[Brand -> STAHL, Models -> ET-208-IX-W00-AC-GL, ET-208-IX-W00-DC-GL]
Factory Address :	ADOLF-GRIMME-ALLEE 8, 50829 COLOGNE COLOGNE,Germany-50829

2. The Licence is being granted for your unit located at the address and for the brand and models mentioned at serial no 1 above.

3. The number assigned to this Licence is **R-41201782** which has been made operative from **08-09-2021** and is valid upto **07-09-2023** . The Licence Number should invariably be referred to in your future correspondence.

4. The rights and privileges under the licence shall not be exercised by any other factory / organization at any other location. This licence is not transferable. In the event of shifting of the manufacturing machinery from the registered premises to some other place use of the Licence Number shall be stopped and BIS shall be informed.

5. The licensee shall comply with the provisions of the Act, rules and regulations framed thereunder and as amended from time to time.

6. The licensee shall follow the guidelines for the use of Standard Mark and labeling requirements as per Annex-I.

7. The licensee shall not use the licence in any manner which contravenes the provisions of Act, rules and regulations framed thereunder and as amended from time to time.

8. Upon expiry of validity, stoppage or suspension or cancellation of licence, you shall discontinue forthwith the self declaration of conformity to the relevant Indian Standard(s) and withdraw all promotional and advertising matter which contains any reference thereto.

9. As per your declaration, **SATHISHKUMAR D, Certification Manager, R STAHL PRIVATE LIMITED(Address- Plot No 5 Malrosapuram Main Road, Sengundram Industrial Area Singaperumal koil Kanchipuram District 603204,NA)** is your authorized Indian representative. Any intended change in the name of the Indian representative ought to be brought to our notice immediately along with requisite fees and document.

10. For renewal of licence, the licensee shall have to apply to BIS three months in advance before expiration of the licence and application form for renewal is available on BIS website

11. The licence is not transferable. Kindly acknowledge receipt of this letter.

Thanking you,

Yours faithfully,
(Avik Datta)
Scientist-C
Telfax : +91-11-23230856
E-mail: registration@bis.gov.in




Note: This is a system generated letter. Hence signature is not required.
To verify authentication of letter, kindly scan the QR code on this letter.

Annex - 1

The guidelines for use of Standard Mark for Scheme-C are per 3(1) of BIS (Conformity Assessment) Regulations,2017 are given below:

- i) The monogram of the 'Standard Mark' consists of the pictorial representation, drawn in the exact style as indicated in the figure in the figure in Annexure I. Its photographic reduction and enlargement is permitted.
- ii) The 'Standard Mark' can be displayed in single colour or multi-colour as per the details given below. The colour scheme for the Standard Mark to be used in multi colour shall be use as indicated below.
- iii) The licensee shall display the 'Standard Mark' on the article and/or the packaging, as the case may be, in a manner so as to be easily visible. It shall be legible, indelible and non-removable. Further, the durability of marking shall be as per the provisions of the relevant Indian Standard, wherever applicable. The display of IS number, Registration number and words shall not be less than Arial font size 6.
- iv) Any device with a integrated display screen may present the Standard Mark electronically (e-labelling) in lieu of a physical presentation on the product.

6 CNEX certificate

 国家防爆	Electrical Apparatus for Explosive Atmospheres CERTIFICATE OF CONFORMITY											
	Cert. No.: CNEx18.3155X											
Manufacturer	R. STAHL HMI Systems GmbH Adolf-Grimme-Allee 8, 50829 Koeln, Germany											
Name of Product	Operator Terminal											
Type of Product	ET-208											
Marking	Ex e ib q [ib] IIC T4 Gb Ex tb ib [ib] IIIA T115°C Db											
Drawing No.	-											
<p>The drawings, technical documents and the samples are verified and certified according to standard(s) for safety as below:</p> <table border="0"> <tr> <td>GB 3836.1-2010</td> <td>Explosive Gas atmospheres - Part 1: Equipment - General requirements</td> </tr> <tr> <td>GB 3836.3-2010</td> <td>Explosive Gas atmospheres - Part 3: Equipment protection by increased safety "e"</td> </tr> <tr> <td>GB 3836.4-2010</td> <td>Explosive Gas atmospheres - Part 4: Equipment protection by intrinsic safety "i"</td> </tr> <tr> <td>GB 3836.7-2017</td> <td>Explosive Gas atmospheres - Part 7: Equipment protection by powder filling "q"</td> </tr> <tr> <td>IEC60079-31:2013</td> <td>Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"</td> </tr> </table>			GB 3836.1-2010	Explosive Gas atmospheres - Part 1: Equipment - General requirements	GB 3836.3-2010	Explosive Gas atmospheres - Part 3: Equipment protection by increased safety "e"	GB 3836.4-2010	Explosive Gas atmospheres - Part 4: Equipment protection by intrinsic safety "i"	GB 3836.7-2017	Explosive Gas atmospheres - Part 7: Equipment protection by powder filling "q"	IEC60079-31:2013	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
GB 3836.1-2010	Explosive Gas atmospheres - Part 1: Equipment - General requirements											
GB 3836.3-2010	Explosive Gas atmospheres - Part 3: Equipment protection by increased safety "e"											
GB 3836.4-2010	Explosive Gas atmospheres - Part 4: Equipment protection by intrinsic safety "i"											
GB 3836.7-2017	Explosive Gas atmospheres - Part 7: Equipment protection by powder filling "q"											
IEC60079-31:2013	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"											
Note	<ol style="list-style-type: none"> Temperature range - 40 °C to + 65 °C Ingress protection: rear side: IP54, inside: IP65 This certificate is only valid in combination with the related Annex Please read and understand the special conditions for safe use as stated in the Annex to this certificate 											
Valid Date	From July 18, 2018 to July 17, 2023											
Issue Date	July 18, 2018											
Director												
 CQST NAN YANG	CHINA NATIONAL QUALITY SUPERVISION AND TEST CENTRE FOR EXPLOSION PROTECTED ELECTRICAL PRODUCTS											
	Address: No.20 North Zhongjing Rd, Nanyang, Henan(473008), P.R.China Tel: 0377-63258564 Fax: 0377-63208175 Http://www.china-ex.com											
<p>Note: This certificate is only valid for the products which identify with the sample(s) tested and verified. Holder(s) of this certificate have the responsibility to ensure the products complying with relevant standard(s).</p> <p>登陆网站 输入数码 查询真伪 5806 9732 6970 4452 查询方式: www.china-ex.com</p>												



Electrical Apparatus for Explosive Atmospheres
CERTIFICATE OF CONFORMITY

Annex to Cert. No.: CNEx18.3155X

Page 1 of 4

This Annex to certificate CNEx 18.3155X covers the following model: Type ET-208.
 This product has been certified, under certificate number IECEx BVS 15.0039X, issue 0, dated 2015-04-28.

Ex marking: Ex e ib q [ib] IIC T4 Gb
 Ex tb ib [ib] IIIA T115°C Db

Product Description:

The operator terminals type ET-208-TX-W00-**-GL serve as human machine interface in areas requiring EPL Gb or Db.
 The terminals consist of a metallic enclosure with a glass panel integrated in its front cover. Behind this glass panel there is a display with touch-screen.
 The enclosure is carried out in type of protection "q" respective "tb" and contains a power supply module, a CPU-module as well as the display. The Touch-Screen is intrinsically safe, level of protection Ex ib.
 The Operator Terminals are supplied via terminals which are located in two separate terminal boxes on the back side of the enclosure. The first terminal box contains an intrinsically safe USB Interface and an intrinsically safe Interface for connection to an external Keyboard. The second terminal box is in type of protection "e" respective "tb" and serves to connect the supply circuit as well as the non-intrinsically safe data circuits.
 A heating within the enclosure in type of protection "q" resp. "tb" assures functionality if the device is used in temperatures from -40 °C up to -10 °C.
 The Operator Terminal can also be used in explosive dust atmospheres requiring equipment group IIIB or IIIC. Therefore it has to be integrated in the wall of an enclosure fulfilling all applicable requirements of GB383.1 and IEC 60079-31. A minimum degree of protection of IP65 according to GB/T4208 shall be ensured.
 The Operator Terminal can also be integrated in a wall of an enclosure in type of protection Increased Safety "e".
 Only suitable cable entries and blind plugs are used.

Issue Date July 18, 2018

Director



**CHINA NATIONAL QUALITY SUPERVISION AND TEST CENTRE
 FOR EXPLOSION PROTECTED ELECTRICAL PRODUCTS**

Address: No.20 North Zhongjing Rd, Nanyang, Henan(473008), P.R.China
 Tel: 0377-63258564 Fax: 0377-63208175 Http://www.china-ex.com

Note: This certificate is only valid for the products which identify with the sample(s) tested and verified. Holder(s) of this certificate have the responsibility to ensure the products complying with relevant standard(s).



Electrical Apparatus for Explosive Atmospheres
CERTIFICATE OF CONFORMITY

Annex to Cert. No.: CNEx18.3155X

Page 2 of 4

Subject and type:

Operator Terminal type ET-208-TX-W00-**-GL

** : AC supply or DC supply

Parameters:

Non-Intrinsically safe circuits

1. Power supply input, Connection via terminal block X1

for type ET-208-TX-W00-AC-GL:

Terminals X1 (L, N)

Rated voltage		AC	115 / 230	V
Rated current			≤ 2	A
Rated power				

Heater off	18 VA			
------------	-------	--	--	--

Heater on	36 VA			
-----------	-------	--	--	--

Max. input voltage	U_m	AC	253	V
--------------------	-------	----	-----	---

for type ET-208-TX-W00-DC-GL:

Terminals X1 (+, -)

Rated voltage		DC	24	V
---------------	--	----	----	---

Rated current			≤ 1.6	A
---------------	--	--	-------	---

Rated power

Heater off	18 VA		12	W
------------	-------	--	----	---

Heater on	36 VA		22	W
-----------	-------	--	----	---

Max. input voltage	U_m	AC	253	V
--------------------	-------	----	-----	---

2. Com1 RS-422 interface

Connection via terminal block X2, terminals X2 (1, 2, 3, 4)

Rated voltage			5	V
---------------	--	--	---	---

Max. input voltage	U_m		30	V
--------------------	-------	--	----	---

Issue Date July 18, 2018

Director



**CHINA NATIONAL QUALITY SUPERVISION AND TEST CENTRE
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Electrical Apparatus for Explosive Atmospheres

CERTIFICATE OF CONFORMITY

Annex to Cert. No.: CNEx18.3155X

Page 3 of 4

3. Com2 RS-422 interface			
Connection via terminal block X3, terminals X3 (1, 2, 3, 4)			
Rated voltage		5	V
Max. input voltage	U_m	30	V
4. Ethernet TP interface			
Connection via terminal block X5, terminals X5 (1, 2, 3, 4)			
Rated voltage		5	V
Max. input voltage	U_m	30	V
5. USB interface			
Connection via terminal block X4, terminals X4 (1, 2, 3, 4)			
Rated voltage		5	V
Max. input voltage	U_m	30	V
Terminal X4.5 shall not be connected inside explosive areas!			

Intrinsically safe circuits level of protection Ex ib IIC resp. Ex ib IIIA

1. Intrinsically safe USB circuit			
Connection via terminal block X7 or USB-socket X8. X7 and X8 shall not be used at the same time.			
Terminal block X7:			
Terminals 1(VBUS), 2(D-), 3(D+) and 4(GND)			
Terminal 5 (shield) is intended for the connection of a cable shield.			
Max. output voltage	U_o	DC	5.45 V
Max. output current	I_o		755 mA
Max. output power	P_o		2.5 W
Maximum permissible (combined) values for external capacitance C_o and external inductance L_o in accordance with the following tables:			
for group IIC:			
L_o [μ H]	4.8	1.8	
C_o [μ F]	4.7	27.7	

Issue Date July 18, 2018

Director



**CHINA NATIONAL QUALITY SUPERVISION AND TEST CENTRE
FOR EXPLOSION PROTECTED ELECTRICAL PRODUCTS**

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Electrical Apparatus for Explosive Atmospheres

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Annex to Cert. No.: CNEx18.3155X

Page 4 of 4

for group IIB resp. group III:

L_o [μ H]	49.8	19.8	9.8
C_o [μ F]	20.7	51.7	107.7

2. Intrinsically safe interface for the connection of a keyboard

Connection via terminal block X9, terminals 1...12 and 13 (GND)

Max. output voltage	U_o	DC	4.96	V
Max. output current	I_o		60	mA
Linear output characteristics				
Max. output power	P_o		75	mW

Maximum permissible (combined) values for external capacitance C_o and external inductance L_o in accordance with the following tables:

for group IIC:

L_o [μ H]	100	50	20
C_o [μ F]	6.7	8.5	11.9

for group IIB resp. group III:

L_o [μ H]	100	50	20	
C_o [μ F]	42	49	95	
<u>Ambient temperature range:</u>			T_a	-40 °C...+65 °C
temperature class				T4
max. surface temperature with thermofuse limited to				115 °C

Special conditions for safe use:

1. The intrinsically safe circuits are connected to earth. Along the intrinsically safe circuits, potential equalization must exist. Maximum overvoltage category II according to GB/T16935.1 is permitted for the non-intrinsically safe circuits.

2. For use in explosive gas atmospheres the terminal may be built in the wall of an enclosure fulfilling all relevant clauses of GB3836.1.

The terminal itself fulfills all mechanical requirements according to GB3836.1 and the degrees of protection IP65 according to GB/T4208 if mounted according to the user's manual.

Issue Date July 18, 2018

Director



**CHINA NATIONAL QUALITY SUPERVISION AND TEST CENTRE
FOR EXPLOSION PROTECTED ELECTRICAL PRODUCTS**


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Note:This certificate is only valid for the products which identify with the sample(s) tested and verified. Holder(s) of this certificate have the responsibility to ensure the products complying with relevant standard(s).

7 Korean certification

7.1 KCS certificate





제2019-020026-01-1 호

안 전 인 증 서


R.STHAL HMI Systems GmbH
Im Gewerbegebiet Pesch 14 50767 Köln, Germany

위 사업장에서 제조하는 아래의 품목이 「산업안전보건법」 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사 결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

	품 목	
	Operator Terminal	
	형식·모델(용량·등급) / 인증번호	
	ET-208-TX-W00-**-**~GL(Ex tb ib q [ib] IIIA T115℃) / 19-KA4BO-0206X	
	인 증 기 준	
	고용노동부고시 제2019-15호	
	인 증 조 건	

1. **제조공장**
·본 인증서는 'Im Gewerbegebiet Pesch 14 50767 Köln, Germany'에서 생산하는 제품에 한함.
2. **제품개요**
·당 기기는 접속용 외함파 터치스크린으로 구성되어 있는 HMI(Human Machine Interface)임.
·정격: (115 ~ 230) Vac, 24 Vdc
·사용주위온도: -40 ℃ ≤ T_a ≤ +65 ℃
·본질안전을 위한 전기적 파라미터
-Terminal block X7(Terminal 1...3, 4(GND)): U₀ = 5.45 V, I₀ = 755 mA, P₀ = 2.5 W, C₀(L₀) = 20.7 μF(49.8 μH), 51.7 μF(19.8 μH), 107.7 μF(9.8 μH)
-Terminal block X9(Terminal 1...12, 13(GND)) U₀ = 4.96 V, I₀ = 60 mA, P₀ = 75 mW, C₀(L₀) = 42 μF(100 μH), 49 μF(50 μH), 95 μF(20 μH)
·IEC 60529에 따른 보호등급 IP 65(전면), IP54(후면)를 만족함.
3. **인증범위:** 본 인증서는 ET-208-TX-W00-AC-GL과 ET-208-TX-W00-DC-GL 제품에 한하여 유효함.
4. **안전한 사용을 위한 조건**
·제품 설치 시 후면은 IEC 60529에 따른 보호등급 IP65에 적합하도록 추가적으로 보호해야 함.
·관련 IECEx 인증서(IECEx BVS 15.0039X Issue No.0) conditions of certification 참조
5. **인증(변경)사항:** 없음.
6. **그 밖의 사항**
·안전인증품의 품질관리, 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수
·본 안전인증서는 반드시 관련 IECEx 인증서(IECEx BVS 15.0039X Issue No.0)와 함께 사용

2019 년 04 월 09 일



한국산업기술시험원장

산업안전보건법 시행규칙 [별지 제10호의6서식]

(08389) 서울시 구로구 디지털로 26길 87(구로동) <http://www.ktl.re.kr>
(52852) 경상남도 진주시 충의로 10(충무공동)



제2019-020028-01-1호

안전인증서

R.STHAL HMI Systems GmbH

Im Gewerbegebiet Pesch 14 50767 Köln, Germany

위 사업장에서 제조하는 아래의 품목이 「산업안전보건법」 제34조 및 같은 법 시행규칙 제58조의4제4항에 따른 안전인증 심사 결과 안전·보건기준에 적합하므로 안전인증표시의 사용을 인증합니다.

품 목
Operator Terminal

형식·모델(용량·등급) / 인증번호
ET-208-TX-W00-**-GL(Ex e ib q [ib] IIC T4) / 19-KA4BO-0207X

인증기준
고용노동부고시 제2019-15호

인증조건

1. 제조공장

·본 인증서는 'Im Gewerbegebiet Pesch 14 50767 Köln, Germany'에서 생산하는 제품에 한함.

2. 제품개요

·당 기기는 접속용 외함과 터치스크린으로 구성되어 있는 HMI(Human Machine Interface)임.

·정격: (115 ~ 230) Vac, 24 Vdc

·사용주위온도: -40 ℃ ≤ T_a ≤ +65 ℃

·본질안전을 위한 전기적 파라미터

-Terminal block X7(Terminal 1...3, 4(GND)): U₀ = 5.45 V, I₀ = 755 mA, P₀ = 2.5 W,
C₀(L₀) = 4.7 μF(4.8 μH), 27.7 μF(1.8 μH)

-Terminal block X9(Terminal 1...12, 13(GND)) U₀ = 4.96 V, I₀ = 60 mA, P₀ = 75 mW,
C₀(L₀) = 6.7 μF(100 μH), 8.5 μF(50 μH), 11.9 μF(20 μH)

·IEC 60529에 따른 보호등급 IP 65(전면), IP54(후면)를 만족함.

3. 인증범위: 본 인증서는 ET-208-TX-W00-AC-GL과 ET-208-TX-W00-DC-GL 제품에 한하여 유효함.

4. 안전한 사용을 위한 조건

·관련 IECEx 인증서(IECEx BVS 15.0039X Issue No.0) conditions of certification 참조

5. 인증(변경)사항: 없음.

6. 그 밖의 사항

·안전인증품의 품질관리, 확인심사 수검, 변경사항 신고 등 인증 받은 자의 의무 준수

·본 안전인증서는 반드시 관련 IECEx 인증서(IECEx BVS 15.0039X Issue No.0)와 함께 사용

2019년 04월 09일

한국산업기술시험원



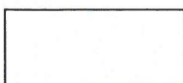
산업안전보건법 시행규칙 [별지 제10호의6서식]

(08389) 서울시 구로구 디지털로 26길 87(구로동) <http://www.ktl.re.kr>
(52852) 경상남도 진주시 충의로 10(충무공동)

7.2 KCC certification

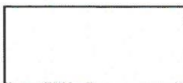
12BF-DA91-D4B1-C454

방송통신기자재등의 적합등록 필증 Registration of Broadcasting and Communication Equipments	
상호 또는 성명 <small>Trade Name or Registrant</small>	R. STAHL HMI Systems GmbH
기자재명칭(제품명칭) <small>Equipment Name</small>	ET/MT-208
기본모델명 <small>Basic Model Number</small>	ET/MT-208-TX-W00-AC
파생모델명 <small>Series Model Number</small>	
등록번호 <small>Registration No.</small>	R-R-RS3-ET208AC
제조사/제조(조립)국가 <small>Manufacturer/Country of Origin</small>	R. STAHL HMI Systems GmbH / 독일
등록연월일 <small>Date of Registration</small>	2019-07-03
기타 <small>Others</small>	
위 기자재는 「전파법」 제58조의2 제3항에 따라 등록되었음을 증명합니다. It is verified that foregoing equipment has been registered under the Clause 3, Article 58-2 of Radio Waves Act.	
2019년(Year) 07월(Month) 03일(Day)	
국립전파연구원장 Director General of National Radio Research Agency	
	
※ 적합등록 방송통신기자재는 반드시 "적합성평가표시" 를 부착하여 유통하여야 합니다. 위반시 과태료 처분 및 등록이 취소될 수 있습니다.	



12DB-F8F3-3CD2-DAD2

방송통신기자재등의 적합등록 필증 Registration of Broadcasting and Communication Equipments	
상호 또는 성명 <small>Trade Name or Registrant</small>	R. STAHL HMI Systems GmbH
기자재명칭(제품명칭) <small>Equipment Name</small>	ET/MT-208
기본모델명 <small>Basic Model Number</small>	ET/MT-208-TX-W00-DC
파생모델명 <small>Series Model Number</small>	
등록번호 <small>Registration No.</small>	R-R-RS3-ET208DC
제조사/제조(조립)국가 <small>Manufacturer/Country of Origin</small>	R. STAHL HMI Systems GmbH / 독일
등록연월일 <small>Date of Registration</small>	2019-07-03
기타 <small>Others</small>	
위 기자재는 「전파법」 제58조의2 제3항에 따라 등록되었음을 증명합니다. It is verified that foregoing equipment has been registered under the Clause 3, Article 58-2 of Radio Waves Act.	
2019년(Year) 07월(Month) 03일(Day)	
국립전파연구원장 Director General of National Radio Research Agency	
	
※ 적합등록 방송통신기자재는 반드시 "적합성평가표시" 를 부착하여 유통하여야 합니다. 위반시 과태료 처분 및 등록이 취소될 수 있습니다.	



7.3 Customer confirmation letter

Customer confirmation letter

납품처 확인서

1. Delivery Overview/ 납품 개요

- Target company name / 대상 회사명: (exporter/(수출자))
- Usage / 용도: (product name / 제품명)
- Model and quantity / 모델 및 수량:
(product number / type number) - (quantity) / (제품 품번 / 타입번호) - (수량)

2. Overview of domestic imports of products / 제품의 국내 수입 개요

The above (product name, model, quantity) are imported from (company name) and then delivered to the supplier (company name) (if there is an intermediary seller), the products are all overseas (country name) will be re-exported.

상기의 (제품명, 모델, 수량)은 제조사(회사명), (중간판매상이 있을 경우 기입,) 납품처 (회사명) 로 납품하는 것으로서, 해당 제품은 모두 해외(나라이름)로 재 수출되는 것입니다.

3. According to the contract between (importer), (if there is an intermediary seller), and the supplier (company name), the product has been imported, and according to the contract of the (supplier), all are re-exported abroad. I will confirm.

(수입자), (중간판매상 있을경우 기입), 납품처(회사명) 간 계약에 따라, 해당 제품 수입진행 하였으며, (납품처)의 계약서에 따라, 모두 해외로 재 수출되는 것임을 확인 드립니다.

Year Month Day / 년 월 일

Manager / 담당자 :

contact / 연락처 :

(Company Name) / (회사명)

4. Attachments:

- Customer PO / 고객 PO
- Owner PO of customer (in case of re-exporter) / 고객의 소유자 PO(재수출자의 경우)
- Product photo / 제품 사진
- Catalogue / 카탈로그
- Invoice / Packing list / B/L / 송장 / 포장 목록 / B/L
- Business registration / 사업자 등록

8 JPNEx certificate

8.1 English version





eurofins



Type Examination Certificate

for Electrical Equipment used in Potentially Explosive Atmosphere

Issued by Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK	
Applicant	R. STAHL HMI Systems GmbH Adolf-Grimme Allee 8, 50829 Köln, Germany
Manufacturer name	R. STAHL HMI Systems GmbH Adolf-Grimme Allee 8, 50829 Köln, Germany
Product name	Terminal
Type/model code	Operator Terminal type ET-208 (See Attachment 1)
Type of protection	Intrinsic safety, Increased safety, Dust ignition protection by enclosure.
Group, Temperature Class and EPL	IIC T4 Gb, [IIC Gb] IIIA T115°C Db, [IIIA Db]
The equipment shall be marked with the following	Ex e ib q [ib] IIC T4 Gb Ex tb ib [ib] IIIA T115°C Db Tamb: -40 °C to +65 °C
Ratings	See Attachment 2
Special condition for safe use	See Attachment 3
Certificate number	CML 19JPN5469X
Term of validity	From 12-12-2019 to 11-12-2022 
	From 12-12-2022 to 11-12-2025 

This is to certify that the equipment specified above complies with the requirements stipulated in Ordinance on Examination of Machines and Other Equipment of the Ministry of Health, Labour and Welfare, Japan.

Issue date: 12-12-2022

Signature of chief examiner:



CML 19JPN5469X
Issue: 1

Attachment 1: Type/model code

Operator Terminal type ET-208

Operator Terminal type ET - 208 - TX - W00 - ** - GL

Supply

** AC AC Supply
DC DC Supply

Attachment 2: Ratings

Non-Intrinsically safe circuits

1 Power supply input, Connection via terminal block X1

for type ET-208-TX-W00-AC-GL:

Terminals X1 (L, N)

Rated voltage	AC	115 / 230 V
Rated current		≤ 2 A
Rated power		
Heater off		18 VA
Heater on		36 VA
Max. input voltage	Um	AC 253 V

for type ET-208-TX-W00-DC-GL:

Terminals X1 (+, -)

Rated voltage	DC	24 V
Rated current		≤ 1.6 A
Rated power		
Heater off		12 W
Heater on		22 W
Max. input voltage	Um	AC 253 V

2 Com1 RS-422 interface

Connection via terminal block X2, terminals X2 (1, 2, 3, 4)

Rated voltage		5 V
Max. input voltage	Um	30 V

3 Com2 RS-422 interface

Connection via terminal block X3, terminals X3 (1, 2, 3, 4)

Rated voltage		5 V
---------------	--	-----

This certificate shall only be copied in its entirety and without change
www.CMLEx.com

本証明書の複写に際しては全体を変更なしに行うこと



CML 19JPN5469X

Issue: 1

	Max. input voltage	U_m	30 V
4	Ethernet TP interface		
	Connection via terminal block X5, terminals X5 (1, 2, 3, 4)		
	Rated voltage		5 V
	Max. input voltage	U_m	30 V
5	USB interface		
	Connection via terminal block X4, terminals X4 (1, 2, 3, 4)		
	Rated voltage		5 V
	Max. input voltage	U_m	30 V
	Terminal X4.5 shall not be connected inside explosive areas!		

Intrinsically safe circuits level of protection Ex ib IIC and Ex ib IIIA

1 Intrinsically safe USB circuit

Connection via terminal block X7 or USB-socket X8. X7 and X8 shall not be used at the same time.

Terminal block X7:

Terminals 1(VBUS), 2(D-), 3(D+) and 4(GND)

Terminal 5 (shield) is intended for the connection of a cable shield.

Max. output voltage U_o	DC	5.45 V
Max. output current I_o		755 mA
Max. output power P_o		2.5 W

Maximum permissible (combined) values for external capacitance C_o and external inductance L_o in accordance with the following tables:

	for group IIC:		for group IIB and group III:		
C_o [μ F]	4.7	27.7	49.8	19.8	9.8
L_o [μ H]	4.8	1.8	20.7	51.7	107.7

2 Intrinsically safe interface for the connection of a keyboard

Connection via terminal block X9, terminals 1...12 and 13 (GND)

Max. output voltage U_o	DC	4.96 V
Max. output current I_o		60 mA
Linear output characteristics		
Max. output power P_o		75 mW

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JPN Type Approval version: 7.0 Approval: Approved



CML 19JPN5469X
Issue: 1

Maximum permissible (combined) values for external capacitance Co and external inductance Lo in accordance with the following tables:

	Group IIC:			Group IIB and Group III:		
Lo [μ H]	100	50	20	100	50	20
Co [μ F]	6.7	8.5	11.9	42	49	95

Ambient temperature range
 temperature class
 max. surface temperature with thermofuse limited to

Ta: -40 °C...+65 °C
 T4
 115 °C

Attachment 3: Special condition for safe use

- i. The intrinsically safe circuits are connected to earth. Along the intrinsically safe circuits, potential equalization must exist. Maximum overvoltage category II is permitted for the non-intrinsically safe circuits.
- ii. The terminal may be built in the wall of an enclosure and provide explosion protection and the degrees of protection IP65 if mounted according to the user’s manual.

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8.2 Japanese version



防爆構造電気機械器具型式検定合格証

発行者： ユーロフィンズ・イーアンドイー・シーエムエル・リミテッド ユニット1、ニューポートビジネスパーク、ニューポートロード、エレスメアポート CH65 4LZ 英国		
申請者	R. STAHL HMI Systems GmbH Adolf-Grimme Allee 8, 50829 Köln, Germany	
製造者	R. STAHL HMI Systems GmbH Adolf-Grimme Allee 8, 50829 Köln, Germany	
品名	オペレータ用端末	
型式の名称	ET-208 (別紙1のとおり)	
防爆構造の種類	本質安全防爆構造、砂詰防爆構造、安全増防爆構造 容器による粉じん防爆構造	
対象ガス又は蒸気の 発火度及び爆発等級	IIC T4 Gb, [IIC Gb] IIIA T115°C Db, [IIIA Db]	
製品上の Ex マーキング	Ex e ib q [ib] IIC T4 Gb Ex tb ib [ib] IIIA T115°C Db Tamb: -40 °C ~ +65 °C	
定 格	別紙2のとおり	
使用条件	別紙3のとおり	
型式検定合格番号	CML 19JPN5469X	
有効期間	2019年12月12日 から 2022年12月11日まで	
	2022年12月12日 から 2025年12月11日まで	

機械等検定規則による型式検定に合格したことを証明する

2022年12月12日

型式検定実施者：ユーロフィンズ・イーアンドイー・シーエムエル・リミテッド主任検定員

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CML 19JPN5469X

版: 1

別紙 1 型式

ET - 208 - TX - W00 - ** - GL

** = 給電

AC 交流電源

DC 直流電源

別紙 2 定格

非本質安全回路

1 電源入力、端子台 X1 経由で接続

ET-208-TX-W00-AC-GL の場合 :

端子 X1 (L, N)

定格電圧

AC 115 / 230 V

定格電流

≤ 2 A

定格電力

ヒータ オフ

18 VA

ヒータ オン

36 VA

最大入力電圧 U_m

AC 253 V

ET-208-TX-W00-DC-GL の場合 :

端子 X1 (+, -)

定格電圧

DC 24 V

定格電流

≤ 1.6 A

定格電力

ヒータ オフ

12 W

ヒータ オン

22 W

最大入力電圧 U_m

AC 253 V

2 Com1 RS-422 インターフェース

端子台 X2 経由で接続、端子 X2 (1, 2, 3, 4)

定格電圧

5 V

最大入力電圧 U_m

30 V

3 Com2 RS-422 インターフェース

端子台 X3 経由で接続、端子 X3 (1, 2, 3, 4)

定格電圧

5 V

最大入力電圧 U_m

30 V

4 Ethernet TP インターフェース

端子台 X5 経由で接続、端子 X5 (1, 2, 3, 4)

定格電圧

5 V

最大入力電圧 U_m

30 V

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JPN Type Approval Version 3.0 Approval: Approved



CML 19JPN5469X

版: 1

5 USB インターフェース

端子台 X4 経由で接続、端子 X4 (1, 2, 3, 4)

定格電圧

5 V

最大入力電圧 U_m

30 V

端子 X4.5 は、危険場所内で接続してはならない。

Ex ib IIC、Ex ib IIIA の本質安全回路

1 本質安全 USB 回路

端子台 X7 又は USB ソケット X8 経由の接続。X7 と X8 は同時に使用しないこと。

端子台 X7

端子 1(VBUS)、2(D-)、3(D+)、4(GND)

端子 5 (シールド) は、ケーブルシールドの接続用である。

最大出力電圧 U_o

DC 5.45 V

最大出力電流 I_o

755 mA

最大出力電力 P_o

2.5 W

外部キャパシタンス C_o と外部インダクタンス L_o に関する

最大許容 (結合) 値: 下表参照

	グループ IIC の場合			グループ IIB 及び III の場合		
C_o [μ F]	4.7	27.7		49.8	19.8	9.8
L_o [μ H]	4.8	1.8		20.7	51.7	107.7

2 キーボード接続用の本質安全インターフェース

端子台 X9 経由の接続、端子 1...12 及び 13 (GND)

最大出力電圧 U_o

DC 4.96 V

最大出力電流 I_o

60 mA

線形出力特性

最大出力電力 P_o

75 mW

外部キャパシタンス C_o と外部インダクタンス L_o に関する

最大許容 (結合) 値: 下表参照:

	グループ IIC の場合			グループ IIB 及び III の場合		
L_o [μ H]	100	50	20	100	50	20
C_o [μ F]	6.7	8.5	11.9	42	49	95

周囲温度範囲

Ta: -40 °C...+65

°C

温度等級

T4

温度ヒューズで制限される最大表面温度

115 °C

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CML 19JPN5469X

版: 1

別紙 3 使用条件

- i. 本質安全回路はアースに接続される。本質安全回路に沿って等電位化がなされること。非本質安全回路に許容される最大過電圧カテゴリは II である。
- ii. 当該機器は容器の壁にはめ込むことができ、取扱説明書に従って取り付けられた時に、爆発保護及び IP65 を提供する。

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JPN Type Approval Version 3.0 Approval: Approved

9 NEC certificate

22.7.2020

NWGD.E202379 - Programmable Controllers for Use in Zone Classified Hazardous Locations | UL Product iQ

UL Product iQ™



NWGD.E202379 - Programmable Controllers for Use in Zone Classified Hazardous Locations

Programmable Controllers for Use in Zone Classified Hazardous Locations

See General Information for Programmable Controllers for Use in Zone Classified Hazardous Locations

R. STAHL HMI SYSTEMS GMBH

E202379

Adolf-Grimme-Allee 8
50829 Koeln, GERMANY

Class I, Zone 1, AEx e ib q [ib] IIC T4 Gb; Zone 21, AEx tb ib [ib] IIIA/IIC T115°C Db, Model(s) ET-208-TX-W00-AC-GL*, MT-208-TX-W00-AC-GL*

Class I, Zone 1, AEx e ib q [ib] IIC T4 Gb; Zone 21, AEx tb ib [ib] IIIA/IIC T115°C Db, Model(s) Operator Terminals, Types ET-208-TX-W00-DC-GL and MT-208-TX-W00-DC-GL providing intrinsically safe circuits when installed per Control Drawing No. 11100030.

* - providing intrinsically safe circuits when installed per Control Drawing No. 11100030

Last Updated on 2020-06-30

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10 CEC certificate

22.7.2020

NWGD7.E202379 - Programmable Controllers for Use in Zone Classified Hazardous Locations Certified for Canada | UL Product iQ

UL Product iQ™

NWGD7.E202379 - Programmable Controllers for Use in Zone Classified Hazardous Locations Certified for Canada

Programmable Controllers for Use in Zone Classified Hazardous Locations Certified for Canada

See General Information for Programmable Controllers for Use in Zone Classified Hazardous Locations Certified for Canada

R. STAHL HMI SYSTEMS GMBH

E202379

Adolf-Grimme-Allee 8

50829 Koeln, GERMANY

Class I, Zone 1, AEx e ib q [ib] IIC T4 Gb; Zone 21, AEx tb ib [ib] IIIA/IIIC T115°C Db, Model(s) ET-208-TX-W00-AC-GL*, MT-208-TX-W00-AC-GL***Class I, Zone 1, AEx e ib q [ib] IIC T4 Gb; Zone 21, AEx tb ib [ib] IIIA/IIIC T115°C Db, Model(s) Operator Terminals, Types ET-208-TX-W00-DC-GL and MT-208-TX-W00-DC-GL providing intrinsically safe circuits when installed per Control Drawing No. 11100030.**

* - providing intrinsically safe circuits when installed per Control Drawing No. 11100030

Last Updated on 2020-06-30

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11 DNV certificate

only version: ET-208-TX-W00-AC-GL



This is to certify:

That the Peripheral Equipment

with type designation(s)
ET-208-TX-W00-AC-GL

Issued to

R. Stahl HMI Systems GmbH
Köln, Nordrhein-Westfalen, Germany

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

Temperature	C
Humidity	B
Vibration	A
EMC	A
Enclosure	B (IP54)

Issued at **Hamburg** on **2020-05-29**

This Certificate is valid until **2025-05-28**.

DNV GL local station: **Essen**

Approval Engineer: **Holger Jansen**



for **DNV GL**
Digitally Signed By:
Papanuskas, Joannis

Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2020-02

www.dnvgl.com

Page 1 of 3

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Job Id: **262.1-033958-1**
Certificate No: **TAA00002SK**

Product description

Operator Interface 7" display with capacitive glass touch screen

Type: ET-208-TX-W00-AC-GL

Electric data

Nominal voltage: 115 – 230 Vac, 48 - 62 Hz
Processor type: Cortex A8, 800MHz
Operating System: Windows Embedded Compact 7

Display

Version: TFT colour display
Size: 7"
Resolution: WVGA 800 x 480
Touchscreen: capacitive

Interfaces

1 x Ethernet 10/100 Base-TX
2 x Serial: RS422, RS422/RS485
4 x 8 potential free contacts

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Drawings: Operating Instructions, Ver. 01.00.12, 2019-11-20
Paptor ET – 208, Dwg.No. 2013 20 7003 0
Assembly Dwg.No. 13100086 Rev01, 2014-08-22
Raptor-Disp-1, Dwg.No. 2012 05 02 2x
Raptor-CutOff-1, Dwg.No. 2012 05 07 0 S
Raptor-BB-1, Dwg.No. 2012 05 01 1x
Raptor-Adapt-BB-1, Dwg.No. 2010 05 10 0x
Raptor-Adapt-BB-2, Dwg.No. 2010 05 11 0x
Raptor-Adapt-PSAC-1, Dwg.No. 2010 05 09 0x
Datasheet: Operator Interface, Series 200, 2015/V 01.00.09
Test reports: Phoenix Testlab No. U200273E1, 2020-04-22
Phoenix Testlab No. E200273E1 + Annex, 2020-04-23
Phoenix Testlab No. E200273E2 + Annex, 2020-04-23
Dekra Test record BVSPS27212, 2015-01-12
Test Description Monitoring VC 01.04.00
Dekra Cer.No. IECEx BVS 15.0039X, 2015-04-28
Dekra No. DE/BVS/ExTR15.0036/00, 2015-04-23
Type Approval Assessment Report 2020-05-15



Job Id: **262.1-033958-1**
Certificate No: **TAA00002SK**

Tests carried out

Applicable tests according to DNVGL-CG-0339, December 2019

Marking of product

The products to be marked with:

- R. Stahl HMI Systems GmbH
- Model name
- Serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE

12 Release Notes

The chapter entitled "Release Notes" contains all the changes made in every version of the certificates.

Version 01.00.08

- Removal of previous release notes
- Changing HW Rev at cover for ET-208-TX-W00-AC
- Changing HW Rev at cover for ET-208-TX-W00-DC-GLN
- Addition of CCC certificate
- Removal notice at NEC and CEC certification
- Formal changes

Version 01.00.09

- Update of EAC certificate

Version 01.00.10

- Update of NEC and CEC certificate

Version 01.00.11

- Changing HW Rev at cover
- Addition of BIS certificate
- Shifting CCC certificate into operating instructions

Version 01.00.12

- Addition of "Customer confirmation letter" for Korea
- Formal changes

Version 01.00.13

- Correction of phone and fax no.
- Changing from DNV / GL -> into DNV
- Correction of certification designation KGS for Korea -> into KCS
- Renew IECEX certificate
- Renew PESO (Indian) certificate
- Renew JPNEEx (Japanese) certificate
- Formal changes

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