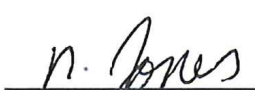




IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.:	IECEx SIR 16.0057	issue No.:0	Certificate history:
Status:	Current		
Date of Issue:	2016-06-20	Page 1 of 3	
Applicant:	R. STAHL HMI Systems GmbH Adolf-Grimme-Allee 8 50829 Köln Germany		
Equipment:	Trex Device Communicator		
Optional accessory:			
Type of Protection:	Intrinsically Safe		
Marking:	Ex ia [ia Ga] [ia Da IIIC] IIC T4 Gb Ta = -20°C ≤ Ta ≤ +50°C		
Approved for issue on behalf of the IECEx Certification Body:	N Jones		
Position:	Certification Manager		
Signature: (for printed version)			
Date:	2016-06-20		

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

sira
CERTIFICATION





IECEx Certificate of Conformity

Certificate No.: IECEx SIR 16.0057

Date of Issue: 2016-06-20

Issue No.: 0

Page 2 of 3

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

Additional Manufacturing location
(s):

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

STANDARDS:

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

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition: 6.0

IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 6.0

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

TEST & ASSESSMENT REPORTS:

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

Test Report:

GB/SIR/ExTR16.0122/00

Quality Assessment Report:

DE/BVS/QAR06.0007/08



IECEx Certificate of Conformity

Certificate No.:

IECEx SIR 16.0057

Date of Issue:

2016-06-20

Issue No.: 0

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Trex Device Communicator is a handheld, battery-powered, intrinsically safe, portable maintenance tool, typically for use in a process plant. The device communicates with microprocessor-based measurement and actuation field devices. It supports multiple communication protocols including HART® and FOUNDATIONTM Fieldbus.

The equipment is powered by four lithium-ion cells (ICR18650K) in a 2-series x 2 parallel combination, with a peak voltage of 8.4 V.

Refer to the Annexe for Type Designations and Entity Parameters

CONDITIONS OF CERTIFICATION: NO

SG Inspection and Test Ltd.

Invoice

15 Highcroft Avenue, Bognor Regis, West Sussex, PO22 8DQ

Mobile: (07810) 742 482

e-mail: simon.s.garston@btinternet.com

To: **CSA Group Testing UK Ltd.**
Unit 6, Hawarden Industrial Park
Hawarden
Deeside
CH5 3US

Our Ref: SIRA/Jun/2016/175

Date: **10 June 2016**

Re: CSA Inspection Services at the following manufacturing facilities:

	Location/Purpose:	Fac.Contract#:	Date:	Amount due:
1	Rosemount Measurement Ltd.	212529	6 June 2016	£ 266.00 p
		243801	6 June 2016	
2	Monitran Ltd.	245724	6 June 2016	£ 230.00 p
3	De Soutter Medical Ltd.	187623	6 June 2016	£ 230.00 p
4	Crowcon Detection Instruments Ltd.	181473	7 June 2016	£ 230.00 p
5	Oleo International Holdings Ltd.	160733	7 June 2016	£ 230.00 p
6	Anixter (UK) Ltd.	214609	8 June 2016	£ 230.00 p
7	Cable Management Systems Ltd.	220935	8 June 2016	£ 266.00 p
		221563	8 June 2016	
				
				£1682.00 p

Payment Terms: Strictly 30 days from date of invoice

Goods remain the property of SG Inspection and Test Ltd. until invoice is paid in full.

Payment Details: Barclays Bank

Account Name: SG Inspection and Test Ltd. Account No.: 33636801 Sort Code: 20-20-62

SG Inspection and Test Ltd.. Registered in England and Wales 6983731.

Registered Office: Avenue House, Southgate, Chichester, PO19 1ES.

Annexe to: IECEx SIR 16.0057 Issue 0 Annexe
Applicant: R. STAHL HMI Systems GmbH
Apparatus: Trex Device Communicator



The Trex Device Communicator is a handheld, battery-powered, intrinsically safe, portable maintenance tool, typically for use in a process plant. The device communicates with microprocessor-based measurement and actuation field devices. It supports multiple communication protocols including HART® and FOUNDATION™ Fieldbus.

The equipment is powered by four lithium-ion cells (ICR18650K) in a 2-series x 2 parallel combination, with a peak voltage of 8.4 V.

Type designation: TREX – a b c d e f g

where:

- a = Communication Module:** (specifies the installed devices according to IEC 60079-11):
C Device Communicator
L Device Communicator Plus
E Blank
- b = Applications:** (specifies software items and does not affect intrinsic safety)
H HART
L HART + FOUNDATION Fieldbus
- c = Power Module Type:** (specifies the installed devices according to IEC 60079-11)
P Rechargeable Li-Ion Power Module
- d = Product Certification:**
KL ATEX, CSA, CSA us, IECEx Intrinsically Safe (includes FISCO as applicable)
KB CSA and CSA us, Intrinsically Safe
- e = Radio Options:**
W WiFi / Bluetooth
9 None
- f = Support:**
Sn Standard Support (not relevant for hazardous area certification)
Pn Premium Support (not relevant for hazardous area certification)
- g = Options:**
These options do not affect intrinsic safety

The Trex Device Communicator consists of the following basic modules:

- a) Baseboard main unit with CPU and I.S. power supply circuits;
- b) Front panel with keypad, LED backlit touch-display;
- c) Replaceable power module.

The following modules are optionally built in or may be attached by the customer or a service center:

- d) Wireless Board
- e) Trex Device Communicator communication module.
- f) Trex Device Communicator Plus communication module

Apart from the HART, mA and FOUNDATION Fieldbus, two connectors (protected by rubber covers) are for use outside the hazardous area:

- Micro USB interface for downloading updates from a PC: 7.13 V, 85 mA.
- AC adaptor for charging the power module and operating in parallel: 12-17 Vdc, 4A

There are three versions:

- Trex Device Communicator blank module, with no electronics or external connections;
- Trex Device Communicator communication module, with four external connections;
- Trex Device Communicator Plus communication module, with nine external connections.

Date: 20 June 2016

Page 1 of 3

Form 9530 Issue 1

Sira Certification Service

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Web: www.csagroupuk.org

Annexe to: IECEx SIR 16.0057 Issue 0 Annexe

Applicant: R. STAHL HMI Systems GmbH

Apparatus: Trex Device Communicator



The **Trex Device Communicator communication module** has the following entity parameters:

Table 1			
	FOUNDATION ^(TM) fieldbus (non-FISCO)	FOUNDATION ^(TM) fieldbus (FISCO)	HART®
	FF + and -	FF + and -	HART + and -
Ui	30 Vdc	30 Vdc	30 Vdc
Ii	380 mA	215 mA (IIC) 380 mA (IIB)	200 mA
Pi	1.3 W	1.9 W (IIC) 5.3 W (IIB)	1.0 W
Ci	0	0	0
Li	0	0	0
Uo	1.89 V	1.89 V	1.89 V
Io	32 µA	32 µA	32 µA
Po	61 µW	61 µW	61 µW
Co	14.3 µF	14.3 µF	14.3 µF
Lo	100 mH	100 mH	100 mH

The **Trex Device Communicator Plus communication module** has the following entity parameters:

Table 2							
	mA- Interface	FOUNDATION ^(TM) fieldbus (non-FISCO)		HART®		FOUNDATION ^(TM) fieldbus (FISCO)	
	mA	FF pwr and F-	FF + and -	HART + pwr	HART + and -	FF pwr and F-	FF + and -
Ui	30 Vdc	17.5 Vdc	30 Vdc	30 Vdc	30 Vdc	17.5 Vdc	30 Vdc
Ii	200mA	380 mA	380 mA	200 mA	200 mA	380 mA	215 mA (IIC) 380 mA (IIB)
Pi	1.0 W	1.3 W	1.3 W	1.0 W	1.0 W	1.3 W	1.9 W (IIC) 5.3 W (IIB)
Ci	0	231 nF	0	0	0	231 nF	0
Li	0	0	0	0	0	0	0
Uo	0	17.31V	1.89 V	25.69 V	1.89 V	17.31V	1.89 V
Io	0	199 mA	32 µA	105 mA	1.9 mA	199 mA	32 µA
Po	0	0.94 W	61 µW	668 mW	3.6 mW	0.94 W	61 µW
Co	-	See table 3	14.3 µF	See table 4	14.3 µF	See table 3	14.3 µF
Lo	-	See table 3	100 mH	See table 4	100 mH	See table 3	100 mH

Table 3: Co and Lo values for FF pwr and F-			
Co [nF]	19	69	115
Lo [µH]	100	50	30

Table 4: Co and Lo values for HART + pwr				
Co [nF]	57	64	75	102
Lo [µH]	1000	750	500	100

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Hawarden, CH5 3US, United Kingdom

Date: 20 June 2016

Page 2 of 3

Form 9530 Issue 1

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Annexe to: IECEx SIR 16.0057 Issue 0 Annexe
Applicant: R. STAHL HMI Systems GmbH
Apparatus: Trex Device Communicator



CONDITIONS OF MANUFACTURE

- i. The manufacturer shall confirm by a routine test on 100% of samples that the output voltage and current of the CDB-1 (FDC) and BB crowbars are within the maximum value permitted.
- ii. The AC Adapter (charger) supplied with the equipment shall comply with the:
 - IEC 60950 series, IEC 61010-1 or a technically equivalent standard or
 - safety extra low voltage (SELV)

The maximum output voltage shall not exceed 17 Vdc. The following type only has been approved for use with the Trex Device Communicator:

 - Type PSDx-y0-XX manufactured by Powersolve Electronics Ltd.
- iii. Fuses that are energised in the hazardous area and are under encapsulation shall be treated (e.g. with silicone sealant) before encapsulation to prevent ingress of casting compound into the body of the fuse.

Date: 20 June 2016

Page 3 of 3

Form 9530 Issue 1

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