



Operating Instructions

RFIDi-RDR-1-xxx

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1 Preface

These operating instructions are intended for the safe installation of the RFIDi-RDR-1-xxx chipcard reader and cover all Ex-relevant aspects.

 For the correct operation of all associated components please note, in addition to these operating instructions, all other operating instructions enclosed in this delivery as well as the operating instructions of the additional equipment to be connected.

2 Function RFIDi

The RFIDi-RDR-1-xxx chipcard readers are explosion-protected equipment for installation in hazardous areas of zones 1, 2, 21 and 22. The devices may be connected to intrinsically safe type RSi reader interfaces of R. STAHL HMI Systems GmbH's operator interfaces. Power supply and data communication takes place via this reader interface.

The RFIDi chipcard readers are proximity readers that can read information from the chip cards without direct contact and transfer this to the operator interfaces.

The RFIDi chipcard readers can be mounted inside a front panel or a desktop housing.

3 Conformity to standards

The RFIDi-RDR-1-xxx chipcard readers comply with the following standards and directive 94/9/EC:

- EN 60079-0 : 2006 (General requirements)
- EN 60079-11 : 2007 (Gas "i")
- EN 61241-0 : 2006 (General requirements Dust)
- EN 61241-11 : 2006 (Dust "iD")

4 Certificates

The RFIDi-RDR-1-xxx chipcard readers are certified for installation in the following areas:

According to ATEX Directive 94/9/EC

for installation in zones 1, 2, 21 and 2

IECEX (International Electrotechnical Commission)

for installation in zones 1, 2, 21 and 2

4.1 ATEX

The readers' ATEX certification has the following number:

Certificate number:

TÜV 09 ATEX 7533 X


4.2 IECEX

The readers' IECEX certification has the following number:

Certificate number:

IECEX TUR 09.0005X

5 Marking

Manufacturer	R. STAHL HMI Systems GmbH	
Type code	RFIDi-RDR-1-xxx	
CE classification:	CE ₀₁₅₈	
Testing authority and certificate number:		
ATEX	TÜV 09 ATEX 7533 X	
IECEX	IECEX TUR 09.0005X	
Ex classification:		
ATEX guideline 94/9/EC		II 2 G Ex ib IIC T4
		II 2 D Ex ibD 21 T90
IECEX		Ex ib IIC T4 Gb
		Ex ib IIIC T90°C Db

6 Permitted maximum values

Voltage:	
U_i	= 10.4 V
I_i	= 220 mA
P_i	= 2.29 W
Group IIC	
C_i	= 0 μ F
L_i	= 0 mH
Group IIB	
C_i	= 0 μ F
L_i	= 0 mH

Signal input / output:			
U_i	= 5.9 V	U_o	= 11.2 V
I_i	= 50 mA	I_o	= 220 mA
P_i	= 62 mW	P_o	= 2.29 W
Group IIC			
C_i	= 0.5 μ F	C_o	= 1.3 μ F
L_i	= 0 mH	L_o	= 20 μ H
Group IIB			
C_i	= 0.5 μ F	C_o	= 10 μ F
L_i	= 0 mH	L_o	= 50 μ H

7 Ambient temperature range

The temperature range is -30 ... +60°C.

8 Type of protection

- Front IP 66
- Rear IP 20

9 Proof of intrinsic safety

Proof of intrinsic safety for the connection of chipcard reader RFIDi-RDR-1-xxx with ET/MT-xx6 operator interfaces and ET-Falcon.

9.1 General information

Proof of intrinsic safety is based on the principles of EN 60079-14 and the standards referred to therein. Particular reference is made to Chapter 12 "Additional requirements for the type of protection i -intrinsic safety" in EN 60079-14.

Proof has been drawn up on the basis of conformity certification as per EN 60079-0 and EN 60079-11 or the EC type examination certificate in accordance with Directive 94/9/EC and the comparison of the safety-related data listed in these documents.

The following EC-type examination certificates were used:

<i>Device</i>		<i>EC type examination certificate</i>
ET-xx6	—	TÜV 05 ATEX 7176 X
MT-xx6	—	TÜV 07 ATEX 7471 X
ET-xx6-A	—	TÜV 11 ATEX 7041 X
ET-Falcon	—	BVS 03 ATEX E 226
RFIDi-RDR-1-xxx	—	TÜV 09 ATEX 7533 X

The testing authority has listed **all** conditions applicable to intrinsic safety in the EC type examination certificates.

If an EC type examination certificate for a device only specifies the input voltage (U_i), for example, intrinsic safety is guaranteed if the associated supply does not exceed this voltage (U_o is less than/equals U_i).

Other output parameters specified in the examination certificate of the power supply (e.g. I_o , P_o) are in this case irrelevant to intrinsic safety.

☞ The data given in this document do **NOT** absolve the fitter and/or operator of the systems from their obligation to ensure compliance with legal requirements, directives and regulations. Due diligence remains the sole responsibility of the fitter and/or operator !

9.2 Interconnection

In this part we list the voltages, currents, capacitance and inductance values of all circuits to determine whether the chipcard reader RFIDi-RDR-1-xxx may be connected to the Eagle/Open/Remote HMI and Falcon series operator interfaces **WITHOUT** cable.

☞ The data given for this interconnection do **NOT** absolve the fitter and/or operator of the systems from their obligation and responsibility to ensure compliance with legal requirements, directives and regulations. Due diligence remains the sole responsibility of the fitter and/or operator !

The cable length of the chipcard reader must not exceed 2.5 m. For proof of intrinsic safety, the C and L values resulting from actual cable length and cable type **must be** taken into account.

a) ET/MT-xx6 operator interface with chipcard reader RFIDi-RDR-1-xxx (**without** cable)

Source / active		==>	Acceptor / passive
ET/MT-xx6			RFIDi-RDR-1-xxx
Terminal X8.3+9			chipcard reader connection 1+2
Power supply			
U _o = 10.4 VDC		≤	U _i = 10.4 VDC
I _o = 220 mA		≤	I _i = 220 mA
P _o = 2.29 W		≤	P _i = 2.29 W
C _{oIIC} [μF] =	2.41	≥	C _i = 0
L _{oIIC} [mH] =	0.02	≥	L _i = 0
C _{oIIB} [μF] =	12	≥	C _i = 0
L _{oIIB} [μH] =	50	≥	L _i = 0

C_o and L_o pairs directly above/underneath each other may be used.

Source / active		==>	Acceptor / passive
ET/MT-xx6			RFIDi-RDR-1-xxx
Terminal X8.5-6			chipcard reader connection 5+7
Signal input / output			
U _o = 5.4 VDC		≤	U _i = 5.9 VDC
I _o = 49 mA		≤	I _i = 50 mA
P _o = 62 mW		≤	P _i = 62 mW
C _{oIIC} [μF] =	45	≥	C _i = 0.5 μF
L _{oIIC} [μH] =	2	≥	L _i = 0
C _{oIIB} [μF] =	78	≥	C _i = 0.5 μF
L _{oIIB} [mH] =	20	≥	L _i = 0

C_o and L_o pairs directly above/underneath each other may be used.

Source / active		==>	Acceptor / passive
RFIDi-RDR-1-xxx			ET/MT-xx6
chipcard reader connection 5+7			Terminal X8.5-6
Signal input / output			
U _o = 11.2 VDC		≤	U _i = 15 VDC
I _o = 220 mA		≤	I _i = 500 mA
P _o = 2.29 W		≤	P _i = 2.5 W
C _{oIIC} [μF] =	1.3	≥	C _i = 0
L _{oIIC} [μH] =	20	≥	L _i = 0
C _{oIIB} [μF] =	10	≥	C _i = 0
L _{oIIB} [μH] =	50	≥	L _i = 0

C_o and L_o pairs directly above/underneath each other may be used.

b) ET-xx6-A operator interface with chipcard reader RFIDi-RDR-1-xxx (**without** cable)

Source / active	==>	Acceptor / passive
ET-xx6-A		RFIDi-RDR-1-xxx
Terminal X8.0+3		chipcard reader connection 1+2
Power supply		
Uo = 10.4 VDC	≤	Ui = 10.4 VDC
Io = 220 mA	≤	Ii = 220 mA
Po = 2.29 W	≤	Pi = 2.29 W
Co [μF] =	≥	Ci = 0 μF
Lo [mH] =	≥	Li = 0 mH

Source / active	==>	Acceptor / passive
ET-xx6-A		RFIDi-RDR-1-xxx
Terminal X8.5-6		chipcard reader connection 5+7
Signal input / output		
Uo = 5.36 VDC	≤	Ui = 5.9 VDC
Io = 46 mA	≤	Ii = 50 mA
Po = 62 mW	≤	Pi = 62 mW
CO _{IIC} [μF] =	≥	Ci = 0.5 μF
LO _{IIC} [μH] =	≥	Li = 0 mH
CO _{IIB} [μF] =	≥	Ci = 0.5 μF
LO _{IIB} [mH] =	≥	Li = 0 mH

Source / active	==>	Acceptor / passive
RFIDi-RDR-1-xxx		ET-xx6-A
chipcard reader connection 5+7		Terminal X8.5-6
Signal input / output		
Uo = 11.2 VDC	≤	Ui = 15 VDC
Io = 220 mA	≤	Ii = 500 mA
Po = 2.29 W	≤	Pi = 2.5 W
CO _{IIC} [μF] =	≥	Ci = 0 μF
LO _{IIC} [μH] =	≥	Li = 0 mH
CO _{IIB} [μF] =	≥	Ci = 0 μF
LO _{IIB} [μH] =	≥	Li = 0 mH

c) ET-Falcon operator interface with chipcard reader RFIDi-RDR-1-xxx (without cable)

Source / active		==>	Acceptor / passive
9143/10-104-220-*0			ET-**-RS-422-***
Terminal 10 & 11			Terminal X7, 1 & 2
Power supply reader module			
U _o = 10.4 VDC		≤	U _i = 12.4 VDC
I _o = 220 mA		≤	I _i = 220 mA
C _o IC [μF] =	2.4	≤	C _i negligible
L _o IC [μH] =	240	≤	L _i negligible
C _o IB [μF] =	16.8	≤	C _i negligible
L _o IB [mH] =	1.5	≤	L _i negligible

C_o and L_o pairs directly above/underneath each other may be used.

Source / active		==>	Acceptor / passive
ET-**-RS-422-RSi			RFIDi-RDR-1-xxx
Terminal X7, 3 & 9			chipcard reader connection 1+2
Power supply reader			
U _o = 10.4 V		≤	U _i = 10.4 VDC
I _o = 220 mA		≤	I _i = 220 mA
C _o IC [μF] =	60 1.8	≥	C _i = 0
L _o IC [mH] =	0.1 0.05	≥	L _i = 0
C _o IB [μF] =	1000 5.1	≥	C _i = 0
L _o IB [mH] =	2 1	≥	L _i = 0

C_o and L_o pairs directly above/underneath each other may be used.

Source / active		==>	Acceptor / passive
ET-**-RS-422-RSi			RFIDi-RDR-1-xxx
Terminal X7, 5 & 6			chipcard reader connection 5+7
Signal input / output			
U _o = 5.4 VDC		≤	U _i = 5.9 VDC
I _o = 49 mA		≤	I _i = 50 mA
P _o = 62 mW		≤	P _i = 62 mW
C _o [μF] =	65	≥	C _i = 0.5 μF
L _o [mH] =	14	≥	L _i = 0

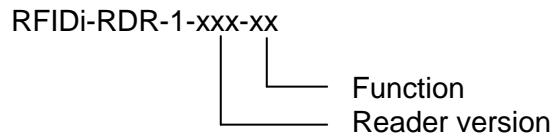
C_o and L_o pairs directly above/underneath each other may be used.

Source / active		==>	Acceptor / passive
RFIDi-RDR-1-xxx			ET-**-RS-422-RSi
chipcard reader connection 5+7			Terminal X7, 5 & 6
Signal input / output			
U _o = 11.2 VDC		≤	U _i = 15 VDC
I _o = 220 mA		≤	I _i = 500 mA
P _o = 2.29 W		≤	P _i = 2.5 W
C _o IC [μF] =	1.3	≥	C _i negligible
L _o IC [μH] =	20	≥	L _i negligible
C _o IB [μF] =	10	≥	C _i negligible
L _o IB [μH] =	50	≥	L _i negligible

C_o and L_o pairs directly above/underneath each other may be used.

10 Type code

Type code:



Product type:

Order number	Description
	Version
RFIDi-RDR-1-MIF-CRYPT	Mifare reader, protocol-based, for Falcon and Eagle
RFIDi-RDR-1-MIF-ASC	Mifare reader, sends ASCII value with CR and LF, for Open HMI and Remote HMI

10.1 Software function

Two chipcard readers that differ in their firmware are available for connection to the R. STAHL HMI Systems GmbH operator interfaces. The type of chipcard reader to be connected is determined by which operator interface it is to be connected to.

Both types based on Mifare technology.

For the Falcon and Eagle series operator interfaces, this is the protocol-based RFIDi-RDR-1-MIF-CRYPT Mifare reader.

For the Open HMI and Remote HMI series, this is the serial RFIDi-RDR-1-MIF-ASC Mifare reader, which sends the card information to the operator interface as an ASCII value with CR and LF.

11 Safety Advice

This chapter is a summary of the key safety measures. The summary is supplementary to existing rules which staff also have to study.

The safety of persons and equipment in hazardous areas depends on compliance with all relevant safety regulations. Thus, the installation and maintenance staff carry a particular responsibility, requiring precise knowledge of the applicable regulations and conditions.

11.1 Installation and operation

Please note the following when installing and operating the device:

- The national regulations for installation and assembly apply (e.g. EN 60079-14).
- The devices may be installed in zones 1 or 2 and 21 or 22.
- For use in zones 21 or 22 the RFIDi chipcard reader has to be installed in a suitable enclosure with a minimal type of protection of IP 6x according to IEC 60529.
- If the RFIDi chipcard reader is mounted inside a cut out of a suitable housing with protection type Ex-e, its mechanical protection regarding impact and IP code protection up to IP 66 is maintained even after the chipcard reader has been installed. The internal separation requirements and the temperature assessment of the Ex-e housing must be in accordance with the applicable standards. The clearance of RFIDi chipcard reader terminals to other bare conducting parts (excepting ground) inside the Ex-e housing shall be at least 50 mm.
- The RFIDi chipcard reader housing must be earthed via the earth connection (earthing screw) with a wire minimum diameter of 4 mm² at the back of the housing !
- The intrinsically safe circuits must be installed according to applicable regulations.
- The safety values of the RFIDi chipcard reader must match those of the device to which it is connected.
- The devices must only be operated when it is closed.
- If the front plate is in any way damaged, the RFIDi chipcard reader must be shut down immediately !
- During assembly and operation of the chipcard reader electrostatic surface charging must not exceed that caused by manual rubbing.
- National safety and accident prevention rules.
- Generally accepted technical rules.
- Safety instructions contained in these operating instructions.
- Any damage may compromise the explosion protection.

Use the device for its intended purpose only (see "Device Function").

Incorrect or unauthorized use and non-compliance with the instructions in this manual will void any warranty on our part.

No changes to the device that compromise its explosion protection are permitted !

The devices may only be installed and operated in an undamaged, dry and clean condition !

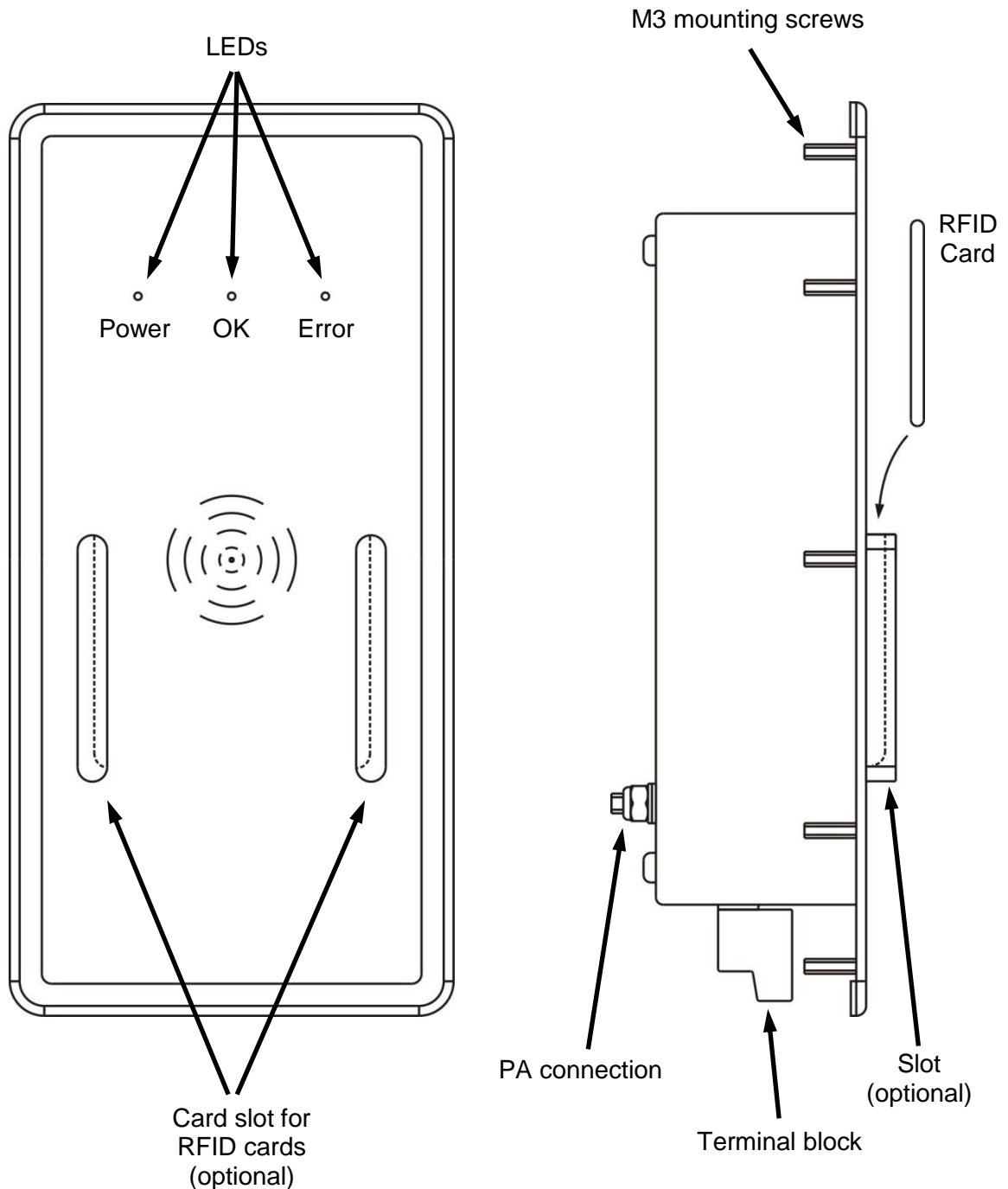
12 Assembly and disassembly

12.1 General information

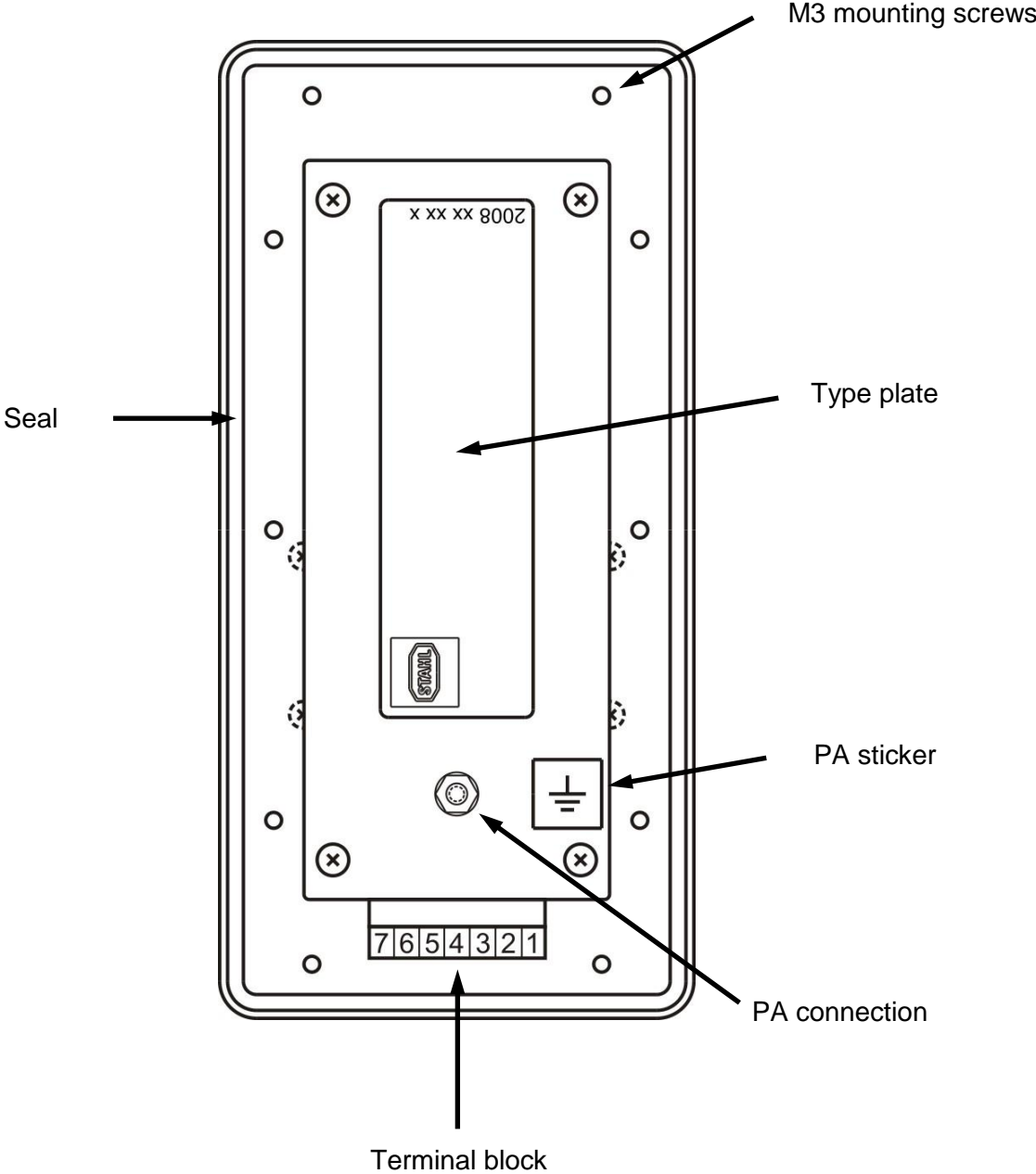
Assembly and disassembly are subject to general technical rules. Additional, specific safety regulations apply to electronic and pneumatic installations.

12.2 Views

Type with card slot:



Back view with terminals:



12.3 Mechanical dimensions

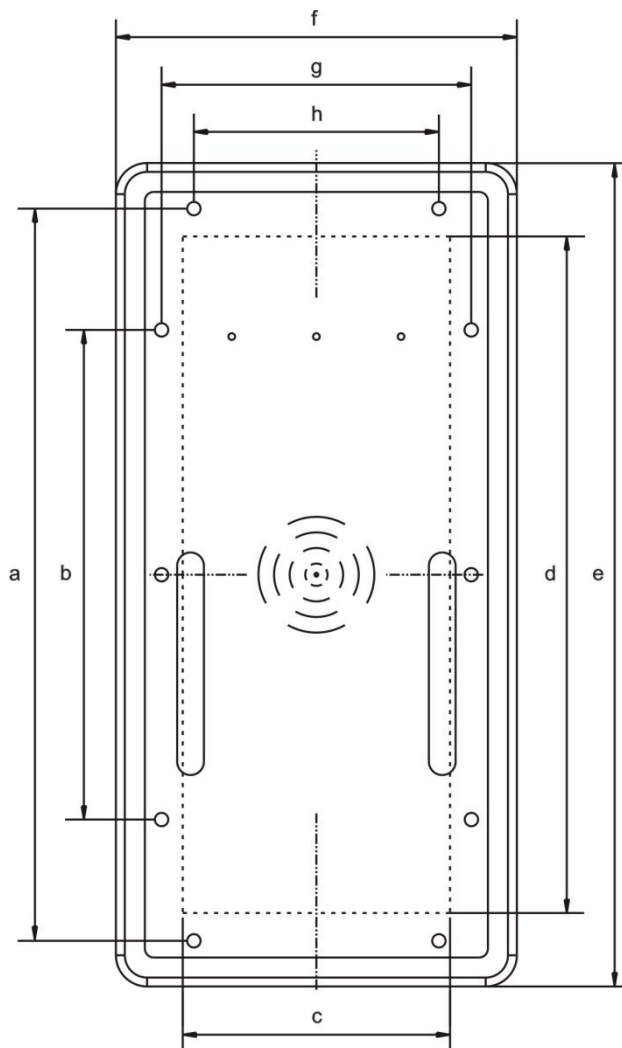
Dimensions in mm

12.3.1 Overview

Chipcard reader	Front plate (h x w)	Cut-out (h x w)	Hole pattern	Material thickness
RFIDi-RDR-1-xxx	185 x 90	152 x 60 (±1)	see diagram	up to 6
	Depth of cut-out (depth)		Design front (height)	
	50		9 with slot 3 without slot	

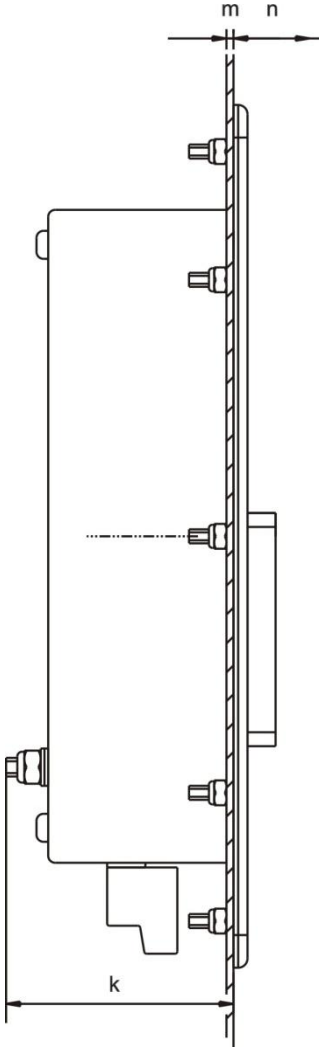
12.3.2 Dimensional drawing

Front view:



- e = dimensions front plate height (h) = 185
- f = dimensions front plate width (w) = 90
- c = cut-out width (w) = 60 (± 1)
- d = cut-out height (h) = 152 (± 1)
- a = distance fitting holes = 164.5
- b = distance fitting holes = 110
- g = distance fitting holes = 69.5
- hb = distance fitting holes = 55

Lateral view:



- k = depth of cut-out = 50
- m = material thickness = 1.5 mm up to 6 mm for metallic enclosures
2.5 mm up to 6 mm for plastic enclosures
- n = Design front height
 - with slot = 9
 - without slot = 3

12.4 Installation instructions

The RFIDi chipcard reader is intended for installation in an appropriate desk housing or control panel. It may be installed in any position.

For use in zones 21 or 22 the RFIDi chipcard reader has to be installed in a suitable enclosure with a minimal type of protection of IP 6x according to IEC 60529.

If the RFIDi chipcard reader has **NOT** been mounted by the manufacturer, a sufficiently large cut-out and a hole pattern for mounting the chipcard reader must be provided.

- Make a cut-out with the following dimensions:
152 (±1) mm (height) x 60 (±1) mm (width).
- Drill 10 holes of a diameter of 3.5 mm according to the hole pattern.
- Mount the chipcard reader inside the cut-out and use the self-locking nuts (10x M3) provided to affix the chipcard reader.

Optimum sealing:

- Tighten the nuts lightly.
- Check the position of the chipcard reader, ensuring above all that it **is correctly positioned**.
- Now fully tighten the nuts.
- Connect the reader's cable to the corresponding terminal at the operator interface according to the connection diagram .(terminal X8 for Eagle/OpenHMI/RemoteHMI or terminal X7 for Falcon)



Earth:

The chipcard reader's housing must be earthed via the PA connection (earthing screw) at the back of the housing !

The wire used must have a minimum diameter of 4 mm² !

13 Operation

13.1 General information

When operating the devices, particular care shall be taken that:

- The chipcard reader has been properly installed according to instructions,
- the chipcard reader is not damaged,
- all screws are tightened fast,
- the cable is connected properly.
- the chipcard reader's housing has been connected to earth via the PA connection.

13.2 Connections RFIDi-RDR-1-MIF

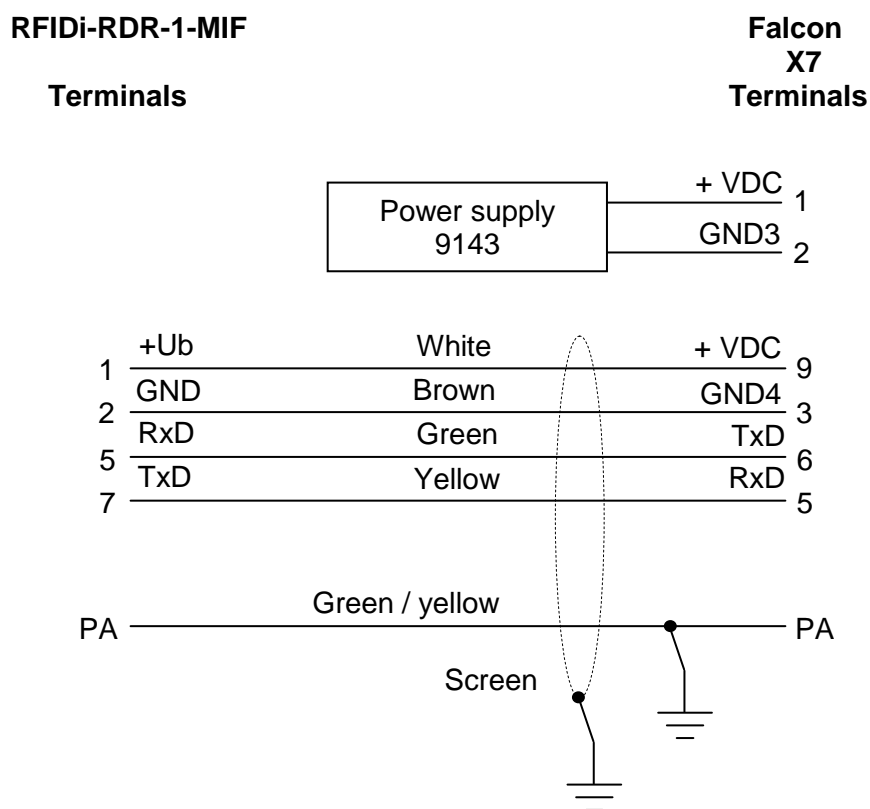
The chipcard readers may be fitted with a connection cable of a maximum length of 2.5 m. If mounted at the factory, the chipcard reader is wired and ready to run. If the customer installs the chipcard reader, the cable has to be connected to terminal X8 (Eagle/Open HMI/Remote HMI) or X7 (Falcon) of the operator interface, according to the diagram below.



Please note the different wiring for the power supply of the chipcard readers, which result from the different hardware revisions of the Eagle, Open HMI and Remote HMI series !

13.2.1 Connection cable Falcon

If the chipcard readers are to be operated together with operator interfaces of the Falcon series, this requires an additional power supply type 9143/10-104-220-x0 !



The shielding connection (green/yellow cable) must be connected to the PA terminal of the operator interfaces !

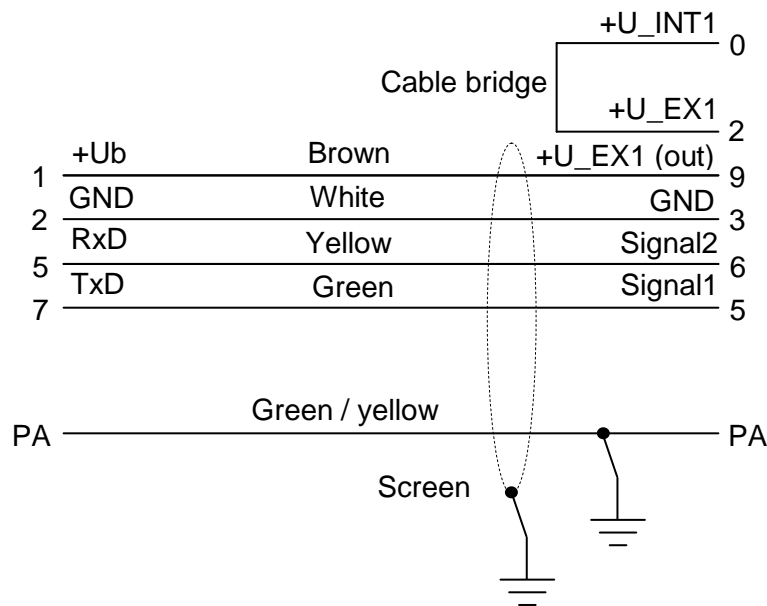
13.2.2 Connection cable Eagle/Open HMI/Remote HMI HW-Rev. 2

RFIDi-RDR-1-MIF

Eagle/Open HMI/Remote HMI
X8

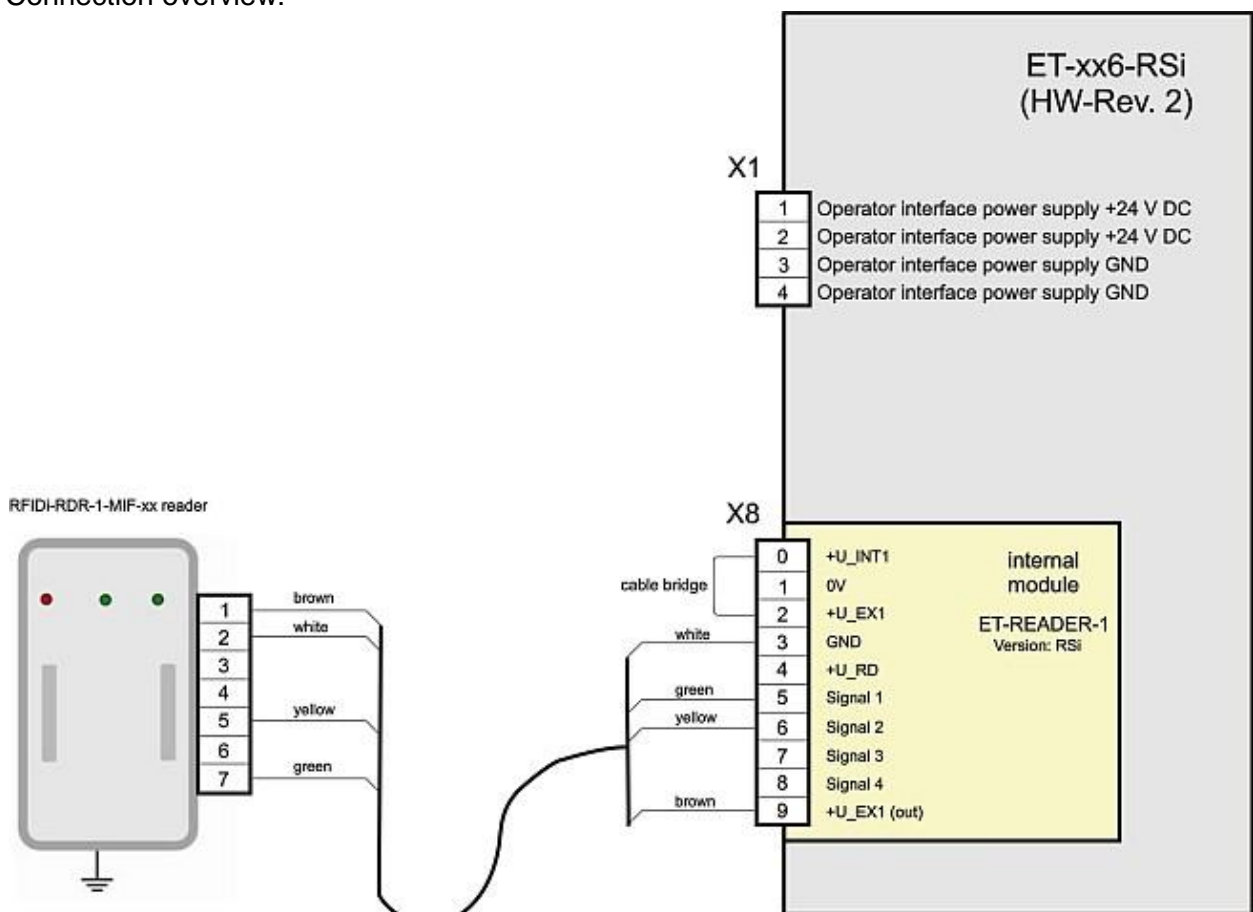
Terminals

Terminals



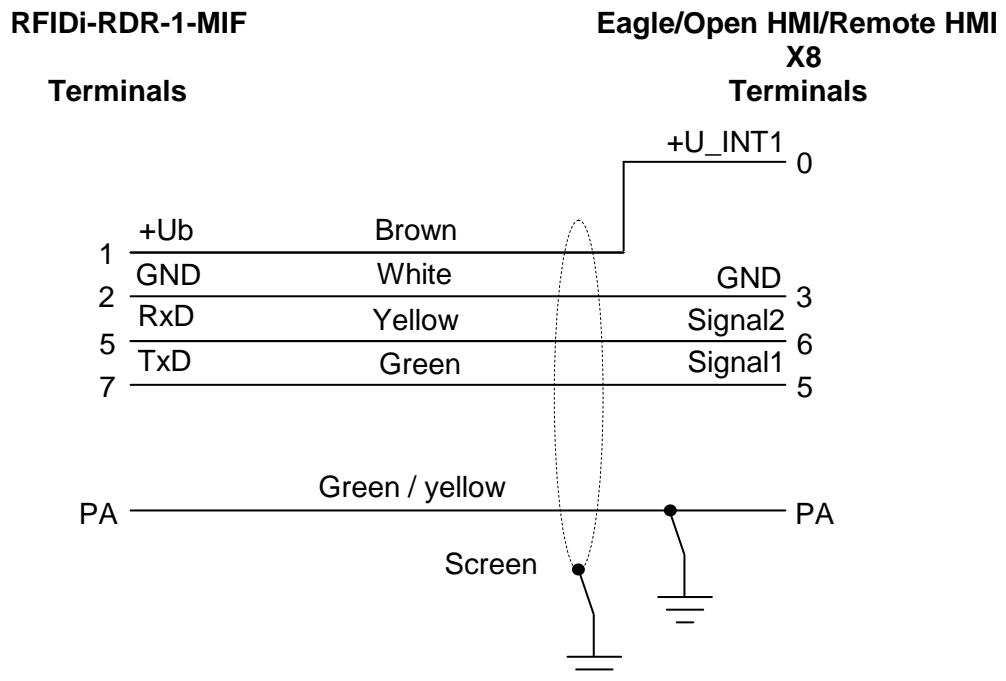
The shielding connection (green/yellow cable) must be connected to the PA terminal block of the operator interfaces !

Connection overview:



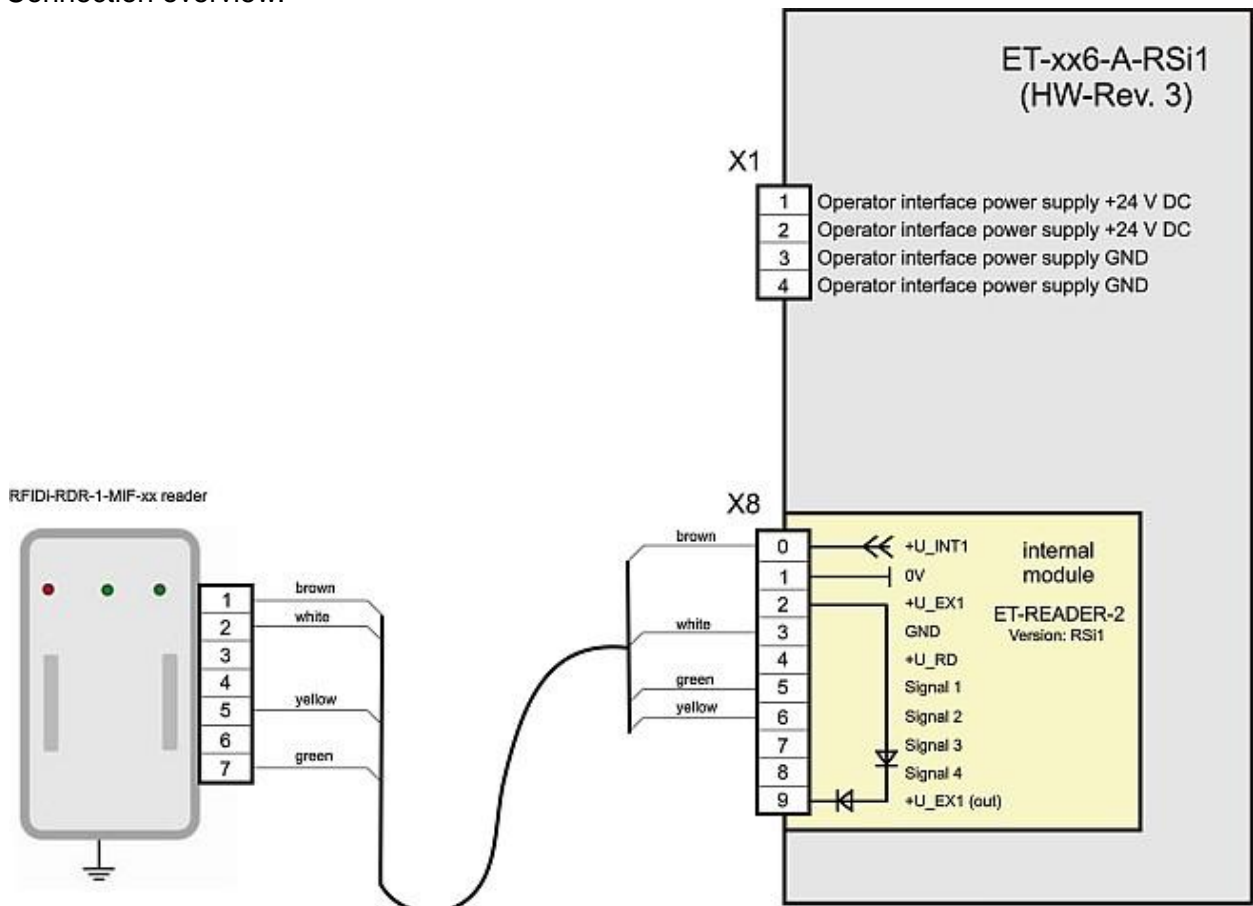
13.2.3 Connection cable Eagle/Open HMI/Remote HMI HW-Rev. 3

Type RSi1 connection version 2



The shielding connection (green/yellow cable) must be connected to the PA terminal block of the operator interfaces !

Connection overview:



14 Maintenance, service

Associated equipment is subject to maintenance, service and testing according to guidelines 1999/92/EC, IEC/EN 60079-14 and IEC/EN 60079-19 and occupational health and safety guidelines.

The chipcard readers contain no replaceable parts. It is therefore not necessary to carry out regular adjustments.

Maintenance should focus on the following:

- Seal wear
- Damage to the front plate
- All cables and lines are properly connected and undamaged
- Housing damage

14.1.1 Servicing

It is the responsibility of the operator of an electrical plant in a hazardous environment to have the plant serviced. Please also note the appropriate national rules and regulations.

15 Troubleshooting

The RFIDi chipcard readers cannot be repaired.

In addition, the following applies:

Devices operated in hazardous areas must not be modified. Repairs may only be carried out by qualified, authorized staff specially trained for this purpose.

- ☞ Repairs may only be carried out by specially trained staff who are familiar with all basic conditions of the applicable user regulations and – if necessary – have been authorized by the manufacturer.

16 Disposal

Disposal of packaging and used parts is subject to regulations valid in whichever country the device has been installed.

The disposal of devices sold after August 13th, 2005, and installed in countries under the jurisdiction of the EU is governed by directive 2002/96/EC on waste electrical and electronic equipment (WEEE). Under this directive, the devices are listed in category 9 (monitoring and control instruments).

We shall take back our devices according to our General Terms and Conditions.

16.1.1 ROHS directive 2002/95/EC

The prohibition of hazardous substances as detailed in directive 2002/95/EC (ROHS) does not apply to electronic equipment of categories 8 and 9, and is therefore not applicable to the equipment described in these operating instructions.

16.1.2 China ROHS labelling

According to new Chinese legislation in force since 01.03.2007, all devices containing hazardous substances must be labeled accordingly.

For our chipcard readers, the following conditions apply:

Names and contents of toxic or hazardous substances or elements:

Part Name	Toxic or hazardous substances and elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexa- valent Chromi- um (Cr (VI))	Poly- brominated Biphenyls (PBB)	Poly- brominated diphenyl ethers (PBDE)
Housing	○	○	○	○	○	○
Display	○	○	○	○	○	○
all PCBs	X	○	○	○	○	○
Miscellaneous	○	○	○	○	○	○

○ Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirements in SJ/T11363-2006.

X Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials for this part is below the limit requirements in SJ/T11363-2006.

17 Certificates

The chapter entitled "Certificates" will contain the first page of the EC type examination certificate plus the first page of the most recent supplement.

All technical details contained in the EC type examination certificate are, however, part of these operating instructions.

The complete certificate can be downloaded from the homepage of R. STAHL HMI Systems GmbH or a copy can be ordered from R. STAHL HMI Systems GmbH.

17.1 Declaration of EC conformity

EG - Konformitätserklärung
EC-Declaration of Conformity
 CE-Déclaration de Conformité



Wir/ We /Nous

R. STAHL HMI Systems GmbH
 Im Gewerbegebiet Pesch 14
 D-50767 Köln

<p>erklären in alleiniger Verantwortung dass unser Produkt: <i>declare under our sole responsibility that the product:</i> <i>attestons sous notre responsabilité que le produit:</i></p>	<p>RFID-Chipcard Reader Typ</p> <p style="text-align: center;">RFIDi-RDR-1-MIF</p>
<p>gekennzeichnet: <i>marked:</i> <i>marqué:</i></p>	<p> II 2G Ex ib IIC T4 II 2 D Ex ibD 21 T90</p>
<p>übereinstimmt mit der/den folgenden Norm(en) oder normativen Dokumenten: <i>is in conformity with the following standard(s) or normative documents:</i> <i>est conforme aux norme(s) ou aux documents normatifs suivants:</i></p>	
<p>Bestimmung der Richtlinie <i>Terms of the directive</i> <i>Préscription de la directive</i></p>	<p>Titel und/oder Nr. sowie Ausgabedatum der Norm <i>Title and/or No. and date of issue of the standard</i> <i>Titre et/ou No. Ainsi que date démission des normes</i></p>
<p>2004/108/EG: Elektromagnetische Verträglichkeit <i>2004/108/EC: Electromagnetic compatibility</i> <i>2004/108/CE: Compatibilité électromagnétique</i></p>	<p>EN 61326-1: 2006</p>
<p>94/9/EG: Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen <i>94/9/EC: Equipment and protective systems intended for use in potentially explosive atmospheres</i> <i>94/9/CE: Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles</i></p>	<p>EN 60079-0: 2006 EN 60079-11: 2007 EN 61241-0: 2006 EN 61241-11: 2006</p>
<p>EG-Baumusterprüfbescheinigung Nr., ausgestellt durch benannte Stelle: <i>EC-Type Examination Certificate No., exposé par organisme notifié:</i> <i>Attestation d'examen CE de type No. issued by notified body:</i></p>	<p>TÜV 09 ATEX 7533 X</p> <p>TÜV Rheinland Industrie Service GmbH Am Grauen Stein D-51105 Köln</p>

Köln, den 16.12.2009

Ort und Datum
Place and date
 lieu et date


 Joachim Düren
 Technical Director



 Werner Bertges
 Quality Manager

17.2 EC type examination certificate

(1) **EC - TYPE EXAMINATION CERTIFICATE**

(2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 94/9/EC**

(3) EC-Type Examination Certificate Number



TÜV 09 ATEX 7533 X

(4) Equipment: **RFID- Chipcard Reader** **RFIDi-RDR-1-xxx**

(5) Manufacturer: **R. Stahl HMI Systems GmbH**

(6) Address: **Im Gewerbegebiet Pesch 14** **D- 50 767 Köln**

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

(8) The TÜV CERT-Zertifizierungsstelle for ex-protected products of TÜV Rheinland Industrie Service GmbH, TÜV Rheinland Group, Notified Body No. 0035 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies 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 atmosphere, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report: 296 / Ex 533.00 / 09


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

EN 60079-0: 2006 **EN 60079-11: 2007**
EN 61241-0: 2006 **EN 61241-11: 2006**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

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

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

 **II 2 G** **Ex ib IIC T4**
II 2 D **Ex ibD 21 T90**

TÜV CERT-Zertifizierungsstelle für Explosionsschutz

Cologne, 16th December 2009


 Dipl.- Ing. Heinz Farke



Translation!

This EC-Type Examination Certificate shall not be valid without signature and stamp.
 This EC-Type Examination Certificate may be circulated without alteration only. Extracts or alterations are subject to approval by the:
 TÜV Rheinland Industrie Service GmbH, Am Grauen Stein 51105 Köln
 (Tel: +49 (0) 221 806-0 Fax: +49 (0) 221 806 114

www.tuv.com

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 Genau. Richtig.

10201: 4.08 © TÜV, TÜV und TÜV sind eingetragene Marken. Eine Nutzung und Verwendung bedarf der vorherigen Zustimmung.

17.3 IECEx certificate

		<h2>IECEx Certificate of Conformity</h2>	
<p>INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres <small>for rules and details of the IECEx Scheme visit www.iecex.com</small></p>			
Certificate No.:	IECEx TUR 09.0005X	issue No.:	0
Status:	Current		
Date of Issue:	2009-12-16	Page 1 of 4	
Applicant:	R. Stahl HMI Systems GmbH Im Gewerbegebiet Pesch 14 50767 Cologne Germany		
Electrical Apparatus: <i>Optional accessory:</i>	RFID- Chipcard Reader, RFIDI-RDR-1-xxx		
Type of Protection:	Intrinsic Safety i (Gb and Db)		
Marking:	Ex ib IIC T4 Gb Ex ib IIIC T90°C Db		
Approved for issue on behalf of the IECEx Certification Body:	Dipl.-Ing. Heinz Farke		
Position:	Deputy Head of ExCB		
Signature: <i>(for printed version)</i>			
Date:	2009-12-16		
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:			
TÜV Rheinland Industrie Service GmbH Am Grauen Stein 51105 Cologne Germany			

18 Release notes

Version 1.00.00

- Original version of the operating instructions

Version 1.00.01

- Text and layout corrections

Version 1.00.02

- Addition of ATEX and IECEx certificates
- Addition of certificate numbers
- Inclusion of comment on certificates
- Addition of preface
- New format of chapter headings
- Chapter title 2 "RFIDi Chipcard reader" removed
- Chapter title 2.x and successional increased by one step
- Back cover page created, with address
- Addition of information on BetrSichVer (German Works Safety Regulations)
- Text and layout corrections

Version 1.00.03

- Change of the cable length to 2.5 m

Version 1.00.04

- Correction reader connection for Eagle/Open HMI/Remote HMI
- Addition block diagram reader connection for Eagle/Open HMI/Remote HMI
- Addition section 9 "Proof of intrinsic safety"
- Changing type code
- Addition section 10.1 "Software function"

Version 1.00.05

- Correction "Proof of intrinsic safety", "interconnection b)", power supply and corresponding safety data
- Changes to section "Assembly and Disassembly - General"
- Improvement of connection cable Falcon
- Change of conformity to standards
- Change of text "earth connection chipcard reader"
- Takeover original text from certificate "installed in suitable enclosure"
- Text corrections

Version 1.00.06

- Addition connection diagram HW Rev. 3
- Addition "Proof of intrinsic safety" for ET-xx6-A
- Addition of disclaimer

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