Operating Instructions

Joystick JSi

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

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Disclaimer

Publisher and copyright holder:

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This documentation has been produced and checked with due care.
R. STAHL HMI Systems GmbH shall, however, not accept liability for any mistakes in this and all other documents.

Any warranty claims are limited to the right to demand amendments. Liability for any damage that might result from the content of this description or all other documentation is limited to clear cases of premeditation.

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) or in the operating instructions included with the operator interface applies.

Trademarks
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Table of contents

1 Preface

These operating instructions are intended for the safe installation of the JSi joysticks and cover all Ex-relevant aspects. Furthermore, these operating instructions contain all necessary information for assembly and connection of the joysticks.

⚠ 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

The type JSi joysticks are used to enter data, commands etc. on PCs and similar devices in hazardous areas.

The type JSi joysticks are explosion-protected equipment for installation in hazardous areas of zones 1 and 2. The devices may be connected to intrinsically safe PS2 or USB interfaces, depending on the joystick version. Power supply and data communication takes place via the associated interface of the operator interfaces. The joystick is connected with a fixed cable.
The joysticks can be mounted inside a front panel or a desktop housing.

3 Conformity to standards

The joysticks comply with the following standards and directive:

Standard	**Classification**
Directive 94/9/EC	
1. Supplement	
EN 60079-0 : 2006	General requirements
EN 60079-11 : 2007	Intrinsic safety "i"
Electromagnetic compatibility	
Directive 2004/108 EC	
EN 61326-1 : 2006	General requirements

4 Certificates

The joysticks are certified for installation in the following areas:
Europe:
according to ATEX Directive 94/9/EC
for installation in zones 1 and 2
International / Australia:
IECEx (International Electrotechnical Commision System for Certification to Standards for Electrical Equipment for Explosive Atmospheres)

4.1 ATEX

The joysticks' ATEX certification has the following number:

Certificate number: BVS 08 ATEX E 081

4.2 IECEx

The joysticks' IECEx certification has the following number:

Certificate number: IECEx BVS 08.0032

You can access all IECEx certificates on the official website of the IEC under their certificate number. http://iecex.iec.ch/iecex/iecexweb.nsf/welcome?openform

5 Marking

Manufacturer	R. STAHL HMI Systems GmbH	
Type code	JSi-1-PS2	
	JSi-2-USB	
CE classification:	CE 0158	
Testing authority and certificate number:	BVS 08 ATEX E 081	
Ex classification:		
ATEX guideline 94/9/EC	Ex	II 2 G Ex ib IIC T4
IECEx		Ex ib IIC T4

6 Safety-related data

	JSi-1-PS2	**JSi-2-USB**
U_i	6 V DC	6 V DC
I_i	350 mA	1.02 A
P_i	1.2 W	6.02 W
C_i	7 µF	7 µF
L_i	negligible	negligible

7 Ambient temperature range

The temperature range is –20 °C ... +60 °C

8 Proof of intrinsic safety

Proof of intrinsic safety for the connection of JSi joysticks with ET-/MT-xx6 HMI devices.

8.1 General information

Proof of intrinsic safety is based on the principles of IEC/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 IEC/EN 60079-14.

Proof has been drawn up on the basis of conformity certification as per IEC/EN 60079-0 and IEC/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:

Device		*EC type examination certificate*
ET-xx6	—	TÜV 05 ATEX 7176 X
MT-xx6	—	TÜV 07 ATEX 7471 X
ET-xx6-A	—	TÜV 11 ATEX 7041 X
MT-xx6-A	—	TÜV 11 ATEX 7103 X
JSi-1-PS2 JSi-2-USB	—	BVS 08 ATEX E 081

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 (Ui), for example, intrinsic safety is guaranteed if the associated supply does not exceed this voltage (Uo is less than / equals Ui).
Other output parameters specified in the examination certificate of the power supply (e.g. Io, Po) 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 !

8.2 Interconnection

In this part we list the voltages, currents, capacitance and inductance values of all circuits to determine whether the JSi joysticks may be connected with a standard cable of 1.7 metres to the series 400 Open HMI - Panel PC´s and series 500 Remote HMI - Thin Clients devices.

☞ 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 !

If the engineer or operator extends the joystick cable, the additional C and L cable values must be taken into account for the connection for proving intrinsic safety.

☞ Please note that we cannot comment on the functionality of such a cable extension.

8.2.1 JSi-1-PS2

a) ET-/MT-xx6 HMI device with joystick JSi-1-PS2

Source / active					==>	Acceptor / passive
ET-/MT-xx6						JSi-1-PS2
Terminal X9						Joystick connection
Uo = 5.9 VDC					≤	Ui = 6 VDC
Io = 200 mA					≤	Ii = 350 mA
Po = 1.18 W					≤	Pi = 1.2 W
Co_{IIC} [µF] =	19	29	-	-	≥	Ci 7 µF
Lo_{IIC} [µH] =	2	1	-	-	≥	Li negligible
Co_{IIB} [µF] =	13	23	46	86	≥	Ci 7 µF
Lo_{IIB} [µH] =	100	50	20	10	≥	Li negligible

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

b) ET-/MT-xx6-A HMI device with joystick JSi-1-PS2
Circuts in zone 1

Source / active					==>	Acceptor / passive
ET-/MT-xx6-A						JSi-1-PS2
Terminal X9						Joystick connection
Uo = 5.88 VDC					≤	Ui = 6 VDC
Io = 200 mA					≤	Ii = 350 mA
Po = 1.18 W					≤	Pi = 1.2 W
Co_{IIC} [µF] =	15.4	25.4	-	-	≥	Ci 7 µF
Lo_{IIC} [µH] =	2	1	-	-	≥	Li negligible
Co_{IIB} [µF] =	10.4	20.4	43.4	82.4	≥	Ci 7 µF
Lo_{IIB} [µH] =	100	50	20	10	≥	Li negligible

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

c) MT-xx6-A HMI device with joystick JSi-1-PS2
Circuts in zone 2

Source / active					==>	Acceptor / passive
MT-xx6-A						JSi-1-PS2
Terminal X9						Joystick connection
Uo = 5.88 VDC					≤	Ui = 6 VDC
Io = 200 mA					≤	Ii = 350 mA
Po = 1.18 W					≤	Pi = 1.2 W
Co_{IIC} [µF] =	68.4	652.4	-	-	≥	Ci 7 µF
Lo_{IIC} [µH] =	2	1	-	-	≥	Li negligible
Co_{IIB} [µF] =	33.4	53.4	102.4	222.4	≥	Ci 7 µF
Lo_{IIB} [µH] =	100	50	20	10	≥	Li negligible

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

8.2.2 JSi-2-USB

a) ET-/MT-xx6 HMI device with joystick JSi-2-USB

Source / active					==>	Acceptor / passive
ET-/MT-xx6						JSi-2-USB
Terminal X6						Joystick connection
Uo = 5.9 VDC					≤	Ui = 6 VDC
Io = 1.02 A					≤	Ii = 1.02 A
Po = 6.02 W					≤	Pi = 6.02 W
Co_{IIC} [µF] =	8	13	30	43	≥	Ci 7 µF
Lo_{IIC} [µH] =	10	5	2	1	≥	Li negligible
Co_{IIB} [µF] =	14	26	50	89	≥	Ci 7 µF
Lo_{IIB} [mH] =	0.1	0.05	0.02	0.01	≥	Li negligible

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

b) ET-/MT-xx6-A HMI device with joystick JSi-2-USB
Circuts in zone 1

Source / active					==>	Acceptor / passive
ET-/MT-xx6-A						JSi-2-USB
Terminal X9						Joystick connection
Uo = 5.88 VDC					≤	Ui = 6 VDC
Io = 200 mA					≤	Ii = 1.02 A
Po = 1.18 W					≤	Pi = 6.02 W
Co_{IIC} [µF] =	15.4	25.4	-	-	≥	Ci 7 µF
Lo_{IIC} [µH] =	2	1	-	-	≥	Li negligible
Co_{IIB} [µF] =	10.4	20.4	43.4	82.4	≥	Ci 7 µF
Lo_{IIB} [µH] =	100	50	20	10	≥	Li negligible

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

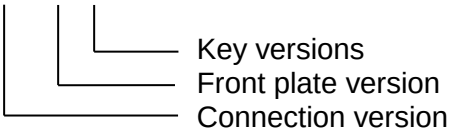
c) MT-xx6-A HMI device with joystick JSi-2-USB
Circuts in zone 2

Source / active					==>	Acceptor / passive
MT-xx6-A						JSi-2-USB
Terminal X9						Joystick connection
Uo = 5.88 VDC					≤	Ui = 6 VDC
Io = 200 mA					≤	Ii = 1.02 A
Po = 1.18 W					≤	Pi = 6.02 W
Co_{IIC} [µF] =	68.4	652.4	-	-	≥	Ci 7 µF
Lo_{IIC} [µH] =	2	1	-	-	≥	Li negligible
Co_{IIB} [µF] =	33.4	53.4	102.4	222.4	≥	Ci 7 µF
Lo_{IIB} [µH] =	100	50	20	10	≥	Li negligible

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

9 Type code

JSi-1-PS2-xx-yy
JSi-2-USB-xx-yy



Name	Marking	Description
Key version	aa	2 keys on the basic plate, joystick without key
	bb	2 keys on the basic plate, joystick with key
	cc	3 keys on the basic plate, joystick with key
Front plate version	No postition xx	Polyester front plate
	VA	Stainless steel front plate

Product type:

Order number	Description
	Joystick version with
JSi-1-PS2-VA-cc	PS2 connection, stainless steel front plate, 3 keys on the basic plate, joystick with key
JSi-2-USB-VA-cc	USB connection, stainless steel front plate, 3 keys on the basic plate, joystick with key

10 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.

10.1 Installation and operation

Please note the following when installing and operating the device:

- The national regulations for installation and assembly apply (e.g. IEC/EN 60079-14).
- The joysticks may be installed in zones 1 or 2.
- The JSi joystick housing must be earthed via the PA connection (earthing screw) at the back of the housing !
- The joysticks with polyester front plate should be mounted in a position where they will not be exposed to direct UV light for extended periods of time.
- The intrinsically safe circuits must be installed according to applicable regulations.
- The joystick may only be switched on when it is closed.
- When installed in zones 1 and 2, the joysticks may be connected to intrinsically safe input circuits.
- The safety values of the joysticks must match those of the device to which it is connected.
- Interconnecting several active devices in an intrinsically safe circuit may result in different safe maximum values. This could compromise intrinsic safety !
- National safety and accident prevention rules.
- Generally accepted technical rules.
- Safety instructions contained in these operating instructions.
- Any damage may compromise the explosion protection.

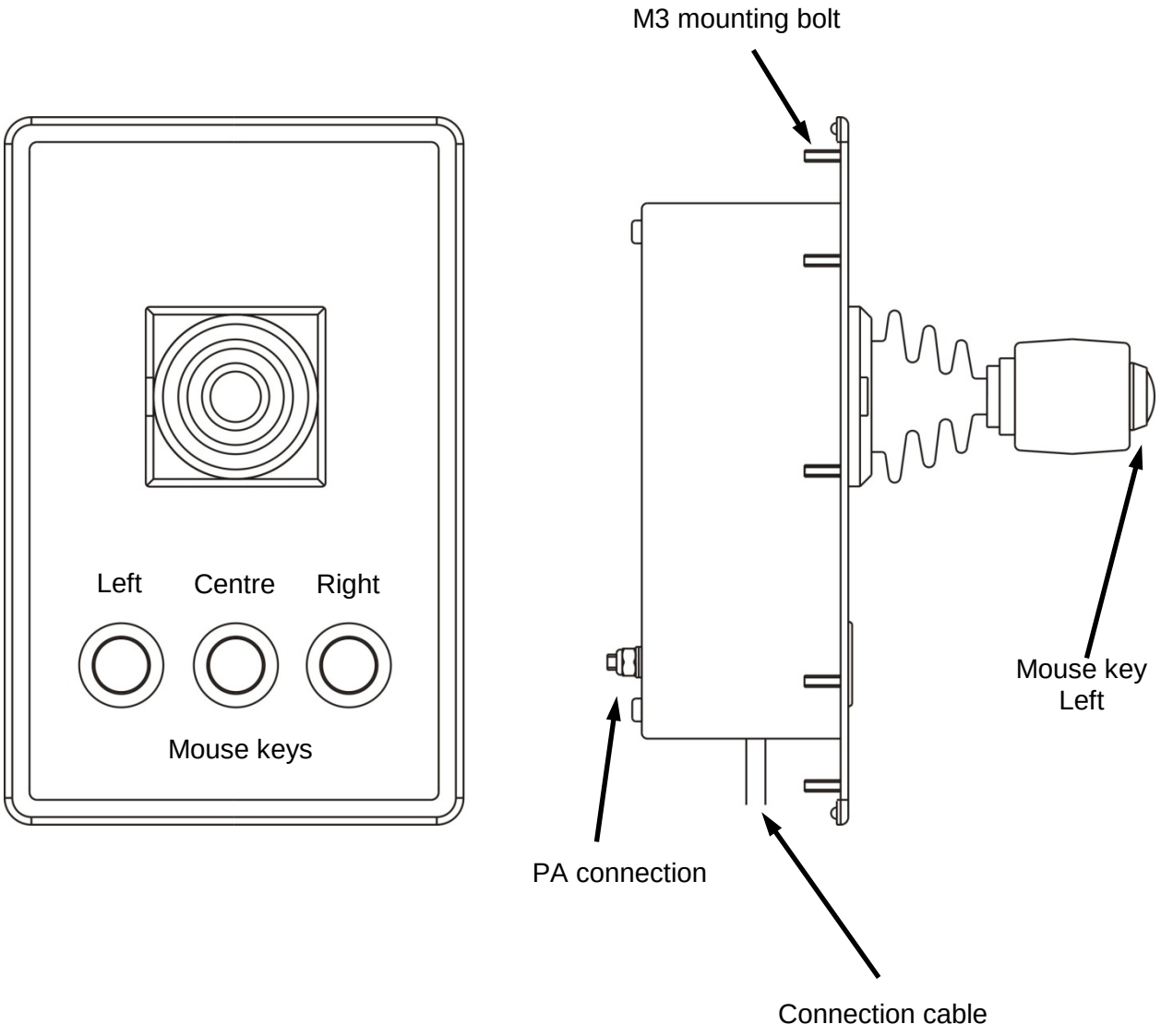
Use the joysticks for their intended purpose only (see "Function").
Incorrect or unauthorized use and non-compliance with the instructions in this manual will void any warranty on our part.
No changes may be made to the joysticks that compromise explosion protection !
The joysticks may only be installed and operated in an undamaged, dry and clean condition !

11 Assembly and disassembly

11.1 General information

Assembly and disassembly are subject to general technical rules. Additional, specific safety regulations apply to electronic and pneumatic installations. In Germany, for example, these include the BGI 547 (Information on and principles of workplace safety and health issued by the Government Safety Association) and the BetrSichVer (Betriebssicherheitsverordnung - German Regulation of Workplace Safety).

11.2 Views



NB:

- The key on the joystick has the same function as a left mouse key. There are therefore two keys on the JSi joystick that have the "left mouse key" function.

11.3 Mechanical dimensions

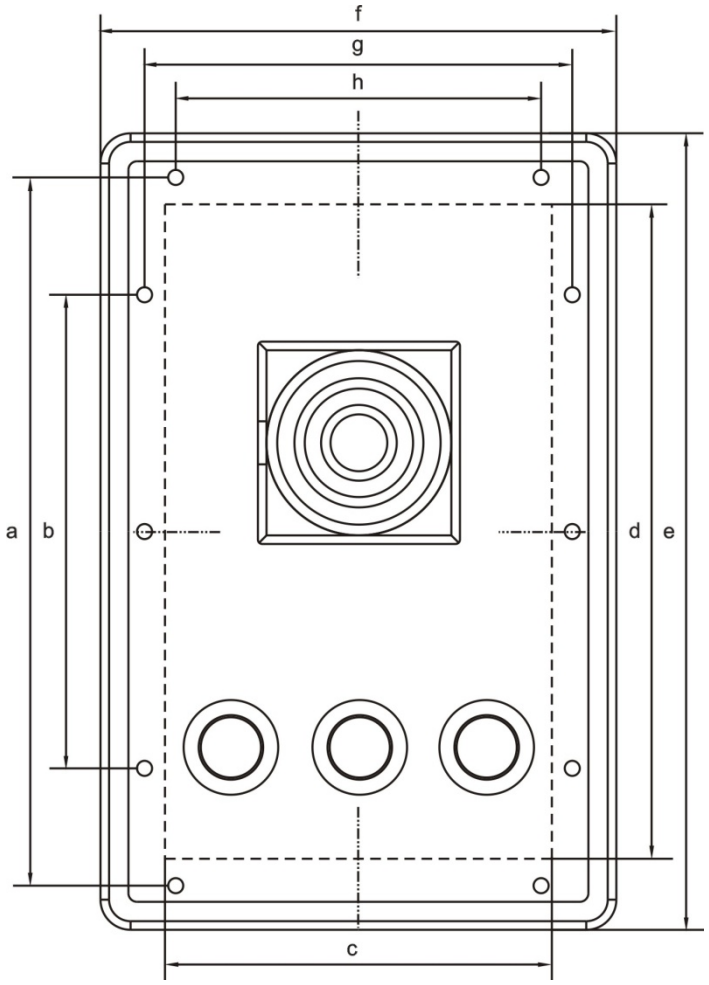
Dimensions in mm.

11.3.1 Overview:

Joystick	Front plate (HxB)	Cut-out (HxB)	Hole pattern	Material thickness
JSi-1-PS2 JSi-2-USB	185 x 120	152 x 90 (±1)	see diagram	up to 6
	Depth of cut-out (Depth)		**Design front (Height)**	
	60		83 (joystick height)	

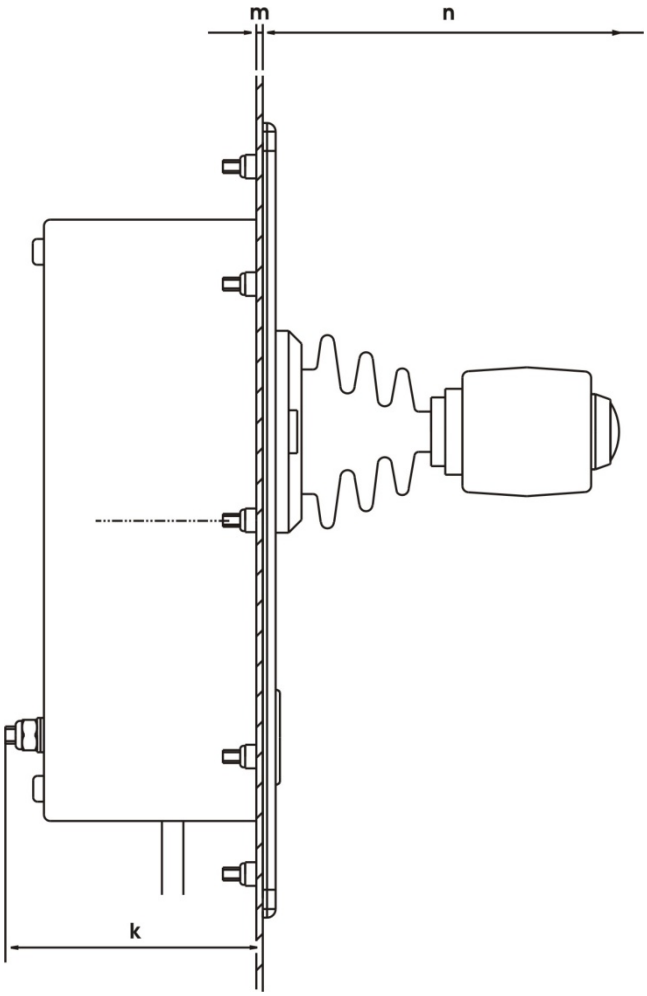
11.3.2 Dimensional drawing

Front view:



e	=	dimensions front plate height (h)	= 185
f	=	dimensions front plate width (w)	= 120
c	=	cut-out width (w)	= 90 (± 1)
d	=	cut-out height (h)	= 152 (± 1)
a	=	distance fitting holes	= 164.5
b	=	distance fitting holes	= 110
g	=	distance fitting holes	= 99.5
h	=	distance fitting holes	= 85

Lateral view:



k	=	depth of cut-out	= 60
m	=	material thickness	= up to 6
n	=	design front height	= 83

11.4 Installation instructions

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

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

- Make a cut-out with the following dimensions:
  152 (±1) mm (height) x 90 (±1) mm (width).
- Drill 10 holes of a diameter of 3.5 mm according to the hole pattern.
- Mount the joystick inside the cut-out and use the self-locking nuts (10x M3) provided to affix the joystick.

Optimum sealing:

- Tighten the nuts lightly.
- Check the position of the joystick, ensuring above all that the **rubber seals are correctly positioned**.
- Now fully tighten the nuts.
- Connect the joystick cable to the corresponding terminal at the operator interface according to the connection diagram.

Earth:
The JSi joystick 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 !

12 Operation

12.1 General information

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

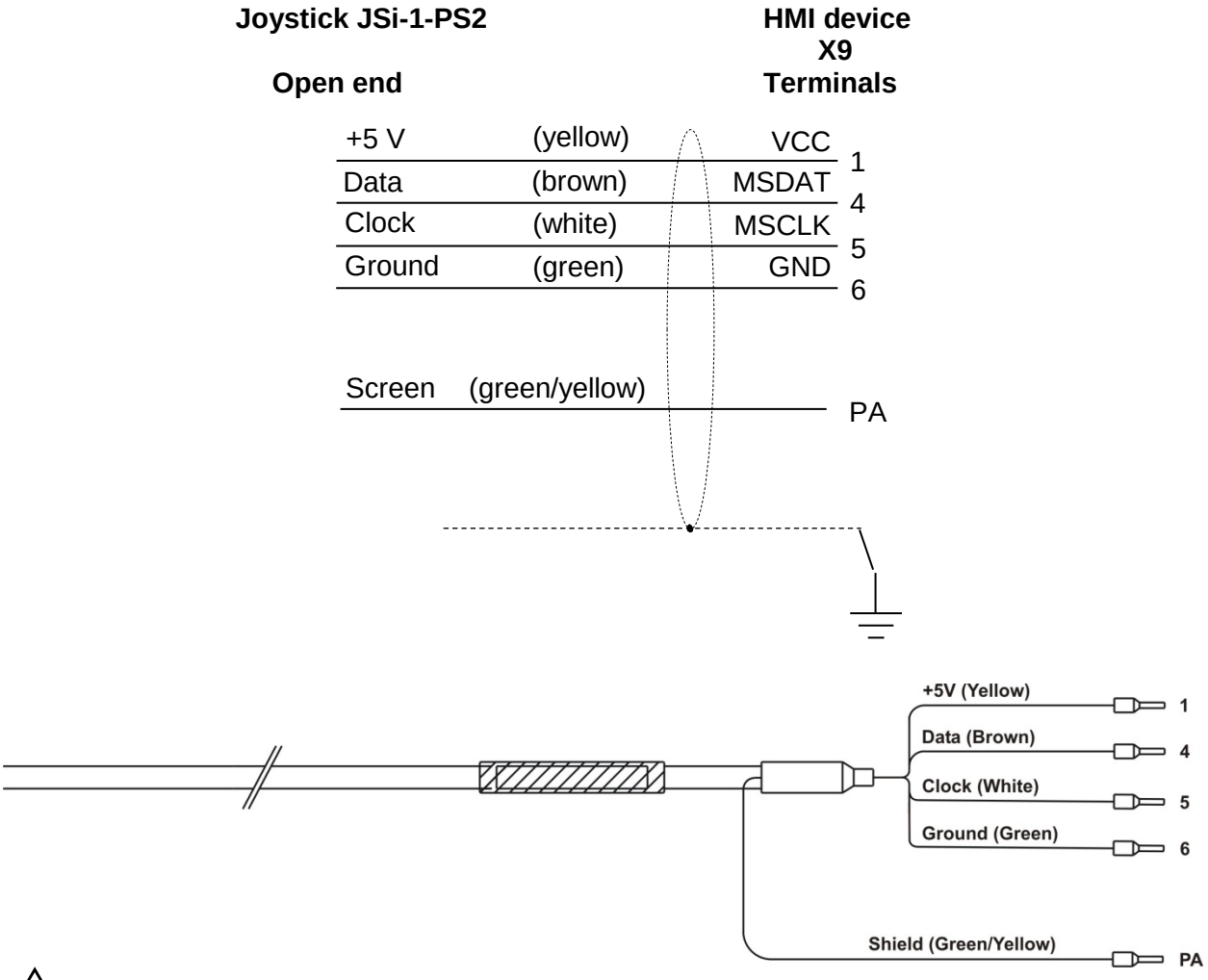
- the joystick has been properly installed according to instructions,
- the joystick is not damaged,
- all screws are tightened fast,
- the cable is connected properly.
- the joystick housing has been connected to earth via the PA connection.

12.2 Connections JSi

The joysticks are fitted with an connection cable (standard length 1.7 m) that can be connected to the corresponding terminal of the series 400 Open HMI - Panel PC´s and series 500 Remote HMI - Thin Clients devices.

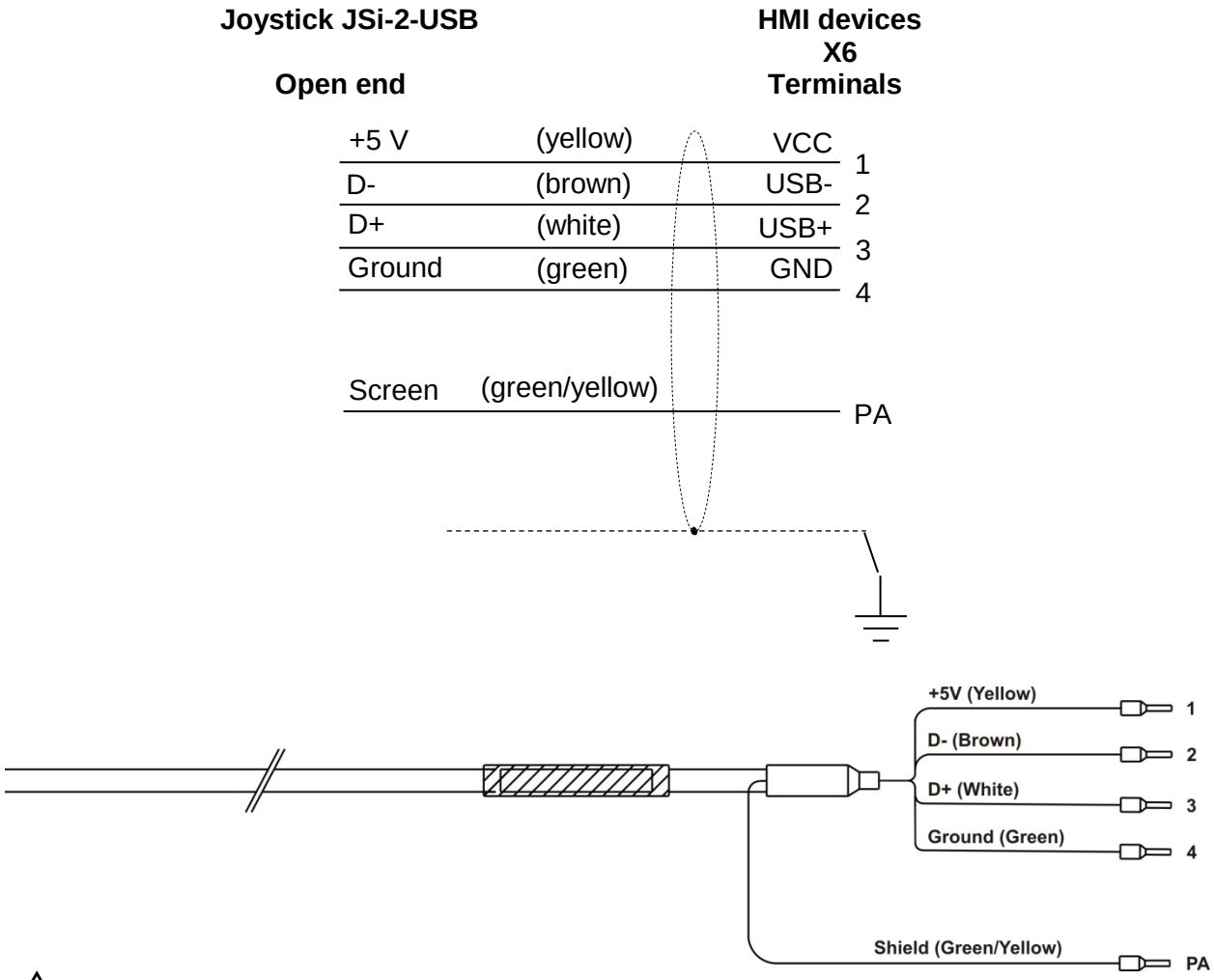
The cable of the JSi-1-PS2 joystick is connected to the X9 Keyboard / Mouse / Trackball / Joystick terminal of the HMI devices.
The cable of the JSi-1-USB joystick is connected to the X6 USB2 terminal of the HMI devices.

12.2.1 Connection cable JSi-1-PS2



⚠ The shielding connection (green/yellow cable) must be connected to the PA terminal block of the HMI devices !

12.2.2 Connection cable JSi-2-USB



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

13 Maintenance, service

Associated equipment is subject to maintenance, service and testing according to guidelines 1999/92/EC, IEC/EN 60079-19, IEC/EN 60079-17 and BetrSichVer (Betriebsicherheits-verordnung - Occupational Safety and Health) also apply !

Because the transmission of the joysticks remains reliable and stable over long periods of time, regular adjustments are not required.
Maintenance should focus on the following:

- Seal wear
- All cables and lines are properly connected and undamaged
- Housing damage

13.1 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.

14 Troubleshooting

Users cannot carry out any repairs on the joysticks.

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.

15 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, operator interfaces are listed in category 9 (monitoring and control instruments).
We shall take back our devices according to our General Terms and Conditions.

15.1.1 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.

15.1.2 China ROHS labelling

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

For joysticks, the following conditions apply:

Names and contents of toxic or hazardous substances or elements:

Part	**Toxic or hazardous substances and elements**					
Name	**Lead (Pb)**	**Mercury (Hg)**	**Cadmium (Cd)**	**Hexavalent Chromium (Cr (VI))**	**Poly-brominated Biphenyls (PBB)**	**Polybrominated diphenyl ethers (PBDE)**
Housing	O	O	O	O	O	O
all PCBs	O	O	O	O	O	O
Miscellaneous	O	O	O	O	O	O

O 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.

16 Certificates

Starting with the version 01.02.04 of these operating instructions, the chapter entitled "Certificates" will contain only the first page of the EC type examination certificate plus the first page of the most recent supplement or other certifications.
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.

16.1 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

erklären in alleiniger Verantwortung dass unser Produkt: *declare under our sole responsibility that the product:* attestons sous notre responsabilité que le produit:	**Joystick Typ JSi-1-PS2** und/and/et **Joystick Typ JSi-2-USB**
gekennzeichnet: *marked:* marqué:	**II 2G Ex ib IIC T4**

übereinstimmt mit der/den folgenden Norm(en) oder normativen Dokumenten:
is in conformity with the following standard(s) or normative documents:
est conforme aux norme(s) ou aux documents normatifs suivants:

Bestimmung der Richtlinie *Terms of the directive* Prescription de la directive	**Titel und/oder Nr. sowie Ausgabedatum der Norm** *Title and/or No. and date of issue of the standard* Titre et/ou No. Ainsi que date démission des normes
2004/108/EG: Elektromagnetische Verträglichkeit *2004/108/EC: Electromagnetic compatibility* 2004/108/CE: Compatibilité électromagnétique	EN 61326-1: 2006
94/9/EG: Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explositionsgefährdeten Bereichen *94/9/EC: Equipment and protective systems intended for use in potentially explosive atmospheres* 94/9/CE: Appareils et systèmes de protection destinés á être utilisés en atmosphères explosibles	EN 60079-0: 2006 EN 60079-11: 2007
EG-Baumusterprüfbescheinigung Nr., ausgestellt durch benannte Stelle: *EC-Type Examination Certificate No., exposé par organisme notifié:* Attestation d´examen CE de type No. issued by notified body:	**BVS 08 ATEX E 081** DEKRA EXAM GmbH Dinnendahlstraße 9 D-44809 Bochum

Köln, den 09.07.2009
Ort und Datum
Place and date
lieu et date

Joachim Düren
Technical Director

Werner Bertges
Quality Manager

 ce_jsi_20.docx

16.2 EC type examination certificate

DEKRA

Translation

(1) **EC-Type Examination Certificate**

(2) **- Directive 94/9/EC -**
Equipment and protective systems intended for use in potentially explosive atmospheres

(3) **BVS 08 ATEX E 081**

(4) **Equipment:** **Joystick type JSi-1-PS2**

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

(6) **Address:** **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 08.2106 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 60079-0:2006 General requirements
EN 60079-11:2007 Intrinsic safety 'i'

(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 ib IIC T4

DEKRA EXAM GmbH
Bochum dated 16. July 2008

Signed: Migenda
Certification body

Signed: Eickhoff
Special services unit

Page 1 of 2 to BVS 08 ATEX E 081
This certificate may only be reproduced in its entirety and without change
DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

DEKRA

1. Nachtrag

(Ergänzung gemäß Richtlinie 94/9/EG Anhang III Ziffer 6)

zur EG-Baumusterprüfbescheinigung
BVS 08 ATEX E 081

Gerät: **Joystick Typ JSi-1-PS2 bzw. JSi-2-USB**

Hersteller: **R. STAHL HMI Systems GmbH**

Anschrift: **50767 Köln**

Beschreibung

Der Joystick Typ JSi-1-PS2 wird geringfügig geändert und ein neuer Typ ist verfügbar:
Typ JSi-2-USB

Die grundlegenden Sicherheits- und Gesundheitsanforderungen der geänderten Ausführung werden erfüllt durch Übereinstimmung mit:

EN 60079-0:2006 Allgemeine Anforderungen
EN 60079-11:2007 Eigensicherheit ´i´

Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

II 2G Ex ib IIC T4

Kenngrößen für Typ JSi-2-USB

Spannung	Ui	DC	6	V
Stromstärke	Ii		1,02	A
Leistung	Pi		6,02	W
Innere Kapazität	Ci		7	µF
Innere Induktivität	Li		vernachlässigbar	
Umgebungstemperaturbereich	Ta		-20 °C bis +60 °C	

Besondere Bedingungen für die sichere Anwendung

Entfällt

DEKRA EXAM GmbH Dinnendahlstraße 9 44809 Bochum Telefon 0234/3696-105 Telefax 0234/3696-110 E-mail zs-exam@dekra.com

16.3 IECEx Certificate

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 BVS 08.0032 issue No.:1	Certificate history: Issue No. 1 (2009-7-2) Issue No. 0 (2008-7-16)
Status:	Current	
Date of Issue:	2009-07-02 Page 1 of 4	
Applicant:	**R. STAHL HMI Systems GmbH** Im Gewerbegebiet Pesch 14 50767 Cologne **Germany**	
Electrical Apparatus: *Optional accessory:*	**Joystick type JSi-1-PS2 and type JSi-2-USB**	
Type of Protection:	**Intrinsic Safety 'i'**	
Marking:	**Ex ib IIC T4**	
Approved for issue on behalf of the IECEx Certification Body:	H.-Ch. Simanski	
Position:	Head of Certification Body	
Signature: *(for printed version)*		
Date:	02.07.2003	

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:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
DEKRA EXAM GmbH

17 Release notes

Version 1.0

- Original version of the operating instructions

Version 1.1

- Section 4.2.1. Connection cable - change of cable diagram

Version 1.2

- Section 3.2 Views - Mousekey joystick changed
- Added information on mouse key.

Version 1.02.03

- Adjustment of document version and name according to revised definition
- Addition of joystick version JSi-2-USB.

Version 1.02.04

- Changes to preface
- New format of chapter headings
- New format of table of contents
- Chapter title 2 "joystick JSi" removed
- Chapter title 2.x and successionals increased by one step
- Renaming chapter 6 into "safety-related data"
- Inclusion of section 8 "proof of intrinsic safety"
- Addition of information on BetrSichVer (German Works Safety Regulations)
- Reduction of the Remote HMI certificates to the first page of the EC type examination certificate and the first page of the most recent supplement
- Inclusion of comment on certificates
- All certificates with lower resolution
- Back cover page created, with address

Version 01.02.05

- Inclusion of disclaimer
- Reconstruction of section "certificates", splitting into areas
- Rename operator interfaces into HMI devices, as naming series 400 Open HMI - Panel PC´s and 500 Remote HMI - Thin Clients
- Addition of "IEC" at standards
- Addition of xx6-A devices at "Proof of intrinsic safety"
- Changing of standard cable length to 1.7 m
- Reduction of IECEx certificate to the first page
- Text and layout changes

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