



This document contains safety-relevant information. It may be changed anywhere provided the contents and meaning of the safety-relevant information remain unaltered.

Operating Instructions

IDM160 barcode handheld scanner IDM160-BT barcode bluetooth scanner

R. STAHL HMI Systems GmbH
Adolf-Grimme-Allee 8
D 50829 Köln

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R. STAHL HMI Systems GmbH
Adolf-Grimme-Allee 8
D 50829 Köln

Registered place of business: Cologne
Court of registration: District court Cologne, HRB 30512
VAT number: DE 812 454 820

Phone:	(switchboard)	+49 (0) 221 76 806	- 1000
	(hotline)		- 5000
Fax:			- 4100
E-mail:	(switchboard)	office@stahl-hmi.de	
	(hotline)	support@stahl-hmi.de	

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Formatting conventions

The markings in these operating instructions refer to specific features that must be noted.

In detail, these are:







 DANGER	This sign alerts users to hazards that will result in death or serious injury if ignored.
 WARNING	This sign alerts users to hazards that may result in death or serious injury if ignored.
 CAUTION	This sign alerts users to hazards that may damage machinery or equipment or result in injury if ignored.
 ATTENTION	Information highlighted by this symbol indicates measures for the prevention of damage to machinery or equipment.
 NOTICE	Information highlighted by this symbol indicates important information of which particular note should be taken.
 DOCUMENTATION	Information highlighted by this symbol refers to a different chapter or section in this manual or other documentation or a web-page.


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1 Preface

These operating instructions are intended for the safe installation of the IDM barcoded scanner and accessories and cover all Ex-relevant aspects. Furthermore, these operating instructions contain all necessary information for assembly and connection of these devices.

 NOTICE	All data relevant to explosion protection was copied to these operating instructions from the EC type examination certificate.
	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.

 DOCUMENTATION	All certificates for the devices listed in these operating instructions are contained in the document entitled CE_IDM, which is not part of the delivery of these devices.
	You can find this document online at www.stahl-hmi.de or request a copy from R. STAHL HMI Systems GmbH.


2 Function

The type IDM barcode scanners are used to capture data and transmit them to PCs and similar devices in hazardous areas.


They are explosion-protected equipment for installation in hazardous areas of zones 1, 2, 21 and 22.

The ReaderBox-054-* supply module is used for the scanner's power supply and data communication. Use cables type VB-IDM to connect the supply module to the handheld scanner. An RS-232 or RS-422 connection can be used for the data connection to a PC or similar devices.

There are several types of this barcode scanner, differing in their design (wired / Bluetooth) and their function (scannable barcode data) - see type code.

 DOCUMENTATION	Separate operating instructions are available for the ReaderBox-054-* supply module.
--	--

2.1 Standard components

 NOTICE	The following components are the standards to be used together with the IDM barcode scanners:	
	Wired handheld scanner	Bluetooth scanner
	IDM160-ex	IDM160-BT-ex
	-	Base loading station IDM160-BT-BaseBT-Z1
	ReaderBox-054-DC-RS232	ReaderBox-054-DC-RS232
	VB-IDM160-XX6-RS232-SR-*	VB-IDM160-Base-RSi-RS232-SR-*.8m-Z1

3 Technical data

3.1 IDM handheld scanner

Handheld scanner	IDM160-ex	IDM160-PDF-ex	IDM160-BT-ex	IDM160-BT-PDF-ex
Version	Wired handheld scanner		Bluetooth scanner	
Design	Linear imager scanner			
Barcode types (scannable)	one-dimensional 1D (barcode)	two-dimensional 2D (stacked code) (PDF417)	one-dimensional 1D (barcode)	two-dimensional 2D (stacked code) (PDF417)
Base loading station	-		Yes	
Operating voltage DC 5.4 V (> 4.9 V)	VB-IDM160-XX6-RS232-SR-*.8 m		-	
Battery	-		Lithium ions (3.6 V; 2250 mAh)	
Interfaces	RS-232 / RS-422 or USB			
Bluetooth	-		Bluetooth TM V 2.1 DER, Class 2	
Function	-		Bluetooth TM V 2.1 DER, Class 2	
Range	-		ca. 30 m (98.43 ft)	
Frequency range	-		2.4 ... 2.4835 GHz (ISM band)	
Light source	Visible red light, 630 nm			
Scan rate	500 scans / sec			
Scan frequency	500 Hz			
Reader distance	50 ... 800 mm (0.5 mm) / (0.164 ... 2.63 ft (0.00164 ft))			
Resistance to outside light interference	100,000 lx			
Signals				
optical	2x LED (operating status / read confirmation)			
acoustic	Beeper / buzzer (can be switched off)			
Shock resistance	50 drops from a height of 2 m onto a concrete surface			
Ambient temperature	-20 °C to +50 °C / -4 °F to +122 °F			
Storage temperature	-30 °C to +70 °C / -22 °F to +158 °F			
Type of protection	IP65			
Dimensions (W x H x D)	104 x 185 x 76 [mm] / 0.34 x 0.607 x 0.25 [ft]			
Weight	200 g (without cable) / (7.05 oz)		260 g (with battery) / (9.17 oz)	

3.2 Base loading station

Base loading station	IDM160-BT-BaseBT-Z1	IDM160-BT-BaseBT	IDM160-BT-Base
Design	Explosion-protected zone 1 without cable	Non-Ex, without cable	Non-Ex, without cable no Bluetooth
Operating voltage DC 5.4 V (> 4.9 V)	VB-IDM160-Base-RSi-RS232-SR-*.8m-Z1	5.6 V	
Interfaces	RS-232 / RS-422 or USB		
Bluetooth			
Function	Bluetooth TM V 2.1 DER, Class 2		
Frequency range	2.4 ... 2.4835 GHz (ISM band)		
Ambient temperature	-20 °C to +50 °C / -4 °F to +122 °F		
Storage temperature	-30 °C to +70 °C / -22 °F to +158 °F		

4 Conformity to standards

4.1 IDM160 handheld scanner

The IDM160 handheld scanners comply with the following standards and directive:

Standard		Classification
Initial certification		
ATEX directive		
until 19.04.2016	from 20.04.2016	
94/9/EC	2014/34/EU	
EN 60079-0 : 2012		General requirements
EN 60079-11 : 2012		Intrinsic safety "i"
Electromagnetic compatibility		
EMC directive		
until 19.04.2016	from 20.04.2016	Classification
2004/108/EC	2014/30/EU	
EN 61000-6-2 : 2006		Immunity
EN 61000-6-3 : 2007		Interference emission
RoHS directive		
2011/65/EU		Classification
EN 50581 : 2012		Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

4.2 IDM160-BT bluetooth scanner and base loading station

The IDM160-BT bluetooth scanner and base loading station comply with the following standards and directive:

Standard		Classification
Initial certification		
ATEX directive		
until 19.04.2016	from 20.04.2016	
94/9/EC	2014/34/EU	
EN 60079-0 : 2012		General requirements
EN 60079-11 : 2012		Intrinsic safety "i"
Electromagnetic compatibility		
EMC directive		
until 19.04.2016	from 20.04.2016	Classification
2004/108/EC	2014/30/EU	
EN 61000-6-2 : 2006		Immunity
EN 61000-6-3 : 2007		Interference emission
Radio and Telecommunications Terminal Equipment directive		
until 12.06.2016	from 13.06.2016	Classification
RED directive	Radio equipment directive	
1999/5/EC	2014/53/EU	
EN 60950-1		Information technology equipment – Safety (General requirements)
EN 300328 V1.7.1 : 2006		Electromagnetic compatibility and radio spectrum matters (ERM) - Wideband-transmission systems - Data transmission equipment operating
EN 301489-1 V1.8.1 : 2008		Electromagnetic compatibility and radio spectrum matters (ERM) - Standard for radio equipment and services - Common technical requirements
EN 301489-17 V2.1.1 : 2009		Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility - Special conditions for broadband data transmission systems
EMC and Low Voltage directive are included		
RoHS directive		
2011/65/EU		Classification
EN 50581 : 2012		Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

5 Certificates

The IDM barcode scanners are certified for installation in the following areas:

Europe:

according to ATEX Directive 94/9/EC
for installation in zones 1, 2, 21 and 22.

International:

IECEX (International Electrotechnical Commission System for Certification to Standards for Electrical Equipment for Explosive Atmospheres)

Korea:

KGS (Korea Gas Safety Corporation)

5.1 IDM160 handheld scanner

5.1.1 ATEX

The ATEX certificate is listed under the following certification number:

Certificate number: IBExU14ATEX1013

5.1.2 IECEX

The readers IECEX certification has the following number:

Certificate number: IECEX IBE 14.0003

5.1.3 KGS

The KGS certificate is listed under the following certification number:

Certificate number: 14-KB4BO-0725
and 14-KB4BO-0726

5.2 IDM160-BT bluetooth scanner

5.2.1 ATEX

The ATEX certificate is listed under the following certification number:

Certificate number: IBExU13ATEX1150

5.2.2 IECEX

The readers IECEX certification has the following number:

Certificate number: IECEX IBE 14.0002


5.2.3 KGS

The KGS certificate is listed under the following certification number:


Certificate number: 14-KB4BO-0727
and 14-KB4BO-0728

6 Marking

6.1 IDM handheld scanner

Manufacturer	R. STAHL HMI Systems GmbH	
Type code	IDM160-ex IDM160-PDF-ex	
CE classification:	CE ₀₁₅₈	
Testing authority and certificate number:	IBExU14ATEX1013 IECEX IBE 14.0003	
Ex classification:		
ATEX guideline 94/9/EC		II 2 G Ex ib IIC T4 Gb II 2 D Ex ib IIIC T135°C Db
IECEX		Ex ib IIC T4 Gb Ex ib IIIC T135°C Db
KGS		Ex ib IIC T4 Ex ib IIIC T135°C

6.2 IDM bluetooth scanner

Manufacturer	R. STAHL HMI Systems GmbH	
Type code	IDM160-BT-ex IDM160-BT-PDF-ex	
CE classification:	CE ₀₁₅₈	
Testing authority and certificate number:	IBExU13ATEX1150 IECEX IBE 14.0002	
Ex classification:		
ATEX guideline 94/9/EC		II 2 G Ex ib IIC T4 Gb II 2 D Ex ib IIIC T135°C Db
IECEX		Ex ib IIC T4 Gb Ex ib IIIC T135°C Db
KGS		Ex ib IIC T4 Ex ib IIIC T135°C

7 Safety data

7.1 IDM barcode scanner / base loading station

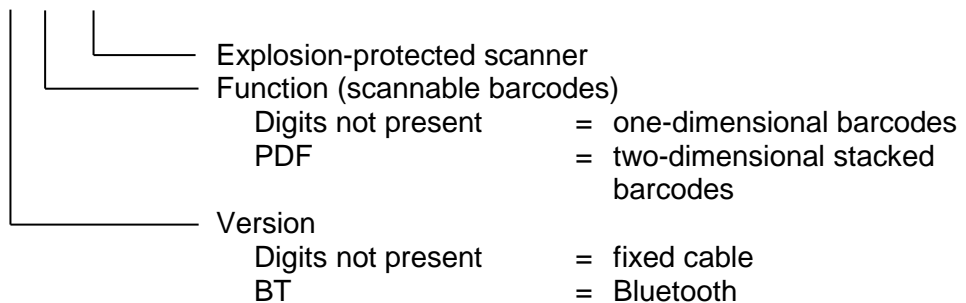
U _i =	5.6V
I _i :	480 mA
P _i :	1.25 W
C _i :	46 µF
L _i :	negligible

8 Type code

8.1 IDM barcode scanner

Type code:

IDM160-aa-bb-ex



Product type:

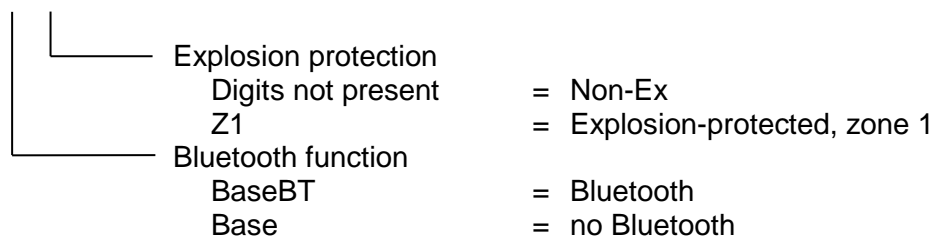
Version	Description
IDM160-ex	Handheld scanner, with fixed cable one-dimensional 1D barcodes scannable
IDM160-PDF-ex	Handheld scanner, with fixed cable two-dimensional 2D stacked barcodes (PDF417) scannable
IDM160-BT-ex	Scanner, Bluetooth one-dimensional 1D barcodes scannable
IDM160-BT-PDF-ex	Scanner, Bluetooth two-dimensional 2D stacked barcodes (PDF417) scannable

8.2 Base loading station

For Bluetooth scanners only

Type code:


IDM160-BT-aa-bb




Product type:

Version	Description
IDM160-BT-BaseBT-Z1	Base loading station, Bluetooth, no fixed cable, explosion-protected, zone 1
IDM160-BT-BaseBT	Base loading station, Bluetooth, no fixed cable, non-Ex
IDM160-BT-Base	Base loading station, NO Bluetooth, no fixed cable, non-Ex

9 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. requiring precise knowledge of the applicable regulations and conditions.

	The notes listed below in section 9.1 must be heeded to avoid injury and damage to equipment!
---	---

9.1 Installation and operation

Please note the following when installing and operating the device:

- Electrical plants are subject to certain regulations concerning installation and operation (e.g. RL 99/92/EG, RL 94/9EG, or the national rules such as IEC/EN 60 079-14 and VDE 0100).
- In the hazardous area it is the operator's responsibility to carry out any repair and maintenance in compliance with applicable rules.
- The handheld scanners and the IDM160-BT-BaseBT-Z1 base loading station may be installed and operated in zones 1, 2, 21 and 22.
- The devices must only be operated when they are fully assembled.
- Users must not open the devices.
- If the enclosure is in any way damaged the device must be removed from the hazardous area immediately.
- The device must be switched off immediately if it is likely that as a consequence of damaging impact or general peculiarities the device can no longer be safely operated (e.g. ingress of water, fluids, impact of temperatures beyond the specified range).
- Do not insert any sharp objects into the enclosure or any other openings of the devices. Any openings at the device must not be covered or blocked.
- The intrinsically safe circuits must be installed according to applicable regulations.
- The handheld scanners / IDM160BT-Z1 base loading station must be connected to intrinsically safe circuits.
- The safety values of the handheld scanners / IDM160-BT-Base-BT-Z1 base loading station must match those of the device to which it is connected.
- Interconnecting several devices in a single intrinsically safe circuit can result in different safety characteristic 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 devices 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 to the devices are permitted !

The operator interfaces may only be installed and operated in an undamaged, dry and clean condition.

9.1.1 IDM handheld scanner

For the IDM handheld scanners the points listed below apply in addition to those listed under Installation and Operation

- In hazardous areas the devices may not be wiped or cleaned with a dry cloth!
- Ensure safe handling with firm footing and sufficient room for movement.
- Devices fitted with laser fall under standards US 21 CFR 1040.10 and EN 60825-1.
- The laser's classification is stated on a plate affixed to the device.
- Class 1 lasers are deemed inherently safe during normal use, but users must not look directly into the light source. The following statement is statutory under American and international law.
Usage of control elements, adaptations or the use of procedures that differ from these instructions may result in a dangerous exposure to rays.
- Class 2 lasers use a visible low-voltage LED. As with any source of bright light, such as the sun, the user should avoid looking directly into the light. Brief exposure to a Class 2 laser is considered not dangerous.

10 Assembly and disassembly

10.1 General information

! NOTICE	<p>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 (Betriebsicherheitsverordnung - Occupational Safety and Health).</p>
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! NOTICE	<p>Usually, all components are installed inside an R. STAHL HMI Systems GmbH field enclosure and fully (functionally) wired unless agreed otherwise. R. STAHL HMI Systems GmbH eingebaut und vollständig, funktionsfähig verdrahtet, wenn nichts anderes vereinbart wurde.</p>
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10.2 Mechanical dimensions

Dimensions in mm / ft.

Device	Width	Height	Depth / length
IDM handheld scanner	104 / 0.34	185 / 0.607	76 / 0.25
Base loading station	100 / 0.33	225 / 0.74	90 / 0.295

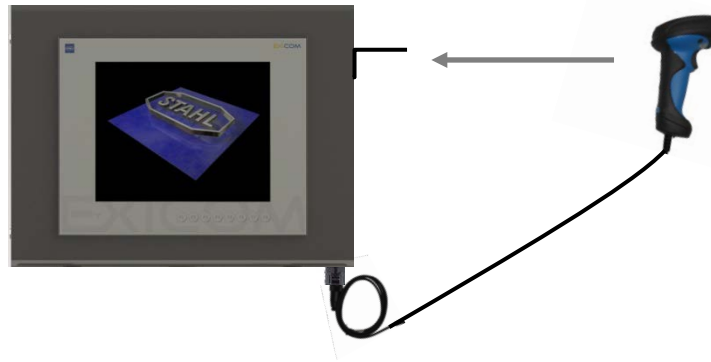
10.2.1 Views



10.3 Wired handheld scanner

The wired handheld scanner is connected to the VB-IDM160-XX6-RS232-SR-* connection cable by inserting the RJ45 plug into the corresponding socket until you can hear a "click". Then check that the cable is firmly connected.

Then connect the scanner cable with the fixed socket and insert the scanner into the corresponding bracket at the field enclosure.



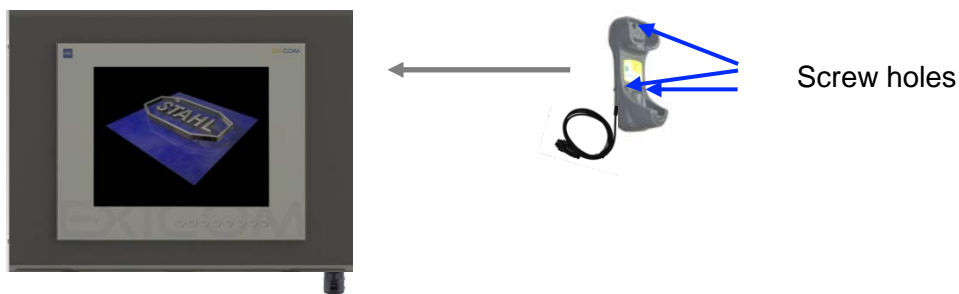
10.4 Base loading station

Before screwing the base loading station onto the field enclosure, the VB-IDM160-Base-RSi-RS232-SR-*.8m-Z1 connection cable must be inserted into the opening on the underside of the base loading station.



For this, insert the cable fully into the socket until you can hear a "click". Then check that the cable is firmly connected.

The base loading station is connected to the field enclosure by means of three screws (1x M4x30 mm; 2x M4x40 mm).



Then insert the connection cable into the fixed socket.



11 Operation

11.1 General information

Before operating the scanners please ensure that all components are complete.

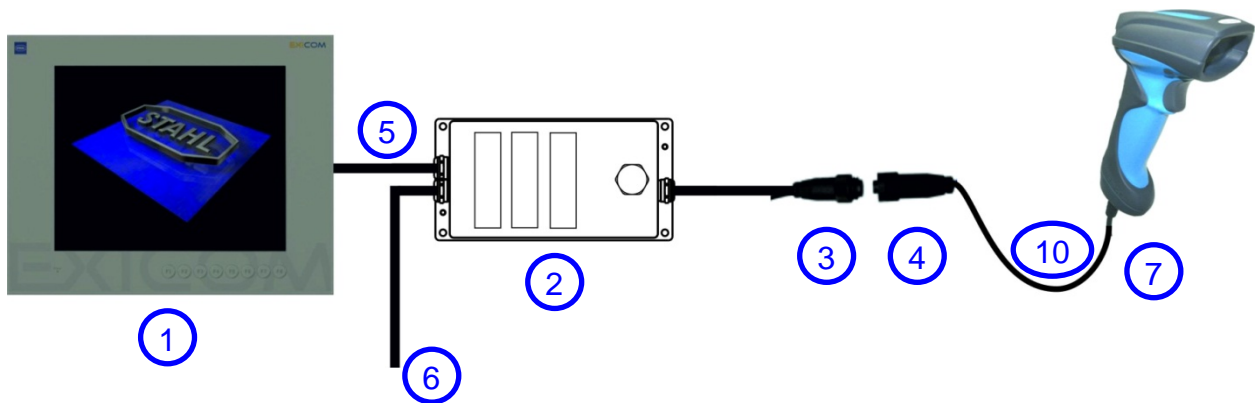
When operating the devices, particular care shall be taken that:

- the devices have been installed according to the directions,
- the devices are not damaged,
- all screws are tightened fast,
- all cables are connected properly.

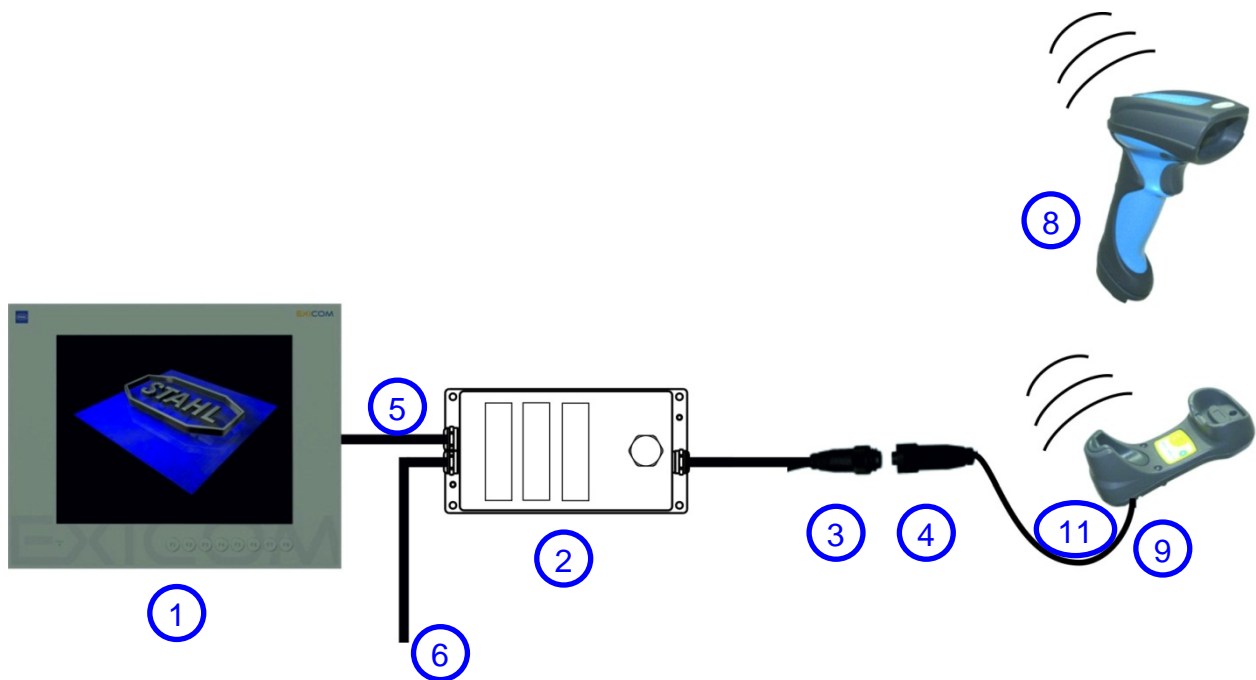
11.2 Connection overview / detail

11.2.1 Standard components

11.2.1.1 IDM160 - Readerbox-054-DC-RS232 - HMI



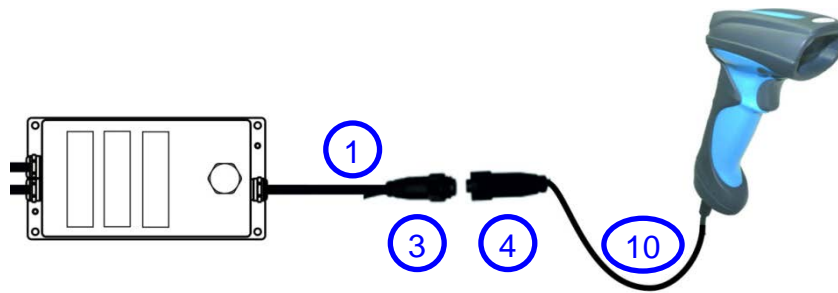
11.2.1.2 IDM160-BT - Base loading station - Readerbox-054-DC-RS232 - HMI



11.2.1.3 Legend for 11.2.1.1 and 11.2.1.2

Number	Description	Number	Description
1	HMI device (ET-/MT-xx6/-xx7)	7	IDM160 Scanner, fixed cable
2	ReaderBox-054-DC-RS232	8	IDM160 Scanner, Bluetooth
3	Binder fixed socket	9	Base loading station
4	Binder plug	10	VB-IDM160-XX6-RS232-SR-*
5	RS-232 serial interface	11	VB-IDM160-Base-RSi-RS232-SR-*.8m-Z1
6	Voltage connection ReaderBox (24 VDC)		

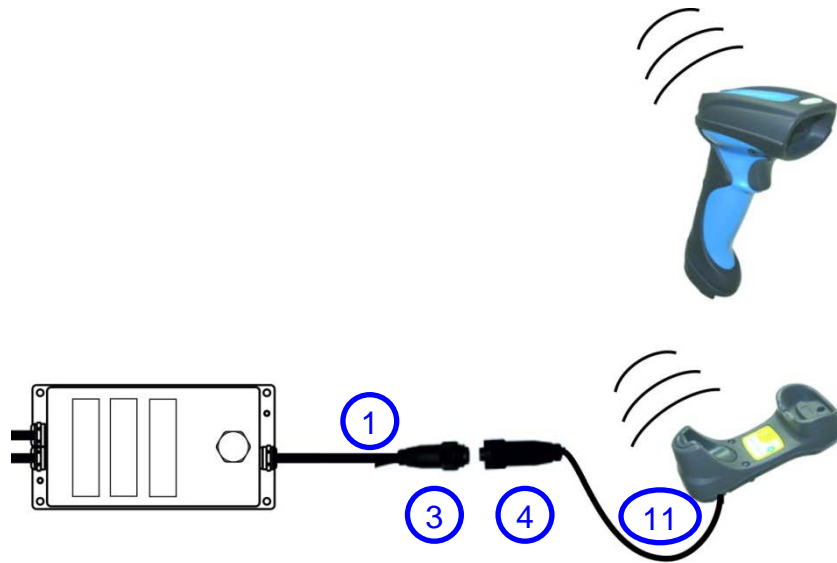
11.2.1.4 Connection of IDM160 to Readerbox-054-DC-RS232



Device name	ReaderBox-054-DC-RS232 data circuit		Binder fixed socket		Binder plug		Cable
Position	1		3		4		10
Definition	open cable end X3		IDM160-Socket-3+PE		VB-IDM160-XX6-RS232-SR-*		
View							
Assignments / connections (wire / pin)	Cable	Signal	Pin	Signal	Pin	Signal	
	1	+ VDC	1	+UB	1	+UB	
	2	GND	2	GND	2	GND	
	4	RxD	3	TxD	3	TxD	
	3 *	TxD *	4	-	4	-	
5	N.V. **	-	-	-	-		

	* The wire no. 3 of the X3 data circuit of the ReaderBox is not needed and must be cut off at the cable end.
	** N.V. = unused wire This wire was cut off ex-factory and is not assigned in the ReaderBox ! When the data cable is shortened, this wire must also be cut off again.


11.2.1.5 Connection of IDM160-BT to Readerbox-054-DC-RS232



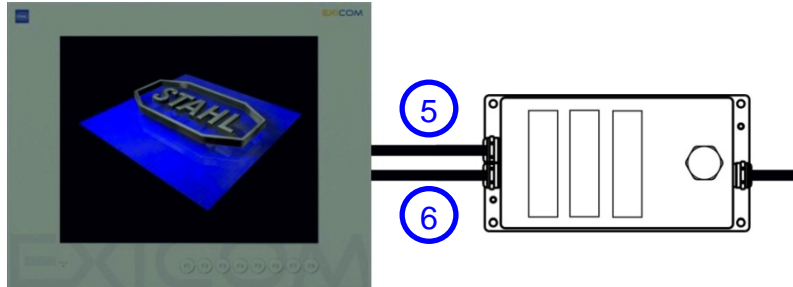
Device name	ReaderBox-054-DC-RS232 data circuit	Binder fixed socket	Binder plug	Cable		
Position	1	3	4	11		
Definition	Open cable end X3	IDM160-Socket-3+PE	VB-IDM160-Base-RSi-RS232-SR-*.8m-Z1			
View						
Assignments / connections (wire / pin)	Cable	Signal	Pin	Signal	Pin	Signal
	1	+ VDC	1	+UB	1	+UB
	2	GND	2	GND	2	GND
	4	RxD	3	TxD	3	TxD
	3 *	TxD *	4	-	4	-
5	N.V. **	-	-	-	-	-

	* The wire no. 3 of the X3 data circuit of the ReaderBox is not needed and must be cut off at the cable end.
	** N.V. = unused wire This wire was cut off ex-factory and is not assigned in the ReaderBox ! When the data cable is shortened, this wire must also be cut off again.

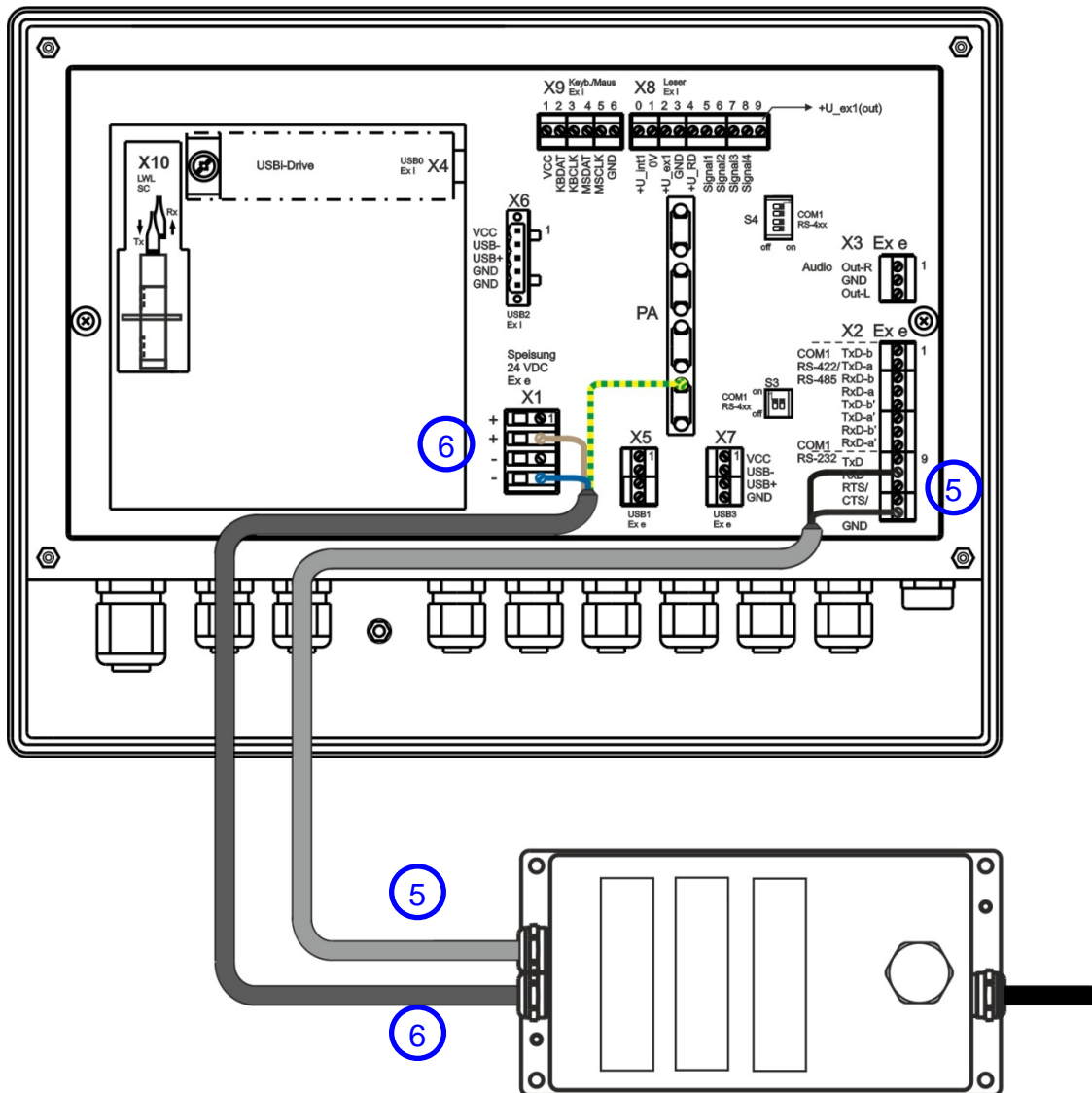
11.2.1.6 Connection of Readerbox-054-DC-RS232 to ET-/MT-xx6

 NOTICE	<p>The 24 VDC voltage supply of the ReaderBox can be connected via the X1 terminals of the ET-/MT-xx6 HMI devices.</p> <p>For this, make sure you use a power supply of sufficient volume to ensure the total voltage supply of both HMI device and ReaderBox.</p>
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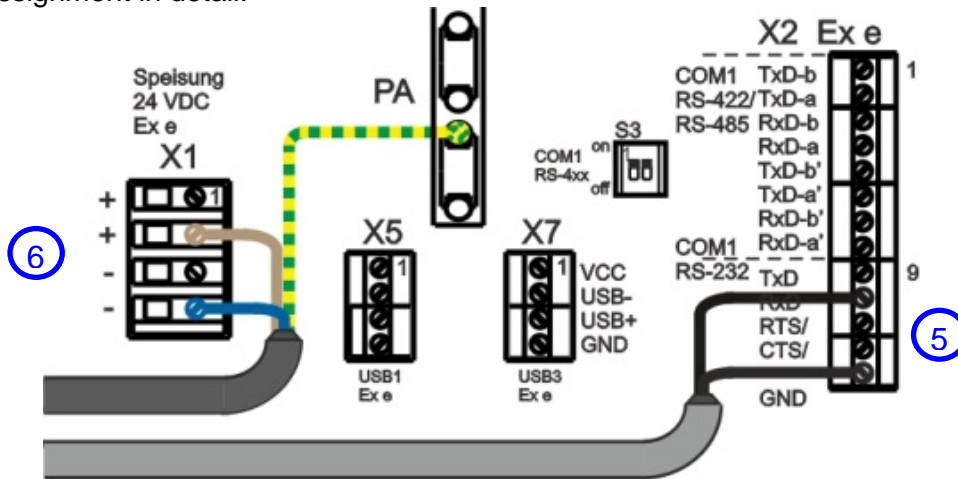
Overview:



Terminal assignment:




Terminal assignment in detail:



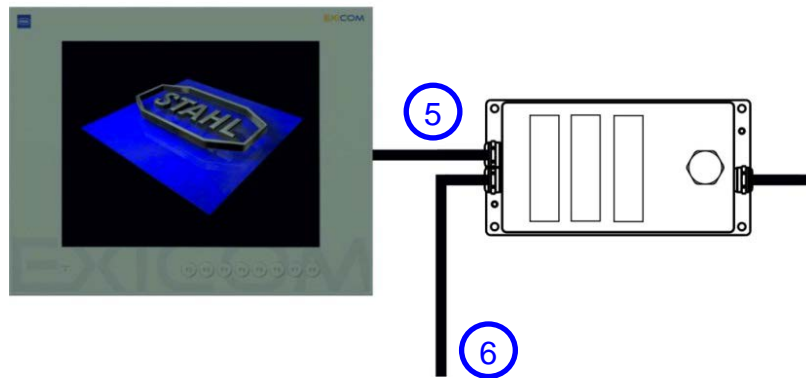
Device name	ReaderBox-054-DC-RS232		HMI ET-/MT-xx6	
Connection	Power supply			
Position	6			
Cable	3 x 1 mm ²		-	
Definition	Open cable end X1		Terminal X1 (VDC)	
View				
Assignments / connections (wire / pin)	Cable	Signal	Pin	Signal
	-	-	1	+24 VDC
	Brown	+ VDC	2	+24 VDC
	-	-	3	GND
	Blue	GND	4	GND
Green / yellow	Earth	PA	PA connection (Equipotential bonding)	
Connection	Data circuit			
Position	5			
Cable	5 x 1 mm ²		-	
Definition	Open cable end X2		Terminal X2 (COM1 - RS-232)	
View				
Assignments / connections (wire / pin)	Cable	Signal	Pin	Signal
	2 *	N.V. **	9	TxD
	1	TxD	10	RxD
	4 *	N.V. **	11	RTS/
	5 *	N.V. **	12	CTS/
3	GND	13	GND	

	* The wires of the X2 data circuit of the ReaderBox that are marked with an asterisk are not needed and must be cut off at the cable end.
	** This wire has been cut off ex-factory and is not assigned in the ReaderBox ! When the data cable is shortened, this wire must also be cut off again.

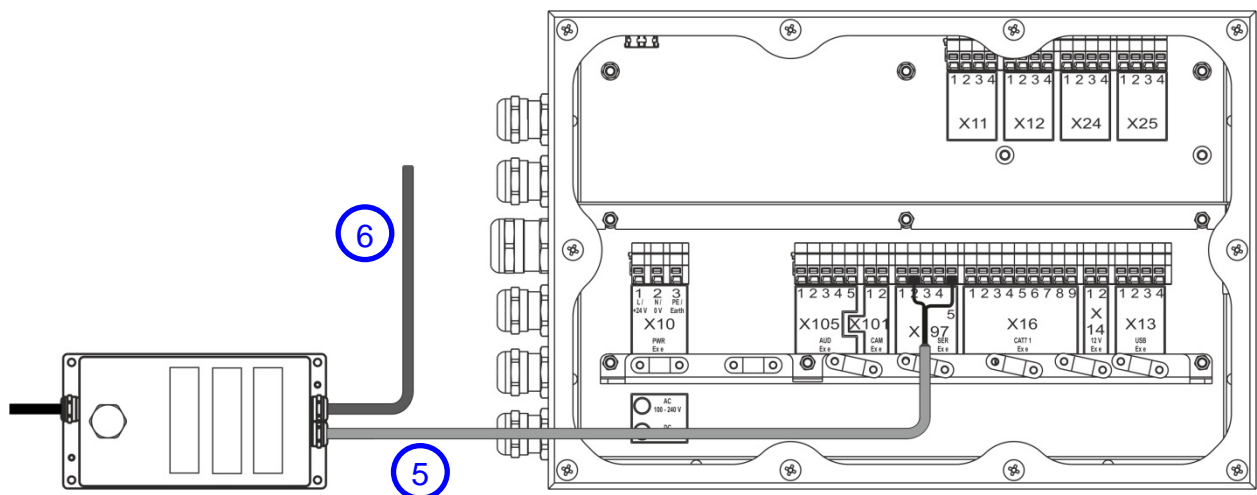
11.2.1.7 Connection of Readerbox-054-DC-RS232 to ET-/MT-xx7

 NOTICE	<p>The ReaderBox cannot be supplied with power via the terminals at the ET-/MT-xx7 HMI units and therefore requires a separate power supply.</p> <p>For the connection of the power supply of the ReaderBox, use a suitable terminal box or connection box.</p>
---	---

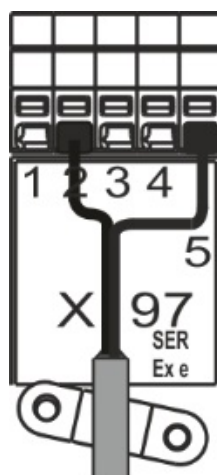
Overview:

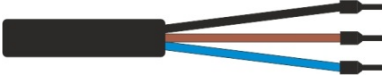
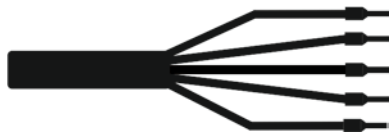
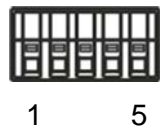



Terminal assignment:



Terminal assignment in detail:



Device name	ReaderBox-054-DC-RS232			
Connection	Power supply (via suitable terminal box or connection box)			
Position	6			
Cable	3 x 1 mm ²			
Definition	Open cable end X1			
View				
Assignments / connections (wire / pin)	Cable	Signal		
	Brown	+ VDC		
	Blue	GND		
	Green / yellow	Earth		
Connection	Data circuit			
Position	5			
Cable	5 x 1 mm ²	-		
Definition	Open cable end X2	Terminal X97 (SER - RS-232)		
View				
Assignments / connections (wire / pin)	Cable	Signal	Pin	Signal
	2 *	N.V. **	1	TxD
	1	TxD	2	RxD
	4 *	N.V. **	3	RTS/
	5 *	N.V. **	4	CTS/
3	GND	5	GND	

	<p>* The wires of the X2 data circuit of the ReaderBox that are marked with an asterisk are not needed and must be cut off at the cable end.</p>
	<p>N.V. = unused wire</p> <p>** This wire has been cut off ex-factory and is not assigned in the ReaderBox ! When the data cable is shortened, this wire must also be cut off again.</p>

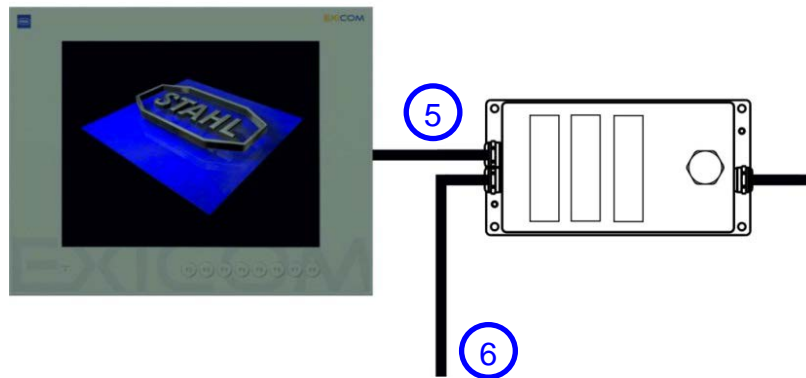
11.2.2 Connection Readerbox-054-AC-RS422

! NOTICE	<p>In contrast to the ReaderBox described in section 11.2.1 this section describes a ReaderBox with AC connection and an RS-422 data connection to the HMI unit.</p> <p>Depending on the actual ReaderBox version (see order versions listed in the "OI_ReaderBox" operating instructions), different combinations of power supply and data connections are possible.</p>
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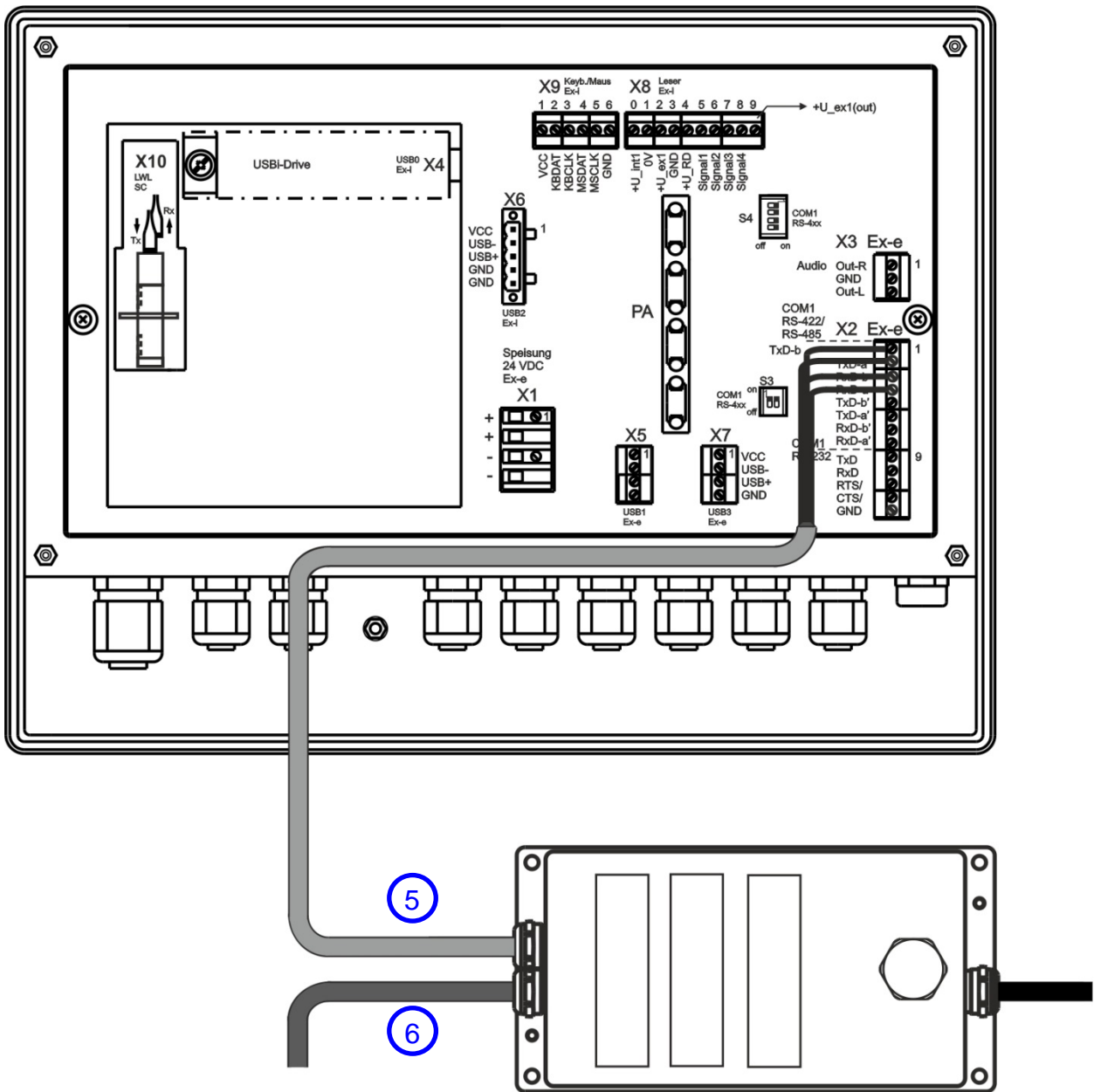
! NOTICE	<p>The ReaderBox cannot be supplied with power via the terminals of the HMI units and therefore requires a separate power supply.</p>
	<p>For the connection of the power supply of the ReaderBox, use a suitable terminal box or connection box.</p>

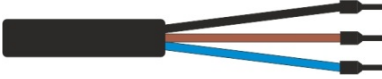
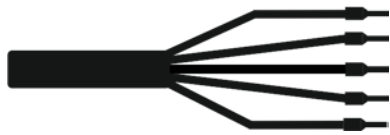
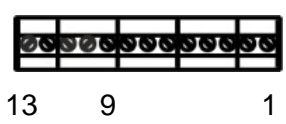
! NOTICE	<p>An RS-422 data connection to the ET-/MT-xx7 devices is not possible as these HMI units have no RS-422 interface.</p>
-----------------	---


Overview:



Terminal assignment:



Device name	ReaderBox-054-AC			
Connection	Power supply (via suitable terminal box or connection box)			
Position	6			
Cable	3 x 1 mm ²			
Definition	Open cable end X1			
View				
Assignments / connections (wire / pin)	Cable	Signal		
	Brown	L1		
	Blue	N		
	Green / yellow	Earth		
Connection	Data circuit			
Position	5			
Cable	5 x 1 mm ²	-		
Definition	Open cable end X2	Terminal X2 (COM1 - RS-422)		
View				
Assignments / connections (wire / pin)	Cable	Signal	Pin	Signal
	3	RxD-b	1	TxD-b
	4	RxD-a	2	TxD-a
	1	TxD-b	3	RxD-b
	2	TxD-a	4	RxD-a
5 *	Not used *	-	-	

 NOTICE	<p>* Not used = unused wire This wire has been cut off ex-factory and is not assigned in the ReaderBox! When the data cable is shortened, this wire must also be cut off again.</p>
---	---

11.3 Bluetooth scanner IDM160-BT

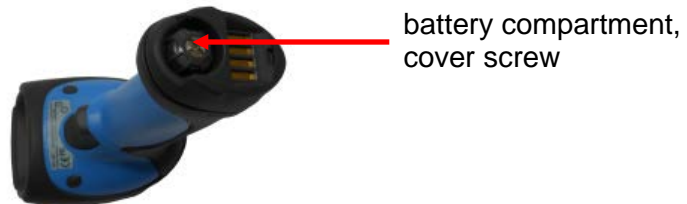
11.3.1 Battery

**WARNING**

Do not replace battery in hazardous areas.

When changing the battery, proceed as follows:

The battery compartment is located at the bottom of the wireless scanner and is covered by a lid.



Unscrew cover screw and remove cover of battery compartment.

**NOTICE**

You need to apply a little force to remove the battery compartment's cover.


Pull out the battery by its lug and insert the replacement battery after having removed its protective cap.


**NOTICE**

If the battery has been correctly inserted into the wireless scanner, this will be indicated by an acoustic and an optical signal.

Replace the cover onto the battery compartment, check that it is position correctly and close it again with the screw.


11.3.2 Base loading station

 WARNING	<p>Only the IDM160-BT-BaseBT-Z1 explosion-protected base loading station may be used in hazardous areas.</p> <p>This is the only station with which the wireless scanner can be re-loaded in a hazardous area.</p>
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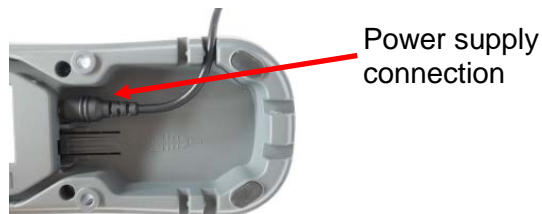
 NOTICE	<p>For loading the explosion-protected wireless scanner in non-hazardous areas two different base loading stations are available (see type keys).</p>
---	---


For loading or parking the wireless scanner, insert the lower part of the handle into the loading station to ensure that the contacts for loading are connected properly.



 NOTICE	<p>The LED at the head of the scanner will come on to indicate loading.</p>
---	---

The non-Ex base loading stations require a power supply, which is connected to the loading station.



 WARNING	<p>This connection is closed ex-factory in base loading stations for hazardous areas.</p>
--	---

12 Maintenance, service

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

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

Maintenance should focus on the following:


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

12.1 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 relevant national rules and regulations.

13 Troubleshooting

Users cannot carry out any repairs on the modules.

 NOTICE	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 requested – have been authorized by the manufacturer.

14 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 (amendment) 2012/19/EU on waste electrical and electronic equipment (WEEE). Under this directive, the scanners are listed in category 3 (IT- and telecommunication equipment).

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

14.1 ROHS directive 2011/65/EC

The revised version of the ROHS (restriction of hazardous substances) 2002/95/EC directive, directive 2011/65/EC, extends its area of application to all electric and electronic products.

In the case of scanners (category 3 - IT- and telecommunication equipment) a transitional period applies until 22.07.2017, after which the banned substances listed in ROHS 2011/65/EC directive apply to all devices newly put on the market.

15 Accessories

The accessories listed below are available / necessary for assembly:

Accessories	Order number	Description / Application
Connection cable	VB-IDM160-XX6-RS232-SR-1.8m	Connection cable for wired scanner and Binder fixed socket, 1.8 m long
	VB-IDM160-XX6-RS232-SR-3.8m	as above, but 3.8 m long
	VB-IDM160-Base-RSi-RS232-SR-1.8m-Z1	Connection cable for base loading station and Binder fixed socket, 1.8 m long
	VB-IDM160-Base-RSi-RS232-SR-3.8m-Z1	as above, but 3.8 m long
	VB-IDM160-EXT-6m-Z1	Extension cable for wired scanner and Binder fixed socket, additional length of 6 m, smooth cable
	VB-IDM160-EXT-4.5m-Z1	Extension cable for wired scanner and Binder fixed socket, additional length of 4.5 m, spiral cable
	VB-IDM160-XX6-USB-1.8m	Connection cable for ReaderBox-SDVM125-*-USB and Cable for handheld scanner, 1.8 m long
	VB-IDM160-XX6-USB-3.8m	as above, but 3.8 m long
	VB-IDM160-Base-SDVM-USB-1.8m-Z1	Connection cable for ReaderBox-SDVM125-*-USB and Cable for base station, 1.8 m long
	VB-IDM160-Base-SDVM-USB-3.8m-Z1	as above, but 3.8 m long
Fixed socket	IDM160-Socket-3+PE	Binder flanged socket with screw connector for scanner cable, number of poles = 3 + PE
Stand bracket	IDM160-tripod	Stand bracked for IDM handheld scanner
Table-mounted bracket	IDM160-Deskholder	Table-mounted bracket for IDM handheld scanner
Power supply	DSP-IDM160-DC5V	Non-Ex, for non-Ex base loading station
Battery	IDM160-BT-ex-Lion	Replacement battery for wireless scanner IDM160-BT-*

16 Declaration of EC conformity

16.1 IDM160 barcode handheld scanner

EG/EU-Konformitätserklärung
EC/EU Declaration of Conformity
Déclaration de Conformité CE/UE



R. STAHL HMI Systems GmbH • Im Gewerbegebiet Pesch 14 • 50767 Köln, Germany
 erklärt in alleiniger Verantwortung, *declares in its sole responsibility, déclare sous sa seule responsabilité,*

dass das Produkt: **Barcodescanner**
that the product: *Barcodescanner*
que le produit: *Lecteur de codebarres*

Typ(en), type(s), type(s): **IDM160-ex**
 und, *and, et*
IDM160-PDF-ex

mit den Anforderungen der folgenden Richtlinien und Normen übereinstimmt.
is in conformity with the requirements of the following directives and standards.
est conforme aux exigences des directives et des normes suivantes.

Richtlinie(n) / Directive(s) / Directive(s)		Norm(en) / Standard(s) / Norme(s)
Bis/Until/Jusque'au 2016-04-19:	Ab/From/De 2016-04-20:	EN 60079-0: 2012 EN 60079-11: 2012
94/9/EG 94/9/EC 94/9/CE	ATEX-Richtlinie ATEX Directive Directive ATEX	2014/34/EU 2014/34/EU 2014/34/UE

Kennzeichnung, marking, marquage: **II 2G Ex ib IIC T4 Gb** **CE0158**
 II 2D Ex ib IIIC T135 °C Db

EG/EU-Baumusterprüfbescheinigung: **IBExU 14ATEX1013**
EC/EU Type Examination Certificate: (IBExU Institut für Sicherheitstechnik GmbH
Attestation d'examen CE/UE de type: Fuchsmühlenweg 7, 09599 Freiberg, Germany, NB0637)

Bis/Until/Jusque'au 2016-04-19:	Ab/From/De 2016-04-20:	EN 61000-6-2: 2006 EN 61000-6-3: 2007
2004/108/EG 2004/108/EC 2004/108/CE	EMV-Richtlinie EMC Directive Directive CEM	2014/30/EU 2014/30/EU 2014/30/UE

Produktnormen nach RoHS-Richtlinie (2011/65/EU): EN 50581:2012
Product standards according to RoHS Directive:
Normes des produit pour la Directive RoHS:

Köln, 2015-09-11

Ort und Datum
Place and date
Lieu et date

i.V.

J. Düren
 Technical Director

i.V.

W. Bertges
 Quality Manager

16.2 IDM160-BT barcode bluetooth scanner

EG/EU-Konformitätserklärung
EC/EU Declaration of Conformity
Déclaration de Conformité CE/UE



R. STAHL HMI Systems GmbH • Im Gewerbegebiet Pesch 14 • 50767 Köln, Germany
 erklärt in alleiniger Verantwortung, *declares in its sole responsibility, déclare sous sa seule responsabilité,*

dass das Produkt:
that the product:
que le produit:

Bluetooth Barcodescanner und Basisladestation
Bluetooth Barcodescanner and wired loading station
Lecteur de codebarres Bluetooth avec station de charge

Typ(en), type(s), type(s):

IDM160-BT-ex
IDM160-BT-PDF-ex
IDM160-BT-BaseBT-Z1

mit den Anforderungen der folgenden Richtlinien und Normen übereinstimmt.
is in conformity with the requirements of the following directives and standards.
est conforme aux exigences des directives et des normes suivantes.

Richtlinie(n) / Directive(s) / Directive(s)		Norm(en) / Standard(s) / Norme(s)
Bis/Until/Jusque'au 2016-04-19:	Ab/From/De 2016-04-20:	EN 60079-0: 2012 EN 60079-11: 2012
94/9/EG 94/9/EC 94/9/CE	ATEX-Richtlinie ATEX Directive Directive ATEX	2014/34/EU 2014/34/EU 2014/34/UE
Kennzeichnung, marking, marquage:		II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T135 °C Db CE 0158
EG/EU-Baumusterprüfbescheinigung: <i>EC/EU Type Examination Certificate:</i> <i>Attestation d'examen CE/UE de type:</i>		IBExU 13 ATEX 1150 (IBExU Institut für Sicherheitstechnik GmbH Fuchsmühlenweg 7, 09599 Freiberg, Germany, NB0637)
Bis/Until/Jusque'au 2016-04-19:	Ab/From/De 2016-04-20:	EN 61000-6-2: 2006 EN 61000-6-3: 2007
2004/108/EG 2004/108/EC 2004/108/CE	EMV-Richtlinie EMC Directive Directive CEM	2014/30/EU 2014/30/EU 2014/30/UE
Bis/Until/Jusque'au 2016-06-12:		EN 60950-1: 2011 EN 300328 V1.7.1: 2006 EN 301489-1V1.8.1: 2008 EN 301489-17 V2.1.1: 2009
1999/5/EG 1999/5/EC 1999/5/CE	R&TTE-Richtlinie R&TTE Directive Directive R&TTE	
Ab/From/De 2016-06-13:		
2014/53/EU 2014/53/EU 2014/53/UE	Funkanlagen Richtlinie RED Directive Directive RED	
EMV und Niederspannungsrichtlinie sind enthalten. <i>EMC and Low Voltage Directives are included.</i> <i>Directives CEM et Basse Tension sont compris.</i>		
Produktnormen nach RoHS-Richtlinie (2011/65/EU): <i>Product standards according to RoHS Directive:</i> <i>Normes des produit pour la Directive RoHS:</i>		EN 50581:2012

Köln, 2015-09-14

i.V.

J. Düren
 Technical Director

i.V.

W. Bertges
 Quality Manager

17 Release notes

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

Version 01.00.04

- Changing of address and phone numbers
- Removal of sentence "Microsoft Corporation" in Trademarks"
- Changing of wire colore into wire numbers at "Connection of IDM160 to Readerbox-054-DC-RS232" at ReaderBox data circuit X3
- Changing of view from cable end at "Connection of IDM160 to Readerbox-054-DC-RS232" at ReaderBox data circuit X3
- Changing of wire colore into wire numbers at "Connection of IDM160-BT to Readerbox-054-DC-RS232" at ReaderBox data circuit X3
- Changing of view from cable end at "Connection of IDM160-BT to Readerbox-054-DC-RS232" at ReaderBox data circuit X3
- Changing of wire colore into wire numbers at "Connection of Readerbox-054-DC-RS232 to ET-/MT-xx6" at ReaderBox data circuit X2
- Changing of view from cable end at "Connection of Readerbox-054-DC-RS232 to ET-/MT-xx6" at ReaderBox data circuit X2
- Changing of drawing from terminal assignment at "Connection of Readerbox-054-DC-RS232 to ET-/MT-xx6"
- Changing of wire colore into wire numbers at "Connection of Readerbox-054-DC-RS232 to ET-/MT-xx7" at ReaderBox data circuit X2
- Changing of view from cable end at "Connection of Readerbox-054-DC-RS232 to ET-/MT-xx7" at ReaderBox data circuit X2
- Changing of drawing from terminal assignment at "Connection of Readerbox-054-DC-RS232 to ET-/MT-xx7"
- Changing of wire colore into wire numbers at "Connection of Readerbox-054- AC-RS422" data circuit X2
- Changing of view from cable end at "Connection of Readerbox-054- AC-RS422" data circuit X2
- Changing of drawing from terminal assignment at "Connection of Readerbox-054- AC-RS422" data circuit X2"
- Deleting of drawing from terminal assignment detail at "Connection of Readerbox-054- AC-RS422"
- Adaptation section "Disposal" according to the newest WEEE and ROHS directive
- Renew Declaration of EC confomity
- Adaptation section "Conformity to standards"
- Removal of previous release notes
- Text and formale corrections

R. STAHL HMI Systems GmbH
Adolf-Grimme-Allee 8
D 50829 Köln

Phone: (switchboard) +49 (0) 221 76 806 - 1000
(Hotline) - 5000
Fax: - 4100
E-mail: (switchboard) office@stahl-hmi.de
(hotline) support@stahl-hmi.de

www.stahl.de
www.stahl-hmi.de

