

SK-IDM-Z2-J2-1M-U-N  
SK-IDM-Z2-J2-5M-S-N

Supply Cable

Manual



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With regard to the supply of products, the current issue of the following document is applicable:  
The General Terms of Delivery for Products and Services of the Electrical Industry, published  
by the Central Association of the Electrical Industry (Zentralverband Elektrotechnik und Elek-  
troindustrie (ZVEI) e.V.) in its most recent version as well as the supplementary clause:  
"Expanded reservation of proprietorship"

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## 1 History of the Manual

The following editions of the manual have been released:

Version	Comments
01/2022	First edition
12/2022	Addition new scanner generation IDM-Z1-x64-* and IDM-Z2-x64-*

## 2 Introduction

### 2.1 Content of this Document

This document contains information required to use the product in the relevant phases of the product life cycle. This may include information on the following:

- Product identification
- Delivery, transport, and storage
- Mounting and installation
- Commissioning and operation
- Maintenance and repair
- Troubleshooting
- Dismounting
- Disposal



#### Note

For full information on the product, refer to the further documentation on the Internet at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

The documentation comprises the following parts:

- This document
- Datasheet

In addition, the documentation may comprise the following parts, if applicable:

- Type examination certificate
- EU declaration of conformity
- Attestation of conformity
- Certificates
- Control drawings
- Instruction manual
- Other documents

### 2.2 Manufacturer

Pepperl+Fuchs Group Lilienthalstraße 200, 68307 Mannheim, Germany
--

Internet: <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
--

### 2.3 Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismantling lies with the plant operator.

Only appropriately trained and qualified personnel may carry out mounting, installation, commissioning, operation, maintenance, and dismantling of the product. The personnel must have read and understood the instruction manual and the further documentation.

Prior to using the product make yourself familiar with it. Read the document carefully.

### 2.4 Symbols Used

This document contains symbols for the identification of warning messages and of informative messages.

## Warning Messages

You will find warning messages, whenever dangers may arise from your actions. It is mandatory that you observe these warning messages for your personal safety and in order to avoid property damage.

Depending on the risk level, the warning messages are displayed in descending order as follows:



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### Danger!

This symbol indicates an imminent danger.

Non-observance will result in personal injury or death.

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### Warning!

This symbol indicates a possible fault or danger.

Non-observance may cause personal injury or serious property damage.

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### Caution!

This symbol indicates a possible fault.

Non-observance could interrupt the device and any connected systems and plants, or result in their complete failure.

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## Informative Symbols



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### Note

This symbol brings important information to your attention.

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### Action

1. This symbol indicates a paragraph with instructions. You are prompted to perform an action or a sequence of actions.

### 3 Technical Specifications

#### 3.1 Explosion Protection

SK-IDM-Z2-J2-5M-S-N (RS-232)

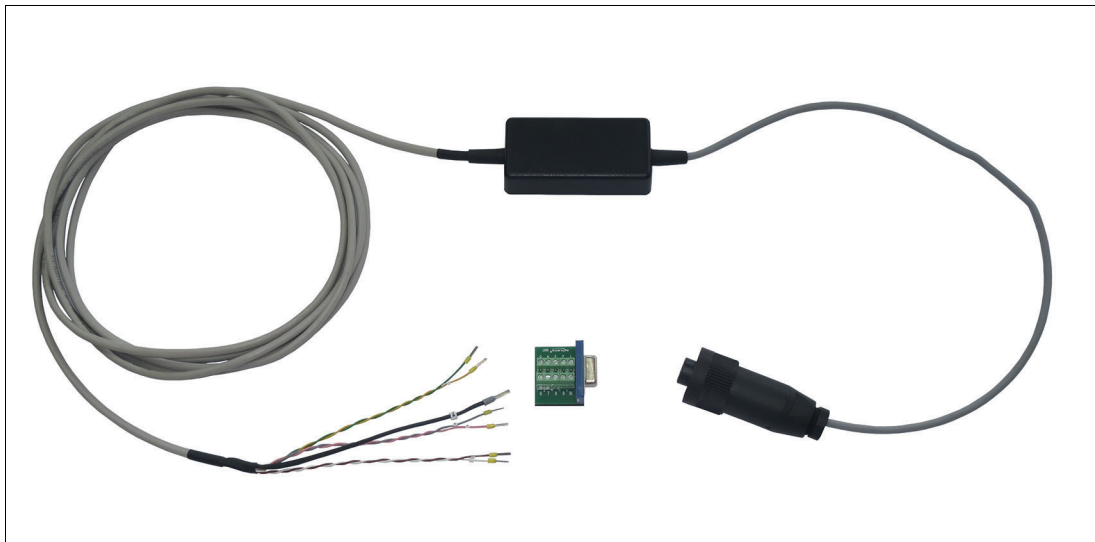


Figure 3.1

SK-IDM-Z2-J2-1M-U-N (USB)



Figure 3.2

#### Markings

Ex II 3G Ex mc [ic] IIC/IIB T4 Gc

Ex II 3D Ex mc [ic] IIIC T135°C Dc

-20 ... 70°C

#### Type Examination Certificate

IBExU19ATEXB016X

IECEX IBE 19.0026X

## Manufacturer

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### Note

The supply cables are available for USB or serial connection.

## 3.2 Technical Data

	SK-IDM-Z2-J2-1M-U-N	SK-IDM-Z2-J2-5M-S-N
Description	Power supply for the intrinsically safe supply of the wired barcode readers IDM-Z2-160-D-*, IDM-Z2-260-D-*, IDM-Z2-164-D-*, IDM-Z2-264-D-* and the Bluetooth® base stations IDM-Z2-x61-B-* and IDM-Z2-x64-B-*	
<b>Electrical data</b>		
Interfaces - field side (Ex e)	USB	RS-232 / RS-422 pins (adapter included)
Interfaces - scanner side (Ex i)	USB Ex ic (via M12 female socket)	RS-232
Current consumption	1 A	0.5 ... 0.2 A
Operating consumption	DC +5 V ±10%	8 ... 30 V DC
Power supply cable	USB 2.0	0.14 mm <sup>2</sup> (26 AWG), 2 pin
Data cable	USB 2.0	0.14 m <sup>2</sup> (26 AWG), 2 pin
Data cable max. length	1 m	5 m
<b>Ambient Conditions</b>		
Operating temperature	-20 ... 70°C	
Storage temperature	-20 ... 70°C	
Relative humidity	95% non-condensing	
<b>Mechanical data</b>		
Degree of protection	IP66	
Dimensions (B x H x T)	80 mm x 20 mm x 40 mm	
Weight	approx. 250 g	

## 3.3 Use

The supply cables are used for the intrinsically safe supply of barcode reader/base station. The supply module serves as a power supply and communication interface for the intrinsically safe supply of power in the explosion-hazardous areas Zone 2 and Zone 22.



## 4 System Structure

The supply cable is an accessory that supplies power to the wired Pepperl+Fuchs handheld readers IDM-Z2-\* and to the Bluetooth® base station IDM-Z2-x61-B-J2\* and IDM-Z2-x64-B-J2\*.

The corresponding system configurations of the supply cable with the respective handheld readers can be found in the manuals for the Pepperl+Fuchs IDM-Z2-\* handheld reader series.



### Warning!

The IP66 rating does not imply that the devices are suitable for outdoor applications. Standing water and environmental influences can lead to a failure of the device. For this reason, in case of outdoor applications the supply module must be installed in an appropriate enclosure.

### Corded Barcode Reader, serial connection to Host PC (stand-alone)

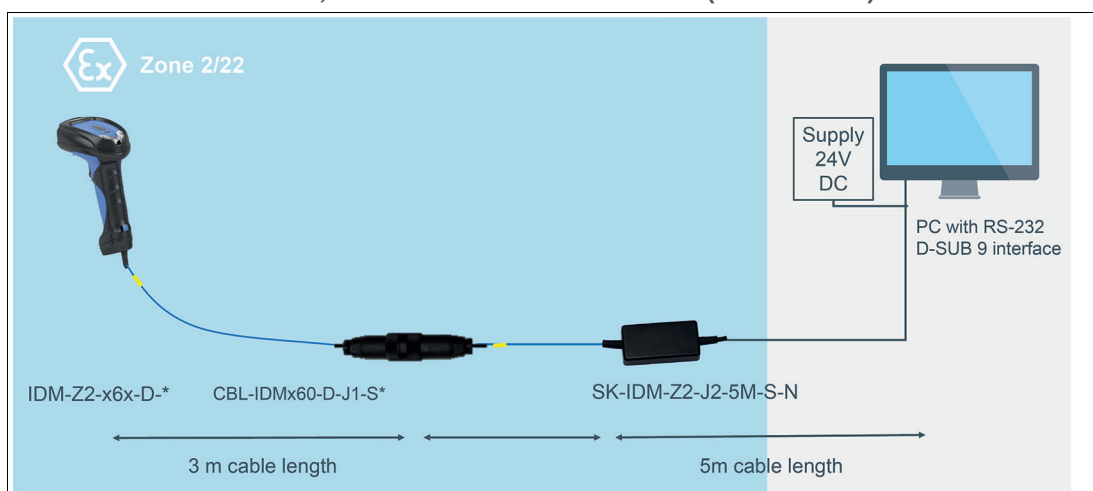


Figure 4.1

### Optional Accessories:

Item Number	Product Name	Description	Photo
#548268	SCANNER-HOLDE- RU1-AG1-N0	Compatible with AG1 Housing and Holder-Bracket Material: Stainless steel AISI 316L (1.4404) Compatible with IDMx6x, ecom Ident-Ex® 01 Prepared for mounting to right side of housing	
#70142693	HOLDER-BRACKET- SK-IDM-Z2-N0	Bracket to wall-mount SK-IDM-Z2-J2-* barrier - Material: Stainless steel AISI 304 (1.4301) - NOTE: Barrier not included!	

## 5 Commissioning

### 5.1 Mounting Stand-alone Applications (Serial Supply Cables)

#### HOLDER-BRACKET-SK-IDM-Z2-N0

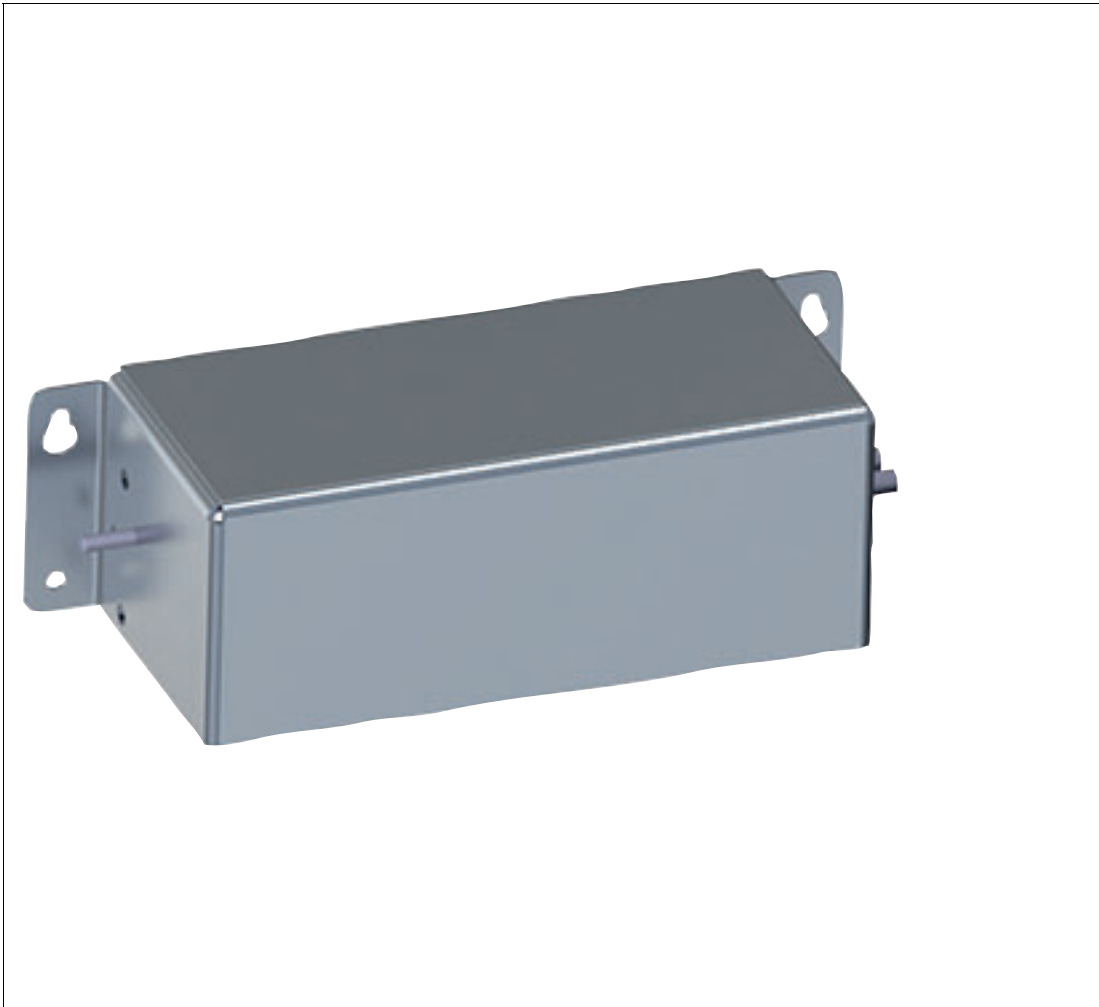


Figure 5.1

#### Dimensions HOLDER-BRACKET-SK-IDM-Z2-N0

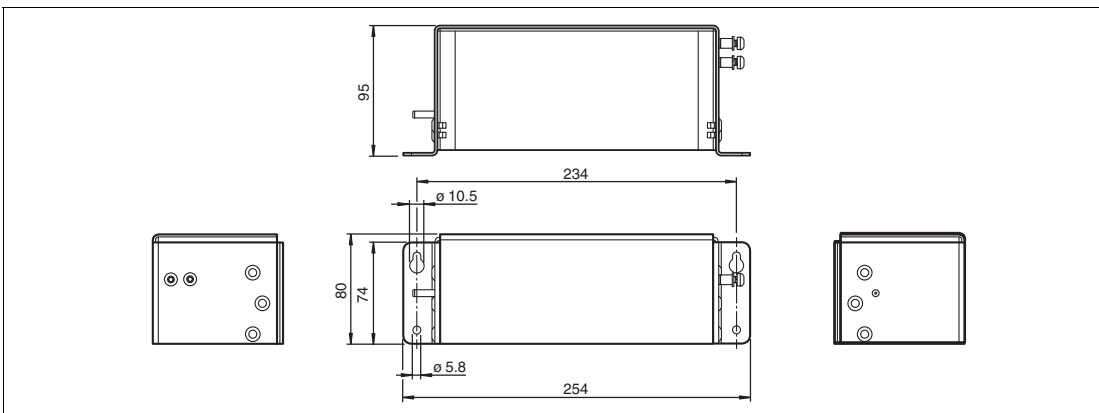


Figure 5.2

**Dimensions HOLDER-BRACKET-SK-IDM-Z2-N0 with SCANNER-HOLDER-U1-AG1-N0**

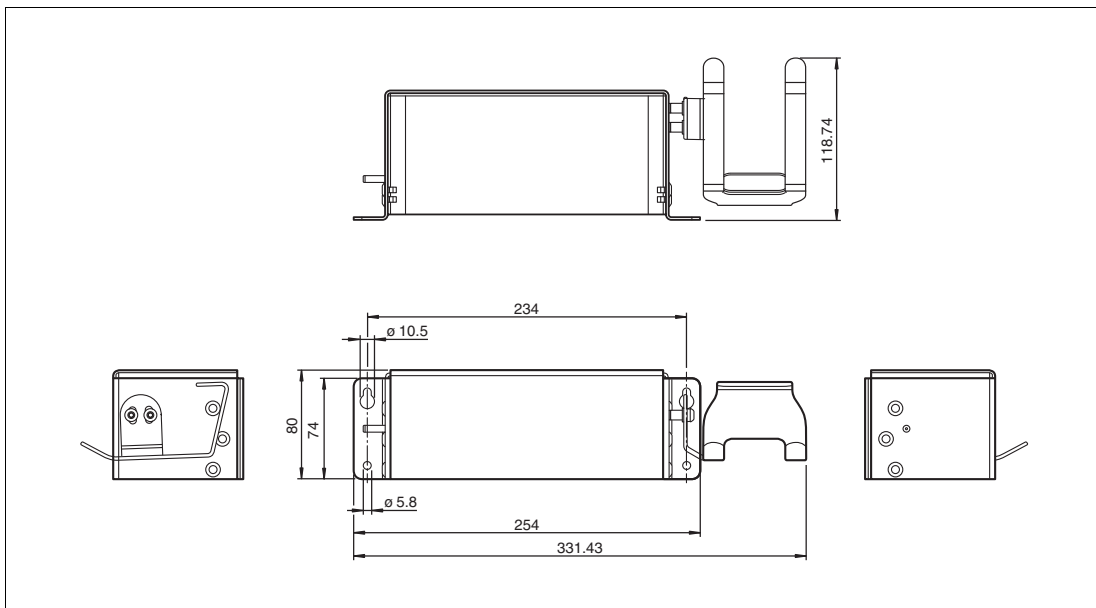


Figure 5.3

**Dimensions HOLDER-BRACKET-SK-IDM-Z2-N0 with HOLDER-BRACKET-AG1-IDMx61-B-N0**

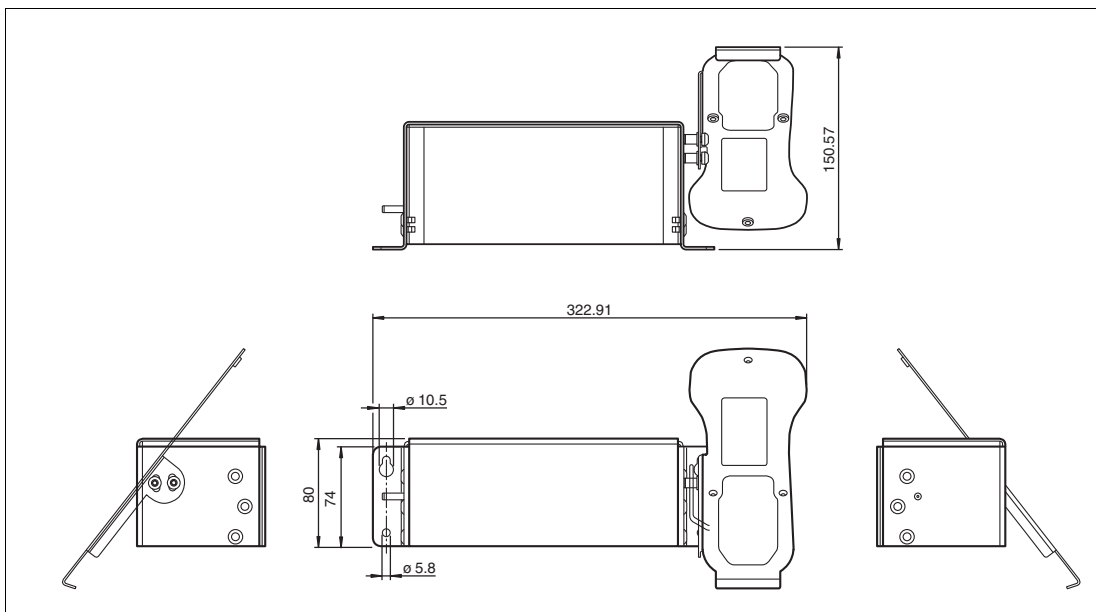


Figure 5.4



**Note**

HOLDER-BRACKET-SK-IDM-Z2-N0 needs to be ordered separately!



## Procedure

1. Use the additional Holder Bracket HOLDER-BRACKET-SK-IDM-Z2-N0 for wall installation.

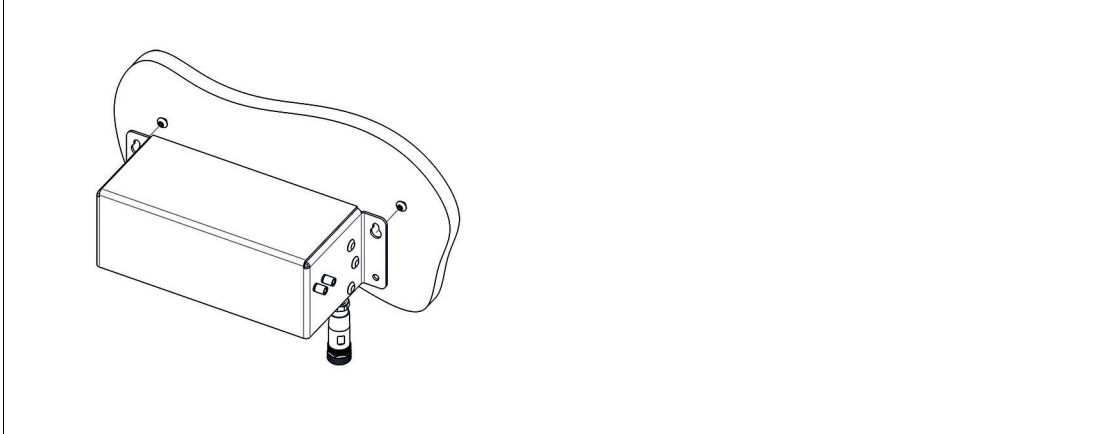


Figure 5.5

2. Mount the accessory holder bracket over (2x) M5 screws through the keyhole slots to the wall. The bracket offers additional strain relief for the the barcode reader or base station connection cable.

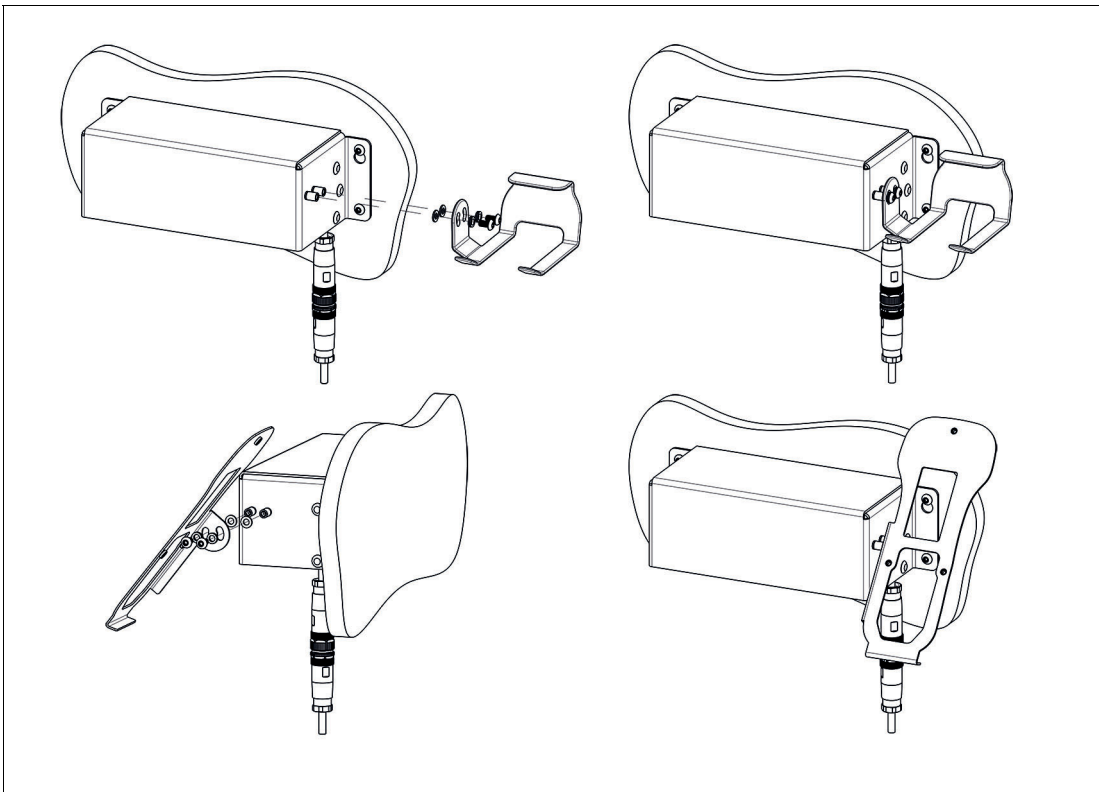


Figure 5.6

3. Use the two mounting holes for optionally installation of the holder bracket for the base station or the scanner holder.

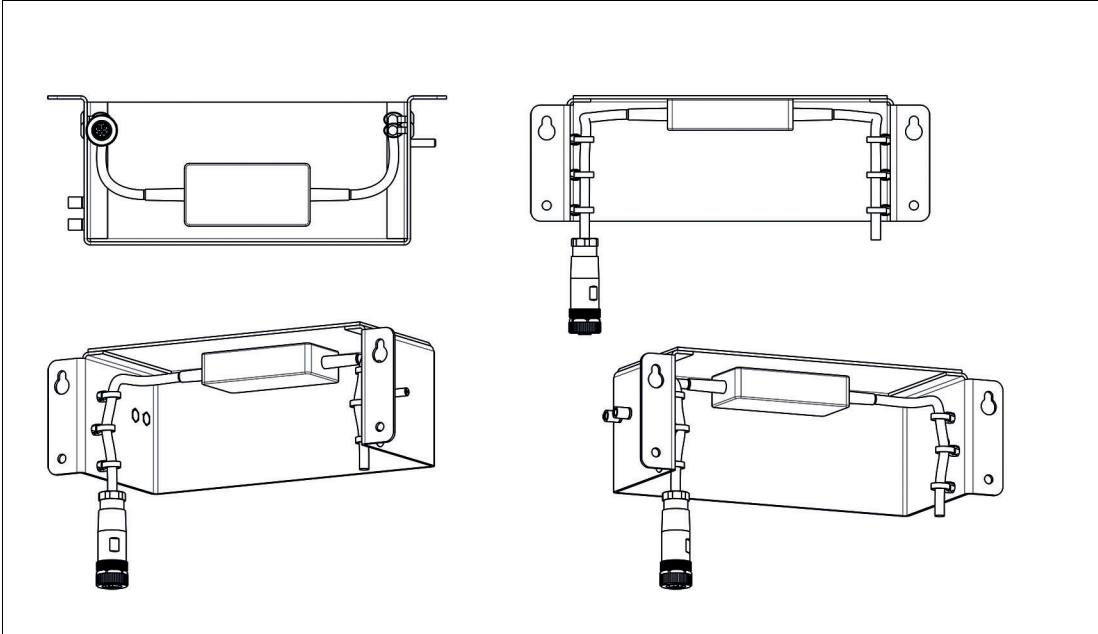


Figure 5.7

## 5.2 Fixing the supply cable within the VisuNet FLX adapter (USB supply cable)



### Mounting with the Velcro Tape within the VisuNet FLX adapter (USB supply cable)



Figure 5.8

1. Each USB supply cable comes with preinstalled Velcro Tape on the backside of the barrier. This allows the fast and easy installation within the VisuNet FLX adapter (ADAPTER-3200-10-304B-M12) or to stick the supply cable to any smooth surface.



#### Note

For detailed information regarding the mechanical installation refer to the VisuNet FLX system manual.

### 5.3 Pin allocation of supply cable SK-IDM-Z2-J2-5M-S-N RS-232 interface

Supply of the corded barcode reader Zone 2/22 and Zone 2/22 base station via plug-in connection plug/coupler.

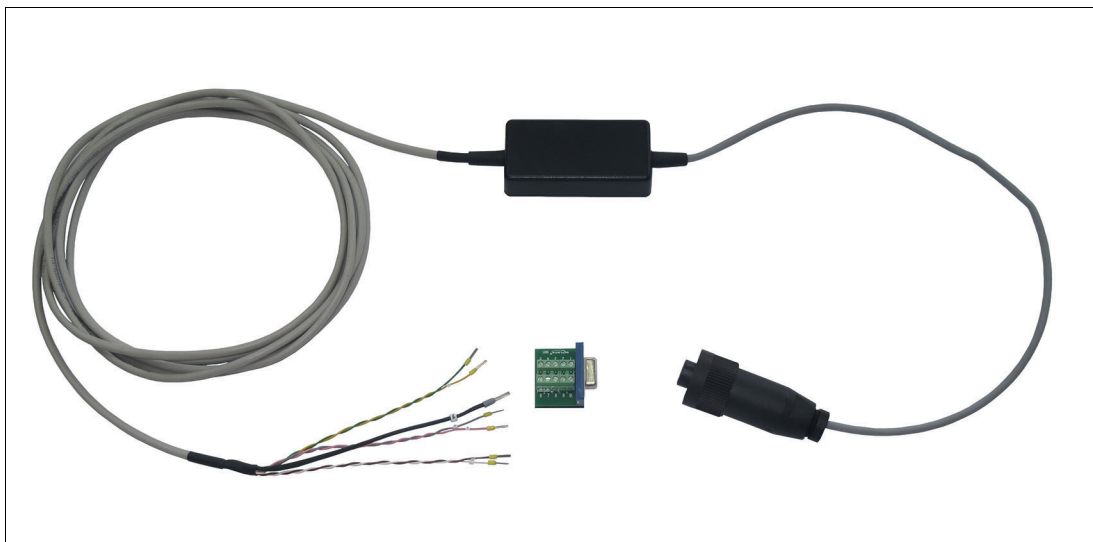


Figure 5.9



#### **Danger!**

Do not open the housing!

Before the unit is put into operation in a potentially explosive atmosphere, it must be ensured that the housing is closed and not damaged.

#### Connection of the corded Zone 2/22 barcode reader and Zone 2/22 base station to the serial supply cable via plug-in connection plug/coupler

Basic connection cable RS-232		Supply cable	
Pin assignment connector		Connection coupling	
Pin	Designation	Pin	Designation
2	GND (brown)	2	GND (brown)
3	TxD (white)	3	RS-232 - TxD (white)
1	+UB (yellow)	1	Supply (yellow)

#### Supply and data transmission with RS-232 interface to a host PC outside the hazardous area

Supply cable		
Pin	Designation	9-pole Sub-D RS-232 Pin
1	TXD / RS-232 (white)	2
2	GND / RS-232 (brown)	5
3	TxD+ / RS-422 (yellow)	
4	TxD- / RS-422 (green)	
5	GND (gray)	
6	+UB (pink)	
7	Shielding	SHL



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**Note**

The wires are connected with the enclosed Sub-D plug. Supply via wires 5 and 6. When connecting without Sub-D, the shield must be connected to GND. The supply line can also be operated with RS-422 interfaces. The wires of the RS-422 connections must remain twisted up to the contact.

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**Note**

Information relating to programming from the SICK AG manual ([www.SICK.com](http://www.SICK.com)) is required for the complete commissioning of the handheld reader.

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## 5.4 Pin allocation of supply cable SK-IDM-Z2-J2-1M-U-N USB interface

Supply of the corded Zone 2/22 barcode reader and Zone 2/22 base station via plug-in connection plug/coupler.



Figure 5.10



### Danger!

Do not open the housing!

Before the unit is put into operation in a potentially explosive atmosphere, it must be ensured that the housing is closed and not damaged.



### Note

Changes to the pin assignment may only be carried out by trained and qualified personnel.

Connection of the corded Zone 2/22 barcode reader and Zone 2/22 base station to the USB supply cable via plug-in connection plug/coupler

Basic connection cable USB		Supply cable	
Pin assignment connector		Connection coupling	
Pin	Designation	Pin	Designation
1	+UB (brown/red)	1	+UB (red)
2	D- (white)	2	D- (white)
3	D+ (green)	3	D+ (green)
4	GND (black)	4	GND (black)

Supply and data transmission with a USB interface to a host PC outside the hazardous area

Supply cable	
Pins	
Designation	USB Pin
+UB	1 (red)
D-	2 (white)

Supply cable	
Pins	
D+	3 (green)
ID	4
GND	5 (black)




**Note**

Information relating to programming from the SICK AG manual ([www.SICK.com](http://www.SICK.com)) is required for the complete commissioning of the handheld reader.



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## 6 Accessories




### Accessories for VisuNet HMI Applications





Item Number	Product Name	Description	Photo
#548395	HOLDER-BRACKET-AG1-IDMx61-B-N0	Bracket to mount IDMx61-B-J1-BT-N0 Base station to AG1 housing - Material: Stainless steel AISI 304 (1.4301) - Assembly: Right side of AG1 housing - Includes bracket and installation materials - Note: Base station and cables not included!	
#70142693	HOLDER-BRACKET-SK-IDM-Z2-N0	Bracket to wall-mount SK-IDM-Z2-J2-* barrier - Material: Stainless steel AISI 304 (1.4301) - NOTE: Barrier not included!	
#548268	SCANNER-HOLDERU1-AG1-N0	AG1 Housing and Holder-Bracket Material: Stainless steel AISI 316L (1.4404) Compatible with IDMx6x, ecom Ident-Ex® 01 Prepared for mounting to right side of housing	

## Corded handheld reader accessories for VisuNet HMI Applications

Suitable for Zone 1/21 & Zone 2/22					
Item number	Product name	Description	Cable		Photo
#548333	CBL-IDMx60-D-J1-S-S18-N0	Connection cable for corded code readers Interface: RJ50 (Reader) with additional sealing ring to M12 male connector Protocol: Serial Compatible with IDM-Zx-x60-D* readers	Straight	1.8-m length	
#548334	CBL-IDMx60-D-J1-S-C38-N0		Coiled	3.8-m length	
#548335	CBL-IDM160-D-J1-U-S18-N0	Connection cable for corded code readers Interface: RJ50 (Reader) with additional sealing ring to M12 male connector Protocol: USB Compatible with IDM-Zx-x60-D* readers	Straight	1.8-m length	
#548336	CBL-IDM160-D-J1-U-C38-N0		Coiled	3.8-m length	
#548376	DATL-IDM-DB-S-XX00-N0	Connector cable for wired 1D reader IDM-Z1-160-D-1D-J1-S-* (S3-Interface required) and 2D reader IDM-Z2-260-D-2D-J1-S* (S4-interface required) compatible with Housing AG-XX00-* and AG1 - 4-wire with ferrules - IDM reader connection via M12-connector - Note: Supports only RS-232 reader/Basestation	1.0-m length		

## Bluetooth® Handheld Reader Accessories

Item Number	Product Name	Description	Cable	Photo
#548345	CBL-IDMx61-B-N0-S-S18-N0	Serial connection cable for base station Explosion protection: non-Ex, for use in non-explosion-hazardous area only! Interface: RJ50 (cradle) to SUB-D9 connector Protocol: serial Compatible with IDM-Zx-x61-B-N0*	Straight 1,8-m length	
#548346	CBL-IDMx61-B-N0-S-C38-N0	Serial connection cable for base station Explosion protection: non-Ex, for use in non-explosion-hazardous area only! Interface: RJ50 (cradle) to SUB-D9 connector Protocol: serial Compatible with IDM-Zx-x61-B-N0*	Coiled 3.8-m length	
#548343	PSU-IDMx61-BC-N0-N0	AC/DC Power supply for base station & charger Input: 230 V AC Explosion protection: non-Ex, for use in non-explosion-hazardous area only! Compatible with non-Ex base station & charger IDM-Zx-x61-B-N0-BT-N0 and IDM-Zx-x61-C-N0-BT-N0	Only required in combination with Serial connection cable for base station (SUB-D9 connector)	
#548347	CBL-IDMx61-B-N0-U-S18-N0	USB connection cable for base station Explosion protection: non-Ex, for use in non-explosion-hazardous area only! Interface: RJ50 (cradle) to USB Type A connector Protocol: USB Compatible with IDM-Zx-x61-B-N0*	Straight 1.8-m length	
#548348	CBL-IDMx61-B-N0-U-C38-N0	USB connection cable for base station Explosion protection: non-Ex, for use in non-explosion-hazardous area only! Interface: RJ50 (cradle) to USB Type A connector Protocol: USB Compatible with IDM-Zx-x61-B-N0*	Coiled 3.8-m length	

Item Number	Product Name	Description	Cable	Photo
#70144009	CBL-IDMx61-B-Jx-S-S07-N0	Serial connection cable for base station Explosion protection: suitable for Zone 1/21 & Zone 2/22 Interface: RJ50 (cradle) to M12 male connector Protocol: serial Compatible with IDM-Zxx61-B-* base station	Straight 0.7-m length	
#548349	CBL-IDMx61-B-J1-S-S18-N0	Serial connection cable for base station Explosion protection: suitable for Zone 1/21 & Zone 2/22 Interface: RJ50 (cradle) to M12 male connector Protocol: serial Compatible with IDM-Zx-x61-B-* base station	Straight 1.8-m length	
#548350	CBL-IDMx61-B-J1-S-C38-N0	Serial connection cable for base station Explosion protection: suitable for Zone 1/21 & Zone 2/22 Interface: RJ50 (cradle) to M12 male connector Protocol: serial Compatible with IDM-Zx-x61-B-* base station	Coiled 3.8-m length	
#70144010	CBL-IDMx61-B-Jx-U-S07-N0	USB connection cable for base station Explosion protection: suitable for Zone 1/21 & Zone 2/22 Interface: RJ50 (cradle) to M12 male connector Protocol: USB Compatible with IDM-Zxx61-B-* base station	Straight 0.7-m length	
#548351	CBL-IDMx61-B-J1-U-S18-N0	USB connection cable for base station Explosion protection: suitable for Zone 1/21 & Zone 2/22 Interface: RJ50 (cradle) to M12 male connector Protocol: USB Compatible with IDM-Zx-x61-B-* base station	Straight 1.8-m length	
#548352	CBL-IDMx61-B-J1-U-C38-N0	USB connection cable for base station Explosion protection: suitable for Zone 1/21 & Zone 2/22 Interface: RJ50 (cradle) to M12 male connector Protocol: USB Compatible with IDM-Zx-x61-B-* base station	Coiled 3,8-m length	

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- HART Interface Solutions
- Surge Protection
- Wireless Solutions
- Level Measurement

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- Photoelectric Sensors
- Industrial Vision
- Ultrasonic Sensors
- Rotary Encoders
- Positioning Systems
- Inclination and Acceleration Sensors
- Fieldbus Modules
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