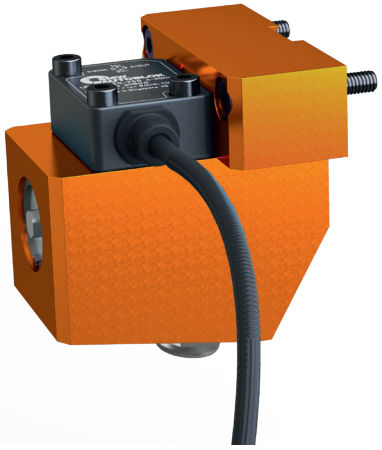
COPY OF THE ORIGINAL

INSTRUCTION MANUAL

LINEAR STROKE CONTROL UNIT FOR STEADY RESTS

Type USP 4.0 250



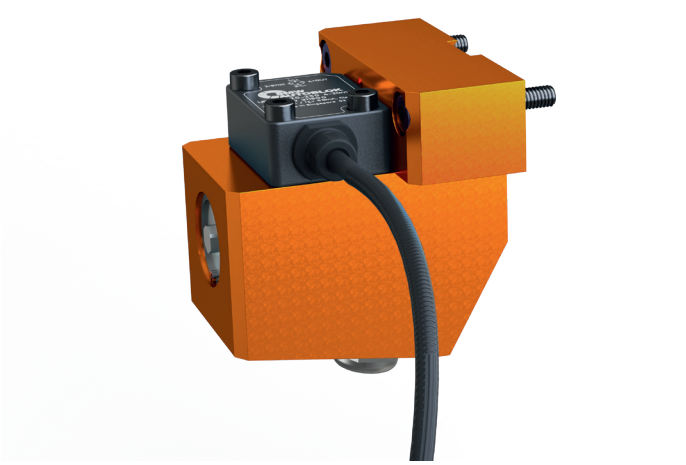
Preliminary

worldwide • weltweit • worldwide

Date: 2023-09
Version: 1
Language: English

SMW AUTOBLOK

Content



INSTRUCTION MANUAL
Linear stroke control unit for Steady Rests Type USP 4.0 250

Thank you for purchasing an Linear stroke control unit for steady rests Type USP 4.0 250.

This **instruction manual** contains the installation, the use and the maintenance instructions of the **„Linear stroke control unit for steady rests Type USP 4.0 250"**.

SMW-AUTOBLOK reserves the right to make **changes without notice**.

This **instruction manual is a part of the „Linear stroke control unit for steady rests Type USP 4.0 250 "** and must be passed to the new owner in case of sale.

This **instruction manual may not be** in whole or in part **copied** without our written agreement.

Please read the instruction manual carefully before installation and use and always follow the regulations.

Please note especially the sections which are marked with the following signs:

- **Danger of injury or danger to life if instructions are not followed.**
- **Danger of damage to the sensor, the machine or the components.**

Declaration of incorporation

for an incomplete machine
Machinery Directive 2006/42/EC, Annex II, B

The manufacturer:	SMW-AUTOBLOK Spannsysteme GmbH Wiesentalstrasse 28 88074 Meckenbeuren Deutschland / Germany

herby declares, that the following product:

Product description:	Linear stroke control for steady rests
Application range:	Installation in machine tool
Type:	USP 4.0 250

is intended to be installed into a completed machine. It must not be put into service until the final machine into which the partly completed machinery it is to be incorporated has been declared in conformity with the provisions of the EU machine directive (2006/42/EC) Annex II, B.

Applied harmonized norms:

- DIN ISO 12100 (2011)
- DIN ISO 13857 (2008)

The following basic requirements of Annex I, 2006/42/EC are complied with:

- No. 1, 1.1, 1.1.1, 1.1.2, 1.1.3
- No. 1.3.2, 1.3.3, 1.3.4, 1.3.7, 1.3.8
- No. 1.5, 1.6.1
- No. 1.7.1, 1.7.3, 1.7.4

The special technical documents have been created in accordance with Annex VII, Part B. These documents will be made available electronically on a reasoned request by the national authorities.

Responsible for documentation:	Schilling Rainer Chief designer
Place:	Meckenbeuren (Germany)
Date:	08.09.2023

Eckhard Maurer
President

General safety instructions

1. Intended use

The ultrasonic positioning sensor is exclusively intended to be used as a parts of a production machine. The sensor must only be installed and operated by personal authorized and advised by the operation, that is qualified according to the valid national laws and according to the national and international regulations. Any other use is a non authorized use, and can cause hazards to health and life of persons as well as damage to material.

The sensor must only be used in perfect functioning condition. The advises of this manual must always be observed.

For any other use than the intended use or any other use than authorised by the manufacturer the operator is sole and fully responsible. Any changes carried out at the sensor must be authorised by the manufacturer and must be documented properly.

In addition to this manual all laws, norms and regulations must be observed.

2. Safety requirements

In order to protect the unit against fire, electric shock or potential destruction of the electronic components, it must never be exposed to rain or extreme humidity. Direct sun or heat are to be avoided as well.

3. Calibration, recalibration

The ultrasonic positioning sensor is adjusted and calibrated at the factory for the measuring path specified.

If the ultrasonic positioning sensor is not used as an absolute measuring system, recalibration is not necessary.
If you are in doubt, please contact the manufacturer.

A recalibration can only be carried out in the factory.

4. Warranty and avoiding of harms

This manual is the basis for installation, use and opertation of the ultrasonic positioning sensor.

Before using the ultrasonic positioning sensor read the manual carefully. This manual must remain stored at the machine where the ultrasonic position sensor installed.

All operations described in this manual must only be carried out by capable personal authorized by the operation.

5. Safety

Always follow the regulations concerning safe working, protection clothes and any other protection devices to be used at the corresponding production machine.

6. General safety advises

- All safety advises, national and international regulations to avoid accidents as well as company internal working and operation advises have to be observed.
- Any conditions causing hazards have to be avoided.
- Interferences that can cause hazards have to be eliminated immediately.
- Ignoring the safety instructions can cause hazards to persons, environment and / or can cause damage and will make any warranty void.
- During installation, the installation and maintenance of the ultrasonic positioning sensor all safety regulations of the machine, into which the sensor is installed, must be observed.
- Prior to any runoff this manual must read, and all safety advises must be followed.
- The manufacturer refuses any claims for problems caused by not following this manual.

7. Safety advises for operation

- When using the ultrasonic positioning sensor in safety relevant operations, precautions must be taken to avoid danger for personal and machine, in case of failure of the sensor. This can be done by posting safety advises on the machine or by adding safety advises to the manual of the machine. Additionally the machine maker can add suitable (mechanical) protections , to avoid any hazards. We also refer to the trouble shooting.
- The installation and run off must be carried out by qualified personal. All safety regulations for electronic installations must be observed.
- The sensor must not be opened at all!
- Before use all connections must be double checked carefully.
- Never touch the sensing surface (opposed to the plug) with sharp or tipped articles. Use a soft tissue only.

Insufficient or improper maintenance makes any warranty from SMW-AUTOBLOK void.

In case of problems or questions please contact SMW-AUTOBLOK directly or one of our authorized offices.

USP 4.0 250

Measuring range 25 - 250 mm

Ultrasonic Positioning Sensor

Application/customer benefits

- Non-contact distance measurement using ultrasonic technology
- Ready for Industry 4.0
- Selectable sound lobe width
- Analog output signal and adjustable switching signals
- Very large measuring range

Technical features

- Ultrasonic measuring system
- No interference from magnetic fields
- Measuring range = 25 - 250 mm
- Compact design / simple installation
- Analog output 0 - 10 V (Id.-Nr. 211501) / 4 - 20 mA (Id.-Nr. 211500)
- Protection class IP 67
- Reverse polarity protection

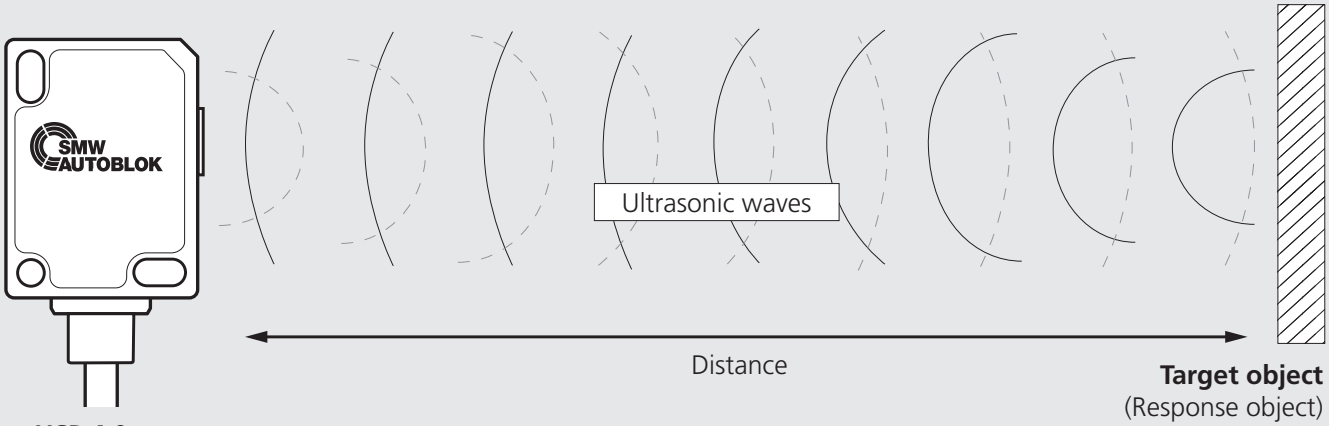
Standard equipment

USP 4.0

Ordering example

USP 4.0 20 - 250 mm
ID.-Nr. 211500

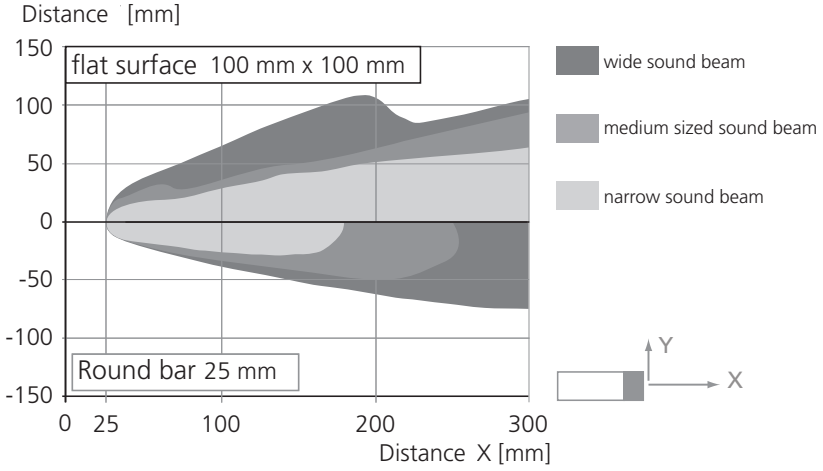
Function



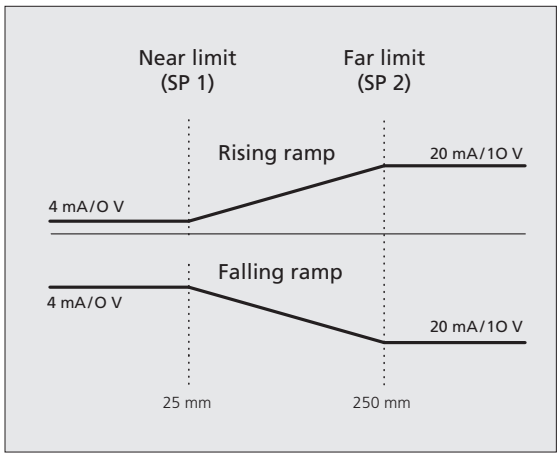
The **USP 4.0 Ultrasonic Positioning Sensor** measures the distance to objects without contact. The sensor emits ultrasonic waves. If these hit an object, they are reflected. The resulting echo is picked up by the sensor and the distance to the object is calculated from the time between the transmission and reception of the sound pulse.

The **USP 4.0 Ultrasonic Positioning Sensor** for distance measurement makes it possible to detect objects made of different materials such as metal, wood or plastic. Only sound-absorbing materials, such as absorbent cotton or smooth sloping surfaces, can be poorly detected by the ultrasonic sensor.

Characteristic response curve



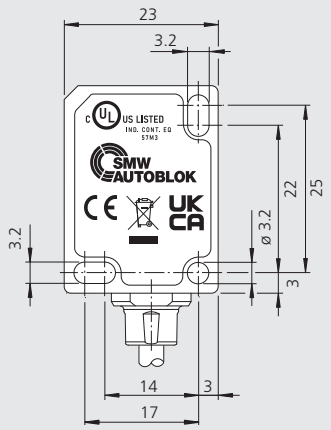
Analog output / switching signal

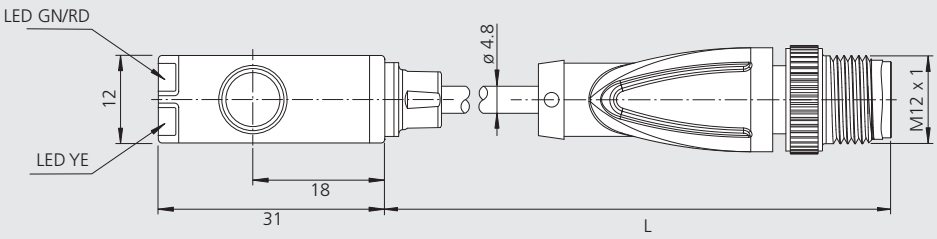


Ultrasonic Positioning Sensor

USP 4.0 250

Measuring range 25 - 250 mm

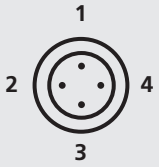




Pin Assignment

Pin	Description
1	24 V DC
2	not used
3	GND
4	Signal output 0 - 10 V (Id. No. 211501) Signal output 4 - 20 mA (Id. No. 211500)

Male connector
M 12 x 1



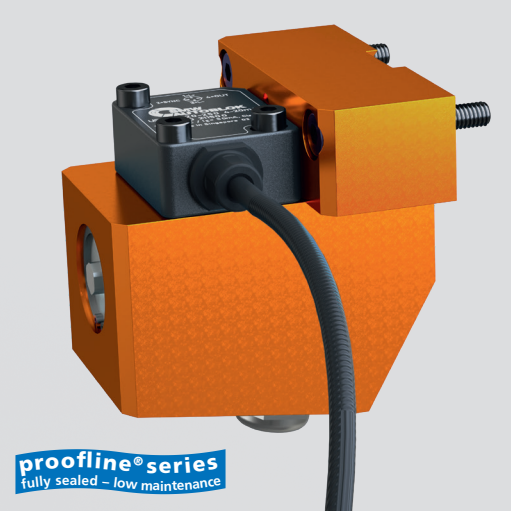
SMW-AUTOBLOK Type			USP 4.0 25 - 250 0 -10 V	USP 4.0 25 - 250 4 - 20 mA
Id. No.			**211501**	**211500**
Sensing range			25 - 250 mm	
Adjustment range			25 - 250 mm	
Output signal			0 - 10 V	4 - 20 mA
Power supply			18 ... 30 V DC	
Repeat accuracy			< ± 0.1%	
Linearity			< ± 1.0 %	
Operating range			-25 - 60°	
Protection class			IP 67	
Material			PC	
Weight			21 g	
Blind zone			0 ... 20 mm	
Standard taget plate			10 mm x 10 mm	
Response delay			min. 8 ms (Factory setting: 29ms)	
Sensor cycle time			≥ 8 ms (Factory setting), parameterizable to 60 s	
Memory				
Non-volatile memory			EEPROM	
Write cycles			300000	
Displays/controls				
LED green		permanently on flashing	Power on Standby-Operation / IO-Link Kommunication	
LED yellow		permanently on flashing	Object in the evaluation area Programming the limits, object detected	
LED red		permanently on flashing	Malfunction Programming the limits, object not recognized	
Electrical data				
No-load current	I_0		≤ 50 mA	
Power input	P_0		≤ 500 mW	
Standby delay	t_v		≤ 300 ms	
Cable				
length	L		200 mm	
Mounting position			any	
Tightening torque	mounting screws		max. 0.2 Nm	
Factory setting				
Output		close border distant border output mode	25 mm 250 mm rising ramp	
Beam width			wide	
Pin assignment				
Pin 1		brown BN	24 V DC	
Pin 2		wihte WH	-	
Pin 3		blue BU	GND	
Pin 4		black BK	0 - 10 V	4 - 20 mA

USP 4.0 250

Measuring range 25 - 250 mm

Linear stroke control unit for Steady Rests

- Completely sealed, protection class IP 67
- Output signal 4 - 20 mA or 0 - 10 V



Application/customer benefits

- For SMW-AUTOBLOK steady rests
- Non-contact distance measurement using ultrasonic technology
- Industry 4.0 compatible
- Linear stroke measuring of the entire clamping stroke avoids collision with the tools, which is an added safety feature
- Time and energy saving due to only partial opening of the steady rest (with corresponding machine hydraulics)

Technical features

- Ultrasonic measuring system
- No interference from magnetic fields
- Measuring range = 25 - 250 mm
- Compact design / easy installation
- Output signal analog 0 - 10 V / 4 - 20 mA
- Protection class IP 67
- Reverse polarity protection
- Use of airpurge is mandatory

Accessories

Sensor connection cable see USP 4.0 250 (Plug M12 x 1) and protection hose

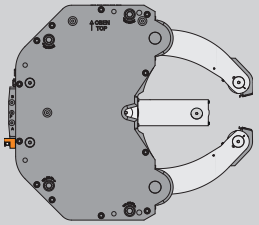
Ordering Example

USP 4.0 250 with 200 mm cable with plug M12 x 1 and protection hose

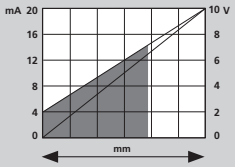
Measuring principle

In **steady rests**, the levers with their rollers move linear and concentric to the center of rotation. With conventional end position measurement via non-contact limit switches, the two end positions **fully open** and **fully closed** without work piece are detected.

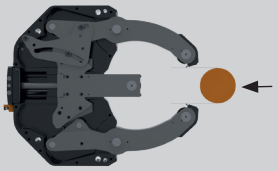
With linear stroke measuring via USP 4.0 250, the clamping stroke is measured lineary. This means that a corresponding analog signal is always available for each individual position. Only partial opening of the steady rest is possible with the appropriate hydraulics, and in addition to easier loading it also saves time and energy. Due to the linear stroke measuring, the integration of a collision protection software is also possible.



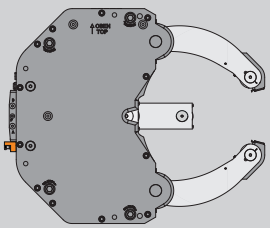
closed



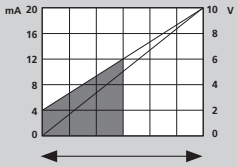
Partial opening of the steady rest for loading and unloading. Time and energy saving.



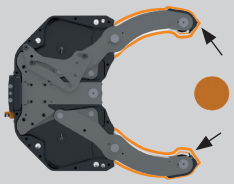
with USP 4.0 250



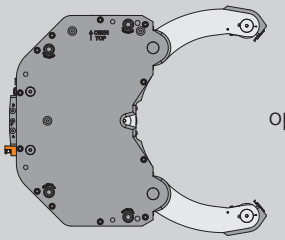
half-open



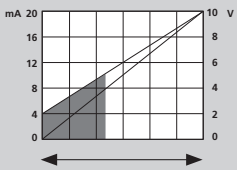
Collision protection: Through the evaluation of the output signal.



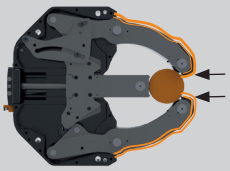
protected area



open



Linear stroke measuring of the steady rests stroke with linear adjustment of the protected area.



protected area

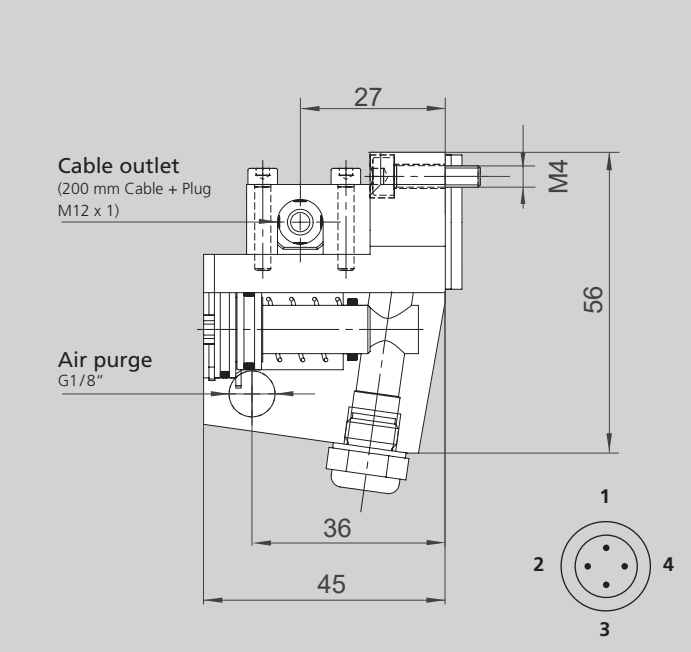
Linear stroke control unit for Steady Rests

USP 4.0 250

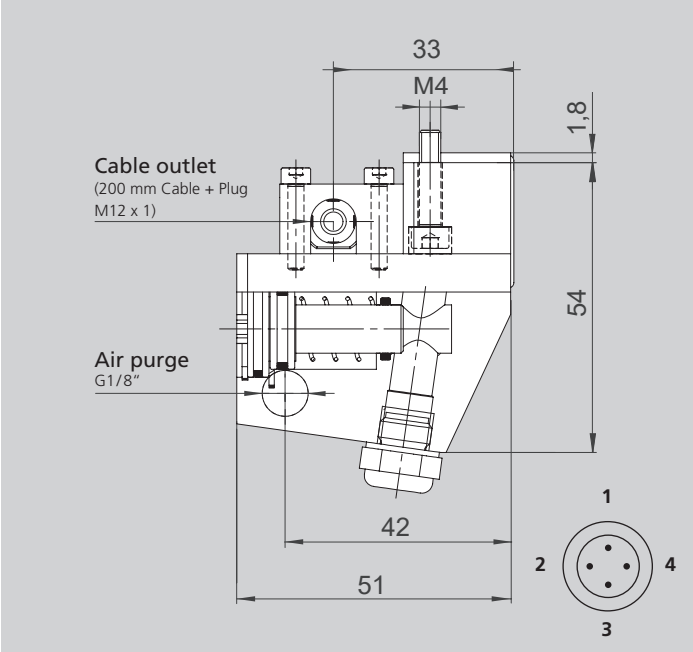
■ Completely sealed, protection class IP 67
■ Output signal 4 - 20 mA or 0 - 10 V

Measuring range 25 - 250 mm

USP 4.0 250 for RX



USP 4.0 250 for SR/SLU-X/K



Technical features

SMW-AUTOBLOK Typ		USP 4.0 250 for RX		USP 4.0 250 for SR/ SLU-X/K	
		0-10 V / 4-20 mA		0-10 V / 4-20 mA	
Measuring range		25 - 250 mm		25 - 250 mm	
Output signal		0 - 10 V 4 - 20 mA		0 - 10 V 4 - 20 mA	
Power supply		18 ... 30 V DC		18 ... 30 V DC	
Repeat accuracy		< ± 0.1%		< ± 0.1%	
Linearity		< ± 1.0 %		< ± 1.0 %	
Operating range		-25 - 60°		-25 - 60°	
Protection class		IP 67		IP 67	
Displays/controls					
LED green	permanently on flashing	Power on Standby-Operation / IO-Link Communication		Power on Standby-Operation / IO-Link Communication	
LED yellow	permanently on flashing	Object in the measuring range, Programming the limits, object detected		Object in the measuring range, Programming the limits, object detected	
LED red	permanently on flashing	Malfunction Programming the limits, object not recognized		Malfunction Programming the limits, object not recognized	
Pin assignment					
Pin 1	brown BN	24 V DC		24 V DC	
Pin 2	white WH	-		-	
Pin 3	blue BU	GND		GND	
Pin 4	black BK	0 -10 V	4 - 20 mA	0 - 10 V	4 - 20 mA

Order overview

SMW-AUTOBLOK Typ		Id.-No.
USP 4.0 250		
Complete set for **RX** steady rests	0 - 10 V	228761
	4 - 20 mA	228670
Complete set for **SR /SLU-X/K** steady rests	0 - 10 V	228762
	4 - 20 mA	228740
USP 4.0 250 ultrasonic sensor **single**	0 - 10 V	211501
USP 4.0 250 ultrasonic sensor **single**	4 - 20 mA	211500

Binary Box 4.0

Binary Interface Box

Binary Interface Box

Application/customer benefits

- Binary output signal 10 bit
- Suitable to USP 4.0 250 (usable for 0 - 10 V versions)

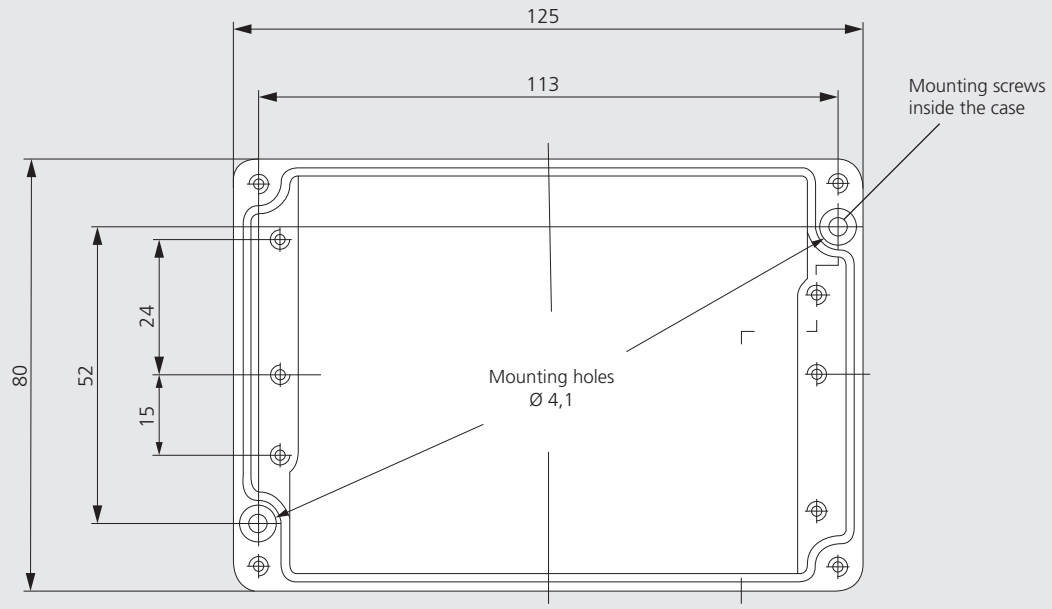
Technical features

- Dimensions 125 x 80 x 50 mm
- Protection class IP 64
- Operating temperature 0 - 70°C
- Resolution: 0-50 mm 0,05 mm = 1 Digit
  > 50 mm 0,25 mm = 1 Digit
- Connections: Socket 16 pin Zylin R
  style A, code N

Internal connection according to the manual instruction for cable with one open end to connect to the USP 4.0 250 sensor.

Standard equipment

Binary Interface Box without cables



Case Binary interface box

Technical data

SMW-AUTOBLOK Type	Binary Interface Box for USP 4.0 250
Id. No.	212100

Cabel for USP 4.0 250*	length	Id. No.
Connecting cable with straight plug M12 x 1 5-pole	5 m 10 m 15 m	208244 208245 208246

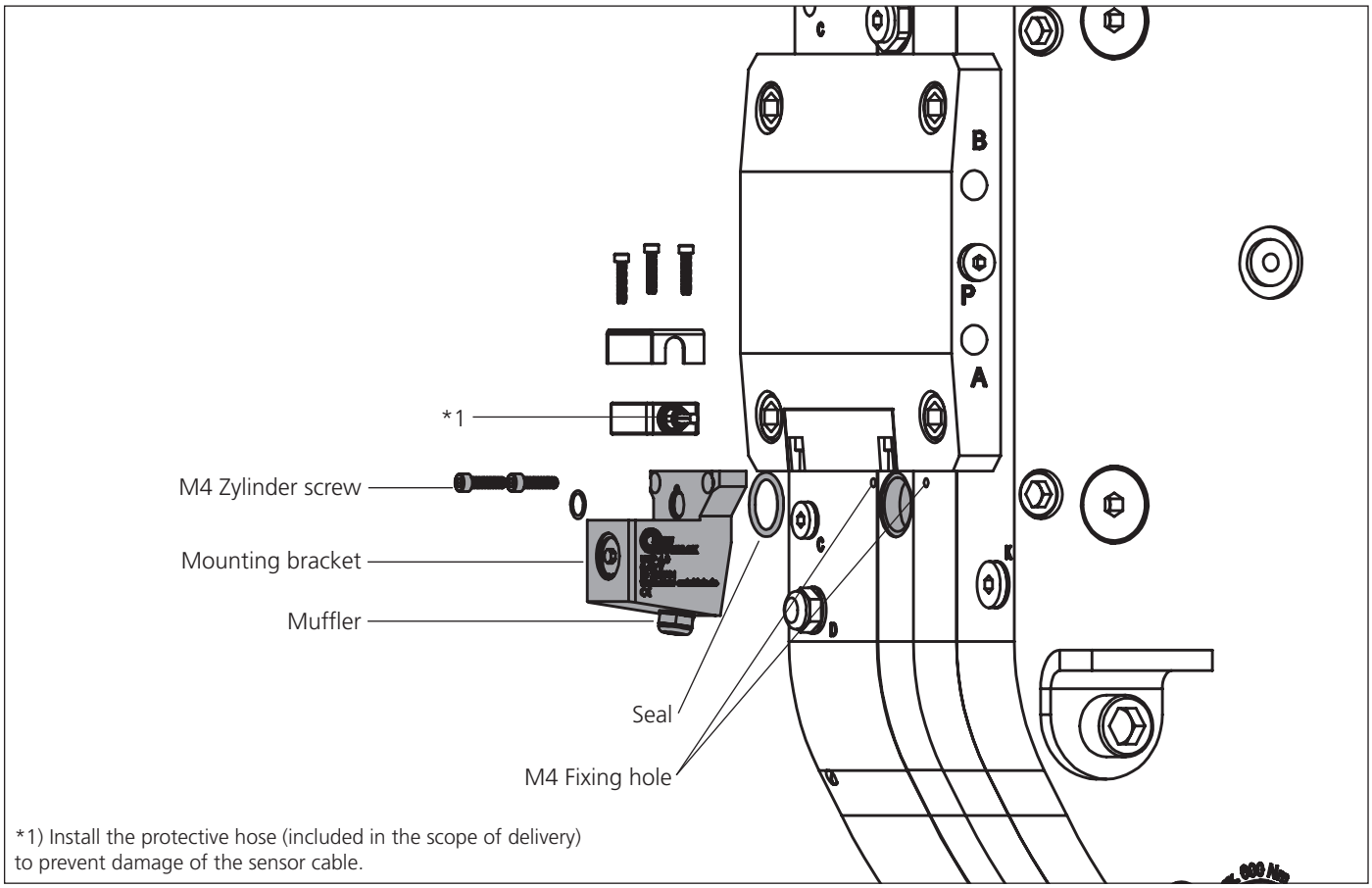
Protection hose	length	Id. No.
	200 mm	212052

* Shielded PUR cable, 1 side with open end, 1 side with M12 x 1 cable socket, gold-plated contacts.

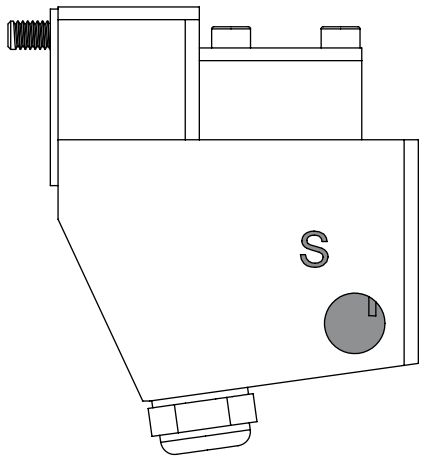
Notes

Mounting on the steady rest type RX:
The sensor is delivered ready for use with a standard configuration.

The following steps must be carried out:
- Linear stroke control unit typ USP 4.0 250 and steady rest must be free of dirt and dust at the mounting position.
- Position the Linear stroke control unit typ USP 4.0 250 straight in the hole provided in the steady rest (do not tilt)..
- Make sure that there is a seal between the linear stroke control unit typ USP 4.0 250 and the steady rest.
- Fasten the linear stroke control unit typ USP 4.0 250 to the steady rest using the two M4 x 16 cylinder screws.



*1) Install the protective hose (included in the scope of delivery) to prevent damage of the sensor cable.



Airpurge connection

On the side of the mounting bracket is the airpurge connection labeled with an „S". This **must be** connected with a T-joint to the same airpurge line as the steady rest.
Airpurge pressure 0,5 - 1,5 bar.

Attention:

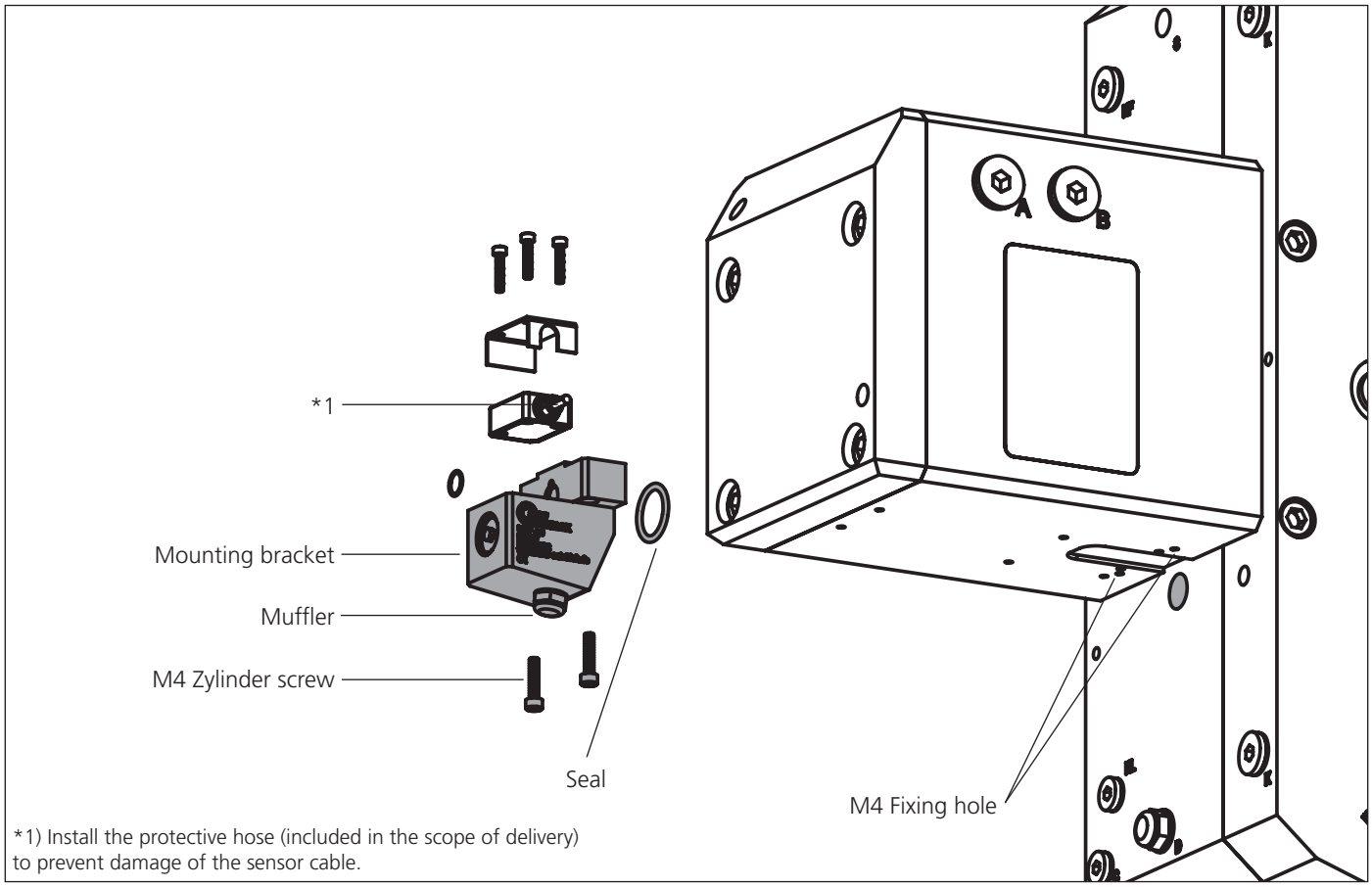
The connection of the airpurge is mandatory for the operation of the linear stroke control unit Typ USP 4.0 250.

Notice:

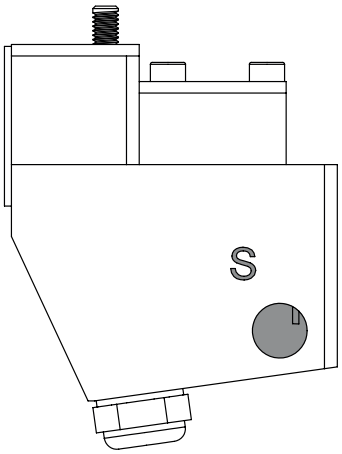
In case the sensor delivers incorrect or no values, this may be due to the outflow being polluted. In this case, remove the muffler on the bottom of the mounting bracket and clean the outflow.

Mounting on the steady rest type SR/SLU-X/K:
The sensor is delivered ready for use with a standard configuration.

The following steps must be carried out:
- Linear stroke control unit typ USP 4.0 250 and steady rest must be free of dirt and dust at the mounting position.
- Position the linear stroke control unit typ USP 4.0 250 straight in the hole provided in the steady rest (do not tilt)..
- Make sure that there is a seal between the Linear stroke control unit typ USP 4.0 250 and the steady rest.
- Fasten the linear stroke control unit typ USP 4.0 250 to the steady rest using the two M4 x 18 cylinder screws.



*1) Install the protective hose (included in the scope of delivery) to prevent damage of the sensor cable.



Airpurge connection

On the side of the mounting bracket is the airpurge connection labeled with an „S". This **must be** connected with a T-joint to the same airpurge line as the steady rest.
Airpurge pressure 0,5 - 1,5 bar.

Attention:

The connection of the airpurge is mandatory for the operation of the linear stroke control unit Typ USP 4.0 250.

Notice:

In case the sensor delivers incorrect or no values, this may be due to the outflow being polluted. In this case, remove the muffler on the buttom of the mounting bracket and clean the outflow.

Adjustment possibilities:

The sensor has an analog output equipped with 2 individually programmable limit levels. The setting options for the limits, output mode and output type as well as the sound lobe width can be done in two different ways.

- By using the programming button of the sensor
- By using the IO-Link interface of the sensor. This requires a commercially available IO-Link master and the related software.

The following describes the use of the programming button for programming. It is possible to program limit values and operating modes independently of each other with no interference between them.

Note:

- In the first 5 minutes after powering on the sensor, a programming can be done. During the process, the time interval is extended in order to make changes to the setting. After 5 minutes of inactivity, the possibility of programming is blocked and remains deactivated until the sensor is powered off and on again.
- It is not possible to program the sensor by using the programming button while data is being transmitted over the IO-Link interface.
- There is always the option to cancel the programming process and retain unchanged sensor settings. For this, it is just required to press the programming button for 10 seconds.
- Programming with the programming button can be carried out in single operation or in a synchronized network of multiple sensors (only in automatic common mode and multiplex mode). If programming is performed in a synchronized sensor network, the programming routine may start with a delay.
- It depends on when it is the turn of the respective sensor. During the programming process, the other sensors switch to stand-by mode and this is indicated by a green flashing LED. As soon as the process is finished, everything continues as normal as before in synchronization mode.

Synchronization:

The Synchronization input of the sensor is capable of suppressing interfering and external ultrasonic signals.

Following synchronization modes are available:

- **Automatic multiplex mode**

By uncomplicated connection of their synchronization inputs, multiple sensors (maximum number, see technical data) can be synchronized. In this way, they operate self-synchronized one after the other in multiplex mode. Only one sensor is active at a time and sends at any time. The measuring cycles of the single sensors are carried out in succession. As a result, the response time of the sensors increases proportionally to the number of sensors in the synchronization network.

- **Automatic common mode**

By uncomplicated connection of their synchronization inputs and setting the synchronization mode on „Automatic common mode“ via the IO-Link interface, multiple sensors (maximum number, see technical data) can be synchronized. In this case, the sensors are operating self-synchronized at the same time, which means that all sensors always send out their ultrasonic pulse at the same time.

- **Externally controlled synchronization**

Multiple sensors can be triggered by a common square wave signal from a PLC output. The maximum number depends on the driver capabilities of the external device used for synchronization. The sensors are triggered in parallel and operate synchronously. For this the sensors must be programmed to the „External synchronization“ mode using the IO-Link interface. The required minimum signal duration must be maintained (see technical data). By applying a low level to the synchronization input, the sensor will take measurements according to the sensor cycle time. When a high-level signal is applied to the synchronization input for longer than 1 sec, the sensor switches to the stand-by state, which is signalized by the green flashing LED. The last set output states are maintained in the stand-by state.

The sensor´s synchronization input delivers an output current in case of low level and burdens with its input impedance in case of high level. It is important to note that the device used for external synchronization must have appropriate driver capabilities.

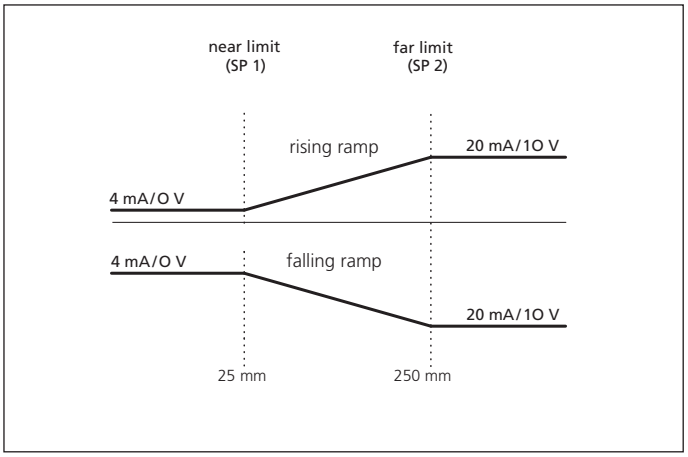
- **driver current against +UB > n x (high level signal/input impedance)**
- **driver current against 0V > n x output current**

(n = number of sensors to be synchronized).

Note:
- If the synchronization option is not used, the synchronization input must be connected to ground (0V).
- If the sensor to be programmed with the programming button is active in the synchronized network, the programming process may start with a delay. During the programming process, the other sensors in the network are switched to standby and do not perform any measurements during this period.
- It is not allowed to program a single sensor via the programming button if this sensor is in an externally synchronized network. If the programming button triggers the programming of the single sensor, the other sensors in the network would continue to perform measurements and will influence the measurement of the sensor to be programmed.

Programming the limits using the programming button

Analog output modes:



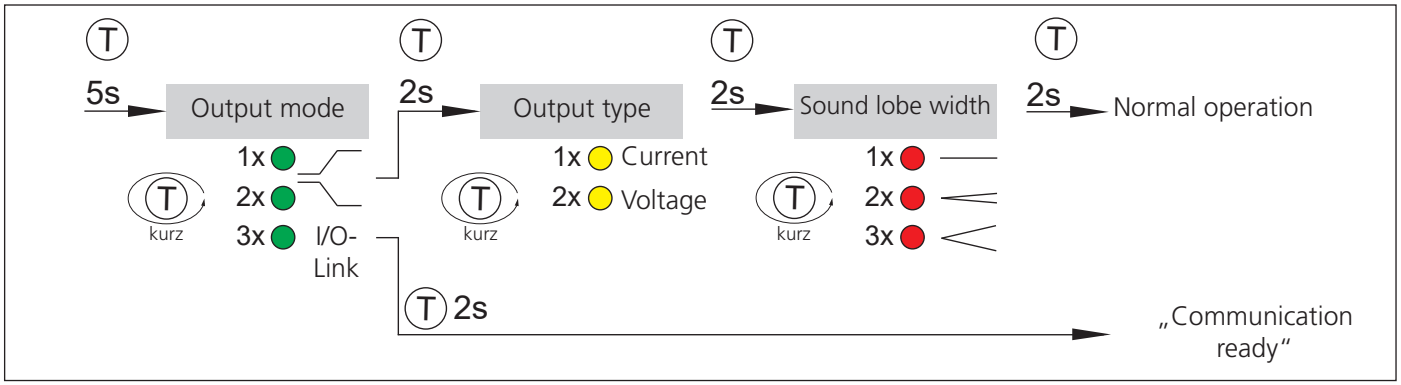
Note:
Yellow LED flashes slowly, the object was detected correctly during the programming process. Yellow LED flashes with a higher frequency, the object was not detected. Red LED flashes during or at the end of the programming process, the object was detected insecurely. In this case, the object must be aligned during the programming process until the yellow LED flashes. Only then the settings will be written into the memory of the sensor.

Programming of the near limit (SP1):
1. Place the object at the desired near limit position.
2. Press the programming button T for 2 sec (yellow LED flashes).
3. Press the programming button T briefly (green LED flashes 3 times as confirmation). The sensor returns to normal mode.

Programming of the far limit (SP2):
1. Place the object at the desired far limit position.
2. Press the programming button T for 2 sec (yellow LED flashes).
3. Press the programming button T for 2 sec (green LED flashes 3 times as confirmation). The sensor returns to normal mode.

Programming the modes of operation:
The sensor has a 3-step programming of the sensor operating modes. The following can be programmed in this programming routine:
A) Output mode B) Output type C) sound lobe width
Programming takes place one after the other. To change to the next programming step, the programming button must be pressed for 2 sec.

The following graphic illustrates the programming routine:



Note:
To switch from IO-Link parameterization mode to normal mode (analog signal at the output), the sensor must be disconnected a short time from the power supply.

Start of the programming sequence:
To activate the programming routine, press the programming button for 5 sec until the green LED starts flashing.

Programming the output mode:
The green LED flashes. The number of flashes indicates the current output mode:
1 x : Rising ramp
2 x : Falling ramp
3 x : IO-Link mode (Select this mode if you want to communicate with the sensor using IO-Link)

1. Press the programming button briefly to toggle sequentially through these output modes and select the desired one.
2. Press the programming button for 2 sec to step forward to the options for the output logic.

Programming the output type:
The yellow LED flashes. The number of flashes indicates the current output type:
1 x : Current output
2 x : Voltage output

1. Press the programming button briefly to toggle sequentially through these output types and select the desired one.
2. Press the programming button for 2 sec to step forward to the options for the sound lobe width.

Programming the sound lobe width:
The red LED flashes. The number of flashes indicates the current sound lobe width:
1 x : narrow
2 x : medium
3 x : wide

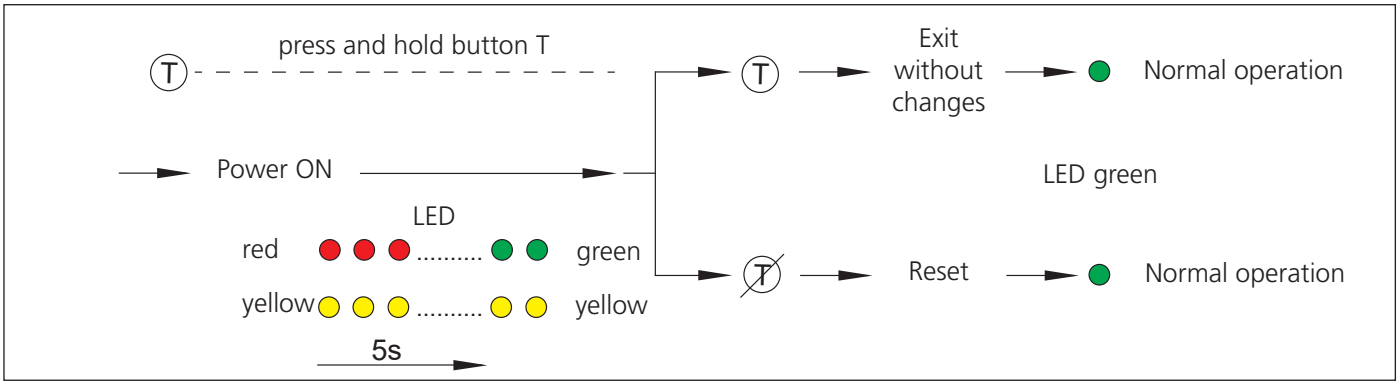
1. Press the programming button briefly to toggle sequentially through these sound lobe widths and select the desired one.
2. Press the programming button for 2 sec to save all settings and to exit into normal operation mode.

Reset the sensor to factory settings:
The sensor provides the option to reset to the original factory settings.

1. Disconnect the sensor from the power supply.
2. Press and hold the programming button T.
3. Switch on the power supply. The yellow and red LEDs flashing in the same cycle for 5 sec. Then the yellow and green LEDs flashing simultaneously for a further 5 sec.
4. Release the programming button T while the yellow and the green LEDs are flashing simultaneously.

The sensor now operates with the default factory settings. If the programming button T is hold beyond the flashing sequence, the sensor changes back to normal operation mode (green LED is on). In this case, all settings remain unchanged.

The following graphic illustrates the sequence for resetting to factory settings:



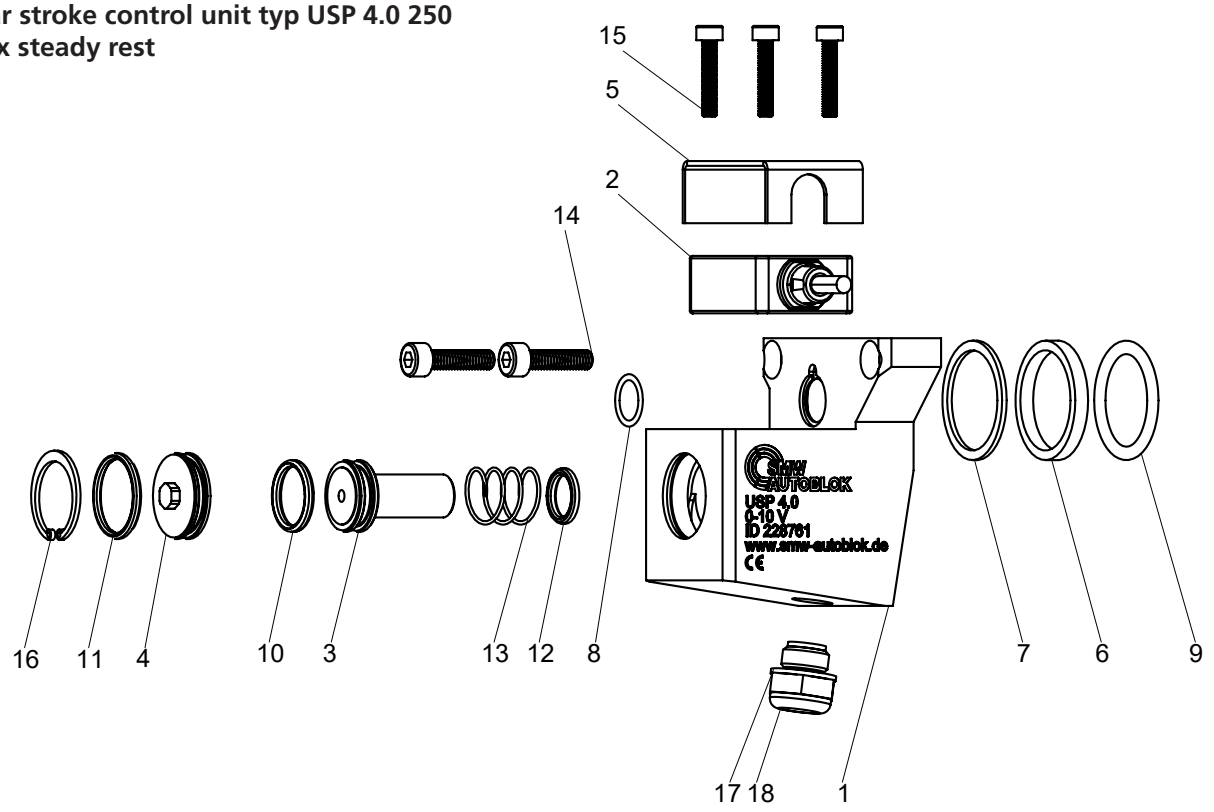
Indicators:
The sensor is equipped with 3 LEDs for status indication.

	Green LED	Yellow LED	Red LED
Normal Operation			
Trouble free function	On	Output state	Aus
Interference	OFF	Output state retains the last state	Ein
Standby (High-level for > 1 s at synchronization input)	Flashing	Output state retains the last state	Aus
Programmierung der Grenzen			
Object detected	Off	Flashing slow	Off
No object detected	Off	Flashing fast	Off
Insecure object detection	Off	Off	Flashing
Successful programming confirmation	Flashes 3x	Off	Off
Warning, programming failed	Off	Off	Flashes 3x
Programmierung der Betriebsarten			
Programming the output mode	Flashing	Off	Off
Programming the output type	Off	Flashing	Off
Programming the sound lobe width	Off	Off	Flashing

Notes

Notes

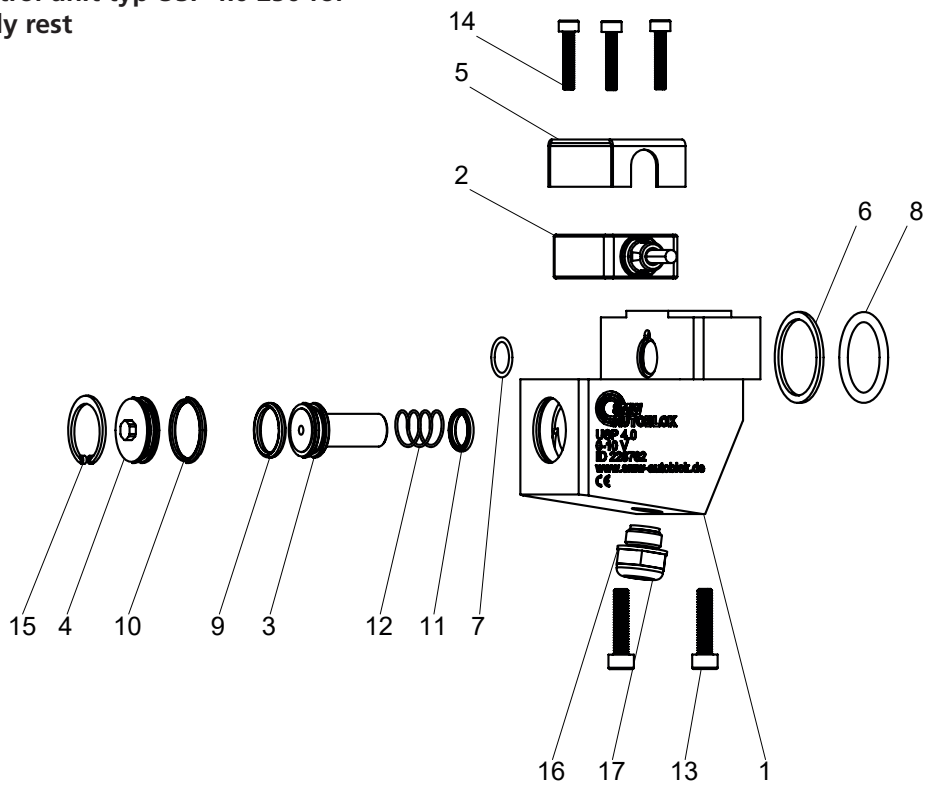
Linear stroke control unit typ USP 4.0 250
for Rx steady rest



	Item number		228670	228761
Position	Description	Quantity	Id. No.	Id. No.
1	MOUNTING BRACKET	1	228671 (USP-A / RX)	228769 (USP-V / RX)
2	USP 4.0 ULTRASONICSENSOR;20-250 4-20 mA	1	211500	-
2	USP 4.0 ULTRASONICSENSOR;20-250 0-10 V	1	-	211501
3	PISTON	1	228462	
4	COVER	1	228463	
5	COVER PLATE USP	1	228746	
6	COPPER SEAL RING	1	228672	
7	COPPER SEAL RING	1	228739	
8	O-RING	1	195760	
9	O-RING	1	018188	
10	O-RING	1	014074	
11	O-RING	1	010020	
12	O-RING	1	015823	
13	COMPRESSION SPRING D-115E	1	211671	
14	CYLINDER SCREW ISO 4762	2	010148	
15	CYLINDER SCREW ISO 4762	3	091434	
16	CIRCLIP DIN 472	1	081550	
17	MUFFLER CPL.	1	193288	
18	PROTECTIVE HOSE	1	212052	

Important!
For spare parts order please advise type and serial number!
Ordering example: For steady rest RX6-ZSW-100520 serial number 100912
Pos. 5: Cover plate USP Id. No. 228746

Linear stroke control unit typ USP 4.0 250 for SR/SLU-X/K steady rest



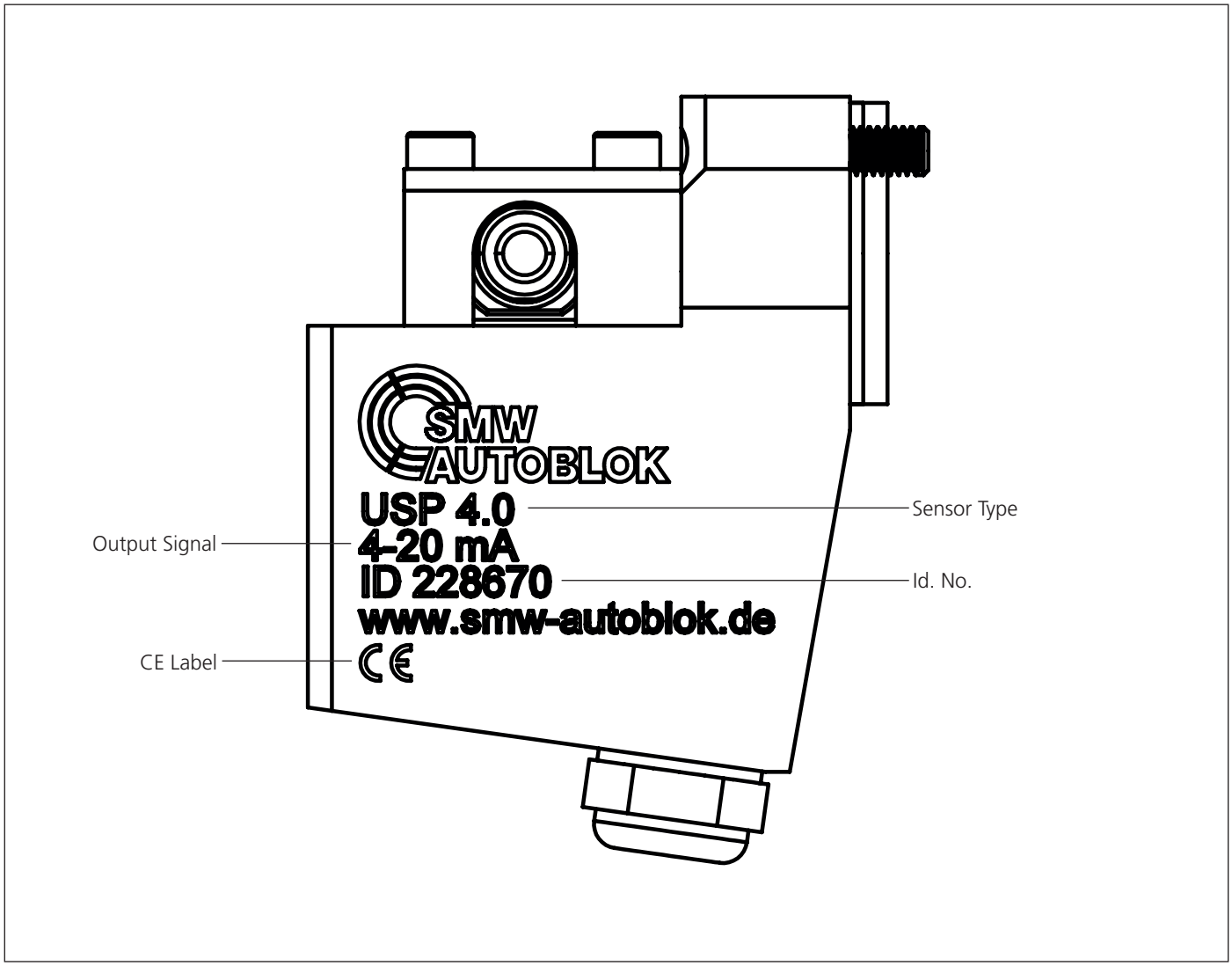
	Item number		228740	228762
Position	Description	Quantity	Id. No.	Id. No.
1	MOUNTING BRACKET	1	228741 (USP-A / SR)	228789 (USP-V / SR)
2	USP 4.0 ULTRASONICSENSOR;20-250 4-20 mA	1	211500	-
2	USP 4.0 ULTRASONICSENSOR;20-250 0-10 V	1	-	211501
3	PISTON	1	228462	
4	COVER	1	228463	
5	COVER PLATE USP	1	228746	
6	COPPER SEAL RING	1	228739	
7	O-RING	1	195760	
8	O-RING	1	018188	
9	O-RING	1	014074	
10	O-RING	1	010020	
11	O-RING	1	015823	
12	COMPRESSION SPRING D-115E	1	211671	
13	CYLINDER SCREW ISO 4762	2	205664	
14	CYLINDER SCREW ISO 4762	3	091434	
15	CIRCLIP DIN 472	1	081550	
16	MUFFLER CPL.	1	193288	
17	PROTECTIVE HOSE	1	212052	

Important!
For spare parts order please advise type and serial number!
Ordering example: For steady rest RX6-ZSW-100520 serial number 100912
Pos. 5: Cover plate USP Id. No. 228746

Notes

Typeplate / Contact

For questions on the product and place an order, please indicate the type marked on the label of the sensor type specification and part number.



Contact:

SMW-AUTOBLOK Spannsysteme GmbH
Postfach 1151 • D-88070 Meckenbeuren
Wiesentalstraße 28 • D - 88074 Meckenbeuren
Tel.: +49 (0) 7542 - 405 - 0

Sales Germany:
Fax: +49 (0) 7542 - 3886
E-Mail ➢ vertrieb@smw-autoblok.de

Sales International:
Fax: +49 (0) 7542 - 405 - 181
E-Mail ➢ sales@smw-autoblok.de

12 months warranty

Product: **Linear stroke control unit typ USP 4.0 250**

SMW-AUTOBLOK provides a warranty on the purchased product for 12 months from the date of purchase as stipulated in our General Terms of Sale in the following cases:

- The defect was not known to the customer at the time of purchase.
- The defect is not due to wear as a result of use.
- The customer has not been negligent by improperly operating or incorrectly maintaining of our product. Refer to the enclosed instruction manual for operation and maintenance information.
- It is not a wear part such as seals, rollers or valves.
- Especially work piece touching parts such as jaws, locators, inserts, rollers and face drivers are excluded from warranty.
- Only original SMW-Autoblok parts have been used such as spare parts, seals, rollers, valves, jaws, locators, inserts and face drivers.
- There is evidence that the maintenance intervals in the operating instructions have been followed. The customer must provide maintenance documentation for this purpose. The maintenance performed must be documented in the maintenance section of the operating instructions and signed by a properly authorized person.

Please note that, if the above requirements are not met, the warranty is only invalid if the defect already existed at the time of transfer of risk, which is usually upon delivery of the product, unless the customer was aware of the defect at the time of transfer of risk.

Empfangsbestätigung für die Betriebsanleitung
Confirmation of receipt of the instruction manual

Hiermit bestätigt die vom Betreiber/ Anwender beauftragte Person

This certifies the operator assigned by the operating company

Herr / Frau

Mr. / Mrs.

den Erhalt der Betriebsanleitung sowie deren Inhalte, insbesondere das Kapitel Sicherheit gelesen und verstanden zu haben.

hereby confirms to have received the instruction manual and to have read and understood the content, especially the chapters concerning safety.

Bediener	Datum	Operator	Date
Betreiber / Sachbeauftragter	Datum	Operating Company / Authorised person	Date

Id.Nr. / Id. No. :

Artikelbez. / Item :

Gewicht / Weight :

Seriennr. / Serialno. :

Bitte ausgefüllt zurückschicken an:

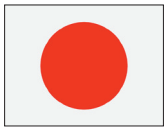
Please send the filled in form back to:

SMW-AUTOBLOK
Spannsysteme GmbH
Wiesentalstraße 28
D-88074 Meckenbeuren
Fax: +49 (0) 7542 - 405 181
Mail: sales@smw-autoblok.de

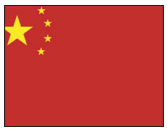
Id. No.	:	
Item	:	
Weight	:	
Serialno.	:	

Germany
SMW-AUTOBLOK Spannsysteme GmbH
Postfach 1151 • D-88070 Meckenbeuren
Wiesentalstraße 28 • D-88074 Meckenbeuren
Tel.: +49 (0) 7542 - 405 - 0
Vertrieb Inland ➤ vertrieb@smw-autoblok.de
Fax: +49 (0) 7542 - 3886
Sales International ➤ sales@smw-autoblok.de
Fax: +49 (0) 7542 - 405 - 181

U.S.A.
SMW-AUTOBLOK Corporation
285 Egidi Drive - Wheeling, IL 60090
Tel. +1 847 - 215 - 0591
Fax +1 847 - 215 - 0594
E-mail ➤ autoblok@smwautoblok.com



Japan
SMW-AUTOBLOK Japan Inc.
1-56 Hira, Nishi-Ku
Nagoya
Tel. +81 (0) 52 - 504 - 0203
Fax +81 (0) 52 - 504 - 0205
E-mail ➤ infosaj@smwautoblok.co.jp

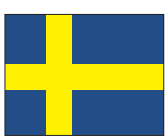


China
SMW-AUTOBLOK (Shanghai) Work Holding Co.,Ltd.
Building 6, No.72, JinWen Road, KongGang
Industrial Zone, ZhuQiao Town, Pudong District
201323, Shanghai P.R. China
Tel. +86 21 - 5810 - 6396
Fax +86 21 - 5810 - 6395
E-mail ➤ china@smwautoblok.cn

Mexico
SMW-AUTOBLOK Mexico, S.A. de C.V.
Acceso III No. 16 Int. 9
Condominio Quadrum
Industrial Benito Juarez
Queretaro, Qro. C.P. 76120
Tel. +52 (442) 209 - 5118
Fax +52 (442) 209 - 5121
E-mail ➤ smwmex@smwautoblok.mx

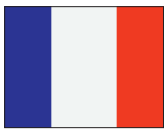
India
SMW-AUTOBLOK Workholding Pvt. Ltd.,
Plot No. 4, Weikfield Industrial Estate,
Gat No. 1251, Sanaswadi, Tal - Shirur,
Dist – Pune. 412 208
Tel. +91 2137 - 616 974
E-mail ➤ info@smwautoblok.in

Turkey
SMW AUTOBLOK Makina San, Ve Tic. Ltd. ti.
Yeni ehir Mah, Osmanli Blv, Volume Kurtkoy Ofis
No:9, Kat:1, D:4, 32912, Pendik Istanbul
Tel. +90 216 629 - 2019
E-mail ➤ info@smwautoblok.com.tr



Sweden / Norway
SMW-AUTOBLOK Scandinavia AB
Kasernvägen 2
SE - 281 35 Hässleholm
Tel. +46 (0) 761 420 111
E-mail ➤ info@smw-autoblok.se

Italy
AUTOBLOK s.p.a.
Via Duca D'Aosta n.24
Fraz. Novaretto
I-10040 Caprie - Torino
Tel. +39 011 - 9638411
Tel. +39 011 - 9632020
Fax +39 011 - 9632288
E-mail ➤ info@smwautoblok.it

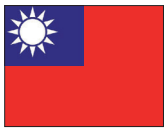


France
SMW-AUTOBLOK
17, Avenue des Frères Montgolfier - Z.I. Mi-Plaine
F-69680 Chassieu
Tel. +33 (0) 4.72.79.18.18
Fax +33 (0) 4.72.79.18.19
E-mail ➤ autoblok@smwautoblok.fr

Great Britain
SMW-AUTOBLOK Telbrook Ltd.
7 Wilford Industrial Estate
Ruddington Lane, Wilford
GB-Nottingham, NG11 7EP
Tel. +44 (0) 115 - 982 1133
E-mail ➤ info@smw-autoblok-telbrook.co.uk

Spain
SMW-AUTOBLOK IBERICA, S.L.
Ursalto 4 – Pab. 9-10 Pol. 27
20014 Donostia - San Sebastián (Gipuzkoa)
Tel.: +34 943 - 225 079
Fax: +34 943 - 225 074
E-mail ➤ info@smwautoblok.es

Canada
SMW AUTOBLOK CANADA CORP
1460 The Queensway - Suite 219
Etobicoke,ON M8Z 1S7
Tel. +1 416 - 316 - 3839
E-mail ➤ info@smwautoblok.ca



Taiwan
AUTOBLOK Company Ltd.
No.6, Shuyi Rd., South Dist.,
Taichung, Taiwan
Tel. +886 4-226 10826
Fax +886 4-226 12109
E-mail ➤ taiwan@smwautoblok.tw

Czech Republic / Slovakia
SMW-AUTOBLOK s.r.o.
Merhautova 20
CZ - 613 00 Brno
Tel. +420 513 034 157
E-mail ➤ info@smw-autoblok.cz

Poland
SMW-AUTOBLOK Poland Sp. z.o.o
Stalowa 17
41-506 Chorzów
Tel. +48 736 059 699
E-mail ➤ info@smwautoblok.pl

Korea
SMW-AUTOBLOK KOREA CO., LTD.
1502-ho, Charyong-ro 48beon-gil,
Uichang-gu, Changwon-si
Gyeongsangnam-do, 51391, Republic of Korea
Tel. +82 55 264 9505
E-mail ➤ info-korea@smw-autoblok.net

SMW AUTOBLOK
www.smw-autoblok.de