

**MS 37**

**Modular hood with integrated connectors**

Part No. 501 09543



10 - 30 V  
DC



- Modular hood with integrated connectors for the BPS 37 barcode positioning system
- Connection with M12 technology
- Integrated, fail-safe parameter memory facilitates device exchange without reconfiguration
- SSI direct connection
- Rotary switch for setting resolution and speed monitoring
- Slide switch for switching between gray/binary coding
- Connection for switching input and switching output



ISO 9001

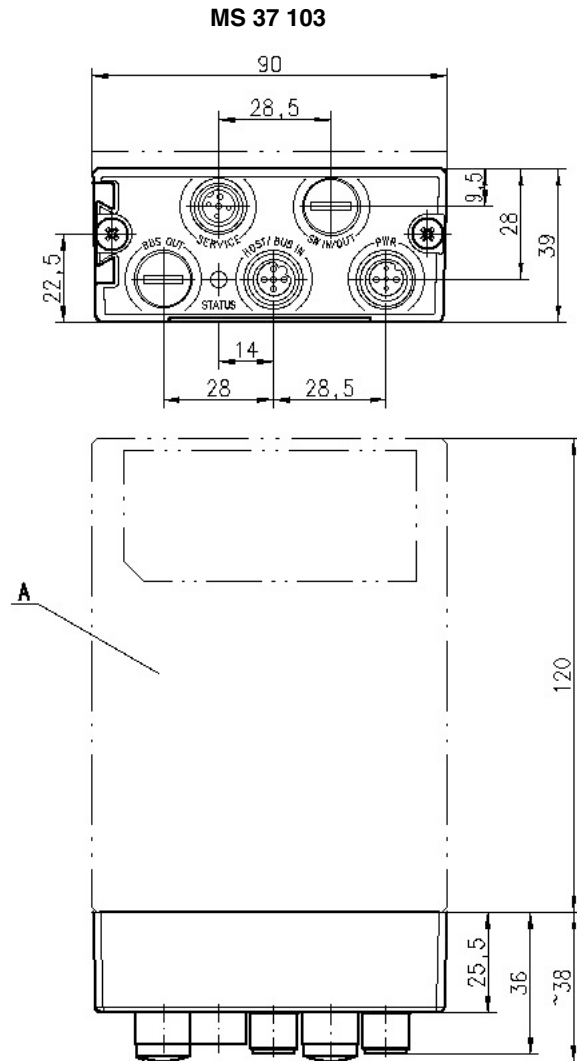


**Accessories:**

(available separately)

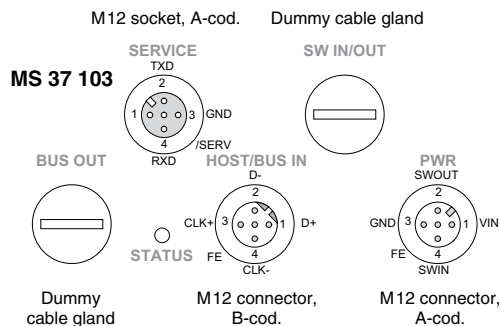
- Ready-made lines for connecting the SSI interface in lengths from 1 ... 30m (KB SSI ...)
- Service cable for connecting the service interface to the PC (KB-Service-3000)
- Easy-to-wire connectors for
  - voltage supply (KD 095-5-A)
  - SSI (KD 02-5-BA)
- Dovetail rod mounting set (BT 56)

**Dimensioned drawing**



A Barcode positioning system BPS 37

**Electrical connection**



<b>VIN</b>	Operating voltage 10 ... 30V DC
<b>GND</b>	Ground
<b>FE</b>	Functional earth
<b>SWIN</b>	Switching input
<b>SWOUT</b>	Switching output
<b>D+</b>	SSI data line +
<b>D-</b>	SSI data line -
<b>CLK+</b>	SSI clock line +
<b>CLK-</b>	SSI clock line -
<b>/SERV</b>	Input for switching to Service mode
<b>TXD</b>	Transmission line RS 232
<b>RXD</b>	Receiving line RS 232

We reserve the right to make changes \*MS\_37\_gb.fm

## Specifications

<b>Electrical data</b>	<b>MS 37 103</b>
Operating voltage	10 ... 30VDC
Power consumption	see BPS 37 data sheet/technical description
Switching input	12 ... 30VDC
Switching output	I <sub>max</sub> 100mA

<b>Indicators</b>		
"STATUS"	LED green	ready
	orange	switching output
	red	error

<b>Mechanical data</b>	
Protection class	IP 65
Weight	160 g
Dimensions (HxWxD)	38x90x39mm
Housing	diecast zinc
Connection type	M12 connector, 5-pin

<b>Environmental data</b>		
Ambient temp. (operation/storage)	BPS 37 standard design:	0°C ... +40°C/-30°C ... +60°C
	BPS 37 with heating:	-30°C ... +40°C/-30°C ... +60°C
	BPS 37 high temperature design:	0°C ... +50°C/-30°C ... +60°C
Air humidity	max. 90% rel. humidity, non-condensing	
Vibration	IEC 60068-2-6, Test Fc 10 ... 55Hz, 0.35mm	
Shock	IEC 60068-2-27, Test Ea 15g/11ms	
Continuous shock	IEC 60068-2-29, Test Eb 10g/16ms	
Electromagnetic compatibility	EN 61326-1, IEC 61000-4-2, -3, -4 and -6	

## Tables

## Diagrams

See page 3.



### Attention!

The MS 37 modular hood with integrated connectors can **only be used in combination with BPS 37 barcode positioning systems with software version 2.02 and newer.**

## Order guide

Type	Description	Part No.
MS 37 103	Modular hood with integrated connectors for BPS 37 with 3 M12 connectors	501 07684

### Accessories

BT 56	Dovetail rod mounting set	500 27375
KD 095-5-A	User-configurable M12 connector for supply voltage	500 20501
KD 02-5-BA	User-configurable M12 socket for SSI	500 38538
KB SSI ... BA	SSI/Interbus cable, B-coded, M12 axial socket - open end, lengths: 2m/5m/10m/15m/20m/25m/30m, see price list	
KB SSI ... SA	SSI/Interbus cable, B-coded, M12 axial connector - open end, lengths: 1m/2m/5m/10m/15m/20m/25m/30m, see price list	
KB-Service-3000	Service cable for connecting the MS 37 103 to a PC, length: 3m	501 10155

## Remarks

### Intended Use

The modular hood with integrated connectors is a connector unit for simplifying the connection of the BPS 37 barcode positioning systems with M12 connector technology.

- The BPS 37 must not be plugged in when the power is on.
- Refer to the technical description of the BPS 37 barcode positioning system.

**MS 37**

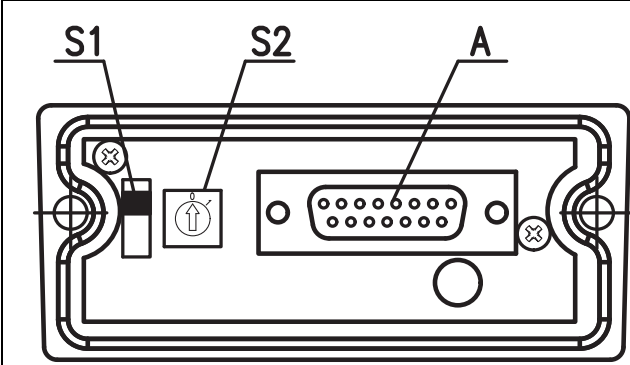
**Modular hood with integrated connectors**

**Description**



The MS 37 103 modular hood with integrated connectors was developed for connecting the BPS 37 barcode positioning system to the host system with M12 connector technology.

- The MS 37 103 is equipped with a parameter memory in which the parameters of the connected barcode positioning system are stored in a fail-safe manner.
- A separate M12 service connector facilitates simple and reliable data communication should servicing be necessary. As soon as the service cable is plugged into the RS 232 socket, the connected barcode positioning system goes into Service mode (default data format 9600baud / 8 data bits / 1 stop bit / no parity).
- Configuration is performed using a hexadecimal rotary switch and a binary slide switch.
- Ready-made M12 lines, user-configurable M12 connectors or M12 sockets can be connected to the hood with integrated connectors.

**Operational controls**



**Operational controls:**

- A** 15-pin Sub-D connector for connecting the BPS 37
- S1** Slide switch for switching between gray/binary coding
  - S1 to **: Gray coding of the measurement values
  - S1 to **: Binary coding of the measurement values
- S2** Hexadecimal rotary switch for setting resolution and speed monitoring (see following table)

**Configuration using the rotary switch:**

Switch position	Resolution [mm]	Max. speed $V_{max}$ [m/s]	Level of the switching output	Speed monitoring
0	via software	deactivated	HIGH = no measurement values (software default)	deactivated
1	0,01			
2	0,1			
3	1			
4	10			
5	100			
6	1000	0,7	HIGH = speed less than $V_{max}$ , LOW = speed greater than $V_{max}$ or no measurement values	activated
7	via software			
8	via software			
9	via software			
A	via software	4		

**Function of speed monitoring**


If the set speed limit is exceeded, the switching output is deactivated. If the BPS 37 cannot measure a speed (no measurement values), the switching output will also be deactivated. The switching output is fail-safe, i.e. the unit functions correctly as long as the switching output is HIGH.

**Changing parameters**

All parameters that are not influenced by the position of the rotary and slide switches can be changed using **BPSconfig** software. For example, in rotary switch position 7, 8, 9 or A, the resolution can be changed or the switching output inverted using this software.

**Parameter reset**

In addition to configuration, the rotary and slide switches of the MS 37 device can also be used to perform a parameter reset.

- For this purpose **S1** is set to  and **S2** is set to position 'F'.
- The BPS 37 is then restarted.
- The parameter set of the BPS 37 is overwritten with the factory parameter set.

Wiring of switching input and switching output

