



bar



**SWITCH***master*®

The opto-electric position indicator

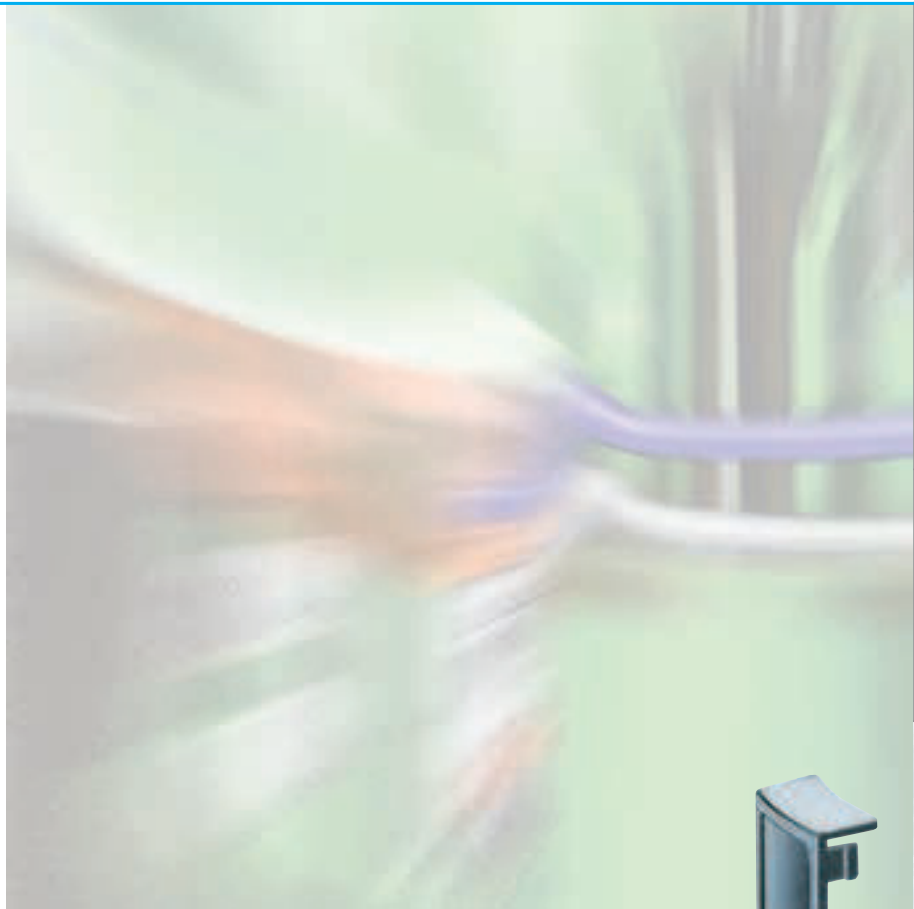
## Opto-electric position indicator for actuators/valves with many advantages

It's got a lot to offer!

The patented Switchmaster®

A lot of power and a lot of safety  
e.g. approx. 50% savings in time and cost for installing and using compared to previous units.

- Rapid comfortable connecting of the cable
- Switchmaster® opens and closes in seconds
- Easy, rapid mounting of the telescopic feet
- Easy and rapid adjustment of the switching points
- Indication of the valve position recognizable from as far away as 30 m
- Clear description of flow path . . .
- . . . also for 3-way or 4-way valves
- Constructional dimensioning prevents wrong mounting
- Protection type IP 67 (water-tight)
- No brackets needed
- Can be used with all VDI/VDE 3845 classified actuators
- High corrosion resistance and much more – but have a look yourself . . .



# Your benefits

## Clips with double use

**Benefit 1:** Is the foot set to the correct height, all you do is to press the clip and the height is safely fixed!

**Benefit 2:** Would you like to have your company logo on the clips?

Left and right?

Everything is possible!





## Indication of the valve-position



The green indicator pads are marking the position of the valve-bore respectively of the valve-disc. Just press-on the marker as required.

## Position easily recognized from long distances

The display can be easily seen from far and from all sides and clearly indicates the switching position: red = closed green = open  
The green marking indicates the flow path.



## Removable mounting plate

Disconnecting is easy, because it happens **outside** the casing:

- Remove mounting plate
- Thread the cable through the cable gland and connect acc. to the wiring diagramm
- Clip the plate into position, tighten the fixing screw - finished!

## One foot for all standard dimensions

The foot is always the same: whether left or right, inside or outside. Simply rotate the feet by 180° and the Switchmaster® is ready for NAMUR dimensions of 80 or of 130 mm.



## The new generation of position indicator

### ❶ Quick-acting closure

The transparent cap with bayonet socket enables rapid and easy opening/closing for connecting and adjusting.

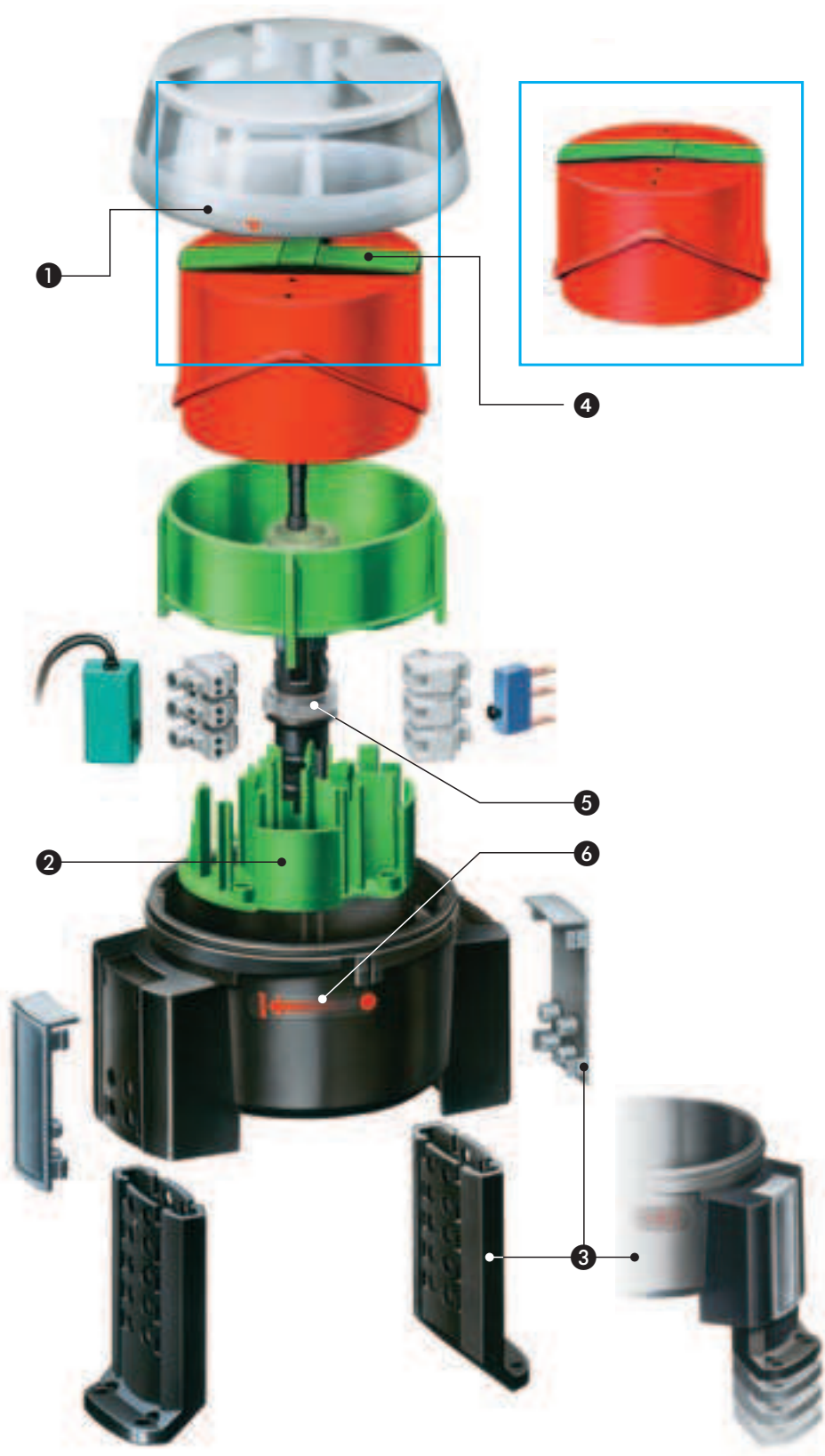
### ❷ Electromechanical or inductive?

The mounting plate is equipped with either micro-switches or inductive switches – i.e. direct switching or according to NAMUR.



### ❸ Vertically adjustable feet

Depending on the pinion overlap (20, 30, 40, or 50 mm), the Switchmaster® can be universally mounted in seconds. Simply mount the feet (without casing) onto the valve, slide the casing over the feet brackets until the shaft matches the actuator pinion. Then press the clips and the position is fixed. Brackets are not needed!







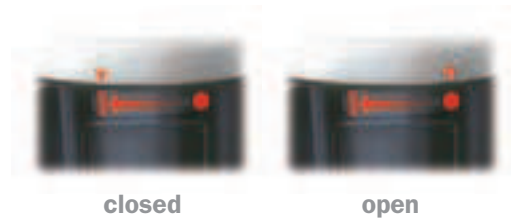
#### ④ Rapid marking

The flow path of the valve can be easily indicated in seconds by pressing on the green path indicator, not only through valves but multiple valves.



#### ⑤ Universal switching cams

The patented switching cams activate the electromechanical or inductive switches. Inductive switches can be switched in either damped or undamped situations, depending on the adjustment. The switching point is quickly and easily changed by rotating the integrated adjusting tool. The positive form-fitting connection between cam and shaft guarantees the stability of the switching point.



#### ⑥ Cap markings

Rotate the cap in the closed position and the Switchmaster® is closed water-tight.

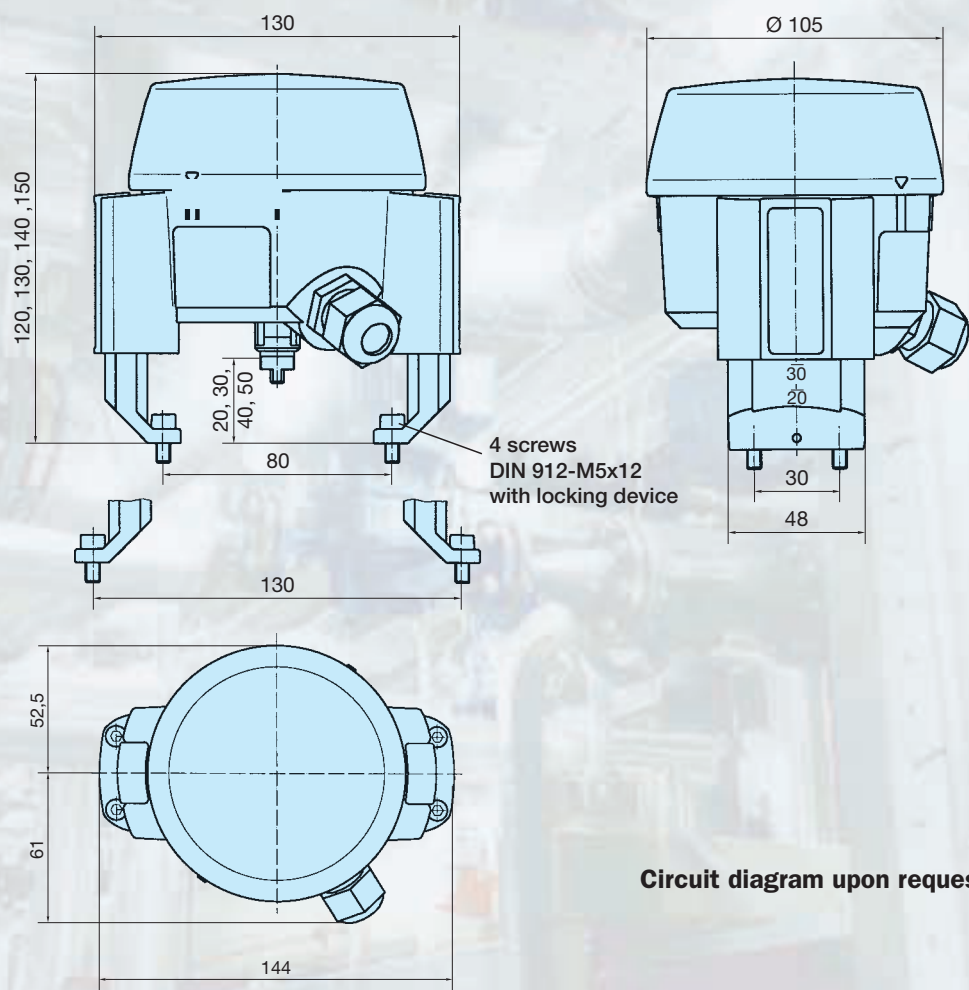
The quick-acting closure enables connecting, adjusting and programming within seconds.

#### Highly visible flow paths

When using multiple valves (L or T models), the green marking indicates the flow path. The closed routes are indicated by red markings.



General Data		<b>SWITCHmaster®</b> -Varianten	
<b>Mounting measurements:</b>	acc. to VDI/VDE 3845 for flange facing 30 x 80 and 30 x 130 (see drawing)	<b>Type M, microswitch</b>	<b>type SM - M2 (signal „open + closed”)</b>
<b>Materials:</b>	Cap: PC Stem: POM Seals: NBR Cable gland/ Nut: PA Other plastic parts: ABS Hexagon socket screw: Stainless steel (A2-70)	Voltage range Current range Switching function	4V/DC - 250V/AC 1mA - 5A change-over, contacts gilded
<b>Protection:</b>	IP67, VDE 0470/EN 60529	<b>Type D, inductive sensor, direct switching, 3-wire system, with LED</b>	<b>type SM - D2 (signal „open + closed”)</b> <b>type SM - DA (signal „open”)</b> <b>type SM - DZ (signal „closed”)</b>
<b>Temperature range:</b>	-20 °C up to +70 °C	Voltage range Constant current Switching function	10V - 30V/DC 100 mA plus switching contact in end position damped or undamped
<b>Display &amp; switching range:</b>	0° - 90° pivoting angle	<b>Type N, inductive sensor, Namur ≅ DIN 19234/EN 50227 + LED explosion-proofed, EExia IIB T6</b>	<b>type SM - N2 (signal „open + closed”)</b> <b>type SM - NA (signal „open”)</b> <b>type SM - NZ (signal „closed”)</b>
<b>Cable gland:</b>	with strain relief Clamp range 7-13 mm	rated voltage output current	8V/DC damped < 1mA undamped > 3mA
<b>Cable:</b>	Ø 7-13 mm, max. 2,5 mm <sup>2</sup>	Switching function	in end position damped or undamped
<b>Weight:</b>	ca. 0,325 kg		

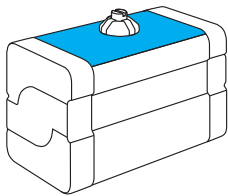


**Circuit diagram upon request.**

## Interfaces

Actubar as center of the Vacotrol system possesses interfaces according to all standards.

Modular construction enables combinations with the following products from our extensive range as well as all other commercially available positioners, solenoid valves and valve fittings.



Interface actuator/signal unit acc. to VDI/VDE 3845



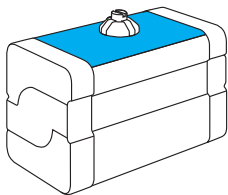
switchcontrol



miniswitch



switchmaster



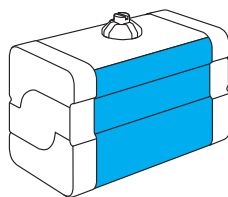
Interface actuator/signal unit bar-vacotrol



bar-position and bar-position 3P



posiswitch



Interface actuator/control valve to VDI/VDE 3845 Namur



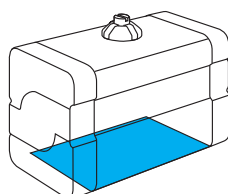
bar-Solenoid valve



Multibar (pressure booster)



Throttle plate



Interface actuator/valve acc. to DIN EN ISO 5211



Manual override



Reductions



Adapters



Mounting brackets

# bar

---

## **bar GmbH**

Auf der Hohl 1  
53547 Dattenberg

Phone +49 (26 44) 960 70  
Fax +49 (2644)96 07 35

[www.bar-gmbh.de](http://www.bar-gmbh.de)  
[sales@bar-gmbh.com](mailto:sales@bar-gmbh.com)

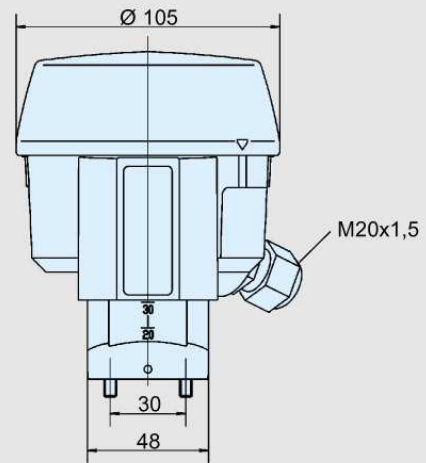
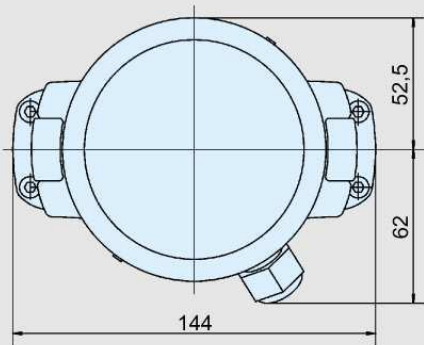
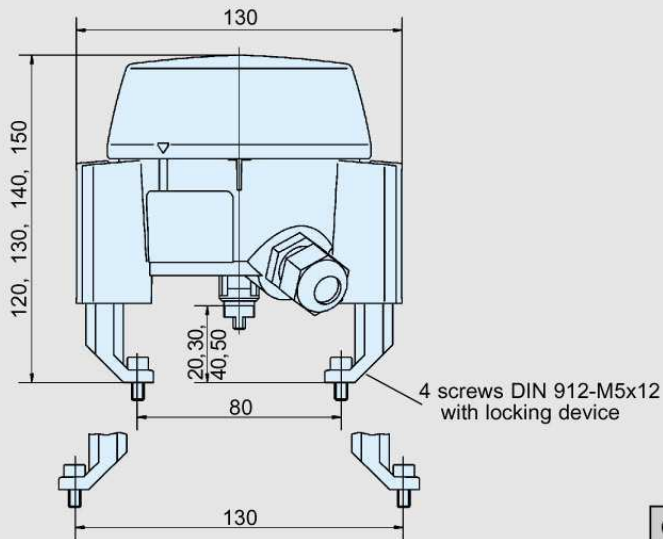
# [www.bar-gmbh.de](http://www.bar-gmbh.de)

---



# SWITCHmaster®

## Technical Data



### General data

<b>Cable gland</b>	With strain relief, clamp range 7-13 mm
<b>Cable</b>	Ø 7-13 mm, max. 2,5 mm <sup>2</sup>
<b>Weight</b>	ca. 0,325 kg

### SWITCHmaster-versions

Typ M, Mikroswitches	Type SM - M2 (signal „open + closed“)
Voltage range	4V/DC - 250V/AC
Current range	1mA - 5A
Switching function	Change-over contact contacts gold plated

Type D, induktive sensor direct switching, three wire system, with LED	Type SM - D2 (signal „open + closed“)
Voltage range	10V - 30V/DC
Current range	100 mA
Switching function	Plus switching, PNP make contact damped or undamped in end-position

Type N, induktive sensor, Namur EN 60947-5-6, with LED explosion-proofed, Ex ia IIC T6	Typ SM - N2 - ATEX (Signal „open + closed“)
Voltage supply	Rated voltage 8V/DC
Output current	Damped ≤ 1mA Undamped ≥ 3mA
Switching function	Damped or undamped in end-position
<b>Switching power</b>	max. 34 mW
<b>ATEX-Name</b>	Ⓔ II 2 G Ex ia IIB T6 -20° C < Ta < +70° C

Circuit diagram upon request.

### General data

<b>Mounting measurements</b>	According to VDI/VDE 3845 for flange facing 30 x 80 and 30 x 130 (s. dimensioned drawing)
<b>Materials</b>	
Cap	Lexan 143 R (PC)
Stem	Delrin (POM)
Seals	Perbunan (NBR)
Cable gland/nut	Polyamid (PA)
Other parts of plastic	Bayblend T45 (ABS + PC)
Hexagon socket screw	Stainless steel AISI 304
<b>Materials version ATEX</b>	
Cap	Lexan 143 R antistatic coated
Casing, feet	Bayblend T45 (ABS + PC) antistatic coated
<b>Protection</b>	IP67, VDE 0470/EN 60529
<b>Temperature range</b>	-20° C to +70° C
<b>Indication and switching range</b>	0 ... 90° pivoting angle