

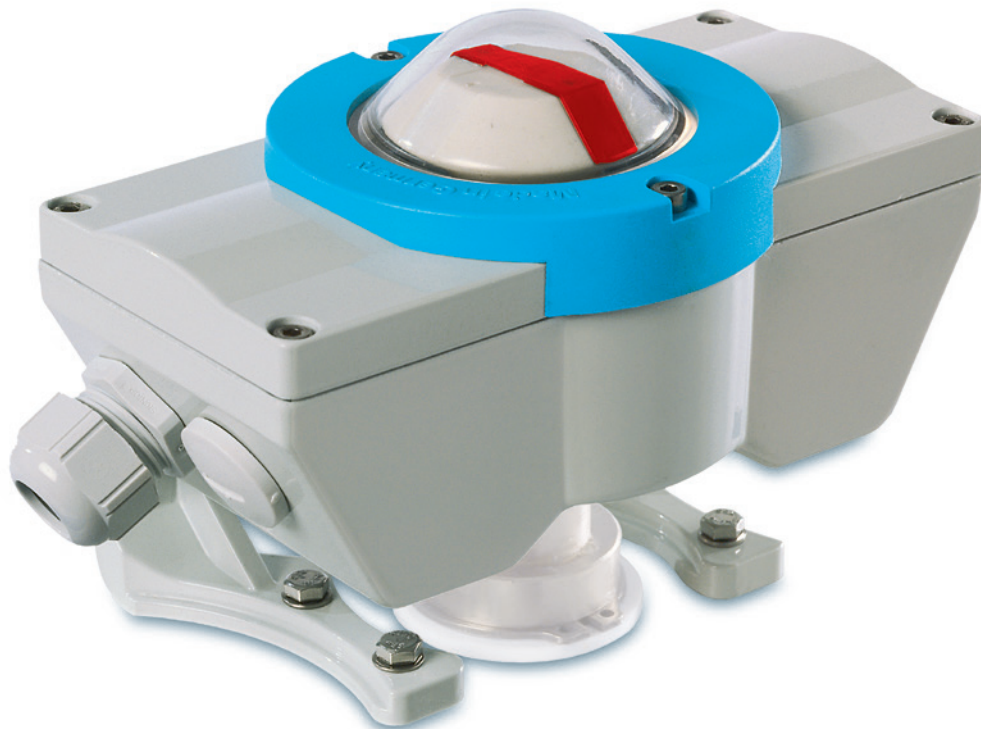
CR-TEC Engineering

Automated Valve Solutions

switchcontrol

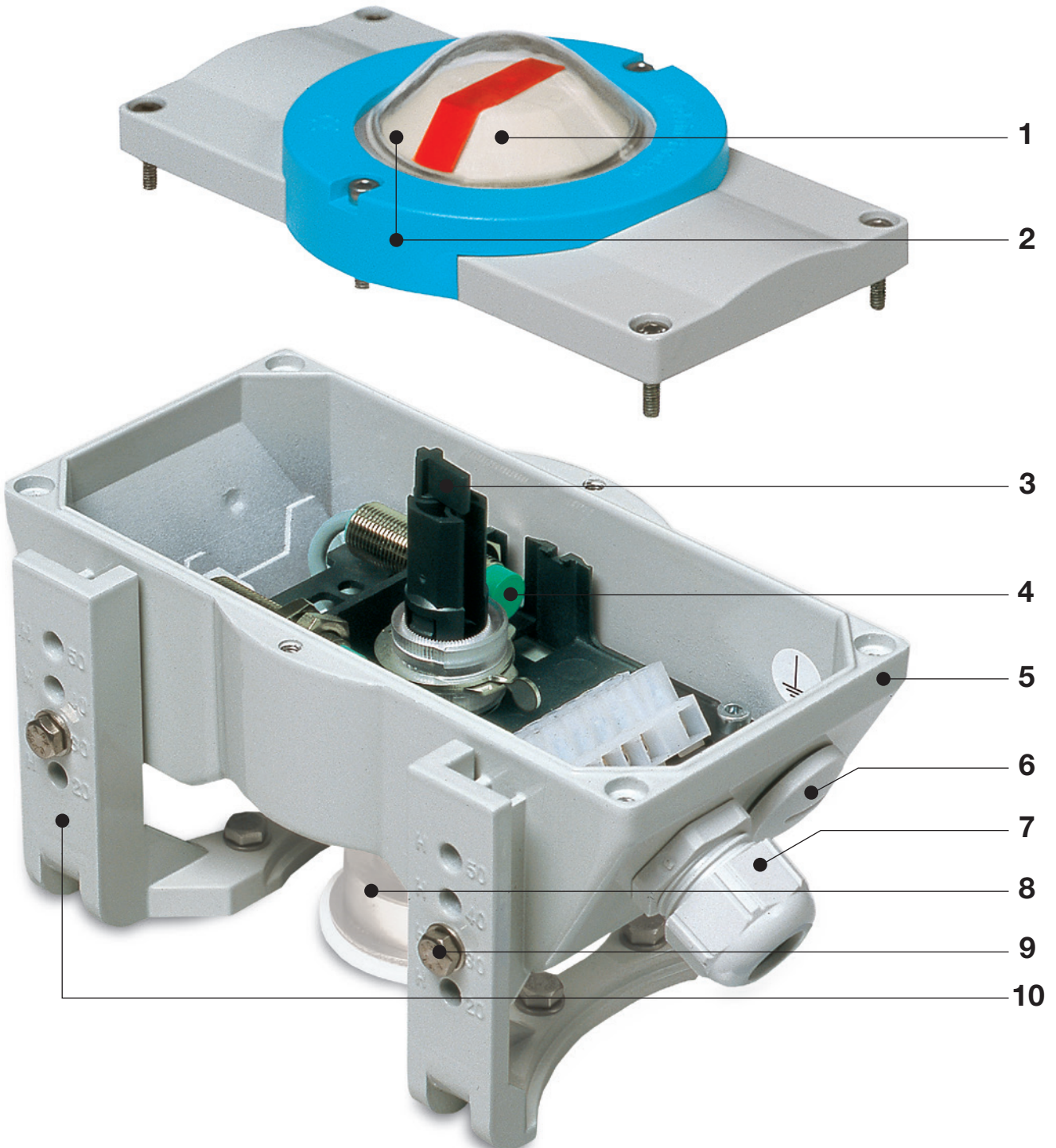
The robust opto-electric position indicator

Technical data sheet

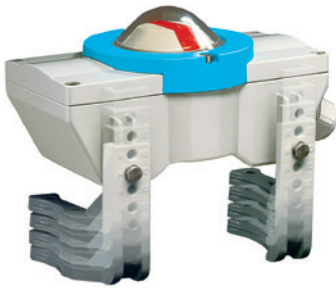


The advantages of the switchcontrol at a glance:

	Description	Advantages
1	clearly visible position display not only for the OPEN/CLOSED position, but also the flow path	good visibility from far away enables recognition of the flow paths of a 2-way or a 3-way valve
2	ATEX-compliant design via NAMUR switch and special coating of the plastic components	clear recognition of the switching position of valves, even in explosion-protected areas
3	easy and fast adjustment of the switch points	time and therefore cost savings
4	available in various switching configurations	large field of application, even in explosion-protected areas, modular construction, means very short delivery times
5	robust construction: Aluminium die-cast casing	non-sensitive to external impacts
6	optional version with climatic valve to avoid condensed water inside casing	guarantees better service life for the electrical components and prevents corrosion
7	up to four cable entries possible	very simple wiring and afterwards re-wiring of solenoids in the bar-switchcontrol
8	easy access to driving pinion	manual operation of the actuator possible, cost-saving mounting of box
9	adjustable heights of 20, 30, 40 and 50mm to accommodate different pinions	switchcontrol can be mounted to all actuators, being equipped with a signal unit interface according to VDI/VDE 3845
10	universal mounting of the switchcontrol to units with NAMUR size 80 & 130 via interchangeable feet	reduces the number of spare parts to be kept in stock
	precision-bearing on driven shaft	exact switching during the whole life-cycle of the unit
	easy removal of the complete camshaft from the casing	enables easy and rapid servicing
	all components made from corrosion-resistant or corrosion-protected materials	extensively wide field of application



switchcontrol ... imaginative, economical, unique.



The advantages, one by one:

Adjustable height for different pinion lengths with 20, 30, 40 and 50mm.

What's special:

The feet of the switchcontrol can be easily and quickly adjusted in height; exact and safe.

Advantage:

The switchcontrol can be mounted on all makes of actuator which are fitted with a signal unit interface acc. to VDI/VDE 3845.



Universal mounting on NAMUR dimensions of 80 x 30 and 130 x 30mm.

What's special:

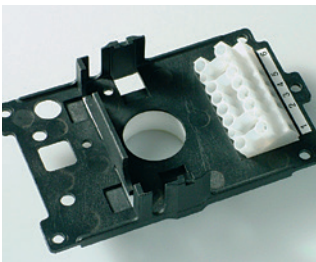
The switchcontrol is delivered as standard for 80 x 30 mounting. To change over to 130 x 30, simply exchange the feet.

Advantage:

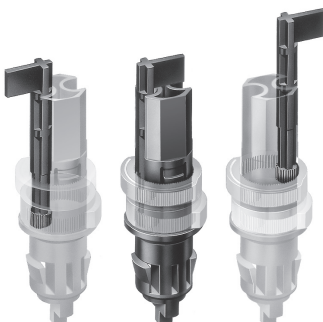
Simplified and reduced storage of spares. Rapid mounting.



The flow paths of the valve are displayed via the red markings, which can easily be adapted to the application.



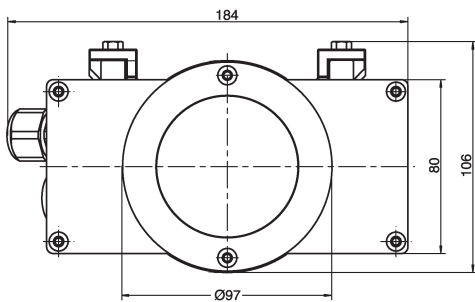
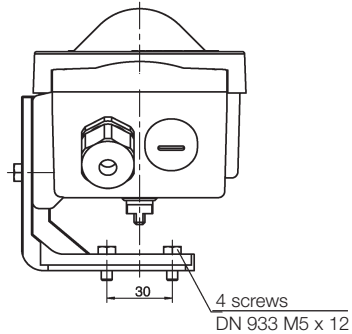
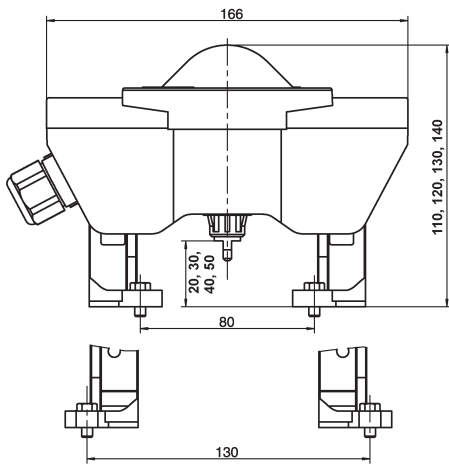
The design of the board enables the mounting of four different types of switches as well as the mounting of the terminal connector block.



Universal actuating cams

The patented actuating cam controls the electro-mechanical or proximity switch. Proximity switches can be operated either damped or undamped. The actuating point is easily and quickly adjusted using the setting tool. Robustness and form play a key role in the connection between actuating cam and shaft which guarantee actuating point stability.

Dimensions



- 1 dimensions 20, 30, 40, 50 via height adjustment of feet
- 2 dimension 130 achieved via exchange of feet
- 3 110 (20), 120 (30), 130 (40), 140 (50)
to accommodate pinion lengths

Technical data

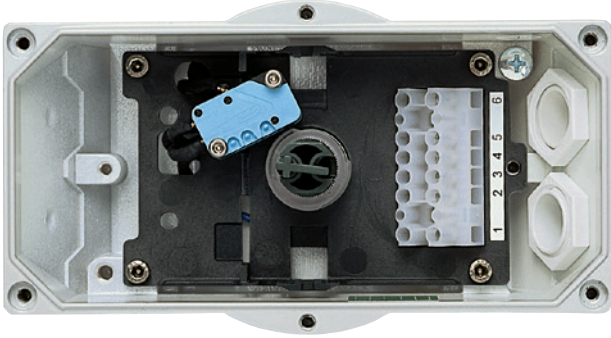
Technical data	
Mounting criteria	according to VDI/VDE 3845 for interfaces 30 x 80 and 30 x 130 (see drawing)
Materials	
Casing parts	Aluminium, resin-coated
Viewing glass	PMMA, anti-static coating for ATEX version
Screws	stainless steel
Blanking plugs and cable glands	PA
Cover	ABS+PC
Protection type	IP67
Temperature range	-20 °C to +70 °C (type SC-M2 as special version for deep temperature applications -40 °C to +70 °C)
Cable gland	M20 x 1,5; clamp range 7–13 mm
Cable	ø 7–13 mm; 2,5 mm ² max.
Weight	0,8 kg
Display and switch range	0 to 180° pivoting angle

Technical details of the switchcontrol variations

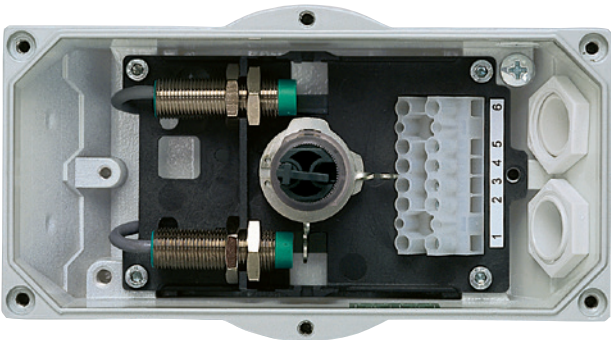
Different standard switching types:

What's special: Different types of switches enable modular constructions in ex and non-ex areas.

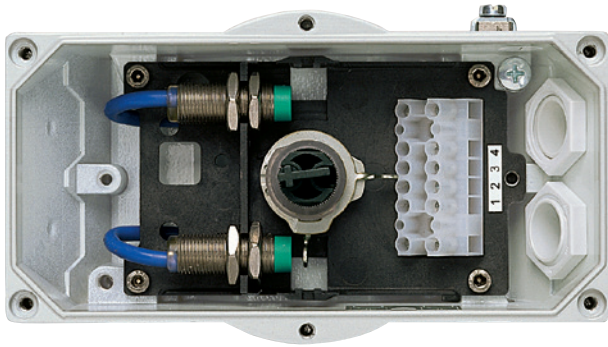
Advantage: Wide-ranging application possibilities and short delivery times.



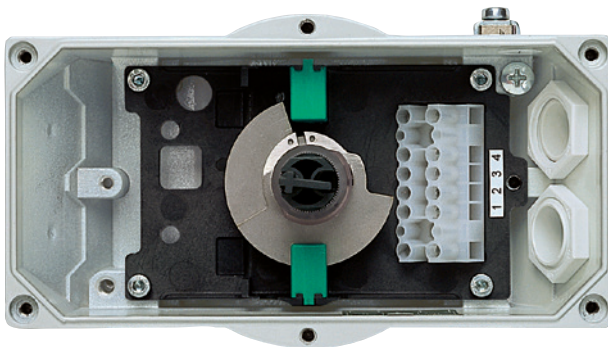
Microswitch	type SC-M2
Voltage range	up to 250 V/AC
Permanent current	5 A
Contacts	silver-plated
Switching function	change-over



Proximity round sensor	type SC-D2 (signal „open + closed“)
Voltage range	10–30 V/DC
Operating current I_l	0–100 mA
Idling current I_o	<15 mA
Switching function	PNP normally open

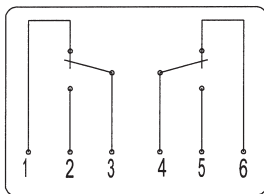


Proximity round sensor NAMUR	type SC-N2 (signal „open + closed“)
Rated voltage U_o	8 V/DC
Current input	damped < 1 mA; undamped > 3 mA
Switching function	NAMUR normally closed, with yellow switching position display (LED)
ATEX marking	Gases: Ex II 2G Ex ia IIB T6-T1 Gb Dusts: Ex II 2D Ex ia IIIB T135°C Db

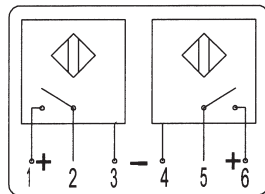


Proximity slot sensor NAMUR	type SC-NS2 (signal „open + closed“)
Rated voltage U_o	8 V/DC
Current input	damped < 1 mA; undamped > 3 mA
Switching function	NAMUR-opener, with yellow switching position display (LED)
ATEX marking	Gases: Ex II 2G Ex ia IIB T6-T1 Gb Dusts: Ex II 2D Ex ia IIIB T135°C Db

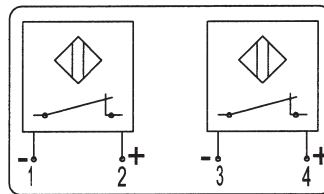
Circuit diagrams



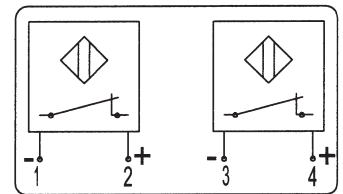
Microswitch
type SC-M2



Proximity round sensor
type SC-D



Proximity round sensor
NAMUR type SC-N



Inductive slot sensor
NAMUR type SC-NS



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