

## Instructions Manual for Cam Switch VSN250

The VSN250 cam switch is tested as isolating switch suitable for safe isolating of electrical equipment. It is maintenance-free.

The cam switches must not be overloaded and the passing current must not exceed the specified thermal current without the cover (I<sub>th</sub>). The VSN250 series switches are capable to switch on, switch off, and isolate safely the power circuits in machines and other devices.

In basic design, the switch body meets the IP 00 protection.

The IP 65 protection from the front will be met under the following conditions:

- The cam switch must be fitted with a seal on its shaft;
- The switch must be secured through the front mounting holes;
- Opening for the shaft and bolts will be drilled according to the drawing, which is included in the installation plan.

The warranty period for the cam switch is limited by the number of switching cycles of electrical and mechanical durability, but not more than 60 months from the date of delivery. The cam switches meet the requirements of the CSN EN 60 947-1 and CSN EN 60 947-3 standards.

When selecting the cam switches for given external influences, we recommend to consult the designer.

### Assembly procedure:

1. Secure the cam switches to the device through the front or rear sliding plate according to the switch type.
2. Connect the wires ended by cable lugs to the switch. The connected wires must be lightened to avoid mechanical strain on the switch by the weight of the wires.
3. Check all the screws are tightened. The connecting terminal screws must be tightened to a specified tightening torque:
  - Tightening torque for Allen screw – 4 Nm
  - Tightening torque for M12 screw – 14 Nm
 Failure to follow the specified torque can damage the switch!
4. Install a control and test the functions without load.

Installation must be carried out by a qualified electrician and the connection must comply with the relevant electrotechnical and safety regulations.

This product does not contain any hazardous substances. At the end of its life, it must be handled in terms of the applicable Waste Act, as amended.

Caution: Do not use the malfunctioning or damaged cam switch and secure it against use. The disassembly needs to be carried out by a qualified electrician. If the cam switch is not fitted with the control and the front plate, it must not be operated!



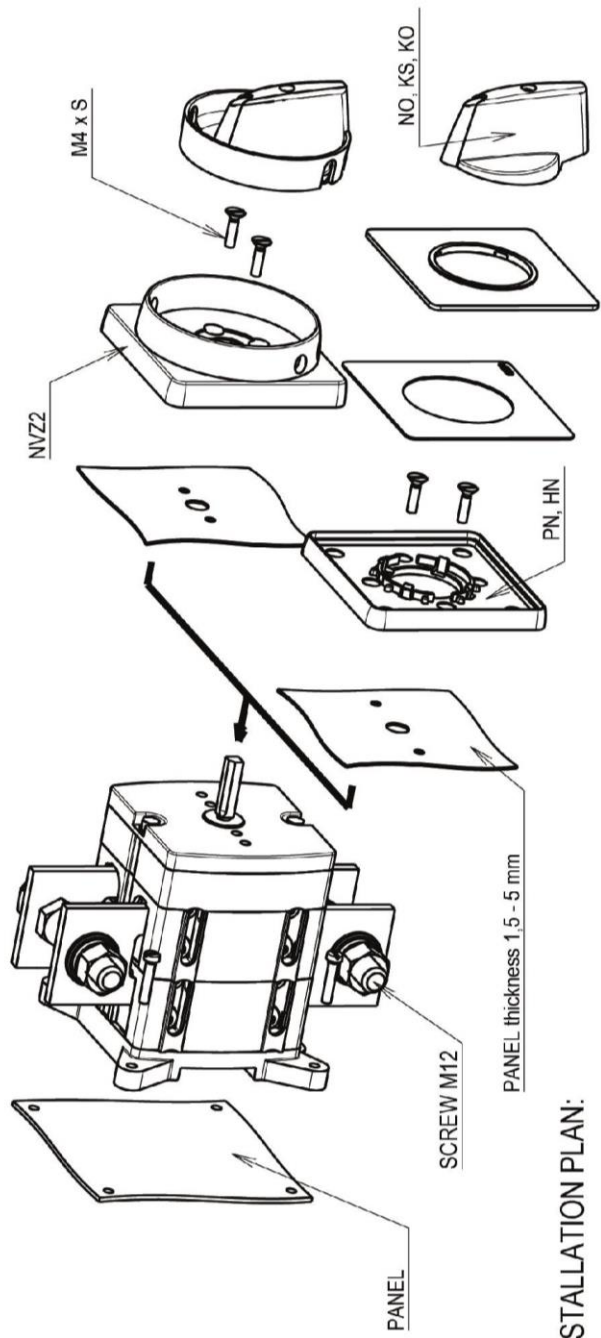
For further information on range of the cam switches, see the catalogue that can be found at [www.obzor.cz](http://www.obzor.cz). The printed catalogue can be requested by phone +420 577 195 151 or by email [marketing@obzor.cz](mailto:marketing@obzor.cz)

We offer technical assistance free of charge when selecting and ordering the cam switches – just call +420 577 195 153, +420 577 195 175.

## Cam switch technical data

Type range		VSN250
Suitable for safe disconnection:		YES
Impuls withstand voltage (U <sub>imp</sub> )		4 kV
Isolation voltage (U <sub>i</sub> )		690 V
Thermal current without cover (I <sub>th</sub> )		250A
Thermal current with cover 400 x 600 x 245 (I <sub>the</sub> )		250A
Nominal on-load voltage (U <sub>e</sub> ) / Working frequency		400 V / 500 V / 50 Hz
Working current (I <sub>e</sub> )	AC 21 B	250 A
	AC 23 B	100 A
	AC 3 B	55 A
Short-term withstand current (I <sub>cw</sub> )		4 500 A / 1 s
Short-circuit switching capacity (I <sub>cm</sub> )		4 000 A
Conductor diameter (mm <sup>2</sup> )		cable lugs Ø 12 mm
Maximum number of switching positions		8
Maximum number of levels		4
Maximum number of contacts		8
Control shaft size (mm)		6 x 6
Electrical endurance in AC3 classes acc. ČSN EN 60947-3 chart A4		200 cycles
Mechanical endurance (number of cycles)		1 400
Maximum switching frequency / h		60
Connection screw		imbus no. 4
Power dissipation (during max loading) per contact		21 W
Protection	cam switch body	IP 00
	from front	IP 65
Weather resistance (°C)		- 40°C to + 50°C
Mounting position		any
Maximum tightening torque		4 Nm
Maximum tightening torque M12		14 Nm
Front mounting pitch		50 mm

# INSTALLATION PLAN VSN 250



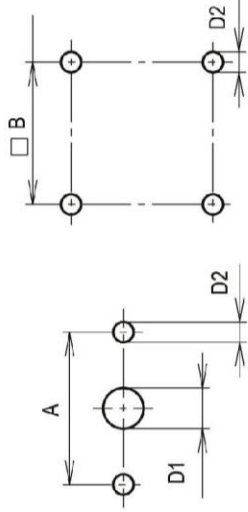
PANEL thickness 1,5 - 5 mm

## INSTALLATION PLAN:

FRONT MOUNTED - V  
(ALSO APPLIES TO REAR  
MOUNTING, DIMENSION - A)

BACK MOUNTED - Z

ALLOCATION CONTROLLERS TO FRONT PANELS



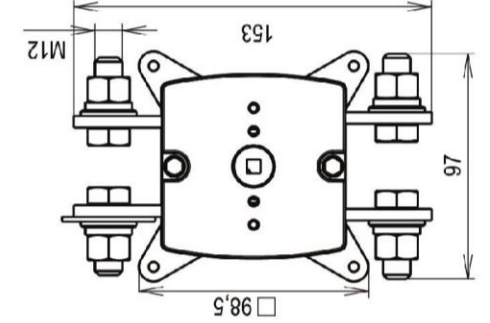
CONTROLLER FRONT PANEL	CONTROLLER			
	NO	KS/6	KO	
PN	X	✓	X	
HN	✓	X	✓	

## RECOMMENDED SWITCHING LEVERS

FRONT PANEL	PN HN	LOCKABLE EXTENSION NVZZ	SCREW M4		BACK MOUNTED		
			A	D2			
	50				B		
			10	4,3	20	1,5 - 5	86
			30				

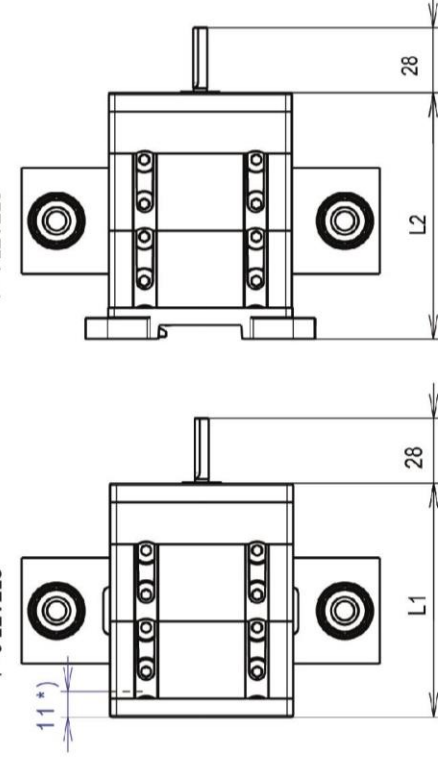
NUMBER LEVELS	VSN 250			
	NO	KS/6	KO	NVZZ
1-2	✓	✓	✓	✓
3-4	X	X	✓	X

## DIMENSIONAL PLAN:



FRONT MOUNTED - V  
1 - 3 LEVELS

BACK MOUNTED - Z  
1 - 4 LEVELS



NUMBER OF LEVELS	L1	L2
1	100	105,4
2	166	171,4
3	232	237,4
4		303,4

NOTE: dimension in mm

It's necessary to provide rear mounting during front panel installation. M4 screws are not included.

\* ) - max. depth for M4 screw for rear mounting