

# SCHMERSAL Non-Illuminated 22mm IP69K Joystick Selector Switches

## Features

- Spring-return (momentary)
- 22mm mounting hole
- Knurled mounting nut
- 6mm front plate thickness
- Front ring material: Plastic
- Bellows material: Silicone
- IP69K



Blue



Gray

Non-Illuminated 22mm IP69K Joystick Selector Switches				
Part Number	Price	Drawing Link	Color	Operation
<a href="#">NK-T-21-1ST8-2</a>	\$102.00	<a href="#">PDF</a>	blue bellows	Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 2-position, momentary, (2) N.O. contact(s), plastic base, plastic bezel, Operator: blue, joystick, round, plastic.
<a href="#">NK-T-41-1ST8-2</a>	\$114.00	<a href="#">PDF</a>		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 4-position, momentary, (4) N.O. contact(s), plastic base, plastic bezel, Operator: blue, joystick, round, plastic.
<a href="#">NK-T-22-2ST8-2</a>	\$107.00	<a href="#">PDF</a>		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 2-position, momentary, (4) N.O. contact(s), plastic base, plastic bezel, Operator: blue, joystick, round, plastic.
<a href="#">NK-T-42-2ST8-2</a>	\$119.00	<a href="#">PDF</a>		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 4-position, momentary, (8) N.O. contact(s), plastic base, plastic bezel, Operator: blue, joystick, round, plastic.
<a href="#">RK-T-21-1ST8-2</a>	\$102.00	<a href="#">PDF</a>	gray bellows	Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 2-position, momentary, (2) N.O. contact(s), plastic base, plastic bezel, Operator: gray, joystick, round, plastic.
<a href="#">RK-T-41-1ST8-2</a>	\$114.00	<a href="#">PDF</a>		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 4-position, momentary, (4) N.O. contact(s), plastic base, plastic bezel, Operator: gray, joystick, round, plastic.
<a href="#">RK-T-22-2ST8-2</a>	\$107.00	<a href="#">PDF</a>		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 2-position, momentary, (4) N.O. contact(s), plastic base, plastic bezel, Operator: gray, joystick, round, plastic.
<a href="#">RK-T-42-2ST8-2</a>	\$119.00	<a href="#">PDF</a>		Schmersal selector switch, IP65, IP67, IP69, and IP69k, 22mm, 4-position, momentary, (8) N.O. contact(s), plastic base, plastic bezel, Operator: gray, joystick, round, plastic.

Schmersal Joystick Selection					
Part Number	Service Conditions	Number of			Color
		Switch Positions	Contacts / Switch Position	Connectors	
<a href="#">NK-T-21-1ST8-2</a>	food processing industry	2	1 (N.O.)	1 (M12, 8-pin)	black ring & blue bellows
<a href="#">NK-T-41-1ST8-2</a>		4			
<a href="#">NK-T-22-2ST8-2</a>		2	2 (N.O.)	2 (M12, 8-pin)	
<a href="#">NK-T-42-2ST8-2</a>		4			
<a href="#">RK-T-21-1ST8-2</a>	rough ambient conditions	2	1 (N.O.)	1 (M12, 8-pin)	black ring & gray bellows
<a href="#">RK-T-41-1ST8-2</a>		4			
<a href="#">RK-T-22-2ST8-2</a>		2	2 (N.O.)	2 (M12, 8-pin)	
<a href="#">RK-T-42-2ST8-2</a>		4			

# SCHMERSAL Non-Illuminated 22mm IP69K Joystick Selector Switches

Joystick Selector Switches Specifications	
<b>Rated operating voltage <math>U_e</math></b>	max. 30 VDC
<b>Operating current <math>I_e</math></b>	max. 0.3 A
<b>Rated insulation voltage <math>U_i</math></b>	30 V
<b>Rated impulse withstand voltage <math>U_{imp}</math></b>	0.5 kV
<b>Degree of pollution</b>	2
<b>Protection class</b>	II x
<b>Switching capacity</b>	max. 7.2 W
<b>Total actuating travel/switching angle</b>	20°
<b>Switching point</b>	13° ± 4°
<b>Actuating frequency</b>	1200/h
<b>Mechanical life</b>	4-spring return positions: 1 x 10 <sup>6</sup> Per spring return position: 2.5 x 10 <sup>6</sup>
<b>Ambient temperature</b>	-40 to 80°C [-40 to 176°F]
<b>Temperature changes</b>	max 10°C / minute
<b>Resistance to shock</b>	30g / 11ms
<b>Continuous shock</b>	10g / 16ms
<b>Protection class</b>	Front: IP65, IP67, IP69/IP69K Contact chamber: IP67 (with connector attached) Switch rod area: IP30
<b>Spacing</b>	90 x 90 mm
<b>Switch functions</b>	2 to 4 switching directions
<b>Type of switching functions</b>	Button
<b>Number of reed contacts</b>	1 to 2 per switching direction
<b>Connection</b>	8-pin M12 connector
<b>Number of terminals</b>	1 ... 2
<b>Type of contact</b>	N.O. contacts, shape A
<b>Front plate thickness</b>	6 mm
<b>Securing tool</b>	Box spanner AF41
<b>Mechanical data at room temperature in new state</b>	Mechanical strength: >200 N Actuating force: <20 N
<b>Switching principle</b>	Magnetic
<b>Utilization category</b>	DC-12
<b>Max fuse rating</b>	0.5 A FF
<b>Required short-circuit current</b>	100 A
<b>Standards *</b>	IEC 60947-1, IEC 60947-5-1

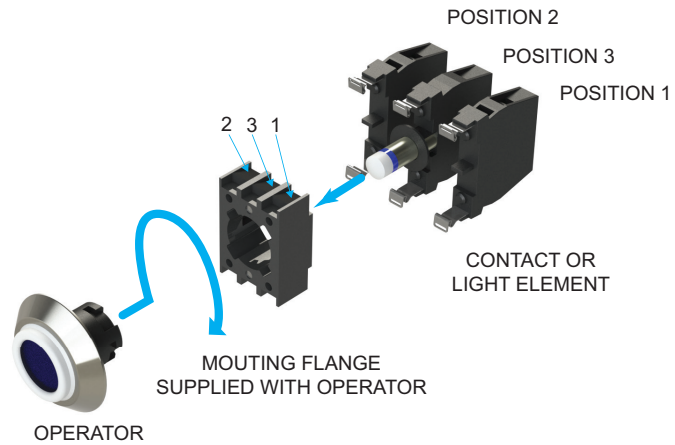
\*To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

# SCHMERSAL Control and Signaling Devices 22mm IP69K

Schmersal control and signaling devices have a number of special design features that make the devices suitable for food processing, pharmaceutical, and medical applications. When utilized in food processing machines, these devices comply with the special cleaning requirements of the industry to prevent cross-contamination, particularly when used in machines that process raw goods. With an ingress protection rating of IP69K, Schmersal control and signaling devices are also suitable for marine applications, traffic systems, commercial vehicles, and in dusty and dirty environments.

## Features

- Special seals prevent product residue from penetrating in the gaps between the fixed and moving device parts, thus preventing the collection of dirt and bacteria in places that are not easily accessible for cleaning.
- Smooth designs make the devices easy to clean.
- Modular contact and light terminal blocks make the devices easy to install.



## IP69K Ingress Protection Rating Overview

### IP69K high-pressure cleaning test

This rating applies to devices tested in accordance with DIN 40050-9. The goal of this test is to duplicate pressure cleaning conditions on a plant floor. In the test fixture, the devices are exposed to a 1450psi spray of water at a temperature of 175°F. The duration of each cleaning cycle is 30 seconds. The test is performed at specified angles using a spray nozzle located at a distance of 4" from the devices. Devices with this rating must withstand test conditions and still be operable. This rating ensures water proofing protection that exceeds NEMA 4X rating.

### Thermal endurance

In pressure environments, controls and signaling devices can be exposed to extreme temperature conditions. To meet the criteria for IP69K rating, devices must undergo a thermal shock test by cycling the environmental temperature to ensure consistent high reliability.

