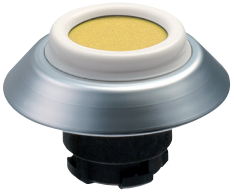
SCHMERSAL Non-Illuminated 22mm IP69K Plastic Pushbuttons

NDTBL



NDTGB

NDTGN

NDTGR

NDTRT

NDTSW

NDTWS

Non-Illuminated 22mm IP69K Plastic Pushbuttons*							
Part Number	***NDTBL***	***NDTGB***	***NDTGN***	***NDTGR***	***NDTRT***	***NDTSW***	***NDTWS***
Color	Blue	Yellow	Green	Gray	Red	Black	White
Price	$17.00	$17.00	$17.00	$17.00	$17.00	$17.00	$17.00
Drawing Link	PDF	PDF	PDF	PDF	PDF	PDF	PDF
Description	Momentary action non-illuminated IP69K pushbuttons with mounting flange						
Mounting diameter	22.3 mm [0.88 in]						
Actuating stroke	5mm						
Dome material	ABS						
Front ring material	ABS, chromium-plated						
Front panel thickness	1.5 to 6 mm						
Weight	25g [0.88 oz]						
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]						
Ambient temperature	-25 to +80°C [-13 to +176°F]						
Shock resistance	<50g						
Vibration resistance	5g						
Ingress protection rating	IP67 and IP69K						
Standards	EN 60947-5-1; IEC/EN 60947-1; UL File E57648, CE						

***Operator only. Purchase contact blocks separately.**

SCHMERSAL Non-Illuminated 22mm IP69K Mushroom Pushbuttons

NDP50BL

NDP50GB

NDP50GN

NDP50SW

NDP50WS

Non-Illuminated 22mm IP69K Mushroom Pushbuttons*					
Part Number	***NDP50BL***	***NDP50GB***	***NDP50GN***	***NDP50SW***	***NDP50WS***
Color	Blue	Yellow	Green	Black	White
Price	$26.00	$26.00	$26.00	$26.00	$26.00
Drawing Link	PDF	PDF	PDF	PDF	PDF
Description	Momentary action non-illuminated IP69K mushroom pushbuttons with mounting flange				
Mounting diameter	22.3 mm [0.88 in]				
Actuating stroke	5mm				
Dome material	ABS				
Front ring material	ABS, chromium-plated				
Front panel thickness	1.5 to 6 mm				
Weight	50g [1.76 oz]				
Mounting screws tightening torque	0.6 N·m [0.44 lb·ft]				
Ambient temperature	-25 to +80°C [-13 to +176°F]				
Shock resistance	< 50g				
Vibration resistance	5g				
Ingress protection rating	IP67 and IP69K				
Standards	EN 60947-5-1; IEC/EN 60947-1; UL File E57648, CE				

***Operator only. Purchase contact blocks separately.**

SCHMERSAL Contact Blocks

EF03.2

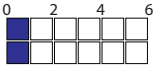
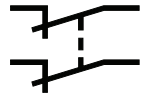
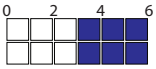
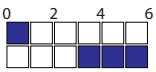
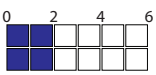
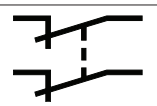
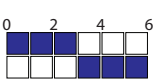
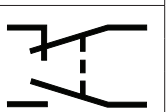
EF10.1

EF103.2

EF220.2

EF303.2

Contact Blocks

Part Number	Price	Qty.	Drawing Link	Contacts	Mounting Position	Travel Diagram (mm)	Wiring Diagram	Application
EF10.1*	$9.25	1	PDF	1 N.C.	1			Standard
EF10.2*	$9.25	1	PDF		2			
EF10.3*	$9.25	1	PDF		3			
EF03.1	$9.25	1	PDF	1 N.O.	1			
EF03.2	$9.25	1	PDF		2			
EF03.3	$9.25	1	PDF		3			
EF110.1*	$14.00	1	PDF	2 N.C.	1			
EF110.2*	$14.50	1	PDF		2			
EF110.3*	$14.50	1	PDF		3			
EF033.1	$14.50	1	PDF	2 N.O.	1			
EF033.2	$14.50	1	PDF		2			
EF033.3	$14.50	1	PDF		3			
EF103.1*	$11.50	1	PDF	1 N.C. / 1 N.O.	1			
EF103.2*	$11.50	1	PDF		2			
EF103.3*	$11.50	1	PDF		3			
EF220.1**	$14.50	1	PDF	2 N.C.	1			Emergency Stop
EF220.2**	$14.50	1	PDF		2			
EF220.3**	$14.50	1	PDF		3			
EF303.1**	$11.50	1	PDF	1 N.C. / 1 N.O.	1			
EF303.2**	$11.50	1	PDF		2			
EF303.3**	$11.50	1	PDF		3			

*Not suitable for Emergency Stop devices
**Not suitable for maintained selector switches NWS/NWT

Travel Diagram Legend
= contact closed
= contact open
Numbers indicate distance in mm

EFM

Mounting Flange

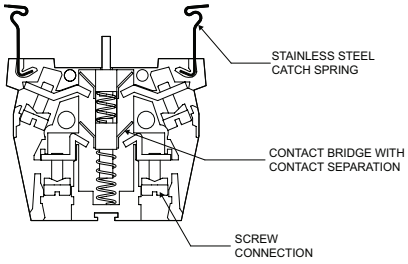
Part Number	Price	Description	Drawing Link
EFM	$5.00	Schmersal mounting flange, replacement. For use with E and N series pushbuttons.	PDF

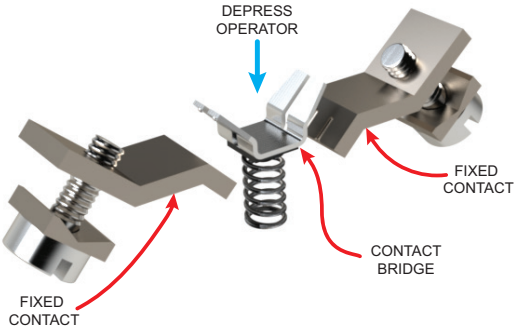
SCHMERSAL

Contact Blocks and Light Terminal Blocks Overview

Features

- A self-cleaning contact bridge system, known as Elan four-way system, which is particularly suitable for low voltage applications and has a lower switching capacity of 5VDC/3.2 mA (max. 400VAC/8A). It is designed in the form of a bent twin contact bridge, with parallel and also diagonal operation.
- Block mounting via snap-on stainless steel springs.
- Complete terminal designations visible at a glance in compliance with IEC 60 947-1 (VDE 0660, Part 100) with a complete function and sequence number (refer also to product ranges). The function number identifies the N.C. and N.O. contact. The sequence number specifies the number and the order of the contacts on the complete switching device.
- N.C. contacts with positive opening in compliance with IEC 60 947-5-1 (VDE 0660 Part 200).
- Galvanically isolated contact circuits in 2-pole blocks.
- High resistance to shock and vibrations.





Technical Specifications

	Contact Blocks	*Light Blocks (ELE)*	*Light Blocks (ELDE)*
General description	Contact element	Light terminal block w/Ba9S base	Light terminal block w/LED
Enclosure material	Plastic, glass fiber reinforced	Plastic, glass fiber reinforced	Plastic, glass fiber reinforced
Contact material	Fine-silver, phosphor bronze or brass carrier	–	–
Utilization category	AC-15: 250 V / 8 A DC-13: 24 V / 5 A	–	–
Suitability for low voltages	≥ 5VDC / 3.2 mA	–	–
Rated insulation voltage Ui	400V	440V	440V
Rated impulse withstand voltage U_{imp}	4kV	–	–
Thermal test current Ithe	10A	–	–
Max. fuse rating	10A gG D-fuse slow blow	10A gG T-slow blow	10A gG T-slow blow
Wire size	0.5 mm² to 2.5 mm² (20 - 14 AWG)		
Tightening torque wire connection	Maximum 1 N·m (0.74 lb·ft)		
NEMA contact rating	A300 / P300	–	–
Switching frequency	1200 s/h	–	–
Switching capacity	5VDC / 3.2 mA (max 400VAC / 8A)	–	–
Mechanical life	10,000,000 operation	–	–
Resistance to shock	110 g/4ms to 30 g/18ms no bouncing	–	–
Resistance to vibration	> 20 g/10ms to 200Hz	–	–
Ambient temperature	-25 to +80°C [-13 to +176°F]		
Ingress protection rating	IP20 terminals / IP40 switching compartment	IP20 terminals	IP20 terminals
Standards	IEC 60947-5-1; IEC 60947-1; UL File E57648		

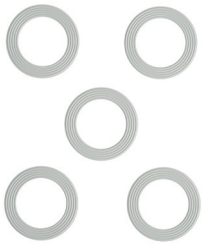
NEMA Contact Rating Designation

	Thermal Current	*Voltage*	*Volt amperes*
A300	10	300 AC	N/A
P300	5	300 DC	138

SCHMERSAL Accessories

NB

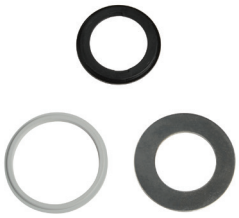
NDP-70-ES



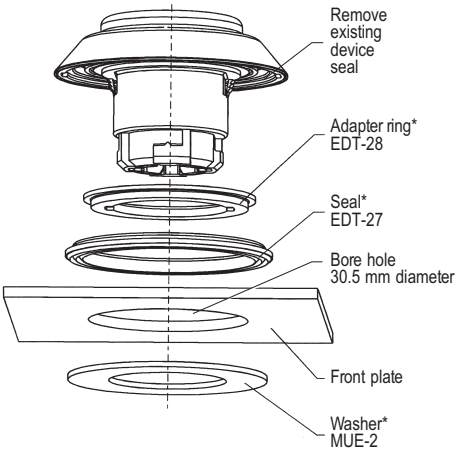
EDT-25-5ST

NZSO-V4A

IP69K Accessories			
Part Number	***Price***	***Drawing Link***	***Description***
NB	$11.50	PDF	Schmersal pilot device hole seal, 22mm, silver.
NDP-70-ES	$9.25	N/A	Schmersal legend plate, metal, round, yellow field, yellow background, black engraved text, legend plate marking “Emergency Stop”. For use with 22mm pilot devices.
NUE	$6.50	N/A	Schmersal pilot device hole adapter, reduces from 30.5 mm to 22.3 mm. Adapter ring, seal and washer included.
EDT-25-5ST	$6.75	N/A	Schmersal pilot device seal, replacement. Package of 5.
NZSO-V4A	$3.75	N/A	Schmersal legend plate, metal, rectangular, gray field, gray background, legend plate marking “blank”. For use with 22mm pilot devices.



NUE



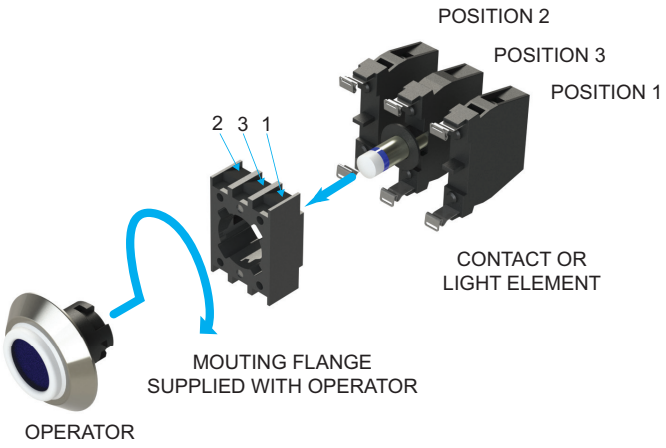
**Included in NUE kit.*

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

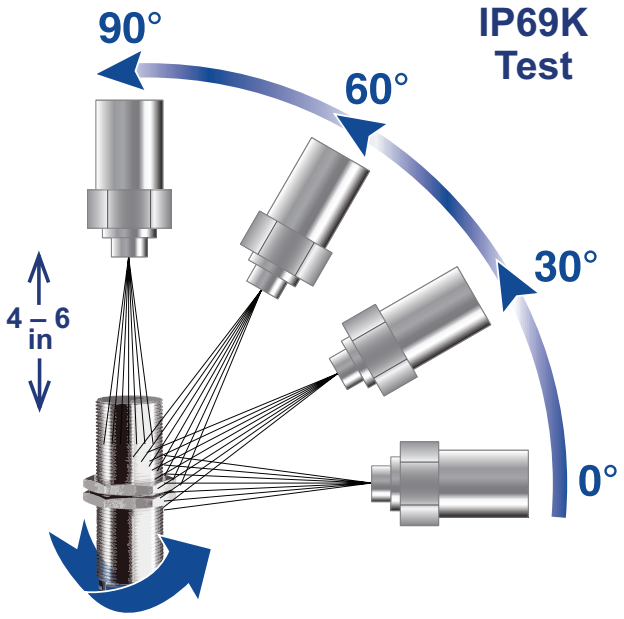
- Special seals prevent product residue from penetrating in the gaps between the fixed and moving device parts, thus preventing the collection of dirt and bacteria in places that are not easily accessible for cleaning.
- Smooth designs make the devices easy to clean.
- Modular contact and light terminal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



IP69K Ingress Protection Rating Overview

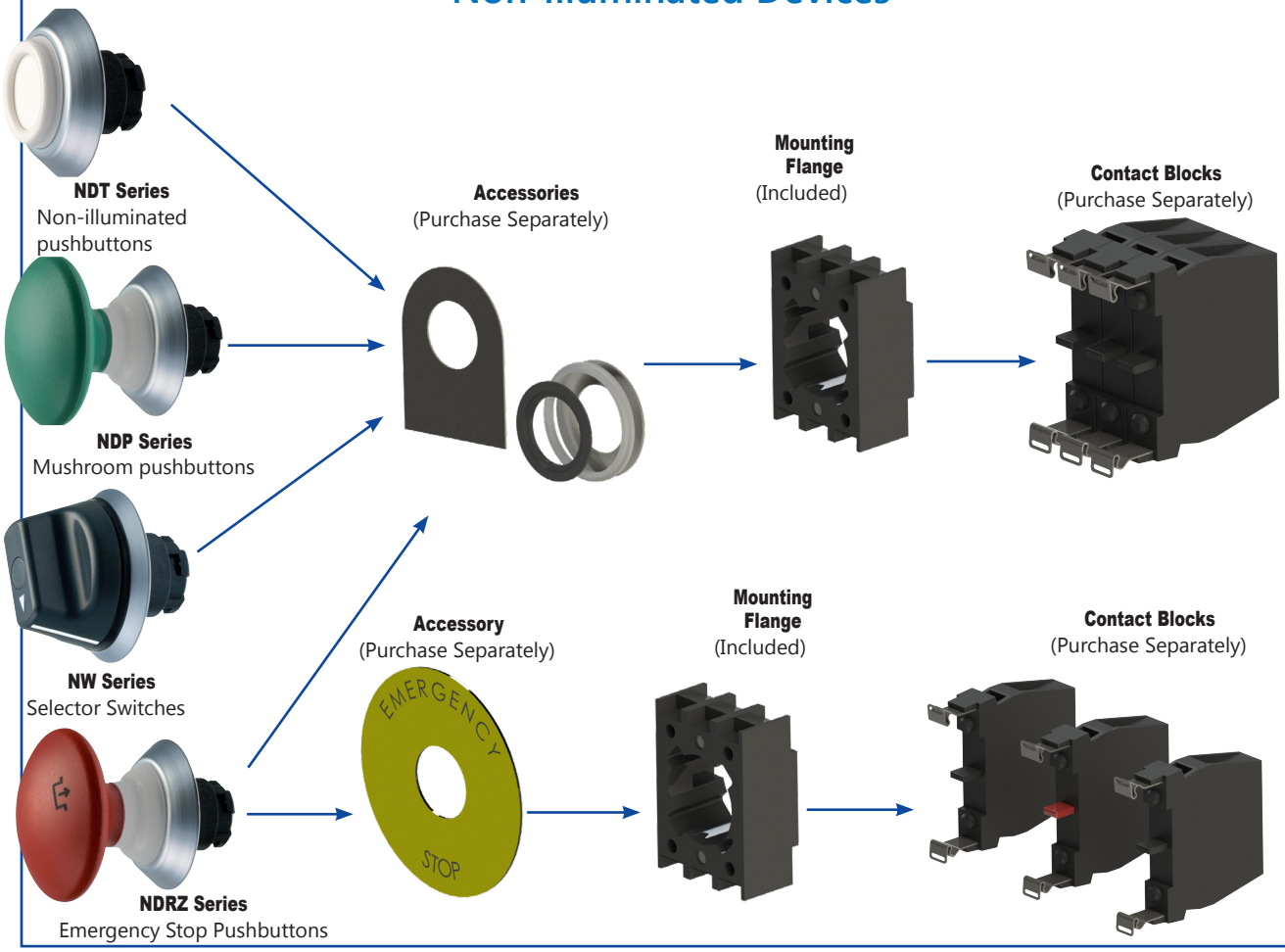
IP69K high-pressure cleaning test
This rating applies to devices tested in accordance with DIN 40050-9. The goal of this test is to duplicate pressure cleaning conditions on a plant floor. In the test fixture, the devices are exposed to a 1450psi spray of water at a temperature of 175˚F. The duration 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.



SCHMERSAL Modular Design Flexibility

Non-Illuminated Devices



Illuminated Devices