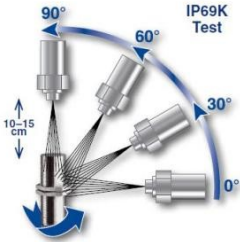# SCHMERSAL

Tech Briefs:
IP69K "N" Series Pushbuttons

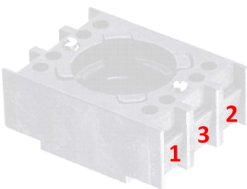

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Features

Devices bearing the IP69K rating can be used in applications in which they are exposed to high pressure (1450psi) and high temperature (175°F) wash down

Different sealing bellow color options for various applications: White, Black, Blue

Custom lettering and IEC 60417 symbols can be factory embossed on button heads

Numbered flange positions and contact blocks to help eliminate duplicate contact labeling in schematics

Optional mountable PS116 limit switch to provide an IP67 contact rating behind the button panel

Overview

The IP69K rating originates from the German standard DIN 40050-9 which evaluated road vehicles that are exposed to regular and intensive cleaning. The requirements and testing to meet the IP69K rating in regards to water-proofing will actually exceed those seen with the NEMA 4X rating.

Subsequently it was found that this rating also served well to meet the cleaning requirements in hygienic applications in food processing, pharmaceutical, and medical industries, as well as marine and other outdoor areas. In addition to high pressure and high temperature, certain application will also require the use of cleaning agents to achieve specific hygienic conditions. In this aspect the N series devices are also clean room approved according to ISO 14644-1 and suitable up to GMP Class C.

The features of the N series hygienic design includes special seals which prevent the ingress of water, dirt and bacteria in the gaps between the fixed and moving device parts.

The smooth design of the bezel eliminates sharp edges and corners allowing easy cleaning and less room for dirt and bacteria to accumulate. Though the NDT and NDL button heads are recessed, the sealing bellows provide zero dead leg once installed at a 90º angle.

Color options for the sealing bellow include white for hygiene and clean-room applications to easily recognize foreign material as with the color blue which is also easily detectable by vision systems. The black sealing bellows are ideal for outdoor applications for increased UV protection.

Mounting of the N series is performed by a typical 22mm mounting hole even though the button heads are a robust yet small profile of 27mm to 50mm. Various symbols and lettering can also be hot embossed on to the pushbuttons and indicator lights.

Product Extension
In addition to pushbuttons and indicator lights, the N series also offers Step Switches, Potentiometer Holders, Main Disconnects, Knobbed Selector Switches as maintained, spring returned or combined, as well as Emergency Stop pushbuttons to ISO 13850.

Applications
- Food processing machinery
- Pharmaceutical machinery
- Medical applications
- Outdoor equipment
- Chemical processing equipment
- Painting systems
- Semiconductor manufacturing

Available Literature

Command and Signaling Devices

Ordering Details

Pushbuttons
ND①②③

① Type
T	Non-illuminating
L	Illuminated
P50	Large mushroom: non-illuminating
TP30	Small mushroom: non-illuminating
LP30	Small mushroom: illuminated

② Sealing Bellows
blank	White
GR/	Black
BL/	Blue (only for NDLP30)

③ Button Color
SW	Black (not for illuminated buttons)		
GB	Yellow	RT	Red
GN	Green	WS	White
BL	Blue		
GR	Gray (only for NDT)		

Indicator Lights
NM①②

① Type
L	Flat
EF	Flat with integrated LED
LH	Domed
E	Domed with integrated LED

② Button Color
GB	Yellow	RT	Red
GN	Green	WS	White
BL	Blue		

Accessories

Light Element for Illuminated Heads
ELDE.N[1]	Integrated LED for NDL(P)
ELE[2]	LED voltage block
EL[3]	Ba9s bulb voltage block

Contact Blocks
EF[4]

Stainless Steel Enclosure
NBGLC	1, 3 or 5 hole enclosure

Adaptor
NUE	30mm mounting adaptor

[1] Must specify color and voltage
[2] Must specify voltage. LED bulb not needed for NME(F)
[3] incandescent bulb not needed for NME(F)
[4] Must specify contact configuration and mounting location

Contact

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