Command and signalling devices
"N" program

Area of application

Series N was originally developed for the specific requirements of food industry mechanical engineering. The command and signalling devices of the machines for this branch of industry must comply with strict hygiene requirements and be easy to clean.

Series N command and signalling devices meet the requirements of Protection class IP69K. This means that even when cleaned on a regular basis using high-pressure cleaners they have an outstanding long service life. They were designed on the basis of the general design concepts for hygienic construction of food processing machinery (EN 1762-2). This means, for example, that the geometry of the devices has no sharp edges. Type examination carried out by the Meat Trade Association confirmed that the design of the N programme was hygiene-appropriate.

In addition, the devices are clean room-approved and also due to their resistance to spray water, they are deployed in outdoor-applications, e.g on municipal vehicles and in car washes. Apart from this, they are tried and tested in extreme applications in food processing, e.g. fish filleting and packaging lines that are installed directly on trawlers.

Design and way of functioning

The N series is of modular structure too which means that machine tool builders always have available a wide selection of different command and signalling devices. The device heads each have one mounting flange that provides effective sealing in conjunction with a labyrinth seal. The EF contact system (see page 62) is used in exactly the same way as with the series.

The N range is characterised by the short actuating stroke of the command devices and the high protection class even behind the front plate. This is a significant benefit in butchers' machines, for example, since condensation can form inside the machines.

The special features of the N range include main switches for up to 63 A. They allow design engineers to design the entire control unit of a (food) machine using just one range of products.

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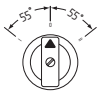
Command and signalling devices – N programme

Maintained selector switches and spring return selector switches

	■ NWS / NWT	■ NWS .1 / NWT .1
Key Features		
General description	Selector switches/spring-return selector switches with short toggle	Selector switches/spring-return selector switches with long toggle
Area of application	Food, hygiene and outdoor applications	Food, hygiene and outdoor applications
Mounting-Ø	22.3 mm	22.3 mm
Toggle length	33 mm	46 mm
Housing material		
Material of operating element	Thermoplastic	Thermoplastic
Material front ring	ABS, chrome-plated	ABS, chrome-plated
Technical features		
Mechanical data		
Colour of the operating element	□ ■	□ ■
Colour of seal	□ ■	□ ■
Design	round	round
Front panel thickness	1…6 mm	1…6 mm
Mounting		
Mounting flange included in delivery	■	■
Mounting position	any	any
Ambient conditions		
Ambient temperatures	0 °C … +80 °C	0 °C … +80 °C
IP Protection class	IP69K	IP69K
Safety classification		
Standards	IEC 60947-5-1; IEC 60947-1	IEC 60947-5-1; IEC 60947-1
Mechanical life	300,000 operations	300,000 operations
Certificates		
Note	cULus in conjunction with the corresponding contact elements only	

Command and signalling devices – N programme

Maintained selector switches and spring return selector switches

Type	Maintained and momentary positions	Positions	Actuator	A	B	C	Type designation
Selector switch	2 maintained positions		Short toggle	26	22.3	44.5	**NWS21** ①
			Long toggle	26	22.3	44.5	**NWS21.1** ①
	3 maintained positions		Short toggle	26	22.3	44.5	**NWS32** ①
			Long toggle	26	22.3	44.5	**NWS32.1** ①
Spring-return selector switch	1 momentary position and automatic return to the zero position		Short toggle	26	22.3	44.5	**NWT21** ①
			Long toggle	26	22.3	44.5	**NWT21.1** ①
	1 momentary position each to the right and left of the zero position		Short toggle	26	22.3	44.5	**NWT32** ①
			Long toggle	26	22.3	44.5	**NWT32.1** ①
Maintained spring-return rotary selector switch	1 momentary position on the right and 2 maintained positions		Short toggle	26	22.3	44.5	**NWTS32** ①
			Long toggle	26	22.3	44.5	**NWTS32.1** ①
	1 momentary position on the left and 2 maintained positions		Short toggle	26	22.3	44.5	**NWTS321** ①
			Long toggle	26	22.3	44.5	**NWTS321.1** ①

① **Abbreviation of colour:** ☐ WH
If you want a white toggle, append "WH" to the type designation.

All dimensions in mm.

Key

A	Height	Height of command device in front of the front panel
B	Mounting-Ø	Installation diameter for the command device head
C	Key Ø	Width of command device head