

# PUSH BUTTONS NEF22H

## DATA SHEET

no: KK-N\_NEF22H



Drives of the NEF22H series control buttons with plastic bodies (under-desk part) and metal body (front part) are intended for installation in standardized  $\varnothing 22.5$ mm holes, in numerous types of control and signal equipment or directly into bodies of machines and equipment. They are intended to work with EF22GX and EF22GY switching elements manufactured by SN PROMET and with EF22L backlight block.

### Push buttons NEF22H consists of:




- a drive of NEF22H,
- 1-6 switching elements of the EF22G type, ordered separately (max 4 switching elements, when using backlit buttons and knob- or lock-operated buttons switched separately),
- an all-purpose EF22L backlight block for backlit buttons.

### TECHNICAL DATA:

Parameter	Value
<b>Insulation rated voltage <math>U_i</math></b>	500V
<b>Rated thermal current <math>I_{th}</math></b>	10A
<b>Rated voltages and switching currents per utilization category <math>I_e</math></b> - $U_e$ 230V/400V (AC15) - $U_e$ 110V/220V (DC13)	6A / 4A 1A / 0,25A
<b>Rated impulse withstand voltage <math>U_{imp}</math></b>	4000V
<b>Limited withstand current</b>	1000A
<b>Mechanical life:</b> - for return drives - for knob-operated drives - for interlocked drives	1 x 10 <sup>6</sup> 0,7 x 10 <sup>5</sup> 1 x 10 <sup>4</sup>
<b>Rated frequency of switching</b>	600 switches/h
<b>IP for button drives</b> <b>IP for under-desk part</b>	IP 65, 55, 40 IP 20
<b>Cross-sections of terminals</b>	1x or 2x LY 0,75 – 1,5 mm <sup>2</sup> 1x or 2x DY 1,0 – 1,5 mm <sup>2</sup>
<b>Working temperature</b>	-40...+50°C
<b>Working position</b>	any
<b>Minimum force for effective opening</b>	1,7N
<b>Travel of effective opening</b>	3 mm
<b>Rated voltage of the backlight block EF22L <math>U_e</math></b>	24-230 V AC/DC

The product conforms to the following standard PN-EN 60947-5-1. Drives of emergency interlocked buttons conform to standard PN-EN 60947-5-5.


**RETURN DRIVES**

	Type	Designation	Colour	Weight [g]
	Return drive with a covered button ☼ backlight available IP65	NEF22H-K c NEF22H-K z NEF22H-K g NEF22H-K s NEF22H-K n NEF22H-K b	red green yellow black blue white	23
	Return drive with an extended button ☼ backlight available IP65	NEF22H-W c NEF22H-W z NEF22H-W g NEF22H-W s NEF22H-W n NEF22H-W b	red green yellow black blue white	23
	Return drive with a palm button ☼ backlight available IP65	NEF22H-D c NEF22H-D z NEF22H-D g NEF22H-D s	red green yellow black	25


**KNOB-OPERATED DRIVES**

	Type	Designation	Colour	Weight [g]
 <p>IP 65</p> <p>☼ backlight available</p>	<b>0 – I</b> stable, knob's angle of rotation 60°	NEF22H-Pa s NEF22H-Pa c NEF22H-Pa z NEF22H-Pa g NEF22H-Pa n	black red green yellow blue	26
	<b>0 ← I</b> unstable, knob's angle of rotation 60°	NEF22H-Pb s NEF22H-Pb c NEF22H-Pb z NEF22H-Pb g NEF22H-Pb n	black red green yellow blue	26
	<b>I – 0 – II</b> stable, knob's angle of rotation 2x45°, contacts of the switch are switched separately	NEF22H-Pc s NEF22H-Pc c NEF22H-Pc z NEF22H-Pc g NEF22H-Pc n	black red green yellow blue	26
	<b>I – 0 ← II</b> pos. I – stable, pos. II - unstable, knob's angle of rotation: 60° to pos. I, 45° to pos. II, contacts of the switch are switched simultaneously	NEF22H-Pd s NEF22H-Pd c NEF22H-Pd z NEF22H-Pd g NEF22H-Pd n	black red green yellow blue	26
	<b>I → 0 ← II</b> unstable, knob's angle of rotation 2x45°, contacts of the switch are switched separately	NEF22H-Pe s NEF22H-Pe c NEF22H-Pe z NEF22H-Pe g NEF22H-Pe n	black red green yellow blue	26
	<b>I – 0 ← II</b> pos. I – stable, pos. II - unstable, knob's angle of rotation 2x45°, contacts of the switch are switched separately	NEF22H-Pf s NEF22H-Pf c NEF22H-Pf z NEF22H-Pf g NEF22H-Pf n	black red green yellow blue	26
	<b>I → 0 – II</b> pos. I – unstable, pos. II - stable, knob's angle of rotation 2x45°, contacts of the switch are switched separately	NEF22H-Pg s NEF22H-Pg c NEF22H-Pg z NEF22H-Pg g NEF22H-Pg n	black red green yellow blue	26
	<b>0 – I – II</b> stable, knob's angle of rotation 2x45°, contacts of the switch are switched separately	NEF22H-Ph s NEF22H-Ph c NEF22H-Ph z NEF22H-Ph g NEF22H-Ph n	black red green yellow blue	26

**LOCK-OPERATED DRIVES**

	Type	Designation	Weight [g]
 <p>IP 40</p>	<b>0 – I</b> stable, key's angle of rotation 60° 1 – removing the key at position 0 2 – removing the key at position 0 and I	NEF22H-Za1 NEF22H-Za2	53
	<b>0 ← I</b> unstable, key's angle of rotation 60° 1 – removing the key at position 0	NEF22H-Zb1	53
	<b>I – 0 – II</b> stable, key's angle of rotation 2x45°, contacts of the switch are switched separately 1 – removing the key at position 0 2 – removing the key at position 0 and I 3 – removing the key at position 0, I and II	NEF22H-Zc1 NEF22H-Zc2 NEF22H-Zc3	53
	<b>I – 0 ← II</b> pos. I – stable; pos. II - unstable, key's angle of rotation: 60° to pos. I, 45° to pos.II, contacts of the switch are switched simultaneously 1 – removing the key at position 0 2 – removing the key at position 0 and I	NEF22H-Zd1 NEF22H-Zd2	53
	<b>I → 0 ← II</b> unstable, key's angle of rotation 2x45°, contacts of the switch are switched separately 1 – removing the key at position 0	NEF22H-Ze1	53
	<b>I – 0 ← II</b> pos. I – stable; pos. II - unstable, key's angle of rotation 2x45°, contacts of the switch are switched separately 1 – removing the key at position 0 2 – removing the key at position 0 and I	NEF22H-Zf1 NEF22H-Zf2	53
	<b>I → 0 – II</b> pos. I – unstable; pos. II – stable, key's angle of rotation 2x45°, contacts of the switch are switched separately 1 – removing the key at position 0	NEF22H-Zg	53
	<b>0 – I – II</b> stable, key's angle of rotation 2x45°, contacts of the switch are switched separately 2 – removing the key at position 0 and I 3 – removing the key at position 0, I and II	NEF22H-Zh2 NEF22H-Zh3	53
	<b>0 – I ← II</b> pos. I – stable; pos. II – unstable, key's angle of rotation 2x45°, contacts of the switch are switched separately 2 – removing the key at position 0 and I	NEF22H-Zi2	53

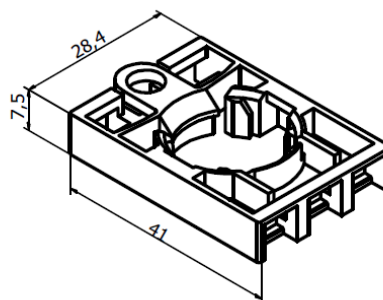
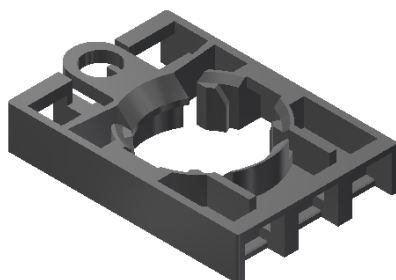
## EMERGENCY INTERLOCKED PALM DRIVE

	Type	Designation	Colour	Weight [g]
	Interlocked palm drive, unlocked by rotating the button  IP 55	NEF22H-DR/P c	red	64

## INTERMEDIATE ELEMENT EF22

Necessary element of NEF22H is intermediate element EF22 (plastic, in black colour).

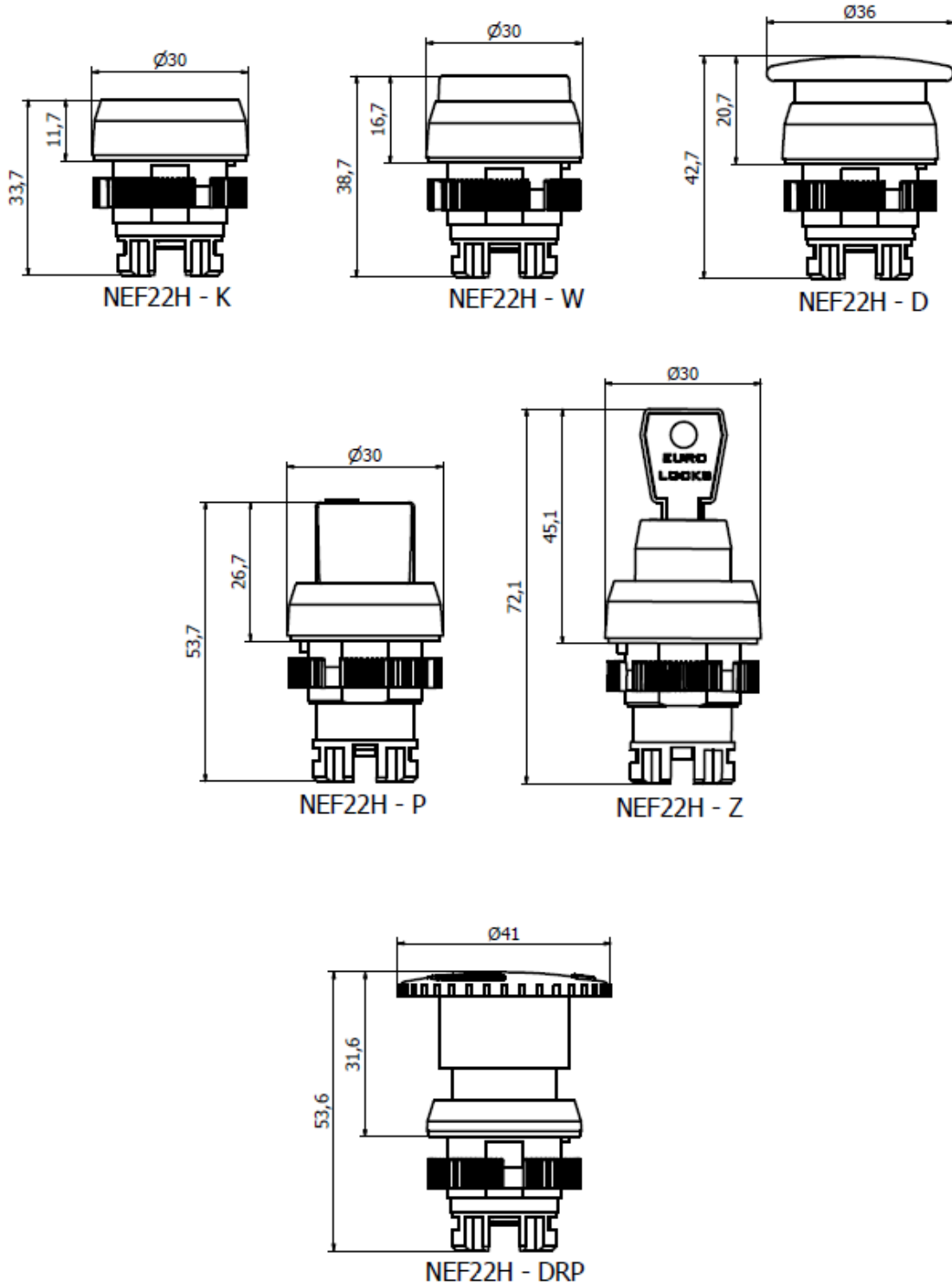
It is used to connect the individual components of the button (drive, switching element, backlight block).



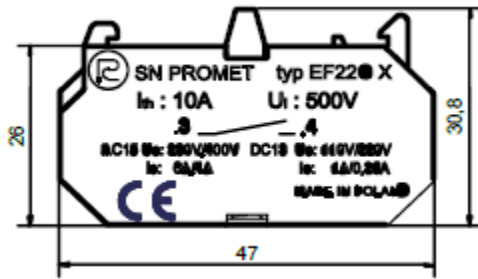
**SWITCHING ELEMENTS EF22G AND BACKLIGHT BLOCK EF22L**

	Type	Designation	Colour	Weight [g]
	Switching element EF22GX (1NO)  IP20	EF22GX	transparent/green	11
	Switching element EF22GY (1NC)  With effective opening  IP 20	EF22GY	transparent/red	12
	All-purpose LED backlight block, operating under 24-230V AC/DC, continuous illumination  IP 20	EF22LN c EF22LN z EF22LN g EF22LN n EF22LN b	red green yellow blue white	12
	All-purpose LED backlight block, operating under 24-230V AC/DC, flashing light  IP 20	EF22LB c EF22LB z EF22LB g EF22LB n EF22LB b	red green yellow blue white	12

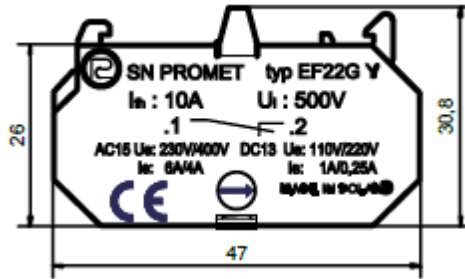
**DIMENSIONS**



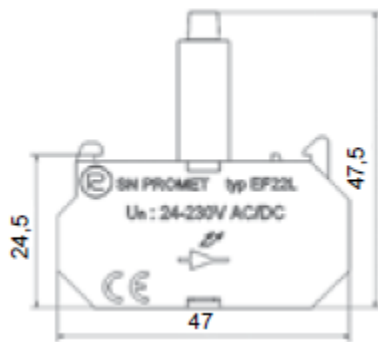




EF22GX



EF22GY



EF22LN, EF22LB