



Choose one component from each of the coloured sections to assemble a complete switch.

### **Product Profile**

The Series 04 is a high quality switch range that includes pushbuttons, indicators, selectors, mushroom

and Emergency-stops. Options include self cleaning, slow-make and snap-action switching elements.

headed switches, key switches,

## Technical data see pages 40-42 Technical drawings see pages 43-47

- IP65 Protection
- Switch Rating: Maximum Voltage, 500VAC Maximum Thermal Current, I<sub>th</sub> = 10A 230VAC/6A, 24VDC/10A
- Raised Mounting into 22.5mm cut out
- Flush Mounting into 30.5mm cut out
- Illumination using Ba9s Lamps or LED's
- All standard lenses are transparent with translucent diffuser
- Screw terminal or plug-in connections



O: Indicator

Indicator, round, full face, 22.5mm mounting



Indicator, flush mount, aluminium bezel, 30.5mm mounting

Colour	Part No.	Colour	Part No.
🔴 Red	704.000.2	🔴 Red	704.006.218*
O Yellow	704.000.4	O Yellow	704.006.418*
🔵 Green	704.000.5	🔵 Green	704.006.518*
O Blue	704.000.6	O Blue	704.006.618*
🔿 Clear	704.000.7	🔿 Clear	704.006.718*
			*Add suffix 'B' for non captive screw with
			flat washer and spring washer option
For comp	lete switch also order 🍟	For compl	lete switch also order 🍟

## **O**Indicator

## 🔘 Non Illuminated pushbutton



Indicator, flush mount, silver bezel, 30 x 30mm mounting

Part No.

704.202.208

704.202.408 704.202.508

704.202.608 704.202.708



Non illuminated raised pushbutton, grey plastic bezel, 22.5mm mounting



Non illuminated raised pushbutton, aluminium bezel, 22.5mm mounting

Colour	Part No., Momentary	Part No., Maintained	Colour	Part No., Momentary	Part No., Maintained
Red	704.010.2	704.040.2	Red	704.012.2	704.042.2
O Yellow	704.010.4	704.040.4	O Yellow	704.012.4	704.042.4
O Green	704.010.5	704.040.5	🔵 Green	704.012.5	704.042.5
O Blue	704.010.6	704.040.6	O Blue	704.012.6	704.042.6
O Clear	704.010.7	704.040.7	○ Clear	704.012.7	704.042.7
Black	704.010.0	704.040.0	Black	704.012.0	704.042.0
For comp	lata awitab alea ardar	A ک	Ear compl	ata awitah alaa ardar	

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Colour

Red

O Yellow

GreenBlue

O Clear

## 22.5mm 30.5mm IP65 10A 500VAC

## Series 04

Choose one component from each of the coloured sections to assemble a complete switch. For other options or further information please contact your local sales office.

A ~ BLOCK LED ACCESSORIES

Non Illuminated pushbutton



Non illuminated flush mount pushbutton, aluminium bezel, 30.5mm mounting





Non illuminated flush mount pushbutton, silver bezel, 30 x 30mm mounting

Part No., Maintained

704.240.008

704.240.208

704.240.408

704.240.508

704.240.608

704.240.708

Part No., Momentary

704.210.008

704.210.208

704.210.408

704.210.508

704.210.608

704.210.708



**Illuminated pushbutton** 

Illuminated raised pushbutton, grey plastic bezel, 22.5mm mounting

d	Colour	Part No., Momentary	Part No., Maintained
	🔴 Red	704.030.2	704.060.2
	O Yellow	704.030.4	704.060.4
	O Green	704.030.5	704.060.5
	O Blue	704.030.6	704.060.6
	◯ Clear	704.030.7	704.060.7
	For comp	lete switch also order(	

### For complete switch also order 🗔 🗛

## **Illuminated pushbutton**



Illuminated raised pushbutton, aluminium bezel, 22.5mm mounting



Illuminated flush mount pushbutton, aluminium bezel, 30.5mm mounting



Illuminated flush mount pushbutton, silver bezel, 30 x 30mm mounting

Colour	Part No., Momentary	Part No., Maintained	Colour	Part No., Momentary	Part No., Maintained	Colour	Part No., Momentary	Part No., Maintained
Red	704.032.2	704.062.2	Red	704.032.218*	704.062.218*	🔴 Red	704.230.208*	704.260.208*
O Yellow	704.032.4	704.062.4	O Yellow	704.032.418*	704.062.418*	O Yellow	704.230.408*	704.260.408*
O Green	704.032.5	704.062.5	🔵 Green	704.032.518*	704.062.518*	🔵 Green	704.230.508*	704.260.508*
O Blue	704.032.6	704.062.6	O Blue	704.032.618*	704.062.618*	O Blue	704.230.608*	704.260.608*
O Clear	704.032.7	704.062.7	◯ Clear	704.032.718*	704.062.718*	◯ Clear	704.230.708*	704.260.708*
				*Add suffix 'B' for non o	captive screw with		*Add suffix 'B' for impro	oved shock
				flat washer and spring	washer option		and vibration performa	nce option

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For complete switch also order 🕢 🍟 🗛

## 22.5mm 30.5mm IP65 10A 500VAC



Choose one component from each of the coloured sections to assemble a complete switch.

#### **O** Mushroom headed pushbutton **Emergency-stop switch** Emergency-stop, twist release, 37mm Emergency-stop, key release, 37mm diameter, Mushroom headed pushbutton, plastic bezel diameter, foolproof to EN 60947-5-1 and foolproof to EN 60947-5-1 and EN 418, and aluminium bezel, 22.5mm mounting, EN 418, use slow-make switching elements use slow-make switching elements function momentary Part No. Part No. Colour Part No., Plastic Part No., Aluminium 704.064.2 704.066.2 Red 704.070.2 704.071.2 O Yellow 704.070.4 704.071.4 O Green 704.070.5 704.071.5 Black 704.070.0 704.071.0 For complete switch also order 🗔 🗛 For complete switch also order 🕢 🗛 For complete switch also order 🕢 🗛

### **Complete switch**



Choose one component from each of the coloured sections to assemble a complete switch. For other options or further information please contact your local sales office.

	ey insert sw	vitch		G <sup>2</sup> Ke	ylock sv	vitch					
	C		,		4		-	(			
steel from	sert switch, stair nt ring, flush mc mounting	ount, 🕐 🗠	10 Å 2 90° Maint/More 42°		switch 2 p 2.5mm mo		2 C B Maint 90°		switch on, flush mour mounting	nt, $3 \qquad 10^{\circ} \qquad 10$	$\sum_{2^{\circ}}^{B} 4 \bigcup_{Maint 90^{\circ}}^{C}$
Drawing	Part No.	Momentary/Mainta	ained	Drawing	Part No.	Momentary/Maintained		Drawing	Part No. Mo	omentary/Maintaine	
8	704.103.0.*28	Momentary		1	704.123.0	Momentary	А	3	704.123.018	Momentary	А
9	704.101.0.*28	Maintained		2	704.121.0	Maintained	C	4	704.121.018	Maintained	C
10	704.093.0.*18	Maintained/Mainta		2	704.122.0	Maintained	C + B	4	704.122.018	Maintained	C + B
10 10	704.095.0.*18 704.097.0.*18	Momentary/Moment									
	*Customized key	chapo will be given	a coordiad								
		shape will be given /hen ordering please									
		wing and sample ke									
	olete switch also d		- ,			lso order 🕢 🗛			lete switch also		
<del>б</del> <sup>7</sup> Ке	eylock swite	ch									
<mark>⊘</mark> Ke	eylock swite	ch								14	
Keylock	switch 2 positi		6 <u></u>		switch 3 p 22.5mm mo		<sup>8</sup> c,s	Keylock 3 positie		nt.	10 c b
Keylock	s switch 2 positiount, 30 x 30m		<sup>6</sup> € Maint 90°		switch 3 p 22.5mm mo		B c Maint 90°	3 positio	switch on, flush mour mounting	- /   >	10 c J s Maint/Morn 42°
Keylock flush m mountir Drawing	e switch 2 positi ount, 30 x 30m g Part No. Mor	tion, the second secon	Maint 90°	raised, 2 Drawing	2.5mm mo Part No.	unting Maint/Mom 4 Momentary/Maintained	l Key rem.	3 positio 30.5mm Drawing	on, flush mour mounting Part No. Mo	nt, Maint 90°	Maint/Mom 42° ed Key rem.
Keylock flush m mountir Drawing 5	s switch 2 positions ount, 30 x 30m and 20 m and	tion, the second secon	Maint 90° Key rem. A	raised, 2 Drawing 7	<b>Part No.</b> 704.115.0	Maint/Mom 4	<b>i Key rem.</b> A	3 position 30.5mm Drawing 9	on, flush mour mounting Part No. Mo 704.113.018	mentary/Maintained	Maint/Mom 42° ed Key rem. C + A + B
Keylock flush m mountir Drawing 5 6	s switch 2 position of the system of the sys	tion, im $5 \frac{1}{Mom 42^{\circ}}$ mentary/Maintained Momentary Maintained	Maint 90° Key rem. A C	raised, 2 Drawing 7 7	<b>Part No.</b> 704.115.0 704.114.0	Unting Maint/Mom 2 Momentary/Maintained Momentary Maintained	<b>i Key rem.</b> A A	3 position 30.5mm Drawing 9 10	Part No.         Mo           704.113.018         704.115.018	Maint 90° Maint 90° Maintained Momentary	$ \begin{array}{c} \hline & Maint/Mom 42^{\circ} \\ \hline & C + A + B \\ \hline & A \end{array} $
Keylock flush m mountir Drawing 5	s switch 2 positions ount, 30 x 30m and 20 m and	tion, the second secon	Maint 90° Key rem. A	raised, 2 Drawing 7	<b>Part No.</b> 704.115.0	Maint/Mom 4	<b>i Key rem.</b> A	3 position 30.5mm Drawing 9	on, flush mour mounting Part No. Mo 704.113.018	mentary/Maintained	Maint/Mom 42° ed Key rem. C + A + B
Keylock flush m mountir Drawing 5 6	s switch 2 position of the system of the sys	tion, im $5 \frac{1}{Mom 42^{\circ}}$ mentary/Maintained Momentary Maintained	Maint 90° Key rem. A C	raised, 2 Drawing 7 7 7	Part No. 704.115.0 704.114.0 704.116.0	Unting Maint/Mom 2 Momentary/Maintained Momentary Maintained Maintained	A A C + B	3 position 30.5mm Drawing 9 10 10	Part No.         Mo           704.113.018         704.115.018           704.114.018         704.114.018	nt, and the second seco	$ \begin{array}{c}                                     $
Keylock flush m mountir Drawing 5 6	s switch 2 position of the system of the sys	tion, im $5 \frac{1}{Mom 42^{\circ}}$ mentary/Maintained Momentary Maintained	Maint 90° Key rem. A C	raised, 2 Drawing 7 7 7	Part No. 704.115.0 704.114.0 704.116.0	Unting Maint/Mom 2 Momentary/Maintained Momentary Maintained Maintained	A A C + B	3 position 30.5mm Drawing 9 10 10	Part No.         Mo           704.113.018         704.115.018           704.114.018         704.114.018	nt, and the second seco	$ \begin{array}{c}                                     $

## 22.5mm 30.5mm IP65 10A 500VAC



Choose one component from each of the coloured sections to assemble a complete switch.



30 X 30	mm mounu	Mom 42°	Maint 90°	22.3000	mounting		Maint/Mom 42°	30.500	mounting		Maint/Mom 42°
Drawing	Part No.	Momentary/Maintained	Bezel	Drawing	Part No.	Momentary/Maintained	Bezel	Drawing	Part No.	Momentary/Maintained	Bezel
16	704.512.008	Momentary	Black plastic	18	704.404.0	Momentary	Grey plastic	19	704.405.018	Momentary	Aluminium
17	704.510.008	Maintained	Black plastic	18	704.405.0	Momentary	Aluminium	19	704.403.018	Maintained	Aluminium
				18	704.402.0	Maintained	Grey plastic				
				18	704.403.0	Maintained	Aluminium				

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## 22.5mm 30.5mm IP65 10A 500VAC

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## Series 04

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Ma int 90

Aluminium

Aluminium

A

ACCESSORIES



Maint/Mom 42

Aluminium

Aluminium

## 22.5mm 30.5mm IP65 10A 500VAC



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Choose one component from each of the coloured sections to assemble a complete switch.

## **Selector switch**

Selector switch long lever

3 position, flush mount,

30 x 30mm mounting





Selector switch, short lever multi position, flush mount, 30.5mm mounting



Selector switch, long lever multi position, flush mount, 30.5mm mounting

		-	Maint/Mom 42°						
Drawing	Part No.	Momentary/Maintained	Bezel		Part No.	Bezel		Part No.	Bezel
28	704.294.00	8 Momentary	Black plastic		704.411.118KN	Aluminium		704.101.118KN	Aluminium
28	704.292.00	8 Maintained	Black plastic						
					For complete selector	switch order		For complete selector	switch order
					Kraus & Naimer conta	act block		Kraus & Naimer conta	ct block
For comp	lete switch a	also order 🗔 🗛		For comp	lete switch also order	A 13	For compl	lete switch also order	a 🖌

## Selector switch



Selector switch, short lever multi position, flush mount, 30 x 30mm mounting



Selector switch, long lever multi position, flush mount, 30 x 30mm mounting

Part No.	Bezel	Part No.	Bezel
704.510.108KN	Black plastic	704.300.108KN	Black plastic
For complete selector s	witch order	For complete selector s	witch order
Kraus & Naimer contact	block	Kraus & Naimer contact	block

For complete switch also order 🗔 🗛

For complete switch also order 🕢 🗛

## **Lever Switches**

For other options or further information please contact your local sales office.

### **Product Profile**

Lever switch

A range of lever switches to compliment the EAO Series 04 and are available with a choice of lever styles and switching action.

**Options include momentary and** maintained positions with 4 connection method types.

- IP54 Protection
- Switch Rating, 10A, 250VAC
- Flush Mounting into 33.5mm dia. cut out
- Up to 5 switching Positions
- Different handle shapes available
- LED Illumination Option
- Mechanical Life of minimum **5 Million Operations**
- Connection types: Screw Terminal, Plug-in, JST Connector, Fast-on 6.3mm, cage clamp®



Lever switch, 2-5 positions, cage clamp®, aluminium bezel, silver contacts, 33.5mm mounting



Lever switch, 2-5 positions, JST pin header, aluminium bezel, silver contacts, 33.5mm mounting

Colour	Range	Momentary/	Contact type	Voltage	Colour	Range	Momentary/	Contact type	Voltage
ooloui	nungo	Maintained	oonaot typo	voltago	ooloui	nungo	Maintained	oontaot typo	Fortago
Black	S 41*	Momentary/ Maintained	max. 5 contacts (NC/NO)	max.250VAC/DC, 1.5A	Black	S 42*	Momentary/ Maintained	max. 5 contacts (NC/NO)	max.250VAC/DC 1.5A
*Part numb	er will be	supplied by EA	O once schematic	diagram has	*Part numb	er will be	supplied by EA	O once schematic	diagram has
been defin	ng specification	of lever style and	l switching	been defined including specification of lever style and switching					
action. For	formation pleas	e contact your lo	cal sales office.	action. For	further in	formation pleas	e contact your loo	cal sales office.	

### Lever switch



Lever switch, 2-5 positions, plug-in terminal, aluminium bezel, silver contacts, 33.5mm mounting



Lever switch, 2-5 positions, cage clamp®, aluminium bezel, silver contacts with positive opening, 33.5mm mounting



Lever switch, 2-5 positions, plug-in or screw terminals, aluminium bezel, silver contacts with positive opening, 33.5mm mounting

Colour	Range	Momentary/ Maintained	Contact type	Voltage	Colour	Range	Momentary/ Maintained	Contact type	Voltage	Colour	Range	Momentary/ Maintained	Contact type	Voltage
Black	S 43*	Momentary/ Maintained	max. 5 contacts (NC/NO)	max.250VAC/DC, 1.5A	Black	S 44*	Momentary/ Maintained	max. 4 contacts (NC/NO)	max.250VAC/DC, 10A	Black	S 45*	Momentary/ Maintained	max. 4 contacts (NC/NO)	max.250VAC/DC, 10A
*Part numb	oer will be	supplied by EA	O once schematic	: diagram has	*Part numb	er will be	supplied by EAC	) once schematic	diagram has	*Part numb	er will be	supplied by EA	O once schematic	c diagram has
been defir	been defined including specification of lever style and switching				been defined including specification of lever style and switching				been defined including specification of lever style and switching				d switching	
action. For	action. For further information please contact your local sales office.				action. For further information please contact your local sales office.			action. For further information please contact your local sales office.						

## 22.5mm 30.5mm IP65 10A 500VAC



Choose one component from each of the coloured sections to assemble a complete switch.

### (iiiiii) Buzzer



Buzzer, plastic bezel, raised, 22.5mm mounting, 24VDC, 95dB  $\pm$  8 at a distance of 0.1m



Buzzer, plastic bezel, flush mount, 30.5mm mounting, 24VDC, IP40, 95dB  $\pm$  8 at a distance of 0.1m



Contact block, screw terminal, snap-action with self-cleaning silver contacts

Part No.	Front finish	Part No.	Front finish		Part No.	Contact type
14-810.002	Black plastic	14-810.910	Black plastic		704.900.1*	1N0
14-810.902	Chromium-plated	14-810.918	Chromium-plated		704.900.2*	1NC
					704.900.3*	2N0
					704.900.4*	2NC
					704.900.5*	1NO/1NC
					Other contact m	naterials available.
					Please contact	US.
					*Add suffix 'B' fo	or non captive screw with
					flat washer and	spring washer option
				For com	plete switch also o	rder 🔘 🔘 🖯 🎸 🕕

## Contact block



Contact block, plug-in terminal, 6.3mm, snap-action with self-cleaning silver contacts



Contact block, screw terminal, slow-make with forced opening silver contacts



Contact block, plug-in terminal, 6.3mm, slow-make with forced opening silver contacts

Part No.	Contact type	Part No.	Contact type		Part No.	Contact type
704.905.1*	1N0	704.910.2*	1NC		704.915.2*	1NC
704.905.2*	1NC	704.910.4*	2NC		704.915.4*	2NC
704.905.3*	2N0	704.910.5*	1NO/1NC		704.915.5*	1NO/1NC
704.905.4*	2NC					
704.905.5*	1NO/1NC					
		Other contact m	naterials available.			
Other contact	materials available.	Please contact	US.		Other contact m	naterials available.
Please contact	t us.	*Add suffix '/B' fo	or non captive screw with		Please contact	US.
*Add suffix '/D'	for double plug-in terminal	flat washer and	spring washer option		*Add suffix '/D' fo	or double plug-in terminal
		For complete suitely size on		_		

For complete switch also order  $\bigcirc \bigcirc \bigcirc \bigcirc \oslash \oslash$ 

For complete switch also order  $\bigcirc \bigcirc \bigcirc \oslash \oslash \textcircled{}$ 

Choose one component from each of the coloured sections to assemble a complete switch. For other options or further information please contact your local sales office.

Ö LED



Contact block

Kraus & Naimer contact block, multi position, screw terminal from 2 - 12 positions

LED, Ba9s, single chip, 6 Volt and 12 Volt



LED, Ba9s, single chip, 24 Volt and 28 Volt

	Colour	Part No.	Voltage	Colour	Part No.	Voltage
	🔴 Red	10-2506.1082	6VDC, 17mA	🔴 Red	10-2512.1142	24VAC/DC, 15mA
	O Yellow	10-2506.1084	6VDC, 17mA	O Yellow	10-2512.1144	24VAC/DC, 15mA
	🔵 Green	10-2506.1085	6VDC, 17mA	O Green	10-2512.1145	24VAC/DC, 7mA
	O Blue	10-2506.1086	6VDC, 7mA	O Blue	10-2512.1146	24VAC/DC, 15mA
	O White	10-2506.1089	6VDC, 17mA	O White	10-2512.1149	24VAC/DC, 15mA
	Red	10-2509.1142	12VAC/DC, 16mA	Red	10-2513.1142	28VAC/DC, 13mA
	O Yellow	10-2509.1144	12VAC/DC, 16mA	O Yellow	10-2513.1144	28VAC/DC, 13mA
Customised switching element part number to be supplied	🔵 Green	10-2509.1145	12VAC/DC, 7mA	🔵 Green	10-2513.1145	28VAC/DC, 7mA
by EAO, once schematic diagram has been defined. For	O Blue	10-2509.1146	12VAC/DC, 16mA	O Blue	10-2513.1146	28VAC/DC, 13mA
further information please contact your local sales office.	O White	10-2509.1149	12VAC/DC, 16mA	O White	10-2513.1149	28VAC/DC, 13mA

For complete switch also order  $\bigcirc \bigcirc \bigcirc \oslash \oslash \bigcirc$ 

## 🍟 LED



LED, Ba9s, single chip, 48 Volt



LED, Ba9s, single chip, 110 Volt with surge and transient protection



LED, Ba9s, single chip, 130 Volt and 230 Volt

Colour	Part No.	Voltage	Colour	Part No.	Voltage	Colour	Part No.	Voltage
Red	10-2519.1052	48VAC/DC, 8mA	Red	10-2422.3052	110VDC, 5.5mA	🔴 Red	10-2H24.2052	130VAC / 5mA
O Yellow	10-2519.1054	48VAC/DC, 8mA	O Yellow	10-2422.3054	110VDC, 5.5mA	O Yellow	10-2H24.2054	130VAC / 5mA
O Green	10-2519.1055	48VAC/DC, 4mA	O Green	10-2422.3055	110VDC, 5.5mA	O Green	10-2H24.2055	130VAC / 3mA
O Blue	10-2519.1056	48VAC/DC, 8mA	O Blue	10-2422.3056	110VDC, 5.5mA	O Blue	10-2H24.2056	130VAC / 5mA
O White	10-2519.1059	48VAC/DC, 8mA	O White	10-2422.3059	110VDC, 5.5mA	O White	10-2H24.2059	130VAC / 5mA
						Red	10-2H25.2042	230VAC / 3mA
						O Yellow	10-2H25.2044	230VAC / 3mA
						O Green	10-2H25.2045	230VAC / 2mA
						O Blue	10-2H25.2046	230VAC / 3mA
						O White	10-2H25.2049	230VAC / 3mA

## 22.5mm 30.5mm IP65 10A 500VAC



Choose one component from each of the coloured sections to assemble a complete switch.

## **A** Accessories



Lamp / LED block, screw terminal



Lamp / LED block, plug-in terminal, 6.3mm



Lens cap, round, transparent, plastic for raised and flush indicators with bezel and pushbutton actuators

		and pushbutton actuators	
Part No.	Part No.	Colour	Part No.
704.950.0*	704.950.1*	🔴 Red	704.602.2
		O Yellow	704.602.4
		O Green	704.602.5
		O Blue	704.602.6
		🔿 Clear	704.602.7
*Add suffix 'B' for non captive screw with			For complete lens also order diffuser
flat washer and spring washer option	*Add suffix '/D' for double plug-in terminal		704.609.9 (see page 38)

## **A** Accessories



Lens cap raised, round, transparent, plastic for raised and flush mount pushbutton actuators



Lens cap, round, aluminium anodised for raised and flush mount pushbutton actuators



Protective cover, raised pushbutton

	Part No.		Part No.	Comment	Part No.
	Fait NO.		Fait NU.	Gomment	rait no.
Red	704.611.2	🔴 Red	704.601.2		704.925.0
O Yellow	704.611.4	O Yellow	704.601.4		
O Green	704.611.5	O Blue	704.601.6		
O Blue	704.611.6	Silver	704.601.8		
○ Clear	704.611.7	O Silver	704.601.81	Window for illumination	
		Black	704.601.0		
		Black	704.601.01	Window for illumination	
	For complete lens also order diffuser				
	704.610.9 (see page 38)				

## 22.5mm 30.5mm IP65 10A 500VAC

## Series 04

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**A** Accessories



Aluminium protective cover for flush mount pushbutton with fitted spring, closed



Aluminium protective cover for flush mount selector switch short lever with fitted spring, closed



Aluminium protective cover for flush mount selector switch, lockable

Colour	Part No.	Colour	Part No.		Part No.
	704.928.12	🔘 Natural	704.928.28	🔘 Natural	704.928.38
	704.928.14				
O Blue	704.928.16				
○ Natural	704.928.18				

## **A** Accessories



Protective front ring with silicon membrane for raised or flush mount pushbutton



Emergency-stop protective shroud, yellow painted aluminium with 22.5mm mounting hole



Emergency-stop switch label, 60mm diameter, English, German, French and Dutch

Part No. Size	Part No.	Part No. Markings
704.600.3 29mm Ø for raised pushbutton	704.927.4	704.963.6 Emergency stop
704.955.3 35mm Ø for flush mount pushbutton		704.963.5 Not Aus
		704.963.7 Arret D'urgence
		007.963.6 Noodstop

## 22.5mm 30.5mm IP65 10A 500VAC







Choose one component from each of the coloured sections to assemble a complete switch.

## **A** Accessories



Emergency-stop switch enclosure with 22.5mm mounting hole, 83mm (w) x 83mm (h) x 59mm (d)



BUZZER

Blanking plate

Lens remover for round pushbuttons and indicators. LED and lamp remover for round and square pushbuttons and indicators

	Part No.	Part No.	Mounting hole	Part No.
1	704.945.0	704.960.7	22.5mm Ø	700.006.0
2	704.945.6	704.964.8	30.5mm Ø	
		704.964.9	30 x 30mm	

## **A** Accessories



Lens remover for square pushbuttons and indicators

98-968



## 22.5mm 30.5mm IP65 10A 500VAC

## Series 04

Choose one component from each of the coloured sections to assemble a complete switch. For other options or further information please contact your local sales office.



## **A** Accessories

Mounting flange



Diffuser for raised indicator, diffuser for flat lens indicator and pushbutton, diffuser for raised pushbutton Legend plate, adhesive, natural anodised aluminium finish for raised and flush mount pushbuttons

Part No.	Material	Image	Part No.	Product description	Image	Part No.	Mounting hole	Legend plate
704.960.5	Metal	1	704.608.9	Diffuser for raised indicator	1	704.968.0	23.5 x 14.5mm	Aluminium
704.950.5	Plastic	2	704.609.9	Diffuser for flat lens	2	704.968.1	23.5 x 14.5mm	Black
		3	704.610.9	Diffuser for raised pushbutton	3	704.968.2	22.5mm Ø	Black
					4	704.968.3	30.5mm Ø	Black
						704.968.4	35 x 18mm	Aluminium
						704.968.5	35 x 18mm	Black



### **Snap-action switching element**

#### Switching system

The double-break, snap-action switching element is equipped with one or two independent contact systems, acting as normally open or normally closed contact. The snap-action switching element is fitted with self-cleaning contacts. Up to 3 switching elements can be snapped to each actuator.

### **Material**

#### Material of contacts

hardsilver, gold/silver, silver/palladium (for aggressive atmospheres) Switching element

#### polycarbonate PC

## **Mechanical characteristics**

#### Connection method

screw terminals plug-in terminals 6.3 x 0.8 mm: max. wire cross-section: 2 x 2.5 mm max. wire cross-section of stranded cable: 2 x 1.5 mm For switches with plug-in terminals it is necessary to provide insulation sockets and to maintain a spacing of 65 mm between rows (mounting dimensions).

#### Starting torque

screws at the mounting flange: max. 25 Ncm screws at switching element: max. 50 Ncm

#### Actuating force

11-20 N ± 1 N

depending on the number of switching elements, 1 to 3 elements

Storage temperature -40°C to + 85°C

#### Mechanical life

moonamoar mo	
pushbuttons:	- maintained action 1.5 million cycles of operation
	- momentary action 3 million cycles of operation
selector switch:	- maintained action 1.25 million cycles of operation
	- momentary action 2.5 million cycles of operation
e-stop switch:	- >= 50'000 cycles of operation
keylock switch:	- maintained action 25'000 cycles of operation
	- momentary action 50'000 cycles of operation

#### Rebound time

<= 3 ms Travel

 $5.8 \pm 0.2$  mm

#### Resistance to shock

(single impacts, semi-sinusoidal) 30 g for 11 ms as per EN 60 947-5-1

## **Resistance to vibration**

(sinusoidal) 10 g at 10-2000 Hz, amplitude 0,75 mm as per EN 60 947-5-1

#### Ambient air temperature

min. - 25°C (- 40° with restriction) max. without illumination: + 80°C max. with neon lamp + 80°C max. with LED: + 80°C max. with incandescent lamp: + 40°C (as per DIN IEC 68-)

#### **Electrical characteristics**

#### Rated insulation voltage

500 VAC/600 VDC as per VDE 0100, group C

#### Standards

The switches comply with the "Standards for low-voltage switching devices" EN 60 947-5-1

#### Contact resistance

starting value <= 50 mΩ as per IEC 512-2-4

#### Insulation resistance

>= 10 m $\Omega$  between open contacts at 500 VDC, as per IEC 512-2-10

#### Continuous thermal current lth<sub>2</sub>

#### 10 A

The maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

#### Switch rating max.

at switch rating AC for gold-, silver- and hard silver contacts service category AC-15 as per EN60947-5-1 (cos  $\phi$  = 0.7) 230 VAC 400 VAC 500 VAC voltage: current: 6 A 4 A 2.5 A

at switch rating DC for gold-, silver- and hard silver contacts service category DC as per EN60947-5-1

L/R=100 ms at P>=50 W and

L/R=2 x P ms<50 W

WOP stands for switch rating in watt				
voltage:	24 VDC	60 VDC	110 VDC	
current:	10 A	3 A	1 A	

#### Switch rating min.

gold/silver contacts: 5 VDC 24 VDC 110 VDC voltage: current: 15 mA 5 mA 2 mA hard silver contacts: 24 VDC 110 VDC voltage: current: 50 mA 10 mA

## **Electric strength**

5000 VAC, 50 Hz, 1 min. between all terminals and earth.

#### Approvals

- SEV 500 VAC/10 A
- CSA 300 VAC
- UL 600 VAC HD
- German Navy
- German Lloyd
- CE (declaration of conformity)
- CB

## Slow-make switching element

#### Switching system

The double-break, slow-make switching element is equipped with one or two independent contact systems, acting as normally open or normally closed contact. Slow-make contacts with forced action are ideal for high switch ratings. Up to 3 switching elements can be snapped to each actuator.

#### Material

### Material of contacts

hardsilver, gold/silver, silver/palladium (for aggressive atmospheres)

## Switching element

polycarbonate PC

## **Mechanical characteristics**

#### **Connection method**

screw terminals plug-in terminals 6.3 x 0.8 mm: max. wire cross-section: 2 x 2.5 mm max. wire cross-section of stranded cable: 2 x 1.5 mm For switches with plug-in terminals it is necessary to provide insulation sockets and to maintain a spacing of 65 mm between rows (mounting dimensions).

#### Starting torque

screws at the mounting flange: max. 25 Ncm screws at switching element: max. 50 Ncm

#### Actuating force

13-36 N ± 1 N

depending on the number of switching elements, 1 to 3 elements

## Storage temperature

-40°C to + 85°C

## Mechanical life

pushbuttons:	<ul> <li>maintained action 1.5 million cycles of operation</li> </ul>
	- momentary action 3 million cycles of operation
selector switch:	- maintained action 1.25 million cycles of operation
	- momentary action 2.5 million cycles of operation
e-stop switch:	- >= 50'000 cycles of operation
keylock switch:	- maintained action 25'000 cycles of operation
	- momentary action 50'000 cycles of operation

#### Travel

5.8 ± 0.2 mm

#### **Resistance to shock**

(single impacts, semi-sinusoidal) 30 g for 11 ms as per EN 60 947-5-1

#### **Resistance to vibration** (sinusoidal) 10 g at 10-2000 Hz, amplitude 0,75 mm as per EN 60 947-5-1

**Rebound time** 

### <= 1 ms

#### Ambient air temperature

min. - 25°C (- 40° with restriction) max. without illumination: + 80°C max. with neon lamp + 80°C max. with LED: + 80°C max. with incandescent lamp: + 40°C

### Electrical characteristics

### Rated insulation voltage

500 VAC/600 VDC as per VDE 0100, group C

#### Standards

The switches comply with the Rules for low-voltage switching devices EN 60 947-5-1

#### Contact resistance

starting value  $\leq 50 \text{ m}\Omega$  as per IEC 512-2-4

#### Insulation resistance

>= 100 m $\Omega$  between open contacts at 500 VDC, as per IEC 512-2-10.

#### Continuous thermal current lth<sub>2</sub> 10 A

The maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

#### Switch rating max.

at switch rating AC for gold-, silver- and hard silver contacts service category AC-15 as per EN60947-5-1 (cos  $\phi$  = 0.7) 230 VAC 400 VAC 500 VAC voltage: 7 A 5 A current: 4 A

At switch rating DC for gold-, silver- and hard silver contacts service category DC as per EN60947-5-1 L/R=100 ms at P>=50 W and L/R=2 x P ms<50 W WOP stands for switch rating in watt 24 VDC 60 VDC 110 VDC voltage: 10 A 5 A 2.5 A current:

## Switch rating min.

gold/silver contacts:					
voltage	24 VDC	110 VDC			
current:	10 mA	2 mA			
hard silver contacts:					
voltage	24 VDC	110 VDC			

#### **Electric strength**

5000 VAC, 50 Hz, 1 min. between all terminals and earth

### **Approvals**

- SEV 500 VAC/10 A
- CSA 300 VAC
- UL 600 VAC HD
- German Navy
- German Lloyd
- CE (declaration of conformity)
- CB

#### Buzzer

Buzzer system

System Piezo disc

#### Material

Alarm buzzer case polyamide

Front cap plastic: polyamide metal: nickel-plated brass sea-water proof

#### Mechanical characteristics

**Connection method** plug-in terminal 2.8 x 0.5 mm

**Operating temperature** -25°C to + 50°C

Storage temperature -25°C to + 50°C

**Degree of protection** IP 40 as per IEC 529 (flush mounting) IP 65 (raised fitting) as per IEC 529

#### **Electrical characteristics**

Frequency (tone) ca. 2.8 kHz continuous tone only

Sound pressure 95 db (A)  $\pm$  8 at a distance of 0.1 m

**Operation voltage/current** operation voltage: 24 VDC ± 10% operation current: <= 25 mA

## **Technical Data**

## Selector switch actuator

### Material

Front ring

polyamide, aluminium or chromium-plated nickel steel

Mounting flange polyethylene terephtalate

Actuator case polycarbonate, polyamide

#### **Mechanical characteristics**

#### Actuating force

snap-action switching element:  $11-20 \text{ N} \pm 1 \text{ N}$ slow-make switching element:  $13-36 \text{ N} \pm 1 \text{ N}$ depending on the number of snap-action elements

**Storage temperature** -30°C to + 85°C

#### Mechanical life

pushbutton: >= 3 million operations selector switch: >= 2.5 million operations emergency stop switch: >= 50'000 operations keylock switch: >= 50'000 operations

Travel

5.8 ± 0.2 mm

**Degree of protection** front as per IEC 529: IP 65

#### Ambient air temperature

min. -25°C max. without illumination: + 80°C max. with neon lamp: + 80°C max. with LED: + 80°C max. with incandescent lamp: + 55°C

### **Electrical characteristics**

#### Standards

The switches comply with the "Rules for low-voltage switching devices" EN 60 947-5-1

### **Rotary selector switch element**

#### Mechanical characteristics

- Number of positions
- 2 to 12 positions max.

## Number of contacts

1 to 16 max. normally open contacts (contact positioning to the rotary plan)

### Switching angle

Switching position a (9<sup>00</sup>) is basic position maintained action switching angle 12 x 30° max. 8 x 45° max. 6 x 60° max. 4 x 90° max. momentary action with release 24°

(provide at the beginning or at the end  $\ensuremath{\mathsf{)}}$ 

## Standard type of Kraus + Naimer

- CG 4 hardsilver contacts with 1 µ gold layer

- CG 4-1 hardsilver contacts with 35  $\mu$  gold layer

### **Electrical characteristics**

DC 1, resistive circuits T = 1 ms							
1 contact in line							
permissible voltage	24 V	48 V	60 V	110 V	220 V	440 V	
rated service current	10.0 A	6.0 A	2.5 A	0.7 A	0.3 A	0.2 A	
2 contacts in line							
permissible voltage	48 V	95 V	120 V	220 V	440 V	660 V	
rated service current	10.0 A	6.0 A	2.5 A	0.7 A	0.3 A	0.2 A	
3 contacts in line							
permissible voltage	70 V	140 V	180 V	330 V	660 V		
rated service current	10.0 A	6.0 A	2.5 A	0.7 A	0.3 A		
4 contacts in line							
permissible voltage	95 V	190 V	240 V	440 V			
rated service current	10.0 A	6.0 A	2.5 A	0.7 A			
5 contacts in line	100.14	04014	0001/				
permissible voltage	120 V	240 V	300 V	550 V			
rated service current	10.0 A	6.0 A	2.5 A	0.7 A			
6 contacts in line	44414	000.14	000.1/	000.1/			
permissible voltage	144 V	290 V	360 V	660 V			
rated service current	10.0 A	6.0 A	2.5 A	0.7 A			
8 contacts in line	100.1/	050.14	450.14				
permissible voltage	190 V	350 V	450 V				
rated service current	10.0 A	6.0 A	2.5 A				
Inductive circuits T =	50 ms						
1 contact in line							
permissible voltage	24 V	30 V	48 V	60 V	110 V		
rated service current	6.0 A	3.0 A	1.0 A	0.7 A	0.3 A		
2 contacts in line							
permissible voltage	48 V	60 V	95 V	120 V	220 V		
rated service current	6.0 A	3.0 A	1.0 A	0.7 A	0.3 A		
3 contacts in line	70.14	00.14	440.14	100.14	0001/		
permissible voltage	72 V	90 V	140 V	180 V	330 V		
rated service current	6.0 A	3.0 A	1.0 A	0.7 A	0.3 A		
4 contacts in line	00.1/	100.1/	100.1/	040.14	440.14		
permissible voltage	96 V	120 V	190 V	240 V	440 V		
rated service current 5 contacts in line	6.0 A	3.0 A	1.0 A	0.7 A	0.3 A		
permissible voltage	120 V	150 V	240 V	300 V	550 V		
rated service current	6.0 A	3.0 A	240 V 1.0 A	0.7 A	0.3 A		
6 contacts in line	0.0 A	3.0 A	1.0 A	0.7 A	0.5 A		
permissible voltage	144 V	180 V	290 V	360 V	660 V		
rated service current	6.0 A	3.0 A	1.0 A	0.7 A	0.3 A		
8 contacts in line	0.0 A	0.0 A	1.0 A	0.7 A	0.5 A		
permissible voltage	190 V	240 V	350 V	450 V			
rated service current	6.0 A	3.0 A	1.0 A	430 V 0.7 A	0.3 A		
	0.0 A	0.0 A	1.0 A	0.1 A	0.0 A		
Short-circuit-proof		1	•				
max. insurance (gL-characteristics) 10 A conditional rated short-circuit current 3 kA							
Rated service voltage	e						
IEC	500 V						
UL	300 V						
SEV	380 V						
	00011						

Rated	service	current

10 A

CEE 24

AC 21 switching of resistive load with low overload

l<sub>0</sub>

380 V

AC 1 non or bad inductive load

AC 22 switching of mixed resistive and inductive load with low overload AC 11 switching of magnetic drives, contactors, valves, draw-in magnet

## Thermic rated current Ith<sub>2</sub>

 $lth_2 = 10 A$ 

## **Resistance/motor load**

CEE 24 4/2 A

# **Technical Drawings**

## Series 04



## 43 | **e a o**

# **Technical Drawings**



twist to release

## 04 E-Stop Mushroom

Pushbutton Mushroom





### 04 E-Stop

EN 418 with optional key



## 04 Keylock

2-Position, 3-Position, Raised



## 04 Keylock

2-Position, 3-Position, Flush



### 04 Selector

2-Position, 3-Position, Short, Flush



## **Technical Drawings**

## Series 04

## 04 Selector

2-Position, 3-Position, Long, Flush



### 04 Selector, Long Lever

2-Position, 3-Position, Raised





2-Position, 3-Position, Raised



### 04 Lever switch

Separate technical document available. Please contact your local sales office.

### 04 Buzzer

Raised



### 04 Buzzer

Flush





## **Technical Drawings**





04 Cut-outs, Raised Mounting

(All but long lever)



04 Cut-outs, Flush Mounting

(All but long lever)



04 Long Lever Cut-outs, Flush Mounting



04 Long Lever Cut-outs, Raised Mounting



04 E-Stop EN418 Cut-outs



### 04 E-Stop Mushroom Cut-outs

Pushbutton Mushroom



04 Cut-outs, Square, Flush Mounting



Indicator-, pushbutton-, keylock switch-, selector switch actuator short lever

## 04 Key Insert Cut-outs, Flush Mounting





Selector switch actuator long lever



Multi position rotary selector switch actuator



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



### Как с нами связаться

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