

Contact and lighting elements

Type EF and EL

Command device	Position 2	Mounting flange EFM Position 3	Position 1
EMERGENCY STOP	Contact element EF...	Spring element EFR	Contact element EF...
Pushbutton	Contact element EF...	Contact element EF...	Contact element EF...
Mushroom head impact button			
Selector switch/key button			
Key-operated selector switch/button			

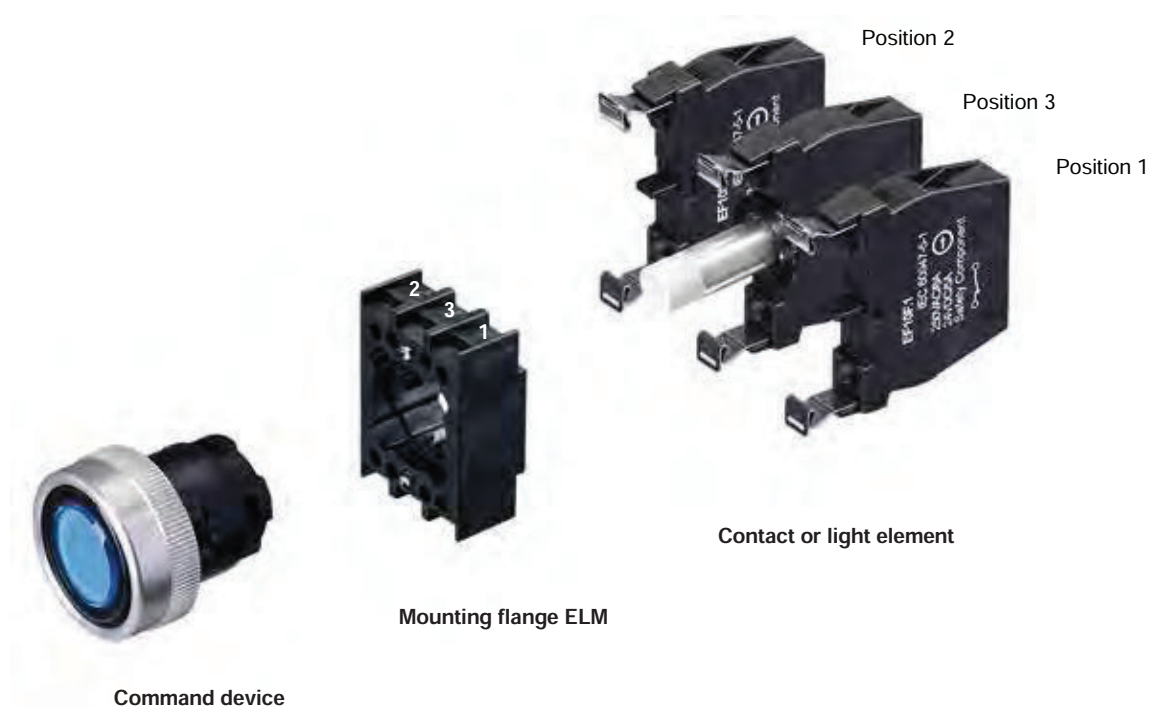
Command device	Position 2	Mounting flange ELM Position 3	Position 1
Illuminated pushbutton	Contact element EF...	Light terminal block EL...	Contact element EF...
Illuminated signal	---	Light terminal block EL...	---

Design

A control and indicator device consists of an actuator, a mounting flange and a contact or light element (in the case of EMERGENCY STOP devices, possibly plus a spring element).

Assembly example

This example shows an illuminated push button with ELM mounting flange, 2 EF... contact elements and an EL... lighting element



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Type	Application	Function	Switch travel diagram	Position	Wiring configuration according to DIN 50005	Screw terminals	Flat plug-in connector	WAGO-Cage clamp
Contact element	EMERGENCY STOP	2 NC contacts		1	11-12/21-22	EF220.1	EF220F.1	-
				2	31-32/41-42	EF220.2	EF220F.2	-
		1 NC contact / 1 NO contact		1	11-12/23-24	EF303.1	EF303F.1	-
				2	31-32/43-44	EF303.2	EF303F.2	-
	Standard	1 NC contacts		1	11-12	EF10.1	EF10F.1	EFK10.1
				2	21-22	EF10.2	EF10F.2	EFK10.2
				3	31-32	EF10.3	EF10F.3	EFK10.3
		1 NO contacts		1	13-14	EF03.1	EF03F.1	EFK03.1
				2	23-24	EF03.2	EF03F.2	EFK03.2
				3	33-34	EF03.3	EF03F.3	EFK03.3
		2 NO contacts		1	13-14/23-24	EF033.1	EF033F.1	EFK033.1
				2	33-34/43-44	EF033.2	EF033F.2	EFK033.2
				3	53-54/63-64	EF033.3	EF033F.3	-
		1 NC contact / 1 NO contact		1	11-12/23-24	EF103.1	EF103F.1	EF103.1
				2	31-32/43-44	EF103.2	EF103F.2	EF103.2
				3	51-52/63-64	EF103.3	EF103F.3	-
	1 NC contact / 1 NO contact overlapping		1	11-12/23-24	EF301.1	EF301F.1	-	
			2	31-32/43-44	EF301.2	EF301F.2	-	
3			51-52/63-64	EF301.3	EF301F.3	-		

Type	Illuminant	Function	Diagram	Position	Description	Screw terminals	Flat plug-in connector	WAGO-Cage clamp
Light terminal block	Ba9S socket *	Lighting element / voltage sensor for lamps + acoustic signal		3	Standard	EL	ELF	-
				3	With transformer	ELT	ELTF	-
				3	With series resistor	ELV	ELVF	-
		Lighting element / voltage sensor for LED		3	24 VAC/DC	ELE	-	ELEK
				3	48 VAC/DC primary ... 24 V secondary	ELE 48	-	-
				3	115 ... 230 VAC primary 24 V secondary	ELE 230	-	-
	Integrated LED	Light element with integrated LED		3	LED red	ELDE.N RT 24	-	ELDEK RT
				3	LED yellow	ELDE.N GB 24	-	ELDEK GB
				3	LED green	ELDE.N GN 24	-	ELDEK GN
				3	LED blue	ELDE.N BL 24	-	ELDEK BL
3				LED white	ELDE.N WS 24	-	ELDEK WS	

Type	Application	Function	Position	Description	Screw terminals	Flat plug-in connector	WAGO-Cage clamp
EFR.EDRRS or EFR	EMERGENCY STOP	Snap-action mechanism with latching	3	Spring element	-	-	-

* Illuminant not included in delivery!

Command and signalling devices

Accessories

Type	Description	Type designation	Recommended for programme		
			E	N	R
EMERGENCY STOP label	Installation Ø for 22.3 mm, 53 mm external Ø	MDP-8	■		■
	Installation Ø for 22.3 mm, 100 mm external Ø	MDP-6	■		■
	Installation Ø for 30.5 mm, 53 mm external Ø	DPF-9	■		■
	Installation Ø for 30.5 mm, 100 mm external Ø	DPF-7	■		■
	External Ø 70 mm, V4A version, colour yellow, self-adhesive, no labelling	NDP-70	■	■	■
	External Ø 65 mm plastic – as adhesive foil	NDP-65	■	■	■
Protective collar	EMERGENCY STOP protective collar, installation Ø for 22.3 mm operating element Ø 38.5 mm	EDRR-1 SET	■		
	EMERGENCY STOP protective collar, installation Ø for 22.3 mm operating element Ø 49 mm	EDRR-2 SET	■		■
	EMERGENCY STOP protective collar, installation Ø for 30.5 mm operating element Ø 38.5 mm	EDRR-1.1 SET	■		
	EMERGENCY STOP protective collar, installation Ø for 30.5 mm operating element Ø 49 mm	EDRR-2.1 SET	■		■
	EMERGENCY STOP protective collar, material 1.4550, incl. fastening screws	NSK/V4A/GB		■	
	Protective collar to prevent accidental touching for pushbuttons and illuminated pushbuttons	NSK-GR		■	
Selector switch lock	Selector switch lock for two-position selector switch	NWSP21GR		■	
	Selector switch lock for three-position selector switch	NWSP32GR		■	
Blanking plug	Blanking plug, metallized	NB		■	
	Blanking plug, stainless steel	NB/VA		■	
	Blanking plug, installation Ø 22.3 mm	BN	■		
	Blanking plug, installation Ø 30.5 mm	MBN	■		■
Identification label	Identification label, small	NZSO/V4A		■	
	Identification label, large	NZSO2/V4A		■	
	Identification label, small	RZSO			■
	Identification label, medium	RZSO1			■
	Identification label, large	RZSO2			■
	Identification label, aluminium	MZSO	■		
	Identification label, plastic	KZSO	■		
	Identification label, 30.5 mm, small	ZSO2	■		
	Identification label, 30.5 mm, large	ZSO	■		
Identification label, 30.5 mm, large	ZSNO	■			
Adapter ring	Adapter ring with gasket for using Ø 22 mm operating buttons to 30.5 mm drilled holes	NUE		■	
	Adapter ring with gasket for using Ø 22 mm operating buttons to 30.5 mm drilled holes	RUE			■
	Adapter ring with gasket for using Ø 22 mm operating buttons to 30.5 mm drilled holes	MUE	■		
Spare key	Spare key for key selector switch	SDS1/SDS2	■		■
mounting flange	mounting flange	EFM	■	■	-
	mounting flange	ELM	■	■	-
	Mounting flange for position switch	EFMH	■	■	
	mounting flange	RLM			■
	Driver for contact elements	R-F			■
Mounting tool	Mounting tool for mounting flange	RMW			■
Multi LED	Multi LED white Ba9S, 24 VDC	LE24/9WS	■	■	■
	Multi LED white Ba9S, 230 VDC	LE230/9WS	■	■	■
Lamp	Lamp 6V/2W	L6/9	■		■
	Lamp 12V/2W	L12/9	■		■
	Lamp 24V/1.9W	L24/9	■		■
	Lamp 30V/2W	L30/9	■		■
	Lamp 130V/2W	L130/9	■		■
Acoustic signal	Acoustic signal for EL voltage sensor, 24 VDC	EMES	■		

Command and signalling devices

Accessories

<p>EMERGENCY STOP label</p>  <ul style="list-style-type: none"> ■ NDP-70 ■ Material V4A ■ Yellow powder-coated 	<p>EMERGENCY STOP protective collar</p>  <ul style="list-style-type: none"> ■ EDRR-1 SET ■ Aluminium die-cast ■ Yellow powder-coated 	<p>EMERGENCY STOP protective collar</p>  <ul style="list-style-type: none"> ■ NSK/V4A/GB ■ Bracket material 1.4550 plate V4A powder-coated
<p>Protective collar</p>  <ul style="list-style-type: none"> ■ NSK-GR ■ Protective collar to prevent accidental touching ■ For pushbuttons and illuminated N product portfolio pushbuttons and illuminated pushbuttons ■ Command device not included in delivery 	<p>Selector switch lock</p>  <ul style="list-style-type: none"> ■ NWSP21GR / NWSP32GR ■ Replacement measure for key-operated selector switch ■ For selector switches with long toggle ■ Padlock not included in the delivery 	<p>Blanking plug</p>  <ul style="list-style-type: none"> ■ NB ■ Plastic, metallized ■ For installation diameter 22.3 mm
<p>Identification label</p>  <ul style="list-style-type: none"> ■ RZSO2 ■ Aluminium plate with black anodized labelling area ■ Depending on version, 1 to 3 lines can be written 	<p>Identification label</p>  <ul style="list-style-type: none"> ■ NZSO... ■ Stainless-steel plate V4A ■ Depending on version, 1 to 3 lines can be written 	<p>Identification label</p>  <ul style="list-style-type: none"> ■ MZSO ■ Aluminium plate with black anodized labelling area

Command and signalling devices

Accessories

Adapter ring	Spare key	Mounting flange
 <ul style="list-style-type: none"> ■ RUE ■ Plastic ■ Adapter ring from installation diameter of 30.5 mm to 22.3 mm 	 <ul style="list-style-type: none"> ■ SDS1/SDS2 ■ Spare key for key selector switch with EKM locking ■ Note: You must state the locking number too 	 <ul style="list-style-type: none"> ■ ELM ■ Mounting flange for E and N product portfolio illuminated pushbuttons
Mounting flange	Mounting flange	Mounting flange
 <ul style="list-style-type: none"> ■ EFM ■ Mounting flange for E and N product portfolio pushbuttons 	 <ul style="list-style-type: none"> ■ EFMH ■ Mounting flange for E and N product portfolio position switches ■ Depending on the version, with position switch included in delivery too 	 <ul style="list-style-type: none"> ■ RLM ■ Mounting flange for R product portfolio with contact carrier and driver
Mounting tool	Multi LED	Acoustic signal
 <ul style="list-style-type: none"> ■ RMW ■ Mounting tool for R product portfolio mounting flange 	 <ul style="list-style-type: none"> ■ LE24/9WS ■ LED white ■ For Ba9S socket ■ 24VAC/DC ■ Also available as 230V version 	 <ul style="list-style-type: none"> ■ EMES ■ Acoustic signal for EL voltage sensor ■ 24 VDC