

## Contact elements for emergency stop buttons

Matching contact element for every emergency-stop application: The various functions are combined into the contact elements. The functions can be assigned to the corresponding module which is identifiable by its colour.

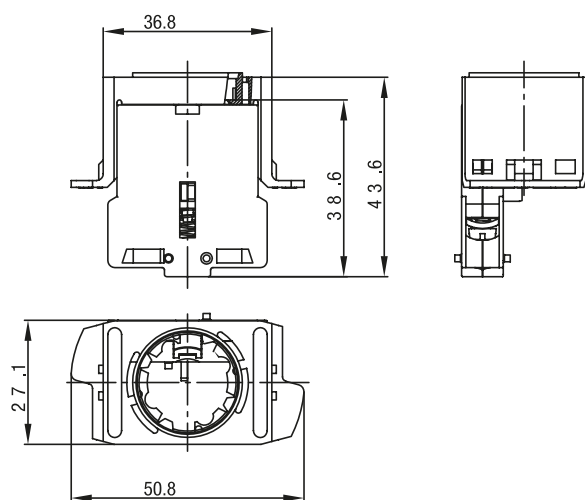
### Technical specification

- Preassembled contact elements
- Positively driven safety contacts for switching the emergency-stop function
- Signal contact (N.O. contact) for external diagnosis, e.g. display on the machine control unit
- Failure protection module checks permanent connection of push button and contact element
- Illumination module for push buttons, with LED illumination integrated in the anti-obstruction protective collar

## Technical drawing

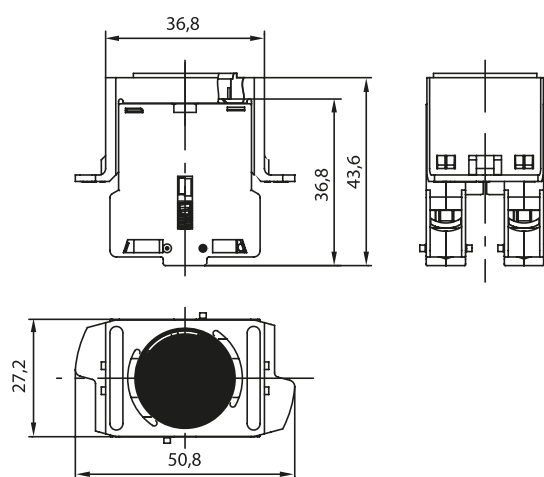
IMAGE 1/3

### KE contact element with 1 N.C. contact



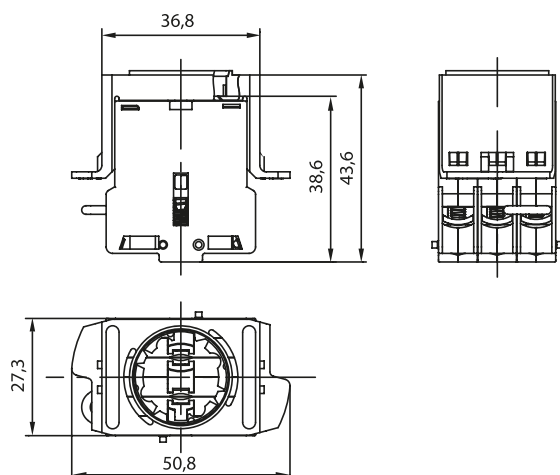
1 x 879901

### KE contact element with 2 N.C. contacts



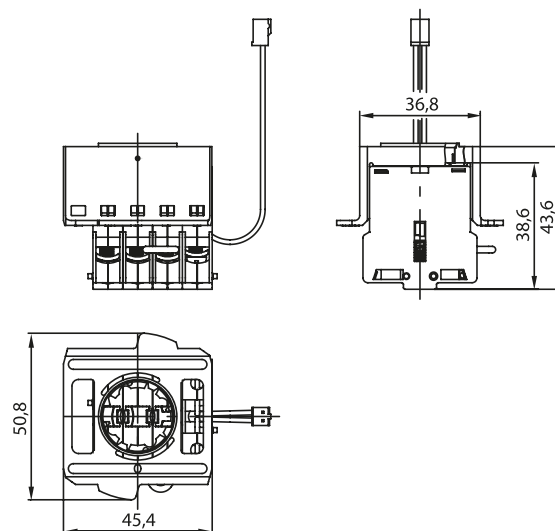
2 x 879901

### KE contact element with 2 N.C. contacts / failure protection



2 x 879901  
1 x 879902

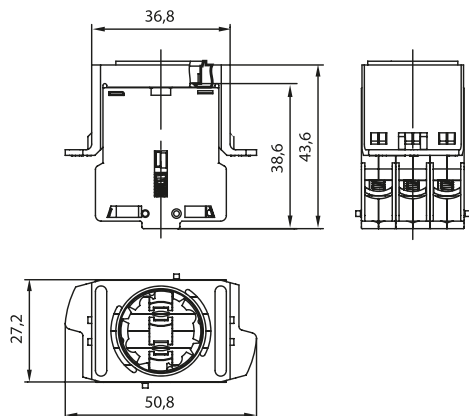
### KE contact element with 2 N.C. contacts / failure protection / illumination



2 x 879901  
1 x 879902  
1 x 879903

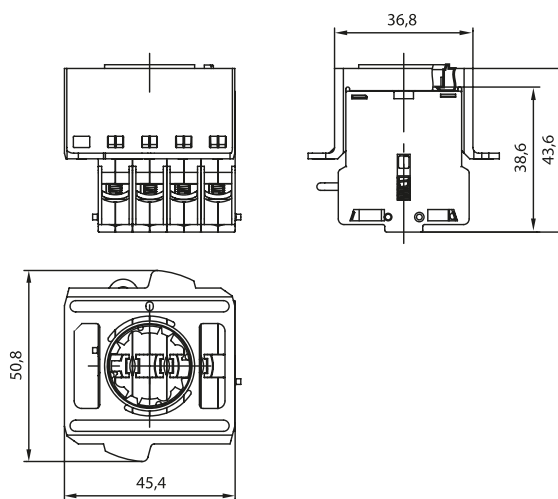
IMAGE 2/3

**KE contact element with 2 N.C. con-  
tacts / 1 N.O. contact**



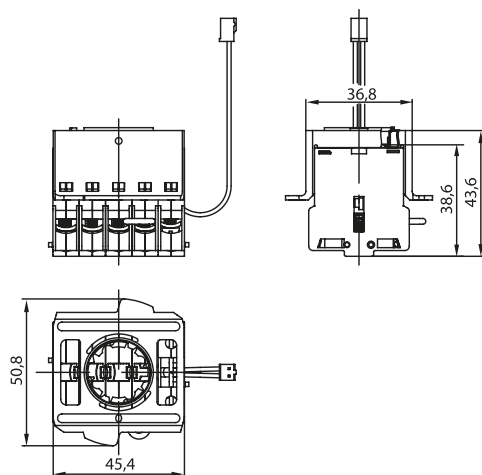
1 x 879900  
2 x 879901

**KE contact element with 2 N.C. contacts /  
1 N.O. contact / failure protection**



1 x 879900  
2 x 879901  
1 x 879902

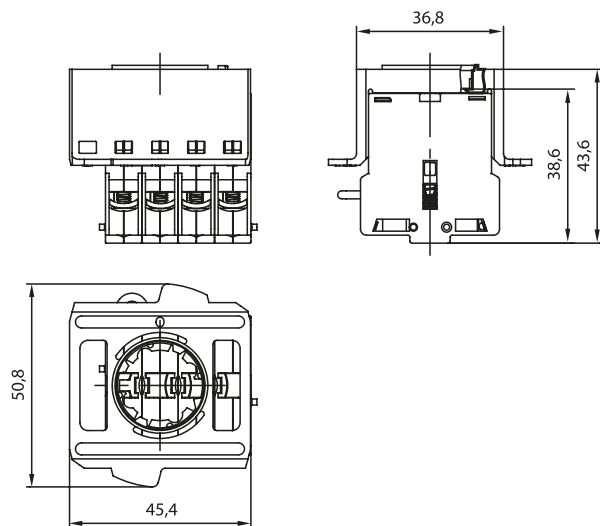
**KE contact element with 2 N.C. contacts / 1 N.O. contact / failure protection / illumination**



1 x 879900  
2 x 879901  
1 x 879902  
1 x 879903

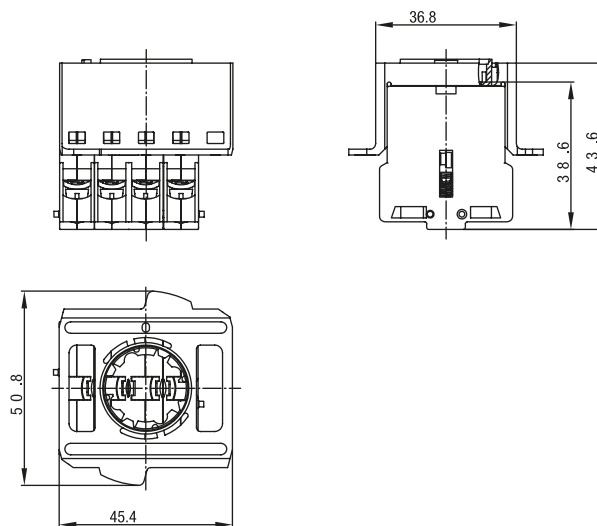
IMAGE 3/3

**KE contact element with 3 N.C. contacts /  
failure protection**



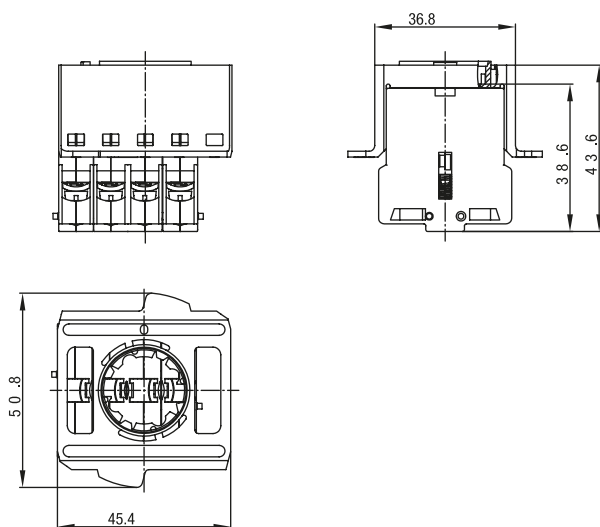
3 x 879901  
1 x 879902

**KE contact element with 3 N.C. contacts /  
1 N.O. contact**



1 x 879900  
3 x 879901

**KE contact element with 4 N.C. contacts**



4 x 879901

## Product options

IMAGE 1/1

### ORDERING KEY

KE			Contact element with frame
			<b>Number and type of contact elements</b>
	10		1 N.C.
	20		2 N.C.
	20	SF	2 N.C. / failure protection
	20	SFB	2 N.C. / failure protection / illumination
	21		2 N.C. / 1 N.O.
	21	SF	2 N.C. / 1 N.O. / failure protection
	21	SFB	2 N.C. / 1 N.O. / failure protection / illumination
	30	SF	3 N.C. / failure protection
	31		3 N.C. / 1 N.O.
	40		4 N.C.
			Other contact elements on request

## Article characteristics

Attribute	KE10	KE20	KE20SF	KE20SFB	KE21	KE21SF ▶
Min. switching voltage	5 V DC			12 V DC	5 V DC	
Min. switching voltage	5 V AC			12 V AC	5 V AC	
Min. switching current	0.01 A					
Conv. thermal continuous current Ith	16 A					
Bounce time	10 ms					
Utilization category	AC15 A600 / DC13 Q600					
Rated operating current (Ie)	3000 / 1600 ; 120 / 200 / 400 / 2000 mA					
Rated operating voltage (Ue)	240 / 440 ; 440 / 250 / 125 / 60 / 24 V					
Rated insulation voltage (Ui)	600 V					
Rated voltage Ue	250 VAC / 440 VAC					
Rated current Ie (ohmic load)	16 A / 10 A					
Rated current Ie (inductive load)	10 A / 6 A					
Protection class	II					
Operating voltage max.	-			30 V DC	-	
Operating voltage max.	-			30 V AC	-	
LED service life	-			100000 (T=25°C, I=20mA)70000 (T=55°C, I=20mA) h	-	
Service life, electrical at nominal load (Cycles)	1000000					
Illumination	No			Yes	No	
Number of safety contacts (positively opening)	1	2				
Number of signalling contacts (N.O.)	0				1	
Failure protection	no		yes		no	yes
Actuation path	6 mm					
Max. switching current	-			0.04 A	-	
Max. contact resistance	0.02 Ohm					
Operating voltage min.	-			12 V DC	-	
Operating voltage min.	-			12 V AC	-	
Max. switching voltage	-			30 V DC	-	

Attribute	KE10	KE20	KE20SF	KE20SFB	KE21	KE21SF ▶
Max. switching voltage	-			30 V AC	-	
B10d acc. to EN ISO 13849-1	180000					
Service life, mechanical (Cycles)	1 x 10^6					
Dimensions	43,6 x 50,8 x 27,3 mm (H/B/T)			43,6 x 50,8 x 45,4 mm (H/B/T)	43,6 x 50,8 x 27,3 mm (H/B/T)	43,6 x 50,8 x 45,4 mm (H/B/T)
Positive opening path	3 mm					
Contact material	AgNi					
Operating temperature min.	-30 °C					
Max. operating temperature	85 °C			65 °C	85 °C	
Min. storage temperature	-50 °C					
Max. storage temperature	85 °C					
Mounting type	inserted/latched					
Installation	from below					
Connection type	-			10cm Litze und Stecker für Beleuchtung	-	
Screw terminals	yes					
Max. connection cross section	2.5 mm²					
Wire cross section	-			0.25 mm²	-	
Certified in accordance with	EN 60947-5-5 EN 60947-5-1 EN ISO 13850 UL 508 / CSA 22.2					
CE label	yes					

Attribute	KE21SFB	KE30SF	KE31	KE40
Min. switching voltage	12 V DC	5 V DC		
Min. switching voltage	12 V AC	5 V AC		
Min. switching current	0.01 A			
Conv. thermal continuous current Ith	16 A			
Bounce time	10 ms			
Utilization category	AC15 A600 / DC13 Q600			
Rated operating current (Ie)	3000 / 1600 120 / 200 / 400 / 2000 mA	3000 / 1600 ; 120 / 200 / 400 / 2000 mA		
Rated operating voltage (Ue)	240 / 440 440 / 250 / 125 / 60 / 24 V	240 / 440 ; 440 / 250 / 125 / 60 / 24 V		
Rated insulation voltage (Ui)	600 V			
Rated voltage Ue	250 VAC / 440 VAC			
Rated current Ie (ohmic load)	16 A / 10 A			
Rated current Ie (inductive load)	10 A / 6 A			
Protection class	III	II		
Operating voltage max.	30 V DC	-		
Operating voltage max.	30 V AC	-		
LED service life	100000 (T=25°C, I=20mA)70000 (T=55°C, I=20mA) h	-		
Service life, electrical at nominal load (Cycles)	1000000			
Illumination	Yes	No		
Number of safety contacts (positively opening)	2	3		4
Number of signalling contacts (N.O.)	1	0	1	0
Failure protection	yes		no	
Actuation path	6 mm			
Max. switching current	0.04 A	-		
Max. contact resistance	0.02 Ohm			
Operating voltage min.	12 V DC	-		
Operating voltage min.	12 V AC	-		
Max. switching voltage	30 V DC	-		
Max. switching voltage	30 V AC	-		
B10d acc. to EN ISO 13849-1	180000			



Attribute	KE21SFB	KE30SF	KE31	KE40
Service life, mechanical (Cycles)	1 x 10^6			
Dimensions	43,6 x 50,8 x 45,4 mm (H/B/T)			
Positive opening path	3 mm			
Contact material	AgNi			
Operating temperature min.	-30 °C			
Max. operating temperature	65 °C	85 °C		
Min. storage temperature	-50 °C			
Max. storage temperature	85 °C			
Mounting type	inserted/latched			
Installation	from below			
Connection type	10cm Litze und Stecker für Beleuchtung	-		
Screw terminals	yes			
Max. connection cross section	2.5 mm²			
Wire cross section	0.25 mm²	-		
Certified in accordance with	EN 60947-5-5 EN 60947-5-1 EN ISO 13850 UL 508 / CSA 22.2			
CE label	yes			