

Manual Motor Starter OKE2, 3-pole



- Thermal trip
- Setting range 1.0 – 25.0 A; 500 V AC
- Switching capacity 11 kW
- Switching operations 60/h
- Including PE/N bar (left side)
- short-circuit release

Order reference	Description Rated current setting range (A)	Packing (units)	Weight (in g)	Part No.
OKE2 016	1,00 – 1,60 A	1	280	202 721
OKE2 025	1,60 – 2,50 A	1	280	202 738
OKE2 040	2,50 – 4,00 A	1	280	202 745
OKE2 063	4,00 – 6,30 A	1	280	202 752
OKE2 100	6,30 – 10,00 A	1	280	202 769
OKE2 160	10,00 – 16,00 A	1	280	202 776
OKE2 250	16,00 – 25,00 A	1	280	202 783

Manual Motor Starter MKE2, 3-pole



- Thermal/magnetic trip
- Setting range 0.10 – 25.0 A; 500 V AC
- Switching capacity 11 kW
- Switching operations 60/h
- Including PE/N bar (left side)
- short-circuit release

Order reference	Description Rated current setting range (A)	Packing (units)	Weight (in g)	Part No.
MKE2 001	0,10 – 0,16 A	1	300	202 158
MKE2 002	0,16 – 0,25 A	1	300	202 165
MKE2 004	0,25 – 0,40 A	1	300	202 172
MKE2 006	0,40 – 0,63 A	1	300	202 189
MKE2 010	0,63 – 1,0 A	1	300	202 196
MKE2 016	1,0 – 1,6 A	1	300	202 202
MKE2 025	1,6 – 2,5 A	1	300	202 219
MKE2 040	2,5 – 4,0 A	1	300	202 226
MKE2 063	4,0 – 6,3 A	1	300	202 233
MKE2 100	6,3 – 10,0 A	1	300	202 240
MKE2 160	10,0 – 16,0 A	1	300	202 257
MKE2 250	16,0 – 25,0 A	1	300	202 264



Manual Motor Starters OKE2 / MKE2

Technical Data OKE2 / MKE2	
Rated insulation voltage U_j acc. to IEC 947-4-2 / VDE 0110	500 V AC
Permissible ambient temperature	
Storage temperature	-25...+ 70 °C
open	-25...+ 60 °C
enclosed type	-25...+ 40 °C
Temperature compensation	no
Climatic resistance	IEC 68 T2-3, 2-30
Glow wire resistance acc. to IEC 695-2-1	Intensity 850°C
Working position any position	preferably vertical
Permissible altitude	3000 m
Permissible vibration resistance IEC 68-2-6	25 Hz b./- 1 mm Amplitude (2,5 g)
Permissible impact direction sine impact (critical direction IEC 68-2-27)	5 g (11 ms)
Surface mounting screws DIN-rail	2 x M4** integrated
Mechanical life in cycles	100.000
Maximum switching operations Cycles/hour	60

**not included in the scope of delivery

Conductor cross-section OKE2 / MKE2		
Manual motor starters	rigid cable 1 x	1 ... 6,0 mm ²
	rigid cable 2 x	1 ... 4,0 mm ²
	flexible cable* 1 x	1 ... 6,0 mm ²
	flexible cable* 2 x	1 ... 2,5 mm ²
Auxiliary contact	rigid cable 1 x	1 ... 2,5 mm ²
	rigid cable 2 x	1 ... 2,5 mm ²
	flexible cable* 1 x	1 ... 2,5 mm ²
	flexible cable* 2 x	1 ... 2,5 mm ²
Undervoltage/ shunt release	rigid cable 1 x	1 ... 2,5 mm ²
	rigid cable 2 x	1 ... 2,5 mm ²
	flexible cable* 1 x	1 ... 2,5 mm ²
	flexible cable* 2 x	1 ... 2,5 mm ²
Enclosure/ PE/N terminal	rigid cable 1 x	1 ... 4,0 mm ²
	rigid cable 2 x	1 ... 4,0 mm ²
	flexible cable* 1 x	1 ... 2,5 mm ²
	flexible cable* 2 x	1 ... 2,5 mm ²
Degree of Protection acc. to DIN 40050 open type enclosed type	IP 20 IP 55...65	

* with cable end sleeve

Undervoltage release OKE2 / MKE2	
Energizing voltage % von U_c	≥ 85
De-energizing voltage % von U_c	35 .. 70
Relative Duty factor % von U_c	100
Power consumption Closing Holding	6,0 VA 3,0 VA

Technical Data OKE2 / MKE2	
Main current paths Number	3
Rated operational voltage U_e bis	16 A 550 V AC 25 A 500 V AC
Rated operational current I_e	25 A
Permissible frequency only for magnetic short-circuit release	40...60 Hz
Current setting ranges I_e OKE2 / MKE2 acc. to VDE 0660 Part 102 A, IEC 947-4-1	1-25 / 0,1-25
Numbers of ranges OKE2 / MKE2	7 / 12
Current dissipation loss Main current paths at I_e max./Phase	1,9...3,7 W 2,6...4,2 W
Tripping curves	10A
Electro-magnetic trip	8 - 13 x I_n

Auxiliary contact OKE2 / MKE2	
Auxiliary current paths Rated insulation voltage IEC 947	230 V
Thermal current I_{th2}	6 A
Short-circuit protection back-up fuse gL MCB B 6 A	10 A B 6 A

Max. switching capacity OKE2 / MKE2	
Auxiliary contact I_e at AC 15 up to	
24 V AC	6 A
230 V AC	4 A
400 V AC	3 A
500 V AC	1 A
may be used for low voltage and PLC inputs acc. to DIN 19240	

Shunt release OKE2 / MKE2	
Energizing voltage % von U_c	ca. 70
Power consumption Closing Holding	6,0 VA 3,0 VA

Manual Motor Starters OKE2 / MKE2

Short circuit switching capacity OKE2 / MKE2	
40 ... 60 Hz P1 / I _{cn} acc. to VDE 0660 / IEC 155-1 Taking the mains back-up fuse into consideration	
230 V	6 kA
400 V	3 kA
440 V	3 kA
500 V	1 kA

Correction factor OKE2 / MKE2	
Ambient temperature	Correction factor
5° C	1,12
+ 20° C	1,00
+ 40° C	0,89

Setting ranges, intrinsic safety and max. back-up fuse OKE2		
Order reference	Setting ranges A	Max. back-up fuse gl (A) 440 / 500 V
OKE2 016	1,0 – 1,6	16
OKE2 025	1,6 – 2,5	25
OKE2 040	2,5 – 4,0	35
OKE2 063	4,0 – 6,3	50
OKE2 100	6,3 – 10,0	63
OKE2 160	10,0 – 16,0	63
OKE2 250	16,0 – 25,0	50

Setting ranges, intrinsic safety and max. back-up fuse MKE2					
Order reference	Setting ranges A	Actuating current of the magn. short-circuit release (A)	max. back-up fuse gl (A)		
			230 V	400 V	500 V
MKE2 001	0,10 – 0,16	1,3	No back-up fuse required		
MKE2 002	0,16 – 0,25	2,0			
MKE2 004	0,25 – 0,40	3,5			
MKE2 006	0,40 – 0,63	5			
MKE2 010	0,63 – 1,0	8			
MKE2 016	1,0 – 1,6	13			
MKE2 025	1,6 – 2,5	20			
MKE2 040	2,5 – 4,0	32			
MKE2 063	4,0 – 6,3	50	63	50	50
MKE2 100	6,3 – 10,0	80	63	63	50
OKE2 160	10,0 – 16,0	128	63	63	50
OKE2 250	16,0 – 25,0	200	63	63	50

Permissible wire protection MKE2					
Order reference	Min. protected cross-section at 400 / 500 V AC, Cu mm ²				
	4	2,5	1,5	1,0	0,75
MKE2					
I _n (A)					
0,16 bis 6,3	X	X	X	X	X
10	X	X	X	X	
16	X	X	X		
25	X	X			

Protection of PVC-insulated cables against thermal overload due to short-circuit:

According to VDE 0100 Parts 430 and 523, cables and wires have to be protected against overload and short-circuit.

The table shows which cable cross-sections are protected against short circuit by the MKE 2.

Accessories OKE2 / MKE2

Order reference	Description	Packing (units)	Weight (in g)	Part No.
Auxiliary contacts *				
Hi 10	Auxiliary contact 1 N.O., right	1	7,5	202 288
Hi 01	Auxiliary contact 1 N.C., right	1	7,5	202 301
Hi 11	Auxiliary contact 1 N.O./1 N.C.	1	7,5	202 325
Shunt release				
AS 230-50	Shunt release 230 V / 50 Hz	1	60	202 479
AS 400-50	Shunt release 400 V / 50 Hz	1	60	202 486
Undervoltage release				
US 110-50	Undervoltage release 110 V / 50 Hz	1	60	202 370
US 230-50	Undervoltage release 230 V / 50 Hz	1	60	202 387
US 400-50	Undervoltage release 400 V / 50 Hz	1	60	202 400
Enclosure/Special accessories				
A IP 41	Enclosure, protection IP 41, up to 16 A	1	285	202 547
A IP 55	Enclosure, protection IP 55, up to 16 A	1	210	202 554
B IP 55	Enclosure with large terminal box, protection IP 55	1	450	202 561
C IP 54	Enclosure, protection IP 54, 5-pole, CEE-plug 16 A	1	375	202 585
E IP 54	Front plate, protection IP 54	1	125	202 622
Enclosure-accessories				
NAK	Emergency-OFF-device IP 55	1	55	202 653
V	Padlock blockade device IP 55	1	40	202 660

*Auxiliary contacts, shunt and undervoltage releases must be factory installed.

Manual Motor Starters



Manual motor starter
MKE2 + AS



Manual motor starter
MKE2 + US



Front plate E IP-54

Enclosure



Enclosure A



Enclosure A +
Emergency-OFF-device NAK

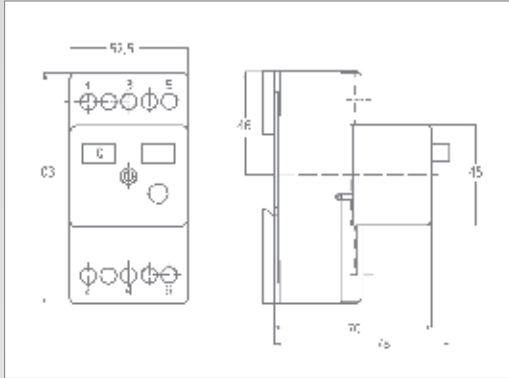


Enclosure B + Padlock
blockade device V

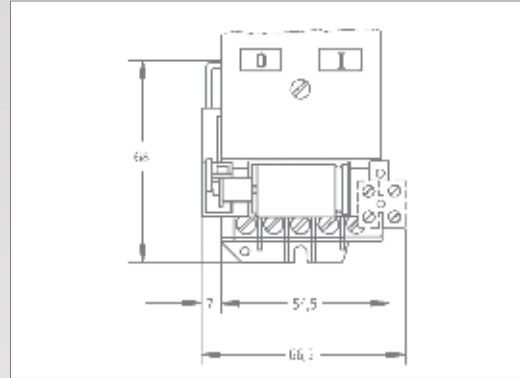


Enclosure C

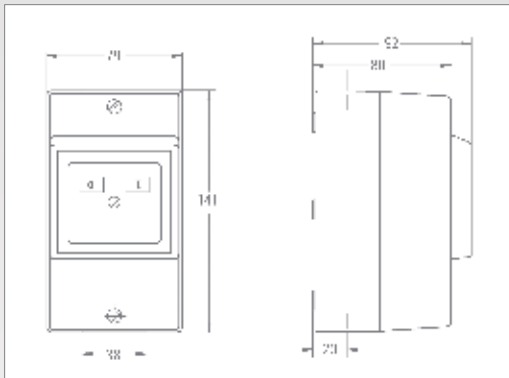
Manual Motor Starters OKE2 / MKE2



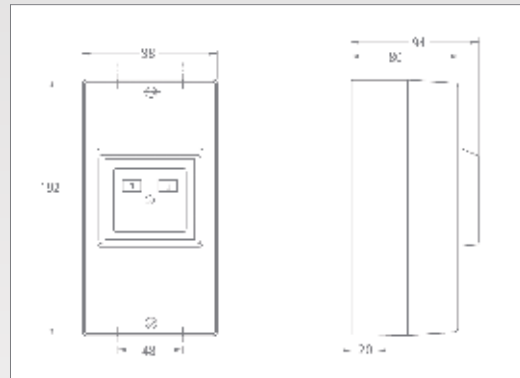
Manual motor starter OKE2 / MKE2



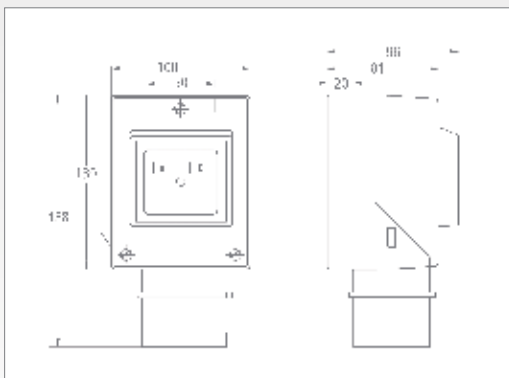
Undervoltage release US, Shunt release AS



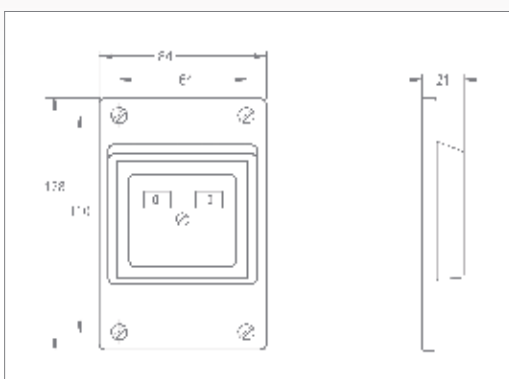
Enclosure A



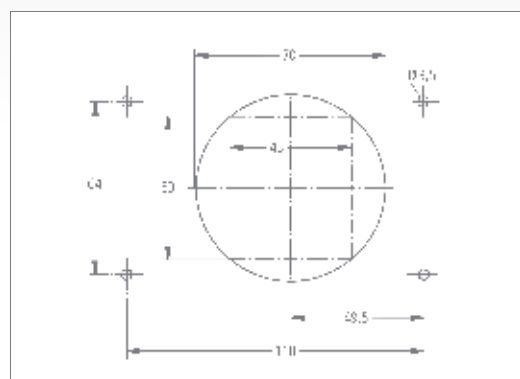
Enclosure B



Enclosure C

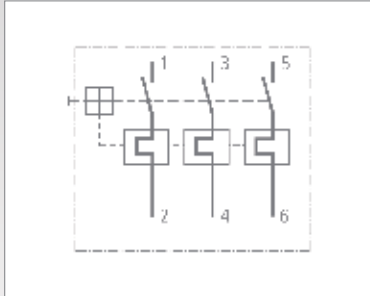


Front plate, protection E

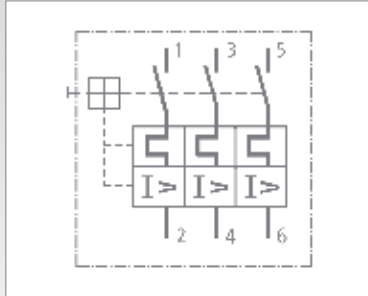


Mounting template for Front plate E

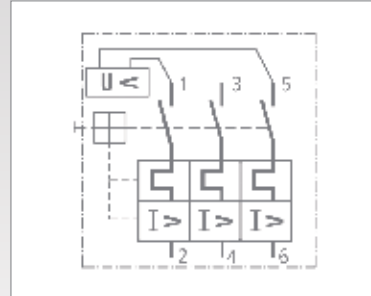
Circuit Diagrams OKE2 / MKE2



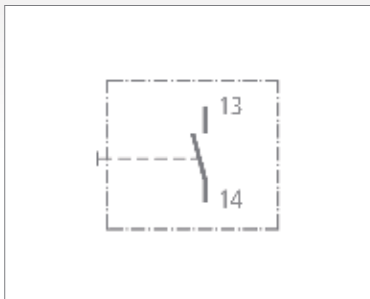
Manual motor starter OKE2



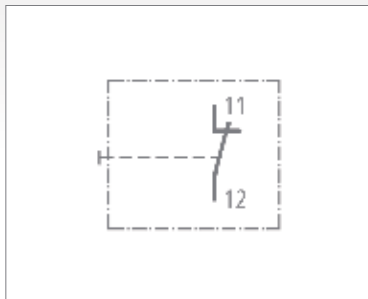
Manual motor starter MKE2



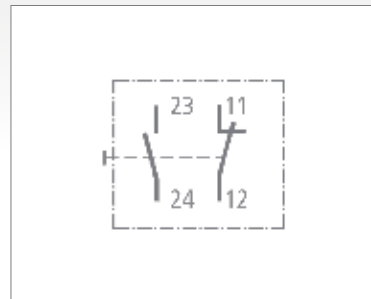
Manual motor starter MKE2 with undervoltage release



Auxiliary contact Hi 10 (1 N.O.)



Auxiliary contact Hi 01 (1 N.C.)



Auxiliary contact Hi 11 (1 N.O. / 1 N.C.)

Tripping curves OKE2 / MKE2

