

DC Contactors



Technical Datasheet

Key Features

- 600VDC / 1000VDC Rating
- Models up to 450A switching capacity
- Designed with PV Installations in mind
- Signal Switching Auxiliaries available



Options & Ordering Codes

600VDC Rated

MDC		20		- S -		00		- 24AC														
Series		Current Rating		Switching Type		Coil Voltage		Aux. Contacts														
600VDC Rated Contactor		<table border="1"> <tr><td>20A</td><td>20</td></tr> <tr><td>48A</td><td>48</td></tr> <tr><td>80A</td><td>80</td></tr> <tr><td>100A</td><td>100</td></tr> </table>		20A	20	48A	48	80A	80	100A	100	Standard		<table border="1"> <tr><td>24AC</td></tr> <tr><td>110AC</td></tr> <tr><td>230AC</td></tr> <tr><td>400AC</td></tr> <tr><td>24DC</td></tr> </table>		24AC	110AC	230AC	400AC	24DC	No Aux. Contacts	
20A	20																					
48A	48																					
80A	80																					
100A	100																					
24AC																						
110AC																						
230AC																						
400AC																						
24DC																						
MDC				S		00																

1000VDC Rated

MPV		12		- S -		00		- 24AC																												
Series		Current Rating		Switching Type		Coil Voltage		Aux. Contacts																												
1000VDC Rated Contactor		<table border="1"> <tr><td>12A</td><td>12</td></tr> <tr><td>30A</td><td>30</td></tr> <tr><td>60A</td><td>60</td></tr> <tr><td>80A</td><td>80</td></tr> <tr><td>100A</td><td>100</td></tr> <tr><td>150A</td><td>150</td></tr> <tr><td>200A</td><td>200</td></tr> <tr><td>240A</td><td>240</td></tr> <tr><td>300A</td><td>300</td></tr> <tr><td>400A</td><td>400</td></tr> <tr><td>450A</td><td>450</td></tr> </table>		12A	12	30A	30	60A	60	80A	80	100A	100	150A	150	200A	200	240A	240	300A	300	400A	400	450A	450	Standard		<table border="1"> <tr><td>24AC</td></tr> <tr><td>110AC</td></tr> <tr><td>230AC</td></tr> <tr><td>400AC</td></tr> <tr><td>24DC</td></tr> </table>		24AC	110AC	230AC	400AC	24DC	No Aux. Contacts	
12A	12																																			
30A	30																																			
60A	60																																			
80A	80																																			
100A	100																																			
150A	150																																			
200A	200																																			
240A	240																																			
300A	300																																			
400A	400																																			
450A	450																																			
24AC																																				
110AC																																				
230AC																																				
400AC																																				
24DC																																				
MPV				S		00																														

Technical Data acc. to IEC / EN 60947-3, VDE 0660

Type		MDC 20..	MDC 48..	MDC 80..	MDC 100..	MPV 12..	MPV 30..	MPV 60..	MPV 80..	MPV 100..	MPV 150..	MPV 200..	MPV 240..	MPV 300..	MPV 400..	MPV 450..
Rated insulation voltage	V=	600	600	1000	600	1200	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
U _{imp}	kV	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Poles in Series		3	3	3	3	8	6	6	4	4	3	3	3	3	3	3
DC1 600V dc I _e	A	20	48	80	100	12	30	60	80	100	150	200	240	300	400	450
DC1 1000V dc I _e	A	-	-	35	100	12	30	60	80	100	150	200	240	300	400	450
DC1 1200V dc I _e	A	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-
Main poles resistance	mΩ	2.5	2.3		3	13	8.5	8.5		4	1.5	1.5	1.5	0.85	0.85	0.85
Mechanical life	10 ⁶	10		10		10			10		10			8		
Protection degree		IP20		IP20		IP20			IP20		IP00		IP20 w. terminal lug.	IP20 w. terminal lug.		
Weight	kg	0.45	1.17	1.8		0.9	1.35	2.3		5				7.5		

DC Contactors



Technical Datasheet

Technical Data continued

Type			MDC 20..	MDC 48..	MDC 80..	MDC 100..	MPV 12..	MPV 30..	MPV 60..	MPV 80..	MPV 100..	MPV 150..	MPV 200..	MPV 240..	MPV 300..	MPV 400..	MPV 450..			
Main poles																				
Cable cross-sections		mm²	2 x 1.5 - 10		2.5-35		4 - 35 + 4-50	2x 1.5-2.5		2 x 1.5-10		2.5-35		4-35 + 4-50		busbar 18 x 4 screw M8		busbar 25 x 6 screw M10		
Tightening torque		Nm	2.3		5		8		1.4		2.3		5		8		17		35	
Mounting			DIN-rail or Screw			Screw		DIN-rail or Screw				Screw								
Operating coil range		U _c	0.85 - 1.1																	
Power consumption of coils																				
AC Inrush		VA	90		250		200		250		350		360							
Hold		VA/W	9 / 4		18 / 6.3		18 / 8		18 / 6.3		5 / 5		5 / 5							
DC Inrush		W	120		230		230		230		350		360							
Hold		W	2		4		4		4		5		5							
Switching time at voltage																				
Make time		ms	10 - 25		15 - 50		10 - 25		15 - 50		30 - 60		40 - 60							
Release time		ms	6 - 18		30 - 80		6 - 18		30 - 80		30 - 60		40 - 60							
Maximum Ambient Temperature																				
Operation °C			-25 to +40 (+70) *1 -25 to +70																	
Storage °C																				

*1 > 40° ... 1% / °C de-rating (eg. at 60°C 20% de-rating)

AC Operated

Rated Operational Current DC1			Part Number	Additional Aux. Contacts	Pack	AC Coil	DC Coil	Wiring Diagram
600V	1000V	1200V				Weight	Weight	
					pcs.	kg / pc	kg / pc	
20A	-	-	MDC20-S-00(10*1,*2)	2 MCAA11*3	1	0.45	0.5	
48A	-	-	MDC48-S-00(10*1,*2)	+1 MCAT..	1	0.45	0.5	
80A**	35A	-	MDC80-S-00*2	2 MCAA11	1	1.17	1.17	
100A	-	-	MDC100-S-00	+1 MCAT..	1	1.8	1.8	
12A	12A	6A	MPV12-S-00(10*1)	2 MCAA11*3 +1 MCAT..	1	0.8	0.85	
30A	30A	-	MPV30-S-00(10*1)	2 MCAA11*3	1	0.9	0.95	
60A	60A	-	MPV60-S-00(10*1)	+1 MCAT..	1	0.9	0.95	
80A	80A**	-	MPV80-S-00*2	2 MCAA11	1	1.35	1.35	
100A	100A	-	MPV100-S-00*2	+1 MCAT..	1	2.3	2.3	
150A	150A	-	MPV150-S-00*2	2 MCAA11 +1 MCAT..	1	5	5	
200A	200A	-	MPV200-S-00*2		1	5	5	
240A	240A	-	MPV240-S-00*2		1	5	5	
300A	300A	-	MPV300-S-00*2	2 MCAA11 +1 MCAT..	1	7.5	7.5	
400A	400A	-	MPV400-S-00*2		1	7.5	7.5	
450A	450A	-	MPV450-S-00*2		1	7.5	7.5	

*1 DC coil version comes with one NO aux. contact

*2 UL Approved

*3 DC coil version only one MCAA11



DC Contactors

IMO

Technical Datasheet

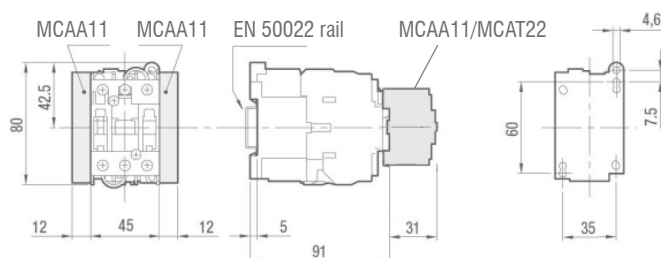
Auxiliary Contact Blocks for contactors MDC-.. & MPV-..

Rated Operational Current			For Contactors	Type	Pack pcs.	Weight kg / pc.	Wiring Diagram
AC15 230V A	AC15 400V A	AC1 690V A					
3	2	10	MDC / MPV-.. Front	MCAT11	1	0.04	
3	2	10	MDC / MPV-.. Front	MCAT22	1	0.05	
3	2	10	MDC / MPV-.. Side	MCAA11	1	0.05	

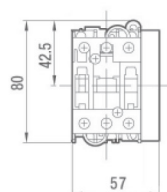


Dimensions (mm)

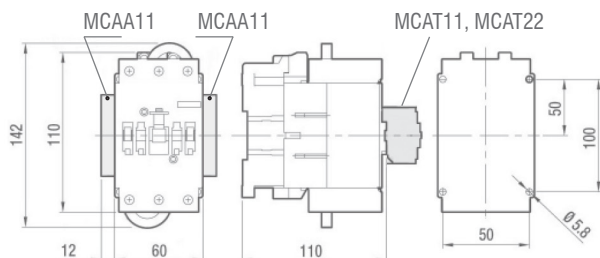
MDC20-S-00, MDC48-S-00



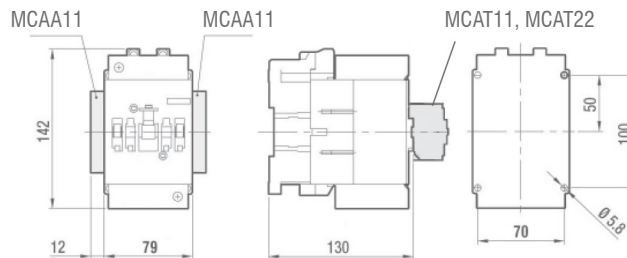
MDC20-S-10, MDC48-S-10 (DC Coil)



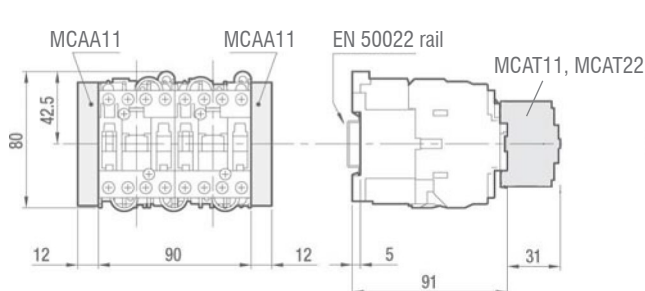
MDC80-S-00



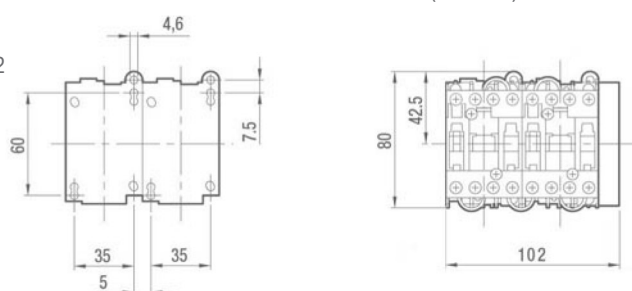
MDC100-S-00



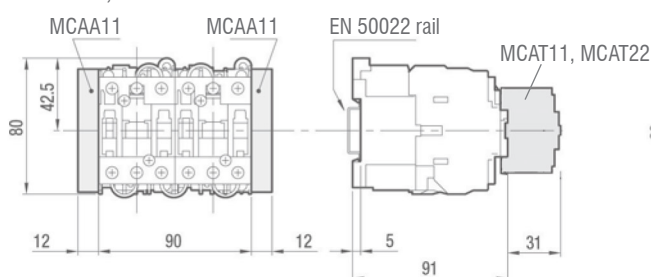
MPV12-S-00



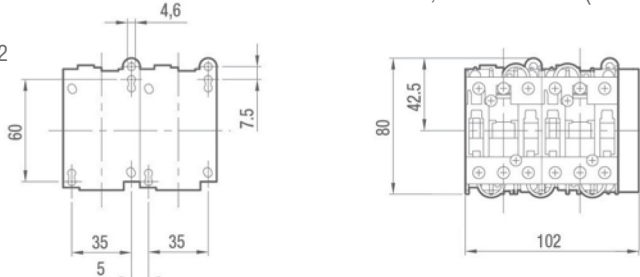
MPV12-S-10 (DC Coil)



MPV30-S-00, MPV60-S-00



MPV30-S-10, MPV60-S-10 (DC Coil)



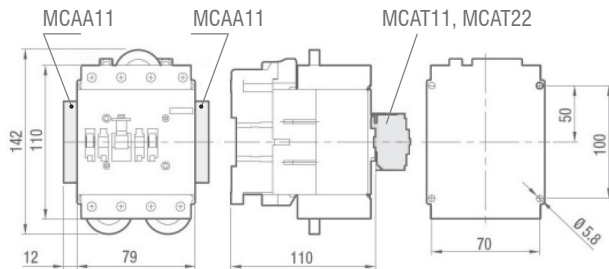
DC Contactors



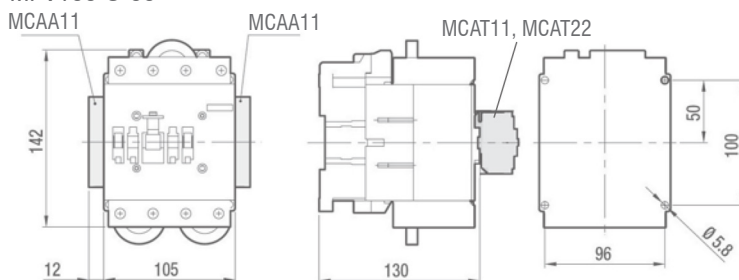
Technical Datasheet

Dimensions (mm) continued

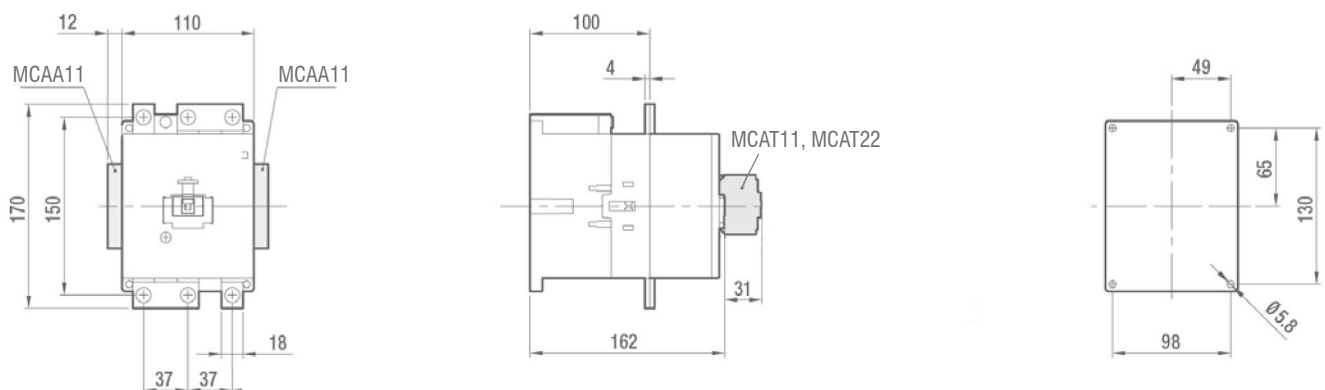
MPV80-S-00



MPV100-S-00



MPV150-S-00, MPV200-S-00, MPV240-S-00



MPV300-S-00, MPV400-S-00, MPV450-S-00

