

# 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

600VDC Rated Contactor **MDC**

#### Current Rating

20A	20
48A	48
80A	80
100A	100

#### Coil Voltage

24AC
110AC
230AC
400AC
24DC

#### Switching Type

Standard **S**

#### Aux. Contacts

**00** No Aux. Contacts

### 1000VDC Rated

**MPV 12 - S - 00 - 24AC**

#### Series

1000VDC Rated Contactor **MPV**

#### Current Rating

12A	12
30A	30
60A	60
80A	80
100A	100
150A	150
200A	200
240A	240
300A	300
400A	400
450A	450

#### Coil Voltage

24AC
110AC
230AC
400AC
24DC

#### Aux. Contacts

**00** No Aux. Contacts

#### Switching Type

**S** Standard

## Technical Data acc. to IEC/EN 60947-4-1, 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 <sub>imp</sub>	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 <sub>e</sub>	A	20	48	80	100	12	30	60	80	100	150	200	240	300	400	450
DC1 1000V dc I <sub>e</sub>	A	-	-	35	100	12	30	60	80	100	150	200	240	300	400	450
DC1 1200V dc I <sub>e</sub>	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 <sup>6</sup>	10		10		10			10		10		10		8	
Protection degree		IP20		IP20		IP20			IP20		IP20		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 Data continued

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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	mm <sup>2</sup>	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 <sub>c</sub>	0.85 - 1.1														
<b>Power consumption of coils</b>																
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								
<b>Switching time at voltage</b>																
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									
<b>Maximum Ambient Temperature</b>																
Operation °C		-25 to +40 (+70) *1														
Storage °C		-25 to +70														

\*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	60A	-	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



## Technical Datasheet

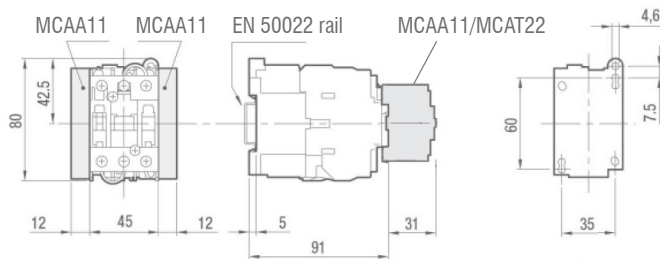
### Auxiliary Contact Blocks for contactors MDC-.. & MPV-..

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	

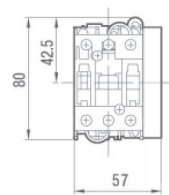


### Dimensions (mm)

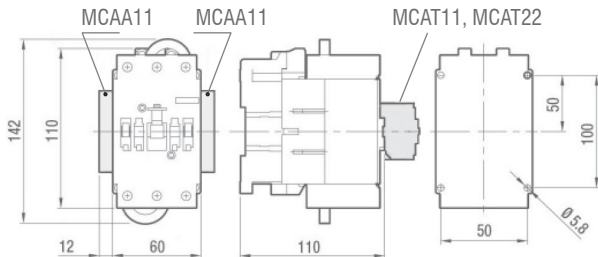
MDC20-S-00, MDC48-S-00



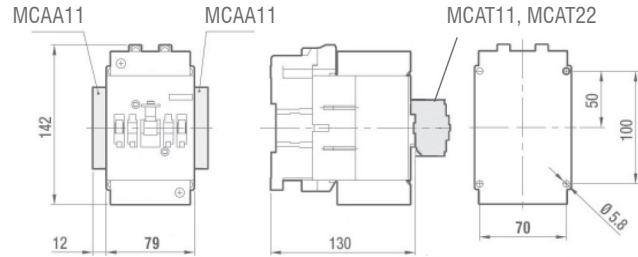
MDC20-S-10, MDC48-S-10 (DC Coil)



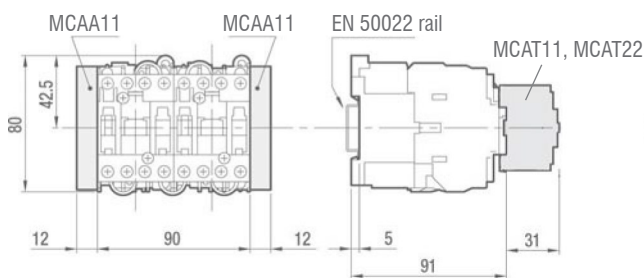
MDC80-S-00



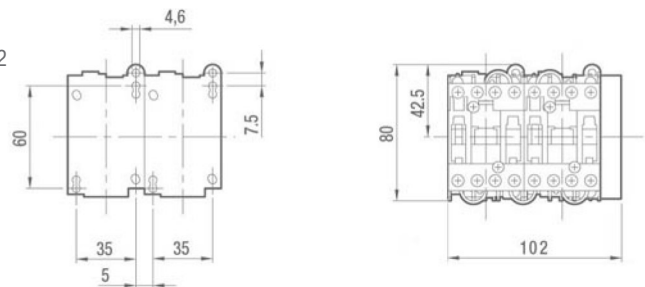
MDC100-S-00



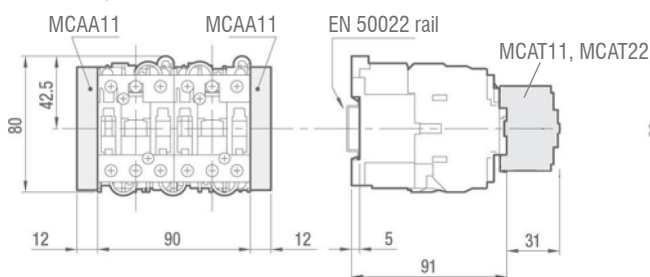
MPV12-S-00



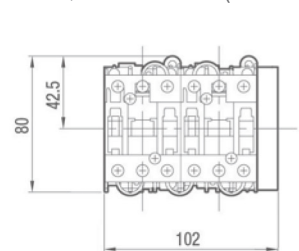
MPV12-S-10 (DC Coil)



MPV30-S-00, MPV60-S-00



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



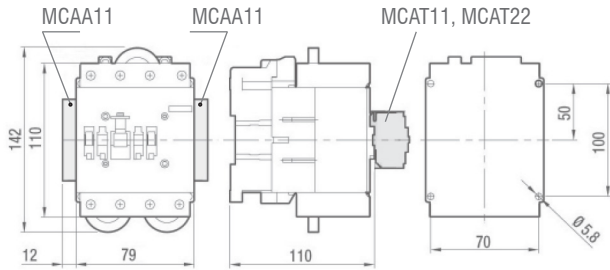
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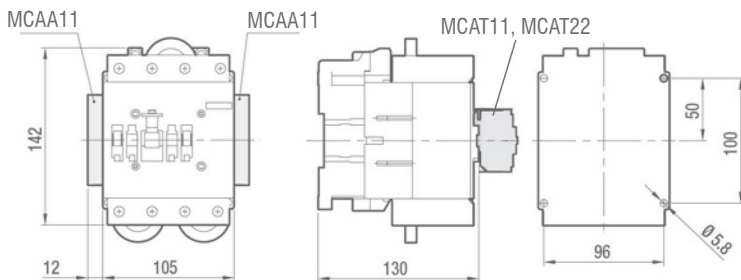
Technical Datasheet

## Dimensions (mm) continued

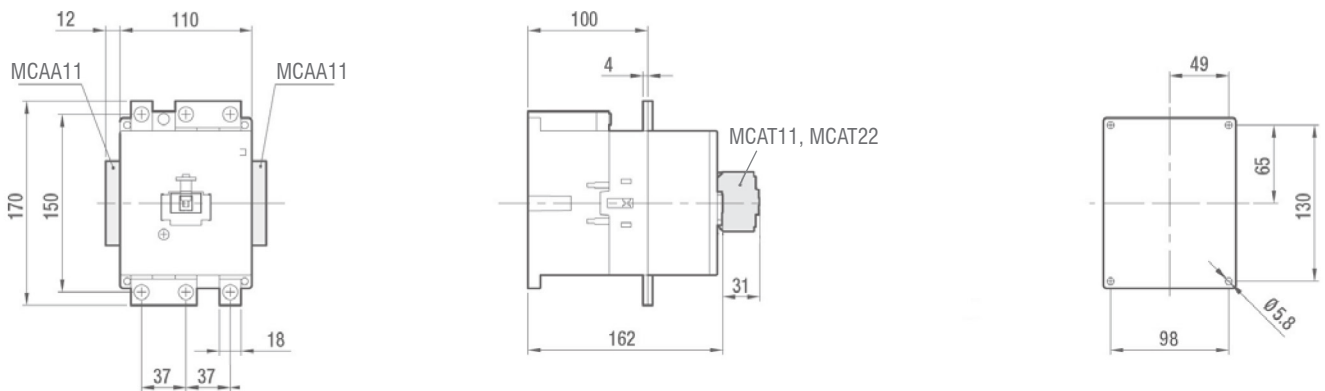
MPV80-S-00



MPV100-S-00



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



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

