

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 60947-3, 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 | | 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 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 | mm ² | 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 | | | | | | | | | | | | | | |
| 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 pcs. | AC Coil | DC Coil | Wiring Diagram |
|-------------------------------|-------|-------|---------------------|--------------------------|-----------|----------------|----------------|----------------|
| 600V | 1000V | 1200V | | | | Weight kg / pc | Weight 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



Technical Datasheet

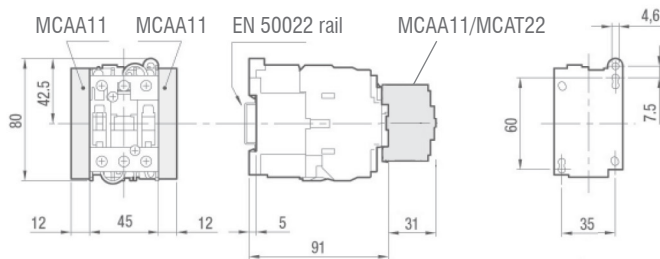
Auxiliary Contact Blocks for contactors MDC-.. & MPV-..

| 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 | |

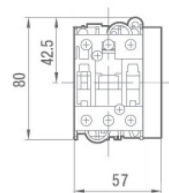


Dimensions (mm)

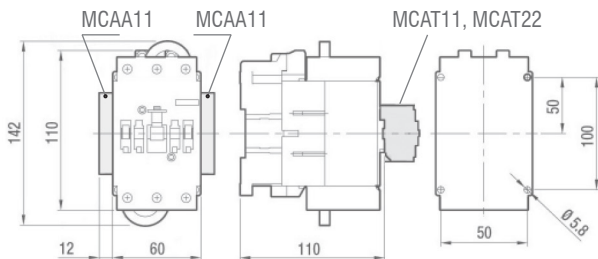
MDC20-S-00, MDC48-S-00



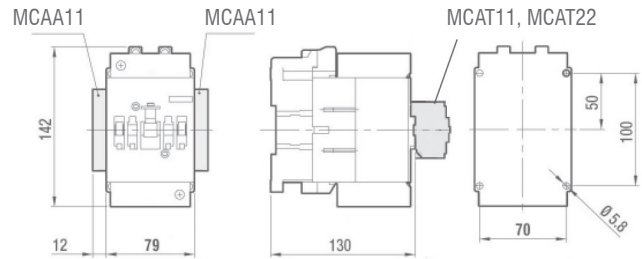
MDC20-S-10, MDC48-S-10 (DC Coil)



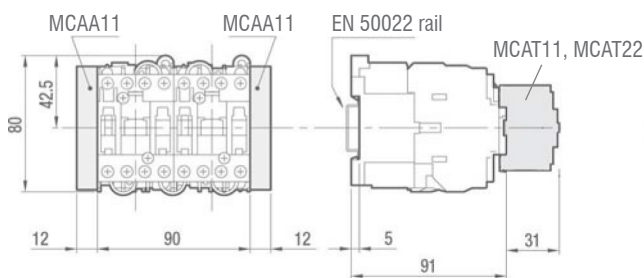
MDC80-S-00



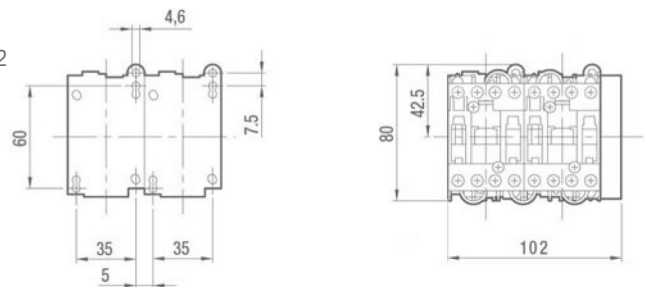
MDC100-S-00



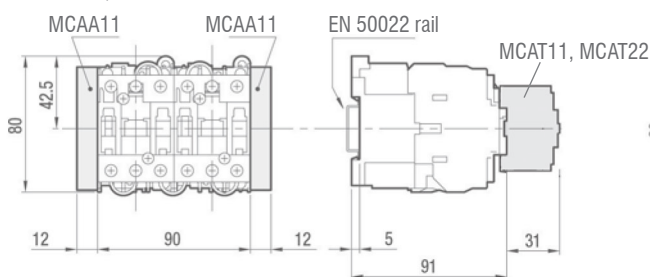
MPV12-S-00



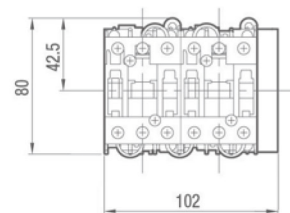
MPV12-S-10 (DC Coil)



MPV30-S-00, MPV60-S-00



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



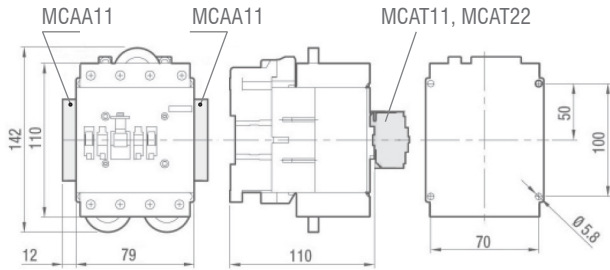
DC Contactors



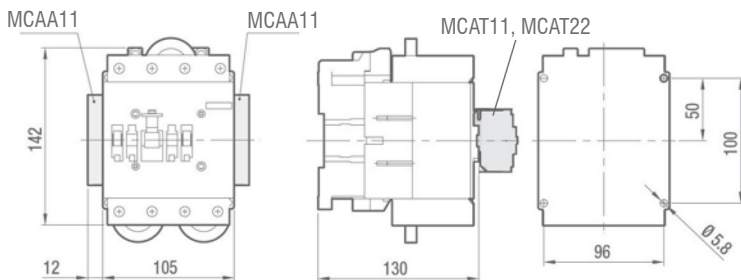
Technical Datasheet

Dimensions (mm) continued

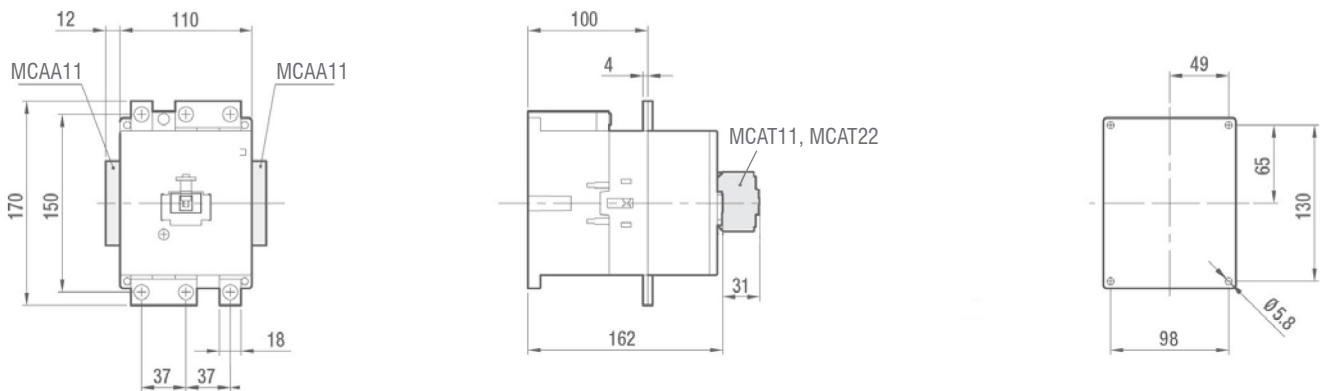
MPV80-S-00



MPV100-S-00



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



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

