

## ■ CIRCUIT BREAKER 3/4-POLE UP TO 500A WITH THERMAL MAGNETIC RELEASE, TYPES MC3N-A, MC3H-A, MC3N-4-A, MC3H-4-A



MC33231

### ■ SCHRACK INFO

- System and line protection
- 3 and 4 pole versions
- Adjustable overload release I: 0,8 – 1 x I<sub>n</sub> (factory setting 0,8 x I<sub>n</sub>)
- Adjustable short-circuit release I: 8 – 10 x I<sub>n</sub> (factory setting 8 x I<sub>n</sub>)
- Breaking capacity 36 / 50 / 150 kA at 415 V 50/60 Hz
- Screw terminals as standard, box terminals as accessories
- Rated uninterrupted current = Rated current

| RATED CURRENT/<br>BREAKING CAPACITY             | SETTING RANGE            |                               | TYPE        | ORDER NO. |
|---|--------------------------|-------------------------------|-------------|-----------|
|   | OVERLOAD-<br>RELEASE (A) | SHORT CIRCUIT-<br>RELEASE (A) |             |           |
| <b>3 POLE (COMFORT BREAKING CAPACITY) 36 kA</b> |                          |                               |             |           |
| 320 A/36 kA                                     | 250...320                | 1920...3200                   | MC3C-A320   | MC332431  |
| 400 A/36 kA                                     | 320...400                | 2400...4000                   | MC3C-A400   | MC340431  |
| 500 A/36 kA                                     | 400...500                | 3000...5000                   | MC3C-A500   | MC350431  |
| <b>3 POLE (NORMAL BREAKING CAPACITY) 50 kA</b>  |                          |                               |             |           |
| 320 A/50 kA                                     | 250...320                | 1920...3200                   | MC3N-A320   | MC332231  |
| 400 A/50 kA                                     | 320...400                | 2400...4000                   | MC3N-A400   | MC340231  |
| 500 A/50 kA                                     | 400...500                | 3000...5000                   | MC3N-A500   | MC350231  |
| <b>3 POLE (HIGH BREAKING CAPACITY) 150 kA</b>   |                          |                               |             |           |
| 320 A/150 kA                                    | 250...320                | 1920...3200                   | MC3H-A320   | MC332331  |
| 400 A/150 kA                                    | 320...400                | 2400...4000                   | MC3H-A400   | MC340331  |
| 500 A/150 kA                                    | 400...500                | 3000...5000                   | MC3H-A500   | MC350331  |
| <b>4 POLE (NORMAL BREAKING CAPACITY) 50 kA</b>  |                          |                               |             |           |
| 320 A/50 kA                                     | 250...320                | 1920...3200                   | MC3N-4-A320 | MC332241  |
| 400 A/50 kA                                     | 320...400                | 2400...4000                   | MC3N-4-A400 | MC340241  |
| 500 A/50 kA                                     | 400...500                | 3000...5000                   | MC3N-4-A500 | MC350241  |
| <b>4 POLE (HIGH BREAKING CAPACITY) 150 kA</b>   |                          |                               |             |           |
| 320 A/150 kA                                    | 250...320                | 1920...3200                   | MC3H-4-A320 | MC332341  |
| 400 A/150 kA                                    | 320...400                | 2400...4000                   | MC3H-4-A400 | MC340341  |
| 500 A/150 kA                                    | 400...500                | 3000...5000                   | MC3H-4-A500 | MC350341  |

## ■ CIRCUIT BREAKER 3/4-POLE UP TO 630A WITH ELECTRONIC RELEASE TYPES MC3N-AE, MC3H-AE, MC3N-4-AE, MC3H-4-AE



MC325232

### ■ SCHRACK INFO

- System and line protection
- Selective and generator protection
- 3 and 4 pole versions
- RMS value and "thermal memory"
- Adjustable overload release I<sub>r</sub>: 0,5 – 1 x I<sub>n</sub> (factory setting 0,8 x I<sub>n</sub>)
- Adjustable short-circuit release I<sub>s</sub>: 2 – 12 x I<sub>n</sub> (factory setting 6 x I<sub>n</sub>)  
at MC3...-AE250/400: 2 – 11 x I<sub>n</sub> (factory setting 6 x I<sub>n</sub>)  
at MC3...-AE630: 2 – 8 x I<sub>n</sub> (factory setting 6 x I<sub>n</sub>)
- Breaking capacity 50 / 150 kA at 415 V 50/60 Hz
- Screw terminals as standard, box terminals as accessory
- Rated uninterrupted current = Rated current

| RATED CURRENT/<br>BREAKING CAPACITY            | SETTING RANGE            |                               | TYPE         | ORDER NO.       |
|--|--------------------------|-------------------------------|--------------|-----------------|
|  | OVERLOAD-<br>RELEASE (A) | SHORT CIRCUIT-<br>RELEASE (A) |              |                 |
| <b>3 POLE (NORMAL BREAKING CAPACITY) 50 kA</b> |                          |                               |              |                 |
| 250 A/50 kA                                    | 125...250                | 500...2750                    | MC3N-AE250   | <b>MC325232</b> |
| 400 A/50 kA                                    | 200...400                | 800...4400                    | MC3N-AE400   | <b>MC340232</b> |
| 630 A/50 kA                                    | 315...630                | 1260...5040                   | MC3N-AE630   | <b>MC363232</b> |
| <b>3 POLE (HIGH BREAKING CAPACITY) 150 kA</b>  |                          |                               |              |                 |
| 250 A/150 kA                                   | 125...250                | 500...2750                    | MC3H-AE250   | MC325332        |
| 400 A/150 kA                                   | 200...400                | 800...4400                    | MC3H-AE400   | MC340332        |
| 630 A/150 kA                                   | 315...630                | 1260...5040                   | MC3H-AE630   | MC363332        |
| <b>4 POLE (NORMAL BREAKING CAPACITY) 50 kA</b> |                          |                               |              |                 |
| 250 A/50 kA                                    | 125...250                | 500...2750                    | MC3N-4-AE250 | <b>MC325242</b> |
| 400 A/50 kA                                    | 200...400                | 800...4400                    | MC3N-4-AE400 | <b>MC340242</b> |
| 630 A/50 kA                                    | 315...630                | 1260...5040                   | MC3N-4-AE630 | <b>MC363242</b> |
| <b>4 POLE (HIGH BREAKING CAPACITY) 150 kA</b>  |                          |                               |              |                 |
| 250 A/150 kA                                   | 125...250                | 500...2750                    | MC3H-4-AE250 | MC325342        |
| 400 A/150 kA                                   | 200...400                | 800...4400                    | MC3H-4-AE400 | MC340342        |
| 630 A/150 kA                                   | 315...630                | 1260...5040                   | MC3H-4-AE630 | MC363342        |

## ■ CIRCUIT BREAKER, 3/4 POLE UP TO 630A WITH DELAYED ELECTRONIC RELEASE TYPES MC3N-VE, MC3H-VE, MC3N-4-VE, MC3H-4-VE



MC325233

### ■ SCHRACK INFO

- System and line protection
- Selective and generator protection
- 3 and 4 pole versions
- RMS value and “thermal memory”
- Adjustable overload release  $I_r$ :  $0,5 - 1 \times I_n$  (factory setting  $0,8 \times I_n$ )
- Adjustable time delay setting to overcome current spikes  $t$ :  $2 - 20$  s at  $6 \times I_r$  as well as infinity
- Adjustable delayed short-circuit releases  $I_{sd}$ :  $2 - 10 \times I_r$  (factory setting  $6 \times I_r$ )  
MC3...-4-VE630:  $2 - 7 \times I_r$  (factory setting  $6 \times I_r$ )
- Adjustable delay time  $t_{sd}$ : Levels:  
0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (factory setting 0)
- Adjustable not-delayed short-circuit release  $I_i$ :  $2 - 12 \times I_n$  (factory setting  $12 \times I_n$ )  
MC3...-VE250/400:  $2 - 11 \times I_n$  (factory setting  $6 \times I_n$ )  
MC3...-VE630:  $2 - 8 \times I_n$  (factory setting  $6 \times I_n$ )
- Switchable  $i^2t$  constant function (factory setting OFF)
- Screw terminals as standard, box terminals as accessories
- Rated uninterrupted current = Rated current

| RATED CURRENT/<br>BREAKING CAPACITY            | SETTING RANGE            |  |                                      | TYPE         | ORDER NO.       |
|--|--------------------------|--|--------------------------------------|--------------|-----------------|
|  | OVERLOAD-<br>RELEASE (A) | SHORT-CIRCUIT RELEASE<br>NOT DELAYED (A) | SHORT-CIRCUIT RELEASE<br>DELAYED (A) |              |                 |
| <b>3 POLE (NORMAL BREAKING CAPACITY) 50 kA</b> |                          |  |                                      |              |                 |
| 250 A/50 kA                                    | 125...250                | 500...2750                               | 250...2500                           | MC3N-VE250   | <b>MC325233</b> |
| 400 A/50 kA                                    | 200...400                | 800...4400                               | 400...4000                           | MC3N-VE400   | <b>MC340233</b> |
| 630 A/50 kA                                    | 315...630                | 1260...5040                              | 472...4410                           | MC3N-VE630   | <b>MC363233</b> |
| <b>3 POLE (HIGH BREAKING CAPACITY) 150 kA</b>  |                          |  |                                      |              |                 |
| 250 A/150 kA                                   | 125...250                | 500...2750                               | 250...2500                           | MC3H-VE250   | MC325333        |
| 400 A/150 kA                                   | 200...400                | 800...4400                               | 400...4000                           | MC3H-VE400   | MC340333        |
| 630 A/150 kA                                   | 315...630                | 1260...5040                              | 472...4410                           | MC3H-VE630   | MC363333        |
| <b>4 POLE (NORMAL BREAKING CAPACITY) 50 kA</b> |                          |  |                                      |              |                 |
| 400 A/50 kA                                    | 200...400                | 800...4400                               | 400...4000                           | MC3N-4-VE400 | <b>MC340243</b> |
| 630 A/50 kA                                    | 315...630                | 1260...5040                              | 472...4410                           | MC3N-4-VE630 | <b>MC363243</b> |
| <b>4 POLE (HIGH BREAKING CAPACITY) 150 kA</b>  |                          |  |                                      |              |                 |
| 400 A/150 kA                                   | 200...400                | 800...4400                               | 400...4000                           | MC3N-4-VE400 | MC340343        |
| 630 A/150 kA                                   | 315...630                | 1260...5040                              | 472...4410                           | MC3H-4-VE630 | MC363343        |

## ■ MOTOR PROTECTION, 3 POLE UP TO 450A WITH ELECTRONIC RELEASE TYPES MC3N-ME, MC3H-ME



MC325233

### ■ SCHRACK INFO

- Adjustable overload release  $I_r$ :  $0,5 - 1 \times I_n$  (factory setting  $0,8 \times I_n$ )
- Adjustable short-circuit release  $I_s$ :  $2 - 14 \times I_n$  (factory setting  $12 \times I_n$ )
- Adjustable time delay setting to overcome current spikes  $t_r$ :  $2 - 20$  s at  $6 \times I_r$ , as well as infinity (without overload release), (factory setting 10 s)
- RMS value and "thermal memory"
- Phase sensitivity
- Screw terminals as standard, box terminals as accessories
- Meets IEC/EN 60947-4 and IEC/EN 60947-2
- Circuit breakers satisfy all requirements of Utilization category AC3 at 400V AC

| NOMINAL CURRENT/<br>BREAKING CAPACITY          | POWER RATING AC3<br>kW | CURRENT AC3<br>A | SETTING RANGE            |                               | TYPE       | ORDER NO.       |
|--|------------------------|------------------|--------------------------|-------------------------------|------------|-----------------|
|  |                        |                  | OVERLOAD-<br>RELEASE (A) | SHORT CIRCUIT-<br>RELEASE (A) |            |                 |
| <b>3 POLE (NORMAL BREAKING CAPACITY) 50 kA</b> |                        |                  |                          |                               |            |                 |
| 220 A/50 kA                                    | 110                    | 196              | 110...220                | 220...3080                    | MC3N-ME220 | <b>MC322237</b> |
| 350 A/50 kA                                    | 200                    | 349              | 175...350                | 350...4900                    | MC3N-ME350 | <b>MC335237</b> |
| 450 A/50 kA                                    | 250                    | 437              | 225...450                | 450...6300                    | MC3N-ME450 | <b>MC345237</b> |
| <b>3 POLE (HIGH BREAKING CAPACITY) 150 kA</b>  |                        |                  |                          |                               |            |                 |
| 220 A/150 kA                                   | 110                    | 196              | 110...220                | 220...3080                    | MC3H-ME220 | MC322337        |
| 350 A/150 kA                                   | 200                    | 349              | 175...350                | 350...4900                    | MC3H-ME350 | MC335337        |
| 450 A/150 kA                                   | 250                    | 437              | 225...450                | 450...6300                    | MC3H-ME450 | MC345337        |

## SWITCH DISCONNECTOR UP TO 630A TYPES MC3-PN, MC3-PN-4, MC3-N, MC3-N-4



MC340035

### SCHRACK INFO

- 3- and 4-pole version
- Rated uninterrupted current up to 630A
- Switch disconnecter type MC3-PN, 2 switch positions 0/I, cannot be tripped remotely
- Switch disconnecter type MC3-N, with trip setting "0"; "+"; "I", can be tripped remotely with undervoltage/shunt release, trip-indicating auxiliary contacts possible
- For type MC...-N switch disconnectors, undervoltage/shunt releases and trip-indicating auxiliary contacts can also be used.
- Type MC3-N... can also be combined with remote control MC-XR...
- Screw terminals as standard, box terminals as accessories
- Remote-trip MC3-N can also be combined with remote operator
- Properties of main switches including positive drive to IEC/EN 60204 and VDE 0113
- Isolating characteristics according to IEC/EN 60947-3 and VDE 0660. Protection against accidental contact accord. to VDE 0160 Part 100
- Rated uninterrupted current = Rated current
- Rated short-circuit breaking capacity values:  $I_{cm}$  25kA
- Rated short-time withstand current:  $I_{cw}$  12kA

| RATED UNINTERRUPTED CURRENT              | MAX. BACK-UP FUSE (gL)<br>FOR SWITCH DISCONNECTOR (AgL) | TYPE         | ORDER NO.       |
|--|---|--------------|-----------------|
| <b>3 POLE CANNOT BE TRIPPED REMOTELY</b> |   |              |                 |
| 400 A                                    | 630   | MC3-PN-400   | <b>MC340034</b> |
| 630 A                                    | 630   | MC3-PN-630   | <b>MC363034</b> |
| <b>4 POLE CANNOT BE TRIPPED REMOTELY</b> |   |              |                 |
| 400 A                                    | 630   | MC3-PN-4-400 | <b>MC340044</b> |
| 630 A/630 A                              | 630   | MC3-PN-4-630 | <b>MC363044</b> |
| <b>3 POLE CAN BE TRIPPED REMOTELY</b>    |   |              |                 |
| 400 A                                    | 630   | MC3-N-400    | <b>MC340035</b> |
| 630 A                                    | 630   | MC3-N-630    | <b>MC363035</b> |
| <b>4 POLE CAN BE TRIPPED REMOTELY</b>    |   |              |                 |
| 400 A                                    | 630   | MC3-N-4-400  | <b>MC340045</b> |
| 630 A                                    | 630   | MC3-N-4-630  | <b>MC363045</b> |

## SOCKET BASE AND WITHDRAWABLE MODULE FOR MC3



MC396707



MC396707

### SCHRACK INFO

- 3- and 4-pole version
- For circuit breaker MC3 and switch disconnecter MC3-N

### TECHNICAL DATA

- Withdrawable unit complete with control circuit plug unit
- $I_n$  max. at 20°C – 605 A,  $I_n$  max. at 40°C – 550 A
- Mounting position: vertical, 90° left
- 3 positions: Retracted, test, extended. The 3 positions are shown mechanically.
- Auxiliary contacts can also be used for remote signaling. Either one N/C or N/O contact per position.
- All connections of auxiliary switches (HIA, HIN, HIV) and undervoltage and shunt releases to the control circuit plug units are already present.
- **Withdrawable module only available in combination with switch.**
- Add an A to switch part number (e.g.: MC340232A) – Switch will be supplied ready for use with withdrawable feature.
- Socket base can be ordered separately, available pre-assembled.

| DESCRIPTION         | TYPE       | ORDER NO.       |
|---------------------|------------|-----------------|
| <b>SOCKET BASE</b>  |            |                 |
| Socket base, 3 pole | MC3-XAVS   | <b>MC396711</b> |
| Socket base, 4 pole | MC3-4-XAVS | <b>MC396712</b> |

### WITHDRAWABLE MODULE

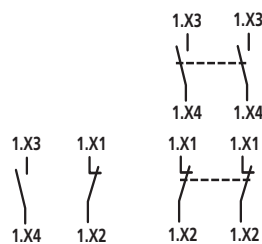
Withdrawable module, 3 pole, supplied with switch, add an A to end of switch part number

Withdrawable module, 4 pole, supplied with switch, add an A to end of switch part number

## STANDARD AUXILIARY CONTACT / TRIP-INDICATING AUXILIARY CONTACT TYPE M22



MM216378



### SCHRACK INFO

- Breaking with the main contacts, used for indicating and interlocking tasks
- General trip indication "+" with trip due to voltage release, overload release or short-circuit-release

### TECHNICAL DATA

Breaking capacity: AC15: 4 A / 230 VAC  
DC13: 3 A / 24 VDC  
DC13: 0,3 A / 220 VDC

### TIPS & TRICKS

The trip-indicating auxiliary contacts is the same contact as the standard auxiliary contact. It derives its function from where it is installed (alarm contact on left).

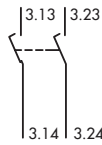
Maximum component installation with auxiliary contacts: 1 x Standard auxiliary contact (HIN) M22-K.  
1 x Trip-indicating contact (HIA) M22-CK.

| DESCRIPTION                                   | TYPE     | ORDER NO.       |
|---|----------|-----------------|
| 1 NO contact with screw terminals             | M22-K10  | <b>MM216376</b> |
| 1 NC contact with screw terminals             | M22-K01  | <b>MM216378</b> |
| 2 NO contacts with cage clamp terminals       | M22-CK20 | <b>MM107898</b> |
| 2 NC contacts with cage clamp terminals       | M22-CK02 | <b>MM107899</b> |
| 1 NO + 1 NC contact with cage clamp terminals | M22-CK11 | <b>MM107940</b> |

## EARLY-MAKE AUXILIARY CONTACT TYPE MC3-XHIV



MC299430



### SCHRACK INFO

For interlock- and load-shedding circuits as well as for early make of undervoltage release in main switch/Emergency stop applications.

### TECHNICAL DATA

- Not in connection with undervoltage release MC3-XU... or shunt release MC3-XA... Early-make during switch on and off (manual switch): approx. 20 ms
- Not in connection with remote operator MC-XR undervoltage- or shunt releases
- Breaking capacity: AC15: 4 A / 230 VAC  
DC13: 3 A / 24 VDC  
DC13: 0,3 A / 220 VDC

### TIPS & TRICKS

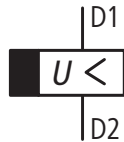
Maximum component installation with auxiliary contacts: 1 x early-make auxiliary contact

| DESCRIPTION                         | TYPE       | ORDER NO. |
|-------------------------------------|------------|-----------|
| Early-make auxiliary contact, 2 N/O | MC2/3-XHIV | MC299430  |

## UNDERVOLTAGE RELEASE TYPES MC3-XU



MC299499



### SCHRACK INFO

- For use in Emergency stop devices in connection with Emergency stop buttons
- Installed in breaker
- Without auxiliary contact
- Not-delayed breaking of circuit breaker MC/ switch disconnector MC-N when the control voltage drops below 35 % - 70%  $U_s$ .

### TIPS & TRICKS

When the undervoltage release is de-energized, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Undervoltage releases cannot be installed at the same time as operating current releases or early-make auxiliary contact MC2-XHIV.

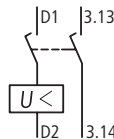
| VOLTAGE              | TYPE              | ORDER NO.       |
|----------------------|-------------------|-----------------|
| 24 VAC 50/60 Hz      | MC2/3-XU24AC      | <b>MC299491</b> |
| 24 VDC 50/60 Hz      | MC2/3-XU24DC      | <b>MC299509</b> |
| 208-240 VAC 50/60 Hz | MC2/3-XU208-240AC | <b>MC299499</b> |
| 380-440 VAC 50/60 Hz | MC2/3-XU380-440AC | <b>MC299501</b> |

Other voltage variants available upon request.

## UNDERVOLTAGE RELEASE WITH TWO EARLY-MAKE AUXILIARY CONTACTS TYPES MC3-XUHIV



MC299591



### SCHRACK INFO

- With 2 early-make auxiliary contacts
- For early-make of the undervoltage release in main switch applications and for interlock- and load-shedding circuits
- Installed in contact
- Other voltages and connection versions available on request

### TIPS & TRICKS

When the undervoltage release is de-energized, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Early-make of auxiliary contacts during switch on and off (20ms). Undervoltage releases cannot be installed at the same time as operating current releases or early-make auxiliary contact MC2-XHIV.

| VOLTAGE       | TYPE            | ORDER NO. |
|---------------|-----------------|-----------|
| 208 - 240 VAC | MC2/3-XUHIV230V | MC299591  |
| 380 - 440 VAC | MC2/3-XUHIV400V | MC299594  |

Other voltage variants available upon request.

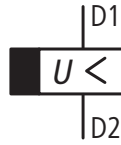
## UNDERVOLTAGE RELEASE, OFF-DELAY TYPES MC-UVU, MC-XUV



MC295927



MC299499



### SCHRACK INFO

- Voltage drops less than 0,07–16 s do not cause MC circuit breakers or N switch disconnectors to trip.

### TECHNICAL DATA

- Time-delay adjustable between 70 ms – 4 s
- With additional external capacitor:  
30.000  $\mu\text{F} \geq 35 \text{ V}$  to 8 s, 90.000  $\mu\text{F} \geq 35 \text{ V}$  to 16 s
- 1 x special release MC2-XUV required
- Cannot be installed simultaneously with early-make auxiliary contact MC2-XHIV... or shunt release MC2-XA....
- Time-delay device for separate mounting (Fastening: DIN rail or screws)
- For other operating voltages, please use a control transformer

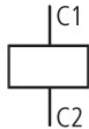
| DESCRIPTION  | TYPE      | ORDER NO. |
|--|-----------|-----------|
| Time-delay unit                                      | MC-UVU    | MC190154  |
| Special undervoltage release for time-delay unit MC2 | MC2/3-XUV | MC299527  |

Other voltage variants available upon request.

## SHUNT RELEASE TYPES MC2-XA



MC299754



### SCHRACK INFO

- Without auxiliary contact
- Switches are tripped by a voltage pulse or by the application of uninterrupted voltage

### NOTES

When the shunt release is energized, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented. Shunt release cannot be installed simultaneously with undervoltage release.

| VOLTAGE           | TYPE             | ORDER NO.       |
|-------------------|------------------|-----------------|
| 24 V AC/DC        | MC2/3-XA24AC/DC  | <b>MC299754</b> |
| 110 VAC/DC        | MC2/3-XA110AC/DC | <b>MC299760</b> |
| 208 - 250 V AC/DC | MC2/3-XA230AC/DC | <b>MC299763</b> |

Other voltage variants available upon request.



## REMOTE OPERATOR FOR MC3



MC299832

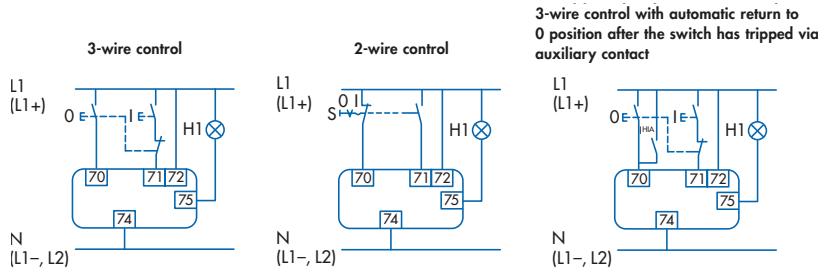
### SCHRACK INFO

- Remote operator can be combined with circuit breaker MC and switch disconnector MC-N, but not with switch disconnector MC-PN.
- Do not deactivate simultaneously via remote control and trip via undervoltage/operating current release.
- 1 standard auxiliary contact M22 necessary (included).

### TECHNICAL DATA

- On/Off breaking and reset by means of 2-wire or 3-wire control.
- Can be synchronized
- Breaking time On:  $\leq 80$  ms
- Local manual breaking possible
- Pause between Off and On: 3 sec.  
On command is ignored
- Function of Terminal 75:  
Ready for operation signal, when cover is closed and not locked.  
AC-15: 2 A/400 V  
DC-13: 0,2 A/220 V

### CIRCUIT DIAGRAMS



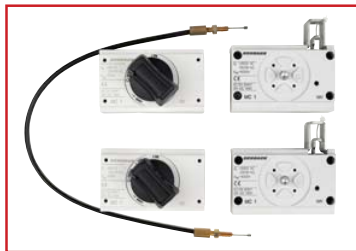
### BREAKING CYCLE



| VOLTAGE                         | TYPE            | ORDER NO.       |
|---------------------------------|-----------------|-----------------|
| 208 - 240 V AC                  | MC3-XR208-240AC | <b>MC399850</b> |
| Extra cover for 4-pole switches | MC3-XAVPR       | <b>MC396678</b> |

Other voltage variants available upon request.

## MECHANICAL INTERLOCK FOR (DOOR COUPLING-) ROTARY HANDLES FOR MC3



MC191581

### SCHRACK INFO

**Rotary handle on switch or door coupling rotary handle additionally required.**

Cannot be combined with remote operator or door frame.

At least 2 interlocking modules are required to construct a mechanical interlocking circuit. See Page 142 for possible combinations and variations in interlocking circuits. Bowden cable to be ordered separately.

| DESCRIPTION          | TYPE       | ORDER NO.       |
|----------------------|------------|-----------------|
| Mechanical interlock | MC3-XMV    | <b>MC391583</b> |
| Bowden cable 225 mm  | MC-XBZ225  | <b>MC191585</b> |
| Bowden cable 600 mm  | MC-XBZ600  | <b>MC191586</b> |
| Bowden cable 1000 mm | MC-XBZ1000 | <b>MC191587</b> |

## MECHANICAL INTERLOCK FOR REMOTE OPERATOR FOR MC3



MC294543



MC294543

### SCHRACK INFO

- For 2 switches of same or next frame size side by side
- Side-by-side mounting
- Mounted on top of each other, long version
- Type contains parts for 2 switches
- Remote operator also required
- For maximum breaking distance, see Page 143

### NOTES

Cannot be combined with rotary handles, door coupling rotary handles and early-make auxiliary contacts.

| DESCRIPTION                                  | TYPE        | ORDER NO. |
|--|-------------|-----------|
| Mechanical interlock for MC2/3               | MC2/3-XMVR  | MC294544  |
| Mechanical interlock for MC2/3, long version | MC2/3-XMVRL | MC294549  |
| Mechanical interlock for MC3                 | MC3-XMVR    | MC394545  |
| Mechanical interlock for MC3 long version    | MC3-XMVRL   | MC394550  |
| Mechanical interlock for MC3/4               | MC3/4-XMVR  | MC394546  |
| Mechanical interlock for MC3/4 long version  | MC3/4-XMVRL | MC394551  |

## ROTARY HANDLE DIRECTLY ON SWITCH FOR MC3



MC390129

### SCHRACK INFO

- Complete with rotary drive
- Can also be combined with door frame

### TECHNICAL DATA

Available in the following versions:

#### Type MC.-XDV

Lockable in the "0" position (up to three padlocks), black/grey

#### Type MC.-XDVR

Lockable in the "0" position (up to three padlocks), Emergency stop red/yellow

| DESCRIPTION   | TYPE     | ORDER NO.       |
|---|----------|-----------------|
| Lockable rotary handle for MC3, black/grey                | MC3-XDV  | <b>MC390129</b> |
| Lockable rotary handle for MC3, Emergency stop red/yellow | MC3-XDVR | <b>MC390140</b> |

## MAIN-SWITCH-SET FOR MC3

### SCHRACK INFO

Set includes:

- Door coupling rotary handle (page 54)
- Extension shaft -XV4 (page 54)
- Frontside warning plate
- Sticker with warning symbol "lightning"

| DESCRIPTION  | TYPE     | ORDER NO. |
|--|----------|-----------|
| Main-switch-set for MC3 with door interlock, black/grey                | MC3-XHB  | MC396628  |
| Main-switch-set for MC3 with door interlock, Emergency stop red/yellow | MC3-XHBR | MC396634  |

## DOOR COUPLING ROTARY HANDLE FOR MC3



MC390170



MC390170



MC390170

### SCHRACK INFO

- Complete unit includes rotary drive and coupling parts
- Degree of Protection IP66
- Rotary handle can be rotated 90° for horizontally-mounted switches
- Cannot be defeated in the locked OFF and ON positions
- Can be modified when in the unlocked ON position, can be defeated from the outside with a screwdriver
- Door can be opened in OFF
- External warning plate/designation plate can be clipped on

### NOTES

- Order extension shaft separately!

### TECHNICAL DATA

Available in the following versions:

#### Type MC.-XTVD

Lockable in the "0" position on handle with up to three padlocks, with door interlock, black/grey

#### Type MC.-XTVDV

Lockable in the "0" position on handle and switch, with up to three padlocks, with door interlock, black/grey

#### Type MC.-XTVDVR

Lockable in the "0" position on handle and switch with up to three padlocks, with door interlock, Emergency stop red/yellow

| DESCRIPTION  | TYPE       | ORDER NO.       |
|--|------------|-----------------|
| Rotary handle for MC3 with door interlock, lockable, black/grey                              | MC3-XTVD   | <b>MC390170</b> |
| Door coupling rotary handle for MC3 with door interlock, lockable, "0", "1", black/grey      | MC3-XTVDV  | <b>MC390176</b> |
| Door coupling rotary handle for MC3 with door interlock, lockable, Emergency stop red/yellow | MC3-XTVDVR | <b>MC390182</b> |

## EXTENSION SHAFT FOR MC3



MC190191

### SCHRACK INFO

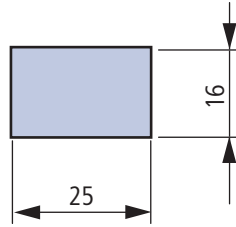
- for maximum cabinet depths of 400 or 600 mm
- Can be cut to required length

| DESCRIPTION             | CABINET DEPTH | TYPE      | ORDER NO.       |
|-------------------------|---------------|-----------|-----------------|
| Extension shaft for MC3 | max. 400 mm   | MC3/4-XV4 | <b>MC391234</b> |
| Extension shaft for MC3 | max. 600 mm   | MC3/4-XV6 | <b>MC390193</b> |

## BOX TERMINALS FOR MC3



MC390042



### SCHRACK INFO

- Installed within the switch housing
- If  $U_e \geq 525V$  AC, use terminal cover MC3(-4)-XKSA
- Conversion kit for switches with screw connection
- Contains parts for one switch side
- Terminal capacities:  
Copper lines/cables 500A: 1 x 35 – 240 mm<sup>2</sup>  
2 x 16 – 120 mm<sup>2</sup>  
Copper strip 630A: 10 x 24 x 1 + 5 x 24 x 1 or (2x) 8 x 24 x 1

| DESCRIPTION                              | TYPE      | ORDER NO.       |
|--|-----------|-----------------|
| Box terminal (contains 3 pcs.) for MC3   | MC3-XKC   | <b>MC390042</b> |
| Box terminal (contains 4 pcs.) for MC3-4 | MC3-4-XKC | <b>MC396783</b> |

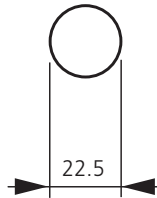
## TUNNEL TERMINAL FOR MC3



MC391461



MC391461



### SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3 or 4-pole switches
- Comes with terminal for control circuit cabling as standard for 1 x 0,75 – 2,5 mm<sup>2</sup> or 2 x 0,75 – 1,5 mm<sup>2</sup> copper conductors
- Terminal capacities:  
XKA1 max. 350A: Cu/Al cable 1 x 16 – 185 mm<sup>2</sup>\*  
XKA2 max. 630A: Cu/Al-cable 2 x 50 – 240 mm<sup>2</sup>  
(\* depending on cable manufacturer up to 240 mm<sup>2</sup> can be connected)
- Installed outside switch housing
- Terminal cover MC3(-4)-XKSA included

### TECHNICAL DATA

- For Cu- and Al cables
- Terminal cover included
- Stranded round conductor / stranded sector-shaped conductor

| DESCRIPTION  | TYPE       | ORDER NO.       |
|--|------------|-----------------|
| Tunnel terminal 185 mm <sup>2</sup> , 3 pole for MC3       | MC3-XKA1   | <b>MC391459</b> |
| Tunnel terminal 2 x 240 mm <sup>2</sup> , 3-pole for MC3   | MC3-XKA2   | <b>MC391461</b> |
| Tunnel terminal 185 mm <sup>2</sup> , 4 pole for MC3-4     | MC3-4-XKA1 | <b>MC391460</b> |
| Tunnel terminal 2 x 240 mm <sup>2</sup> , 4-pole for MC3-4 | MC3-4-XKA2 | <b>MC391462</b> |

## ■ CABLE LUG FOR MC3



MC299776

### ■ SCHRACK INFO

- Special cable lug in slimline design
- Cable lugs must be insulated when using without a cover plate.

| DESCRIPTION                             | TYPE         | ORDER NO.       |
|---|--------------|-----------------|
| Cable lug 185 mm <sup>2</sup> , for MC3 | MC3/4-XKS185 | <b>MC390040</b> |
| Cable lug 240 mm <sup>2</sup> , for MC3 | MC3/4-XKS240 | <b>MC390041</b> |

## ■ REAR CONNECTION FOR MC3



MC396792

### ■ SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Terminal capacities: Copper cable 8 x 16 – 240 mm<sup>2</sup>

| DESCRIPTION                       | TYPE      | ORDER NO.       |
|-----------------------------------|-----------|-----------------|
| Rear connection, 3 pole for MC3   | MC3-XKR   | <b>MC396792</b> |
| Rear connection, 4 pole for MC3-4 | MC3-4-XKR | <b>MC396795</b> |

## ■ CONNECTION WIDTH EXTENSION FOR MC3



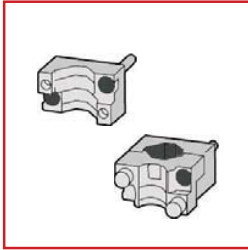
MC390514

### ■ SCHRACK INFO

- Contains parts for one switch side incl. phase separator
- Central holes, max. 2 cable lugs per phase
- Distance between pole centers 70 mm
- Terminal capacities: Copper cable lugs 2 x 300 mm<sup>2</sup>  
Copper rails (2x) 10 x 50

| DESCRIPTION                                      | TYPE        | ORDER NO.       |
|--|-------------|-----------------|
| Connection width extension, 3 pole 630 A for MC3 | MC3-XKV70   | <b>MC390514</b> |
| Connection width extension, 4 pole 630 A for MC3 | MC3-4-XKV70 | <b>MC390515</b> |

## CONNECTION TERMINALS FOR CONNECTION WIDTH EXTENSION MC3



MC390782 + MC390784

### SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Only in combination with connection width extension
- Use with flexible and highly-flexible conductor end sleeves
- Comes with terminal for control circuit cabling as standard for 1 x 0,75 – 2,5 mm<sup>2</sup> or 2 x 0,75 – 1,5 mm<sup>2</sup> Cu conductors
- Terminal capacities: Copper cable 2 x 120 – 300 mm<sup>2</sup>  
Cu strip (2x) 11 x 21 x 1 mm

| DESCRIPTION  | TYPE          | ORDER NO. |
|--|---------------|-----------|
| <b>3 POLE</b>  |               |           |
| Connection terminals for connection width extension, 500 A for cable | MC3-XK300     | MC390782  |
| Connection terminals for connection width extension, 630 A for strip | MC3-XK22X21   | MC390784  |
| <b>4 POLE</b>  |               |           |
| Connection terminals for connection width extension, 500 A for cable | MC3-4-XK300   | MC390783  |
| Connection terminals for connection width extension, 630 A for strip | MC3-4-XK22X21 | MC390785  |

## PHASE SEPERATOR PLATE FOR MC3



MC3-XKP

### SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Supplied with the connection width extension
- Insulation protection where cable lugs, busbars or flat conductor are connected.
- Cannot be combined with tunnel terminal, rear-side connection

| DESCRIPTION                     | TYPE      | ORDER NO. |
|---------------------------------|-----------|-----------|
| Phase seperator plate for MC3   | MC3-XKP   | MC390512  |
| Phase seperator plate for MC3-4 | MC3-4-XKP | MC390513  |

## CONTROL CIRCUIT TERMINAL FOR MC3



MC196739

### SCHRACK INFO

- Contains parts for two terminals located at top or bottom for 3/ 4 pole switches
- Included with tunnel terminal
- Terminal capacities: Screw connection 1 x 0,75 – 2,5 mm<sup>2</sup>, 2 x 0,75 – 1,5 mm<sup>2</sup>

| DESCRIPTION                                       | TYPE       | ORDER NO.       |
|---|------------|-----------------|
| Control circuit terminal for box terminal MC3     | MC3/4-XSTK | <b>MC196739</b> |
| Control circuit terminal for screw connection MC3 | MC3/4-XSTS | <b>MC396797</b> |

## ■ TERMINAL COVER FOR MC3



MC390045

### ■ SCHRACK INFO

- Protection against accidental contact when using cable lugs, rails or tunnel terminals
- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Degree of protection IP4X front, side and rear, IP1X on the connection side when using insulated conductor material
- Cover plate included with tunnel terminals

| DESCRIPTION                      | TYPE       | ORDER NO.       |
|----------------------------------|------------|-----------------|
| Terminal cover, 3 pole for MC3   | MC3-XKSA   | <b>MC390045</b> |
| Terminal cover, 4 pole for MC3-4 | MC3-4-XKSA | <b>MC396801</b> |

## ■ IP2X FINGER PROTECTION FOR DIRECT-MOUNTED MC3 SWITCHES



MC196744



MC196748

### ■ SCHRACK INFO

- Increases the protection against accidental contact to IP2X
- Protects when reaching into the cable connection area when cables are connected in box terminal
- For 2 conductors, maximum cross-section 70 mm<sup>2</sup>
- MC3-XIPA and MC3-4-XIPA only in combination with cover plate

| DESCRIPTION                         | TYPE       | ORDER NO.       |
|-------------------------------------|------------|-----------------|
| <b>FOR BOX TERMINAL</b>             |            |                 |
| Finger protection, 3 pole for MC3   | MC3-XIPK   | <b>MC396804</b> |
| Finger protection, 4 pole for MC3-4 | MC3-4-XIPK | <b>MC396805</b> |
| <b>FOR TERMINAL COVER</b>           |            |                 |
| Finger protection, 3 pole for MC3   | MC3-XIPA   | <b>MC396808</b> |
| Finger protection, 4 pole for MC3-4 | MC3-4-XIPA | <b>MC396809</b> |

## INSULATED ENCLOSURE XCI



MC391525

### SCHRACK INFO

- Only for switches with box terminals for direct cable connection
- With door coupling rotary handle
- Complete including all necessary functional parts
- Degree of protection IP65
- Comes with gland plates

### TECHNICAL DATA

Enclosure suitable for installation of circuit-breakers and switch-disconnectors for separate mounting with top and bottom cable entry. Including fixing straps for wall mounting.

Short circuit protection at 415 V 50/60 Hz to 10 kA.

Not in combination with remote operator, plug-in- or withdrawable unit.

Additional insulated terminals for 4 or 5 pole must be ordered separately.

Available in the following versions:

#### Standard, black/grey

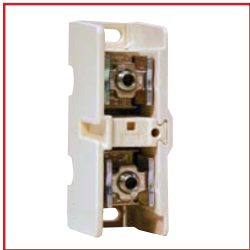
Lockable in the "0" position at handle with up to 3 padlocks. Additionally with cover interlock.

#### For Emergency stop, red/yellow

Lockable on handle and switch with up to 3 padlocks. Lockable in the "0" position on handle. Additionally with cover interlock and lockable at switch in the "0" position.

| DESCRIPTION                           | MAX. RATED UNINTERRUPTED CURRENT | TYPE          | ORDER NO.       |
|---------------------------------------|----------------------------------|---------------|-----------------|
| <b>STANDARD, BLACK/GREY</b>           |                                  |               |                 |
| Insulated enclosure for MC3(-4)       | ≤ 400 A                          | MC3-XCI48-TVD | <b>MC391525</b> |
| <b>FOR EMERGENCY STOP, RED/YELLOW</b> |                                  |               |                 |
| Insulated enclosure for MC3(-4)       | ≤ 400 A                          | MC3-XCI48-TVD | <b>MC391530</b> |

## ADDITIONAL INSULATED TERMINALS FOR MC3



MC294709

### SCHRACK INFO

- For looping through the neutral and earth conductor
- 1 pole

| DESCRIPTION                          | TERMINAL CAPACITY   | TYPE        | ORDER NO. |
|--------------------------------------|---|-------------|-----------|
| Additional insulated terminal 250 A  | stranded, 1 x (35-150mm <sup>2</sup> ), 2 x (16-70mm <sup>2</sup> )       | K150/1/BR   | MC294709  |
| Additional insulated terminals 400 A | stranded, 1 x (50-240mm <sup>2</sup> ), 2 x (25-120mm <sup>2</sup> )      | K240/1/BR   | MC397082  |
| Additional insulated terminals 630 A | stranded, 1 x (240 – 300mm <sup>2</sup> ), 2 x (50 – 240mm <sup>2</sup> ) | K2x240/1/BR | MC399455  |



## DEVICE ADAPTERS FOR CIRCUIT-BREAKERS AND SWITCH-DISCONNECTORS FOR 60 mm MC3 BUSBAR SYSTEM



MC391668

### SCHRACK INFO

- Cover plate MC-XKR necessary for frame size 2 and 3.
- For mounting on flat copper rails 12 x 5 mm bis 30 x 10 mm
- Double T and triple T profile
- Snaps onto the voltage-free busbar
- Rated operational voltage, Ue: 690 V

### TECHNICAL DATA

MC 3 up to 630 A:

- Connection to system from top
- For component adapter MC3-XKR13 with rear connection, cover plate needed

| DESCRIPTION                                | TYPE      | ORDER NO.    |
|--|-----------|--------------|
| 60 mm busbar adapter 550 A, 3 pole for MC3 | 32170     | MC391700     |
| 60 mm busbar adapter 550 A, 4 pole for MC3 | 32581     | upon request |
| Cover plate for busbar adapter, 3 pole     | MC3-XKR13 | MC391668     |

## DOOR SEALING FRAME FOR MC3



MC394645

### SCHRACK INFO

- For toggle levers, rotary handles with rotary drive and remote operator
- Degree of protection IP40
- For rectangular cut-out on doors and enclosures with material thicknesses of 1,5 – 5 mm
- External warning plate/designation plate can be clipped on

| DESCRIPTION                | TYPE    | ORDER NO. |
|----------------------------|---------|-----------|
| Door sealing frame for MC3 | MC3-XBR | MC394645  |

## TOGGLE LEVER LOCKING DEVICE FOR MC3



MC390201

### SCHRACK INFO

- Off position lockable with up to 3 padlocks (hasp thickness 4 – 8 mm)
- Cannot be combined with Insulating surround

| DESCRIPTION                         | TYPE       | ORDER NO.       |
|-------------------------------------|------------|-----------------|
| Toggle lever locking device for MC3 | MC2/3-XKAV | <b>MC290201</b> |

## SPACERS FOR MC3



MC390211

### SCHRACK INFO

- Enables fast and low-priced adjustment of a variety frame sizes with/without rotary handle or remote operator same front depth
- Grid depth 17,5 mm, thread M5
- Each set contains 4 x spacers
- 4 fastening screws included per switch

| DESCRIPTION     | TYPE      | ORDER NO. |
|-----------------|-----------|-----------|
| Spacers for MC3 | MC3/4-XAB | MC390211  |