

Tehnički list za artikl: MC332231--

# Kompaktni prekidač snage tip A, 3P/320A/50kA

Veličina 3, Nazivna struja 320A, Polovi 3, IP stupanj zaštite IP20, Kratkospojna prekidna moć 50kA, Okidač A termo-magnetska zaštita instalacija i kabela



## Tehnički podaci

|                                |                                                |
|--------------------------------|------------------------------------------------|
| Neto širina (mm)               | 140,00                                         |
| Neto visina (mm)               | 275,00                                         |
| Neto masa (kg)                 | 5,80                                           |
| EAN                            | 9004840551211                                  |
| Disipacija snage (W)           | 79,00                                          |
| Min. temperatura okoline (°C)  | -25                                            |
| Maks. temperatura okoline (°C) | 60                                             |
| Norma                          | IEC EN 60947<br>VDE 0660                       |
| Uređaj                         | Prekidač snage                                 |
| Nazivna struja (A)             | 320                                            |
| Nazivni napon                  | < 690VAC                                       |
| Kratkospojna prekidna moć (kA) | 50                                             |
| Veličina                       | 3                                              |
| Okidač                         | A termo-magnetska zaštita instalacija i kabela |
| Polovi                         | 3                                              |

## Tehnički podaci - nastavak

|                                                  |                                                                                                            |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Struja kratkog spoja                             | 320A                                                                                                       |
| Zaštita od dodira                                | finger-proof and back-of-hand-proof according to VDE 0106 Part 100                                         |
| Uvjeti okoline                                   | Vlažnost i toplina, konstantno, prema IEC 60068-2-78<br>Vlažnost i toplina, ciklički, prema IEC 60068-2-30 |
| Mehanička otpornost na polu-sinusoidni udar 10ms | 20 (Halbsinusstoß 20 ms)                                                                                   |
| IP stupanj zaštite                               | IP20                                                                                                       |
| Nazivni napon izolacije [Ui] (V)                 | 1000                                                                                                       |
| Mehanički životni vijek                          | 20000 operation cycles                                                                                     |
| Električni životni vijek (sklopnih ciklusa)      | 10000                                                                                                      |
| Tip stezaljke                                    | Vijčani priključak                                                                                         |
| Nazivna kratkotrajno podnosiva struja Icw        | 3,3kA                                                                                                      |

## GENERAL DATA - MC2, MC3, MC4

|                                              |                                                                                            |
|----------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Normen und Bestimmungen</b>               | IEC/EN 60947, VDE 0660                                                                     |
| <b>Berührungsschutz</b>                      | finger- und handrücksicher nach VDE 0106 Teil 100                                          |
| <b>Klimafestigkeit</b>                       | Feuchte Wärme, konstant nach IEC 60068-2-78<br>Feuchte Wärme, zyklisch nach IEC 60068-2-30 |
| <b>Umgebungstemperatur</b>                   |                                                                                            |
| Lagerung                                     | -25...+70°C                                                                                |
| Betrieb                                      | -25...+70°C                                                                                |
| <b>Schockfestigkeit (IEC/EN 60068-2-27)</b>  | 20 (Halbsinusstoß 20 ms)                                                                   |
| <b>Sichere Trennung nach EN 61140</b>        |                                                                                            |
| zwischen Hilfskontakten und Hauptstrombahnen | 500V AC                                                                                    |
| zwischen den Hilfskontakten                  | 300V AC                                                                                    |

## Podatkovna tablica: Kompaktni prekidač snage tip A, 3P/320A/50kA

|                   |                                         |
|-------------------|-----------------------------------------|
| <b>Einbaulage</b> | senkrecht und 90° nach allen Richtungen |
|-------------------|-----------------------------------------|



|                                  |                                                          |
|----------------------------------|----------------------------------------------------------|
| <b>Energie-Einspeiserichtung</b> | beliebig                                                 |
| <b>Schutzart</b>                 |                                                          |
| Gerät                            | im Bereich der Bedienteile: IP20 (Basisschutzart)        |
| Gehäuse                          | mit Blendrahmen: IP40<br>mit Türkupplungsdrehgriff: IP66 |
| Anschlusstechnik                 | Tunnelklemme: IP10<br>Phasentrenner und Bandklemme: IP00 |

## DIELECTRIC STRENGTH OF MCCB - MC3

|                                                               | Bemessungsdauerstrom max. 160A |                       |                       |
|---------------------------------------------------------------|--------------------------------|-----------------------|-----------------------|
|                                                               | MC3 - 36kA                     | MC3 - 50kA            | MC3 - 150kA           |
| <b>Bemessungsstoßspannungsfestigkeit <math>U_{imp}</math></b> |                                |                       |                       |
| Hauptstrombahnen                                              | 8000V                          | 8000V                 | 8000V                 |
| Hilfsstrombahnen                                              | 6000V                          | 6000V                 | 6000V                 |
| <b>Bemessungsbetriebsspannung <math>U_e</math></b>            | 690V AC                        | 690V AC               | 690V AC               |
| <b>Bemessungsbetriebsspannung Schalten über 3 Strombahnen</b> | -                              | 750V DC <sup>1)</sup> | 750V DC <sup>1)</sup> |
| <b>Überspannungskategorie/Verschmutzungsgrad</b>              | III/3                          | III/3                 | III/3                 |
| <b>Bemessungsisolationsspannung <math>U_i</math></b>          | 1000V <sup>2)</sup>            | 1000V                 | 1000V                 |
| <b>Einsatz in IT-Netzen</b>                                   | 690V                           | 690V                  | 690V                  |

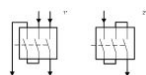
### Hinweis:

<sup>1)</sup> Für Bemessungsbetriebsspannung Schalten über 3 Strombahnen gilt: Korrekturfaktor DC für Schnellauslöseransprechwert:

MC3: 1,35

Einstellwert für  $I_i$  bei DC = Einstellwert  $I_i$  AC/Korrekturfaktor DC

Angabe gilt für 3-polige Anlagenschutzschalter mit thermomagnetischem Auslöser MC3



1 \* Schalten von einem Pol über zwei Strombahnen in Reihe

2 \* Schalten von einem Pol über drei Strombahnen in Reihe

<sup>2)</sup> Für 3-polige Anlagenschutzschalter gilt: 690V

## BREAKING CAPACITY - MC3

Bemessungsdauerstrom max.300A

|                                                                          |                  | MC2 - 25kA                       | MC2 - 50kA | MC2 - 150kA |
|--------------------------------------------------------------------------|------------------|----------------------------------|------------|-------------|
| <b>Bemessungskurzschlusseinschaltvermögen <math>I_{cm}</math></b>        |                  |                                  |            |             |
| 240V                                                                     |                  | 63kA                             | 187kA      | 330kA       |
| 400/415V                                                                 |                  | 53kA                             | 105kA      | 330kA       |
| 440V                                                                     |                  | 53kA                             | 74kA       | 286kA       |
| 525V                                                                     |                  | -                                | 53kA       | 105kA       |
| 690V                                                                     |                  | -                                | 40kA       | 40kA        |
| <b>Bemessungskurzschlussausschaltvermögen <math>I_{cn}/I_{cs}</math></b> |                  |                                  |            |             |
| Icu nach IEC/EN 60947<br>Schaltfolge O-I-CO                              | 240V 50/60 Hz    | 30kA                             | 85kA       | 150kA       |
|                                                                          | 400/415V 50/60Hz | 25kA                             | 50kA       | 150kA       |
|                                                                          | 440V 50/60Hz     | 25kA                             | 35kA       | 130kA       |
|                                                                          | 525V 50/60Hz     | -                                | 25kA       | 50kA        |
|                                                                          | 690V 50/60Hz     | -                                | 20kA       | 20kA        |
|                                                                          | 500V DC          | -                                | 30kA       | 60kA        |
|                                                                          | 750V DC          | -                                | 30kA       | 60kA        |
| Ics nach IEC/EN 60947<br>Schaltfolge O-I-CO-I-CO                         | 240V 50/60Hz     | 30kA                             | 85kA       | 150kA       |
|                                                                          | 400/415V 50/60Hz | 25kA                             | 50kA       | 150kA       |
|                                                                          | 440V 50/60Hz     | 18,5kA                           | 35kA       | 130kA       |
|                                                                          | 525V 50/60Hz     | -                                | 25kA       | 37,5kA      |
|                                                                          | 690V 50/60Hz     | -                                | 5kA        | 5kA         |
| maximale NH-Sicherung $\leq 1600A$                                       |                  | 355A gG/gL                       |            |             |
| <b>Gebrauchskategorie nach IEC/EN 60947-2</b>                            |                  | A                                | A          | A           |
| <b>Bemessungskurzzeitstromfestigkeit <math>I_{cw}</math></b>             |                  |                                  |            |             |
| t = 0,3s                                                                 |                  | -                                | 1,9kA      | 1,9kA       |
| t = 1s                                                                   |                  | -                                | 1,9kA      | 1,9kA       |
| <b>Bemessungsein- und - ausschaltvermögen <math>I_e</math></b>           |                  |                                  |            |             |
| Bemessungsbetriebsstrom                                                  | AC-1             | 400/415V 50/60Hz                 | 250A       | 250A        |
|                                                                          |                  | 690V 50/60Hz                     | 250A       | 250A        |
|                                                                          | AC-3             | 400/415V 50/60Hz                 | 250A       | 250A        |
|                                                                          |                  | 690V 50/60Hz                     | 250A       | 250A        |
|                                                                          | DC-1             | 500V DC mit thermischen Auslöser | -          | 250A        |
|                                                                          |                  | 750V DC mit thermischen Auslöser | -          | 250A        |
|                                                                          | DC-3             | 500V DC mit thermischen Auslöser | -          | 250A        |
|                                                                          |                  | 750V DC mit thermischen Auslöser | -          | 250A        |

## LIFETIME - MC3

| Bemessungsdauerstrom max. 630A                                   |            |            |             |
|------------------------------------------------------------------|------------|------------|-------------|
|                                                                  | MC3 - 36kA | MC3 - 50kA | MC3 - 150kA |
| <b>Lebensdauer, mechanisch (Schaltspiele)</b>                    | 15000      | 15000      | 15000       |
| <b>Maximale Schalthäufigkeit</b>                                 | 60 S/h     | 60 S/h     | 60 S/h      |
| <b>Lebensdauer, elektrisch (Schaltspiele)</b>                    |            |            |             |
| AC-1 400/415V 50/60Hz                                            | 5000       | 5000       | 5000        |
| 690V 50/60Hz                                                     | 3000       | 3000       | 3000        |
| AC-3 400/415V 50/60Hz                                            | 2000       | 2000       | 2000        |
| 690V 50/60Hz                                                     | 2000       | 2000       | 2000        |
| DC-1 500V mit thermischem Auslöser                               | -          | 5000       | 5000        |
| 750V mit thermischem Auslöser                                    | -          | 5000       | 5000        |
| DC-3 500V mit thermischem Auslöser                               | -          | 2000       | 2000        |
| 750V mit thermischem Auslöser                                    | -          | 2000       | 2000        |
| <b>Stromwärmeverluste je Pol bei I<sub>N</sub> <sup>1)</sup></b> | 31W        | 31W        | 31W         |
| <b>Gesamtausschaltzeit im Kurzschlussfall</b>                    | <10ms      | <10ms      | <10ms       |

<sup>1)</sup> Bei Stromwärmeverluste je Pol beziehen sich die Angaben auf den maximalen Nennstrom der Baugröße.

## WEIGHT - MC1

ACTIVE POWER DISSIPATION

| $I_n$ [A] | MC1 - Leistungsschalter |         |             |         | MC2 - Leistungsschalter |         |             |         | MC3 - Leistungsschalter |         |             |         |
|-----------|-------------------------|---------|-------------|---------|-------------------------|---------|-------------|---------|-------------------------|---------|-------------|---------|
|           | Anlagenschutz           |         | Motorschutz |         | Anlagenschutz           |         | Motorschutz |         | Anlagenschutz           |         | Motorschutz |         |
|           | P [W]                   | R [Ohm] | P [W]       | R [Ohm] | P [W]                   | R [Ohm] | P [W]       | R [Ohm] | P [W]                   | R [Ohm] | P [W]       | R [Ohm] |
|           |                         |         |             |         |                         |         |             |         |                         |         |             |         |

## CONNECTION CROSS SECTIONS

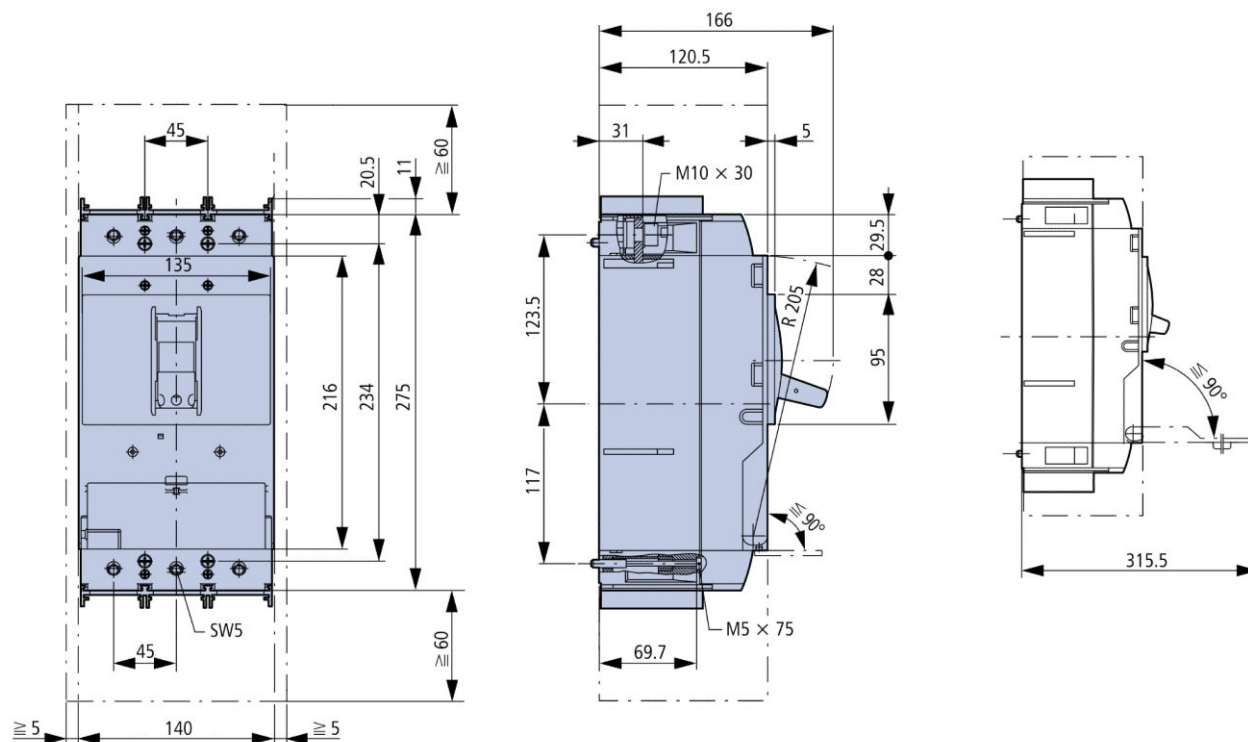
|                                                           |          |                               |                                              | MC3                                                      | I <sub>n</sub> <sup>1)</sup> |
|-----------------------------------------------------------|----------|-------------------------------|----------------------------------------------|----------------------------------------------------------|------------------------------|
| Standard equipment                                        |          |                               |                                              | Screw connection                                         | -                            |
| Accessories                                               |          |                               |                                              | Box terminal<br>Tunnel terminals<br>Rear-side connection |                              |
| Cu-conductors, Cu-cable                                   |          |                               |                                              |                                                          |                              |
| Box terminal                                              | solid    | 2 x 16mm <sup>2</sup>         |                                              |                                                          | 500A                         |
|                                                           | stranded | 1 x (35 - 240)mm <sup>2</sup> |                                              |                                                          |                              |
|                                                           |          | 2 x (25 - 120)mm <sup>2</sup> |                                              |                                                          |                              |
| Tunnel terminal                                           | solid    | -                             |                                              |                                                          | -                            |
|                                                           | stranded | 1-hole                        | 1 x (25-185)mm <sup>2</sup>                  |                                                          | 350A                         |
|                                                           |          | 2-hole                        | 1 x (50 - 240)mm <sup>2</sup>                |                                                          | 630A                         |
|                                                           |          | 2 x (50 - 240)mm <sup>2</sup> |                                              | 2 x 185A                                                 |                              |
|                                                           |          | 4-hole                        | -                                            |                                                          | -                            |
| Screw connection and Rear-side connection                 |          |                               |                                              |                                                          |                              |
| directly on switch                                        | solid    | 1 x 16mm <sup>2</sup>         |                                              |                                                          | 630A2 x 185A                 |
|                                                           |          | 2 x 16mm <sup>2</sup>         |                                              |                                                          |                              |
|                                                           | stranded | 1 x (25 - 240)mm <sup>2</sup> |                                              |                                                          |                              |
|                                                           |          | 2 x (25 - 240)mm <sup>2</sup> |                                              |                                                          |                              |
| Module plate                                              | 1-hole   | min.                          | -                                            |                                                          | -                            |
|                                                           |          | max.                          | -                                            |                                                          | -                            |
| Module plate                                              | 2-hole   | min.                          | -                                            |                                                          | -                            |
|                                                           |          | max.                          | -                                            |                                                          | -                            |
| Connection extension                                      |          |                               |                                              | 2 x 300mm <sup>2</sup>                                   | 630A2x185                    |
| Al-conductors, Al-cable                                   |          |                               |                                              |                                                          |                              |
| Tunnel terminal                                           | solid    | 1 x 16mm <sup>2</sup>         |                                              |                                                          | 350A                         |
|                                                           | stranded | 1-hole                        | 1 x (25 - 185) <sup>2)</sup> mm <sup>2</sup> |                                                          |                              |
|                                                           |          | 2-hole                        | 1 x (50 - 240)mm <sup>2</sup>                |                                                          | 630A                         |
|                                                           |          | 2 x (50-240)mm <sup>2</sup>   |                                              |                                                          |                              |
|                                                           |          | 4-hole                        | -                                            |                                                          | -                            |
| Screw connection and Rear-side connection                 |          |                               |                                              |                                                          |                              |
| directly on switch                                        | solid    | 1 x 16mm <sup>2</sup>         |                                              |                                                          | 400A                         |
|                                                           |          | 2 x (10 - 16)mm <sup>2</sup>  |                                              |                                                          |                              |
|                                                           | stranded | 1 x (25 - 120)mm <sup>2</sup> |                                              |                                                          |                              |
|                                                           |          | 2 x (25 - 120)mm <sup>2</sup> |                                              |                                                          |                              |
| Module plate                                              | 1-hole   | min.                          | -                                            |                                                          | -                            |
|                                                           |          | max.                          | -                                            |                                                          | -                            |
| Module plate                                              | 2-hole   | -                             |                                              |                                                          | -                            |
| Connection extension                                      |          |                               |                                              | -                                                        | -                            |
| Cu-strip (number of segments x width x segment thickness) |          |                               |                                              |                                                          |                              |
| Box terminal                                              |          | min.                          | 6 x 16 x 0,8mm                               |                                                          | 630A                         |
|                                                           |          | max.                          | 10 x 24 x 1,0mm                              |                                                          |                              |
|                                                           |          |                               | +5 x 24 x 1,0mm                              |                                                          |                              |
|                                                           |          |                               | (2x) 8 x 24 x1,0mm                           |                                                          |                              |
| Flat conductor terminal, basic                            |          | min.                          | -                                            |                                                          | -                            |
|                                                           |          | max.                          | -                                            |                                                          | -                            |

|                                           |        |      |                      |
|-------------------------------------------|--------|------|----------------------|
| Module plate                              | 1-hole | -    | -                    |
| Screw connection and Rear-side connection |        |      |                      |
| Cu-strip, with holes                      |        | min. | 6 x 16 x 0,8mm       |
|                                           |        | max. | 10 x 32 x 1,0mm      |
|                                           |        |      | +5 x 32 x 1,0mm      |
| Connection extension                      |        |      | (2x) 10 x 50 x 1,0mm |
| <b>Cu-rail (width x thickness)</b>        |        |      |                      |
| Screw connection and Rear-side connection |        |      |                      |
| Screw connection                          |        | M10  | -                    |
| directly on switch                        |        | min. | 20 x 5mm             |
|                                           |        | max. | 30 x 10mm            |
|                                           |        |      | +30 x 5mm            |
| Module plate                              | 1-hole | min. | -                    |
|                                           |        | max. | -                    |
| Module plate                              | 2-hole | -    | -                    |
| Connection extension                      |        | min. | -                    |
|                                           |        | max. | 2 x (10 x 50)        |

**Notes:** 1) The rated currents  $I_n$  have been calculated in accordance with IEC/EN 60947 (protection devices standard) and generally relate to the max. specified cross-sections and are used here for the purpose of orientation. The design standards which apply in each case must be observed.

2) Depending on the cable manufacturer up to 240mm<sup>2</sup> can be connected.

## Mjerne skice: Kompaktni prekidač snage tip A, 3P/320A/50kA





Kompaktni prekidač snage tip A, 3P/320A/50kA

Veličina 3, Nazivna struja 320A, Polovi 3, IP stupanj zaštite IP20, Kratkospojna prekidna moć 50kA, Okidač A termo-magnetska zaštita instalacija i kabela MC332231