

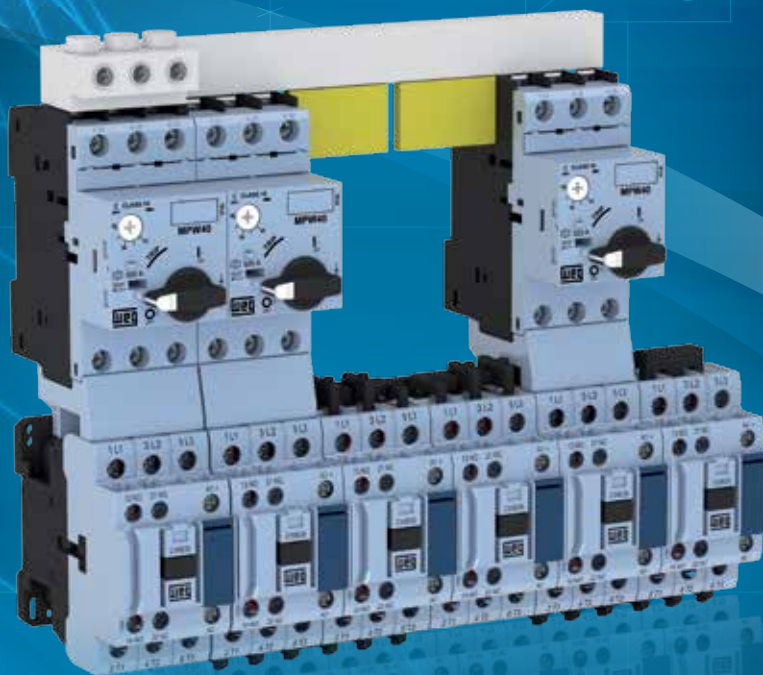


Controls



MOTOR STARTER GUIDE

(up to 18.5kw)



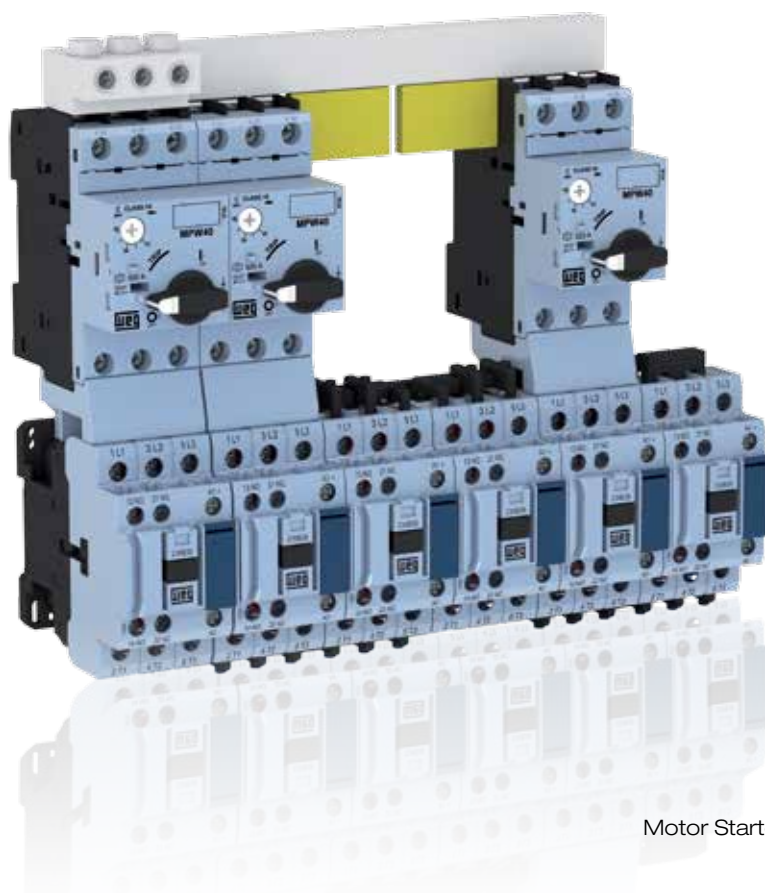


MOTOR STARTER GUIDE

(up to 18.5kw)

Summary

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Motor Starters

Complementing the new CWB line of contactors, WEG is also launching the 45 mm wide motor protective circuit breakers, MPW40 of 0.16 to 40 A and MPW18 of 0.16 up to 18 A, and the thermal overload relay RW27-2D of 0.28 to 40 A, with the same visual pattern and identity of the WEG brand.

With the new CWB line of contactors, MPW motor protective circuit breaker and the RW27-2D thermal overload relay, WEG now offers a complete and compact line of starters that stands out on the market with:

Easy Installation

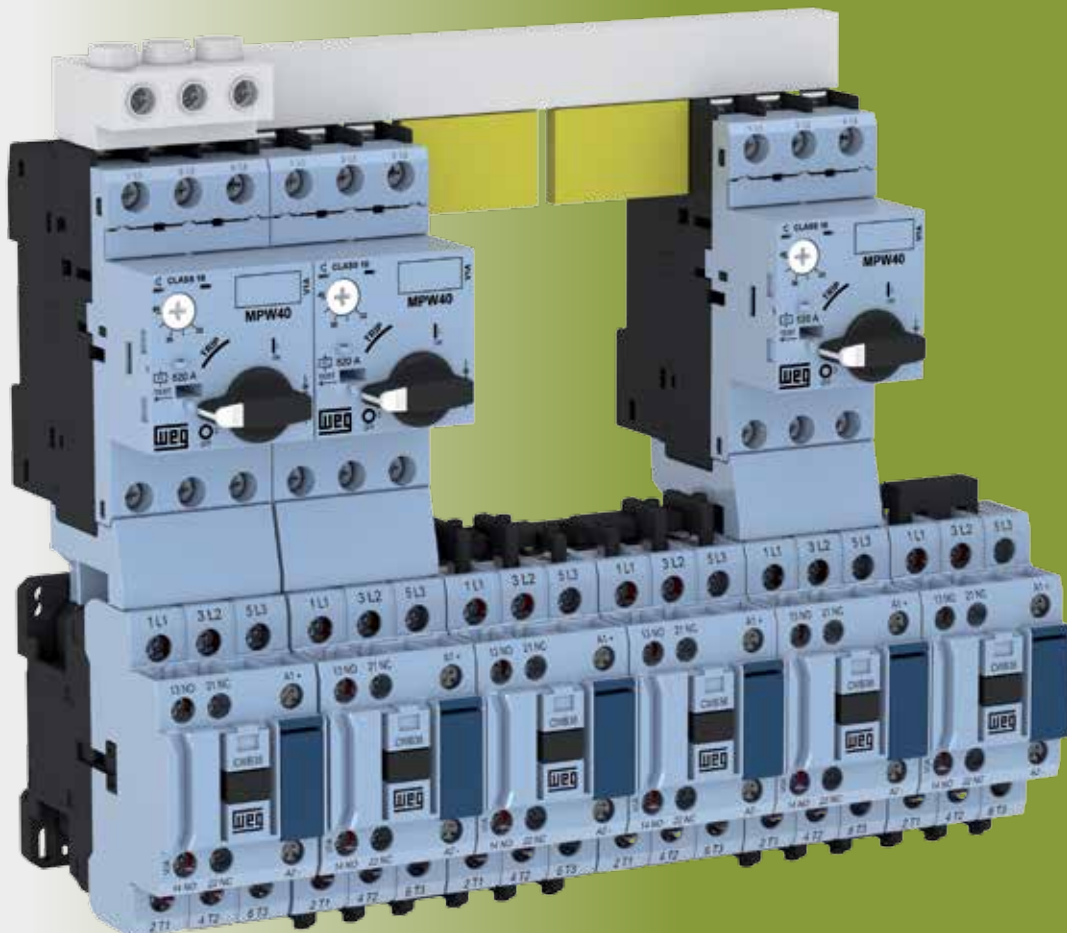
- CWB contactors, overload relays and motor protective circuit breakers in compact design up to 38 A (18.5 kW @ 380/415 V)
- Easy connection busbars and connectors for DOL, reversing and star-delta starters saving assembly time
- Easy combination among all starter components
- Contactors with built-in 1NO + 1NC auxiliary contacts

Easy Operation

- High performance and reliability for a wide variety of applications
- Energy savings
- No inrush current on pick-up for DC operated contactors
- Integrated overload and/or short-circuit protection (when using MPW)

Easy Panel Optimization

- 45 mm up to 38 A
- 9 mm wide side auxiliary contact blocks
- Very compact starters
- Mechanical interlock with “zero” additional side space
- Simple and reliable components

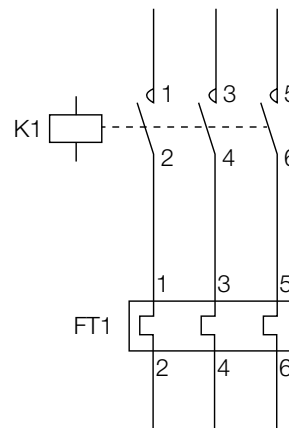




Direct On Line Starter

CWB Contactor + RW27-2D Thermal Overload Relay

- Hand / auto / reset button
- Overload protection
- Allows assembly on a DIN rail by fixing a single component
- Remote load switching
- Phase-loss sensitivity
- Tripping class 10
- Temperature compensation



| Motor current I_n A | Contactor AC-3 | | Overload relay | | CWB + RW27-2D | | Total weight kg |
|--------------------------|----------------|---------------------------------|----------------|---------------------------------|--|--|--------------------|
| | Reference code | Maximum rated current AC-3 A | Reference code | Setting overload release I A | Maximum gL/gG fuse (type 1 coordination) A | Maximum gL/gG fuse (type 2 coordination) A | |
| 0.28...0.4 | CWB9-11-30◆ | 9 | RW27-2D3-D004 | 0.28...0.4 | 2 | 2 | 0.57 |
| 0.43...0.63 | CWB9-11-30◆ | 9 | RW27-2D3-C063 | 0.43...0.63 | 2 | 2 | 0.57 |
| 0.56...0.8 | CWB9-11-30◆ | 9 | RW27-2D3-D008 | 0.56...0.8 | 2 | 2 | 0.57 |
| 0.8...1.2 | CWB9-11-30◆ | 9 | RW27-2D3-D012 | 0.8...1.2 | 4 | 4 | 0.57 |
| 1.2...1.8 | CWB9-11-30◆ | 9 | RW27-2D3-D018 | 1.2...1.8 | 6 | 6 | 0.57 |
| 1.8...2.8 | CWB9-11-30◆ | 9 | RW27-2D3-D028 | 1.8...2.8 | 6 | 6 | 0.57 |
| 2.8...4 | CWB9-11-30◆ | 9 | RW27-2D3-U004 | 2.8...4 | 10 | 10 | 0.57 |
| 4...6.3 | CWB9-11-30◆ | 9 | RW27-2D3-D063 | 4...6.3 | 16 | 16 | 0.57 |
| 5.6...8 | CWB9-11-30◆ | 9 | RW27-2D3-U008 | 5.6...8 | 20 | 20 | 0.57 |
| 7...9 | CWB9-11-30◆ | 9 | RW27-2D3-U010 | 7...10 | 25 | 25 | 0.57 |
| 8...12 | CWB12-11-30◆ | 12 | RW27-2D3-D125 | 8...12.5 | 25 | 25 | 0.57 |
| 10...15 | CWB18-11-30◆ | 18 | RW27-2D3-U015 | 10...15 | 35 | 35 | 0.57 |
| 11...17 | CWB18-11-30◆ | 18 | RW27-2D3-U017 | 11...17 | 40 | 35 | 0.57 |
| 15...23 | CWB25-11-30◆ | 25 | RW27-2D3-U023 | 15...23 | 50 | 50 | 0.57 |
| 22...32 | CWB32-11-30◆ | 32 | RW27-2D3-U032 | 22...32 | 63 | 63 | 0.57 |
| 25...38 | CWB38-11-30◆ | 38 | RW27-2D3-U040 | 25...40 | 90 | 80 | 0.57 |

Notes: Orientative values valid for operational voltages up to 440 V, site altitude up to 2000 m, temperature range of -20 °C...+55 °C and maximum switching frequency up to 15 operations/hour.

For other conditions verify technical data of each individual component.

Find orientative diagrams on pages D-12 to D-14 and information related to the motor current on pages D-20 and D-21.

To complete the reference code, replace “◆” by the appropriate coil voltage code

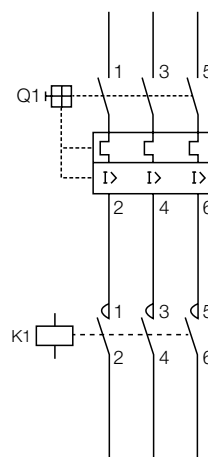
| Coil voltage code | D02 | D07 | D13 | D15 | D17 | D77 | D23 | D24 | D25 | D33 | D34 | D35 | D36 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V (50/60 Hz) | 24 | 48 | 110 | 120 | 127 | 208 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |

| Coil voltage code | C02 | C03 | C07 | C09 | C12 | C13 | C15 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|
| V dc | 12 | 24 | 48 | 60 | 110 | 125 | 220 |



MPW18 Motor Protective Circuit Breaker + CWB Contactor

- Supply disconnecting device acc. to IEC 60204-1
- Pushbutton operated
- Short-circuit protection
- High short-circuit breaking capacity
- Fixed short-circuit release $13xI_n$
- Overload protection
- Allows assembly on a DIN rail by fixing a single component
- Remote load switching
- Phase-loss sensitivity
- Tripping class 10
- Temperature compensation



| Motor current I_n A | Contactor AC-3 | | Motor protective circuit breaker | | | Accessories | Total weight kg |
|--------------------------|----------------|---------------------------------|----------------------------------|---------------------------------|---|--------------------------------|--------------------|
| | Reference code | Maximum rated current AC-3 A | Reference code | Setting overload release I A | Instantaneous magnetic trip I_{rm} A | Link module | |
| 0.1...0.16 | CWB9-11-30◆ | 9 | MPW18-3-C016 | 0.1...0.16 | 2.0 | ECCMP-18B38 (CWB - AC coil) | 0.71 |
| 0.16...0.25 | CWB9-11-30◆ | 9 | MPW18-3-C025 | 0.16...0.25 | 3.2 | | 0.71 |
| 0.25...0.4 | CWB9-11-30◆ | 9 | MPW18-3-D004 | 0.25...0.4 | 5.2 | | 0.71 |
| 0.4...0.63 | CWB9-11-30◆ | 9 | MPW18-3-C063 | 0.4...0.63 | 8.1 | | 0.71 |
| 0.63...1 | CWB9-11-30◆ | 9 | MPW18-3-U001 | 0.63...1 | 13 | | 0.71 |
| 1...1.6 | CWB9-11-30◆ | 9 | MPW18-3-D016 | 1...1.6 | 20.8 | | 0.71 |
| 1.6...2.5 | CWB9-11-30◆ | 9 | MPW18-3-D025 | 1.6...2.5 | 32.5 | | 0.71 |
| 2.5...4 | CWB9-11-30◆ | 9 | MPW18-3-U004 | 2.5...4 | 52 | | 0.71 |
| 4...6.3 | CWB9-11-30◆ | 9 | MPW18-3-D063 | 4...6.3 | 81.9 | | 0.71 |
| 6.3...10 | CWB12-11-30◆ | 12 | MPW18-3-U010 | 6.3...10 | 130 | | 0.71 |
| 10...16 | CWB18-11-30◆ | 18 | MPW18-3-U016 | 10...16 | 208 | | 0.71 |
| 16...18 | CWB18-11-30◆ | 18 | MPW18-3-U020 | 16...20 | 260 | | 0.71 |

Notes: Orientative values valid for operational voltages up to 440 V, site altitude up to 2000 m, temperature range of -20 °C...+55 °C and maximum switching frequency up to 15 operations/hour.

For other conditions verify technical data of each individual component.

Find orientative diagrams on pages D-12 to D-14 and information related to the motor current on pages D-20 and D-21.

To complete the reference code, replace “◆” by the appropriate coil voltage code

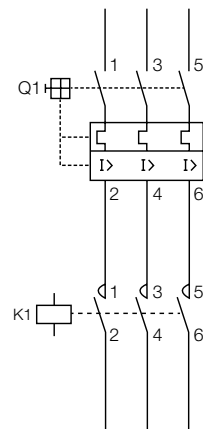
| Coil voltage code | D02 | D07 | D13 | D15 | D17 | D77 | D23 | D24 | D25 | D33 | D34 | D35 | D36 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V (50/60 Hz) | 24 | 48 | 110 | 120 | 127 | 208 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |

| Coil voltage code | C02 | C03 | C07 | C09 | C12 | C13 | C15 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|
| V dc | 12 | 24 | 48 | 60 | 110 | 125 | 220 |



MPW40 Motor Protective Circuit Breaker + CWB Contactor

- Supply disconnecting device acc. to IEC 60204-1
- Rotary handle operated
- Short-circuit protection
- High short-circuit breaking capacity
- Fixed short-circuit release $13 \times I_n$
- Overload protection
- Allows assembly on a DIN rail by fixing a single component
- Remote load switching
- Phase-loss sensitivity
- Tripping class 10
- Temperature compensation



| Motor current I_n A | Contactor AC-3 | | Motor protective circuit breaker | | | Accessories | Total weight kg |
|--------------------------|----------------|---------------------------------|----------------------------------|---------------------------------|---|-------------------------------|--------------------|
| | Reference code | Maximum rated current AC-3 A | Reference code | Setting overload release I A | Instantaneous magnetic trip I_{rm} A | Link module | |
| 0.1...0.16 | CWB9-11-30◆ | 9 | MPW40-3-C016 | 0.1...0.16 | 2.0 | ECCMP-40B38 (CWB - AC coil) | 0.79 |
| 0.16...0.25 | CWB9-11-30◆ | 9 | MPW40-3-C025 | 0.16...0.25 | 3.2 | | 0.79 |
| 0.25...0.4 | CWB9-11-30◆ | 9 | MPW40-3-D004 | 0.25...0.4 | 5.2 | | 0.79 |
| 0.4...0.63 | CWB9-11-30◆ | 9 | MPW40-3-C063 | 0.4...0.63 | 8.1 | | 0.79 |
| 0.63...1 | CWB9-11-30◆ | 9 | MPW40-3-U001 | 0.63...1 | 13 | | 0.79 |
| 1...1.6 | CWB9-11-30◆ | 9 | MPW40-3-D016 | 1...1.6 | 20.8 | | 0.79 |
| 1.6...2.5 | CWB9-11-30◆ | 9 | MPW40-3-D025 | 1.6...2.5 | 32.5 | | 0.79 |
| 2.5...4 | CWB9-11-30◆ | 9 | MPW40-3-U004 | 2.5...4 | 52 | ECCMP-40B38DC (CWB - DC coil) | 0.79 |
| 4...6.3 | CWB9-11-30◆ | 9 | MPW40-3-D063 | 4...6.3 | 81.9 | | 0.79 |
| 6.3...10 | CWB12-11-30◆ | 12 | MPW40-3-U010 | 6.3...10 | 130 | | 0.79 |
| 10...16 | CWB18-11-30◆ | 18 | MPW40-3-U016 | 10...16 | 208 | | 0.79 |
| 16...20 | CWB25-11-30◆ | 25 | MPW40-3-U020 | 16...20 | 260 | | 0.79 |
| 20...25 | CWB25-11-30◆ | 25 | MPW40-3-U025 | 20...25 | 325 | | 0.79 |
| 25...32 | CWB32-11-30◆ | 32 | MPW40-3-U032 | 25...32 | 416 | | 0.79 |
| 32...38 | CWB38-11-30◆ | 38 | MPW40-3-U040 | 32...40 | 520 | | 0.79 |

Notes: Orientative values valid for operational voltages up to 440 V, site altitude up to 2000 m, temperature range of -20 °C...+55 °C and maximum switching frequency up to 15 operations/hour.

For other conditions verify technical data of each individual component.

Find orientative diagrams on pages D-12 to D-14 and information related to the motor current on pages D-20 and D-21.

To complete the reference code, replace “◆” by the appropriate coil voltage code

| Coil voltage code | D02 | D07 | D13 | D15 | D17 | D77 | D23 | D24 | D25 | D33 | D34 | D35 | D36 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V (50/60 Hz) | 24 | 48 | 110 | 120 | 127 | 208 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |

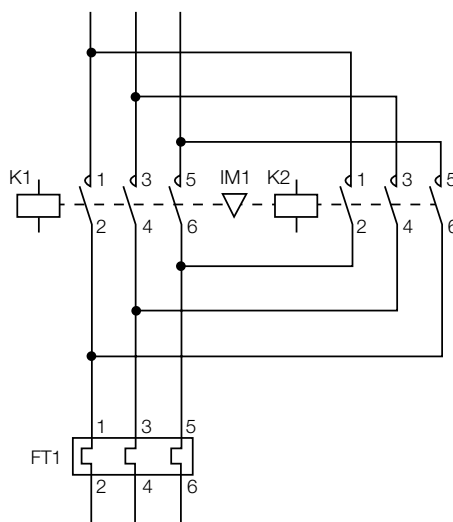
| Coil voltage code | C02 | C03 | C07 | C09 | C12 | C13 | C15 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|
| V dc | 12 | 24 | 48 | 60 | 110 | 125 | 220 |



Reversing Starter

CWB Contactors + RW27-2D Thermal Overload Relay

- Hand / auto / reset button
- Overload protection
- Allows assembly on a DIN rail by fixing a single component
- Remote load switching
- Phase-loss sensitivity
- Tripping class 10
- Temperature compensation



| Motor current I_n A | Contactor AC-3 | | Overload relay | | Accessories | | CWB + RW27-2D | | Total weight kg |
|--------------------------|----------------|---------------------------------|----------------|---------------------------------|--------------------------|-------------------------|---|---|--------------------|
| | Reference code | Maximum rated current AC-3 A | Reference code | Setting overload release I A | Mechanical interlock kit | Easy connection busbars | Maximum gL/gG fuse (type 1 coordination) A | Maximum gL/gG fuse (type 2 coordination) A | |
| 0.28...0.4 | CWB9-11-30◆ | 9 | RW27-2D3-D004 | 0.28...0.4 | IM1 | EC-R1 | 2 | 2 | 1.02 |
| 0.43...0.63 | CWB9-11-30◆ | 9 | RW27-2D3-C063 | 0.43...0.63 | | | 2 | 2 | 1.02 |
| 0.56...0.8 | CWB9-11-30◆ | 9 | RW27-2D3-D008 | 0.56...0.8 | | | 2 | 2 | 1.02 |
| 0.8...1.2 | CWB9-11-30◆ | 9 | RW27-2D3-D012 | 0.8...1.2 | | | 4 | 4 | 1.02 |
| 1.2...1.8 | CWB9-11-30◆ | 9 | RW27-2D3-D018 | 1.2...1.8 | | | 6 | 6 | 1.02 |
| 1.8...2.8 | CWB9-11-30◆ | 9 | RW27-2D3-D028 | 1.8...2.8 | | | 6 | 6 | 1.02 |
| 2.8...4 | CWB9-11-30◆ | 9 | RW27-2D3-U004 | 2.8...4 | | | 10 | 10 | 1.02 |
| 4...6.3 | CWB9-11-30◆ | 9 | RW27-2D3-D063 | 4...6.3 | | | 16 | 16 | 1.02 |
| 5.6...8 | CWB9-11-30◆ | 9 | RW27-2D3-U008 | 5.6...8 | | | 20 | 20 | 1.02 |
| 7...9 | CWB9-11-30◆ | 9 | RW27-2D3-U010 | 7...10 | | | 25 | 25 | 1.02 |
| 8...12 | CWB12-11-30◆ | 12 | RW27-2D3-D125 | 8...12.5 | | | 25 | 25 | 1.02 |
| 10...15 | CWB18-11-30◆ | 18 | RW27-2D3-U015 | 10...15 | | | 35 | 35 | 1.02 |
| 11...17 | CWB18-11-30◆ | 18 | RW27-2D3-U017 | 11...17 | | | 40 | 35 | 1.02 |
| 15...23 | CWB25-11-30◆ | 25 | RW27-2D3-U023 | 15...23 | | | 50 | 50 | 1.03 |
| 22...32 | CWB32-11-30◆ | 32 | RW27-2D3-U032 | 22...32 | | | 63 | 63 | 1.03 |
| 25...38 | CWB38-11-30◆ | 38 | RW27-2D3-U040 | 25...40 | | | 90 | 80 | 1.03 |

Notes: Orientative values valid for operational voltages up to 440 V, site altitude up to 2000 m, temperature range of -20 °C...+55 °C and maximum switching frequency up to 15 operations/hour.

For other conditions verify technical data of each individual component.

Find orientative diagrams on pages D-12 to D-14 and information related to the motor current on pages D-20 and D-21.

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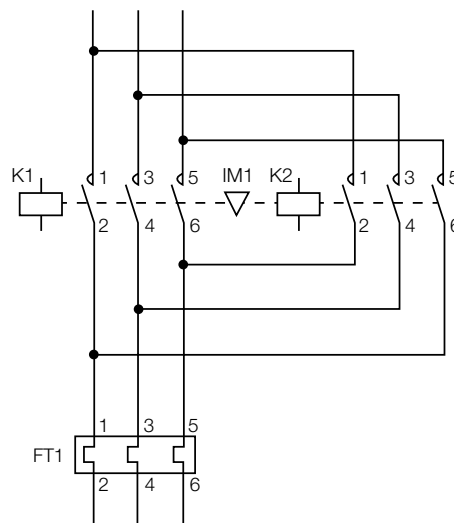
| Coil voltage code | D02 | D07 | D13 | D15 | D17 | D77 | D23 | D24 | D25 | D33 | D34 | D35 | D36 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V (50/60 Hz) | 24 | 48 | 110 | 120 | 127 | 208 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |

| Coil voltage code | C02 | C03 | C07 | C09 | C12 | C13 | C15 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|
| V dc | 12 | 24 | 48 | 60 | 110 | 125 | 220 |



MPW18 Motor Protective Circuit Breaker + CWB Contactors

- Supply disconnecting device acc. to IEC 60204-1
- Pushbutton operated
- Short-circuit protection
- High short-circuit breaking capacity
- Fixed short-circuit release $13 \times I_u$
- Overload protection
- Allows assembly on a DIN rail by fixing a single component
- Remote load switching
- Phase-loss sensitivity
- Tripping class 10
- Temperature compensation



| Motor current I_n A | Contactor AC-3 | | Motor protective circuit breaker | | | Accessories | | | Total weight kg |
|--------------------------|----------------|---------------------------------|----------------------------------|---------------------------------|---|-------------------------------|--------------------------|-------------------------|--------------------|
| | K1 = K2 | Maximum rated current AC-3 A | Reference code | Setting overload release I A | Instantaneous magnetic trip I_{rm} A | Link module | Mechanical interlock kit | Easy connection busbars | |
| 0.1...0.16 | CWB9-11-30◆ | 9 | MPW18-3-C016 | 0.1...0.16 | 2.0 | ECCMP18B38 (CWB - AC coil) | IM1 | EC-R1 | 1.138 |
| 0.16...0.25 | CWB9-11-30◆ | 9 | MPW18-3-C025 | 0.16...0.25 | 3.2 | | | | 1.138 |
| 0.25...0.4 | CWB9-11-30◆ | 9 | MPW18-3-D004 | 0.25...0.4 | 5.2 | | | | 1.138 |
| 0.4...0.63 | CWB9-11-30◆ | 9 | MPW18-3-C063 | 0.4...0.63 | 8.1 | | | | 1.138 |
| 0.63...1 | CWB9-11-30◆ | 9 | MPW18-3-U001 | 0.63...1 | 13 | | | | 1.138 |
| 1...1.6 | CWB9-11-30◆ | 9 | MPW18-3-D016 | 1...1.6 | 20.8 | | | | 1.138 |
| 1.6...2.5 | CWB9-11-30◆ | 9 | MPW18-3-D025 | 1.6...2.5 | 32.5 | | | | 1.138 |
| 2.5...4 | CWB9-11-30◆ | 9 | MPW18-3-U004 | 2.5...4 | 52 | | | | 1.138 |
| 4...6.3 | CWB9-11-30◆ | 9 | MPW18-3-D063 | 4...6.3 | 81.9 | | | | 1.138 |
| 6.3...10 | CWB12-11-30◆ | 12 | MPW18-3-U010 | 6.3...10 | 130 | | | | 1.138 |
| 10...16 | CWB18-11-30◆ | 18 | MPW18-3-U016 | 10...16 | 208 | | | | 1.138 |
| 16...18 | CWB18-11-30◆ | 18 | MPW18-3-U020 | 16...20 | 260 | | | | 1.138 |

Notes: Orientative values valid for operational voltages up to 440 V, site altitude up to 2000 m, temperature range of -20 °C...+55 °C and maximum switching frequency up to 15 operations/hour.

For other conditions verify technical data of each individual component.

Find orientative diagrams on pages D-12 to D-14 and information related to the motor current on pages D-20 and D-21.

To complete the reference code, replace “◆” by the appropriate coil voltage code

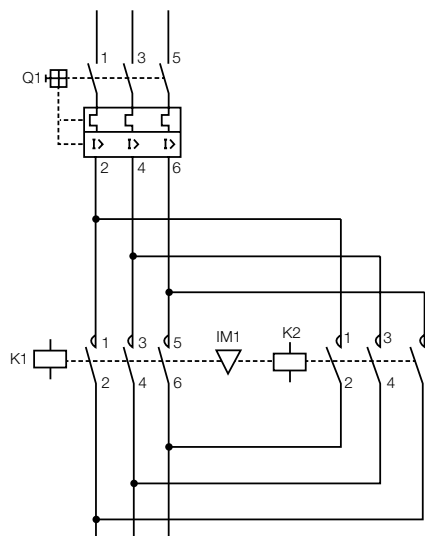
| Coil voltage code | D02 | D07 | D13 | D15 | D17 | D77 | D23 | D24 | D25 | D33 | D34 | D35 | D36 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V (50/60 Hz) | 24 | 48 | 110 | 120 | 127 | 208 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |

| Coil voltage code | C02 | C03 | C07 | C09 | C12 | C13 | C15 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|
| V dc | 12 | 24 | 48 | 60 | 110 | 125 | 220 |



MPW40 Motor Protective Circuit Breaker + CWB Contactors

- Supply disconnecting device acc. to IEC 60204-1
- Rotary handle operated
- Short-circuit protection
- High short-circuit breaking capacity
- Fixed short-circuit release 13xlu
- Overload protection
- Allows assembly on a DIN rail by fixing a single component
- Remote load switching
- Phase-loss sensitivity
- Tripping class 10
- Temperature compensation



| Motor current I_n A | Contactor AC-3 | | Motor protective circuit breaker | | | Accessories | | | Total weight kg |
|--------------------------|----------------|---------------------------------|----------------------------------|---------------------------------|---|-----------------------------|--------------------------|-------------------------|--------------------|
| | K1 = K2 | Maximum rated current AC-3 A | Reference code | Setting overload release I A | Instantaneous magnetic trip I_{rm} A | Link module | Mechanical interlock kit | Easy connection busbars | |
| 0.1...0.16 | CWB9-11-30◆ | 9 | MPW40-3-C016 | 0.1...0.16 | 2.0 | ECCMP-40B38 (CWB - AC coil) | IM1 | EC-R1 | 1.218 |
| 0.16...0.25 | CWB9-11-30◆ | 9 | MPW40-3-C025 | 0.16...0.25 | 3.2 | | | | 1.218 |
| 0.25...0.4 | CWB9-11-30◆ | 9 | MPW40-3-D004 | 0.25...0.4 | 5.2 | | | | 1.218 |
| 0.4...0.63 | CWB9-11-30◆ | 9 | MPW40-3-C063 | 0.4...0.63 | 8.1 | | | | 1.218 |
| 0.63...1 | CWB9-11-30◆ | 9 | MPW40-3-U001 | 0.63...1 | 13 | | | | 1.218 |
| 1...1.6 | CWB9-11-30◆ | 9 | MPW40-3-D016 | 1...1.6 | 20.8 | | | | 1.218 |
| 1.6...2.5 | CWB9-11-30◆ | 9 | MPW40-3-D025 | 1.6...2.5 | 32.5 | | | | 1.218 |
| 2.5...4 | CWB9-11-30◆ | 9 | MPW40-3-U004 | 2.5...4 | 52 | | | | 1.218 |
| 4...6.3 | CWB9-11-30◆ | 9 | MPW40-3-D063 | 4...6.3 | 81.9 | | | | 1.218 |
| 6.3...10 | CWB12-11-30◆ | 12 | MPW40-3-U010 | 6.3...10 | 130 | | | | 1.218 |
| 10...16 | CWB18-11-30◆ | 18 | MPW40-3-U016 | 10...16 | 208 | | | | 1.218 |
| 16...20 | CWB25-11-30◆ | 25 | MPW40-3-U020 | 16...20 | 260 | | | | 1.226 |
| 20...25 | CWB25-11-30◆ | 25 | MPW40-3-U025 | 20...25 | 325 | | | | 1.226 |
| 25...32 | CWB32-11-30◆ | 32 | MPW40-3-U032 | 25...32 | 416 | | | | 1.226 |
| 32...38 | CWB38-11-30◆ | 38 | MPW40-3-U040 | 32...40 | 520 | | | | 1.226 |

Notes: Orientative values valid for operational voltages up to 440 V, site altitude up to 2000 m, temperature range of -20 °C...+55 °C and maximum switching frequency up to 15 operations/hour.

For other conditions verify technical data of each individual component.

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To complete the reference code, replace “◆” by the appropriate coil voltage code

| Coil voltage code | D02 | D07 | D13 | D15 | D17 | D77 | D23 | D24 | D25 | D33 | D34 | D35 | D36 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V (50/60 Hz) | 24 | 48 | 110 | 120 | 127 | 208 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |

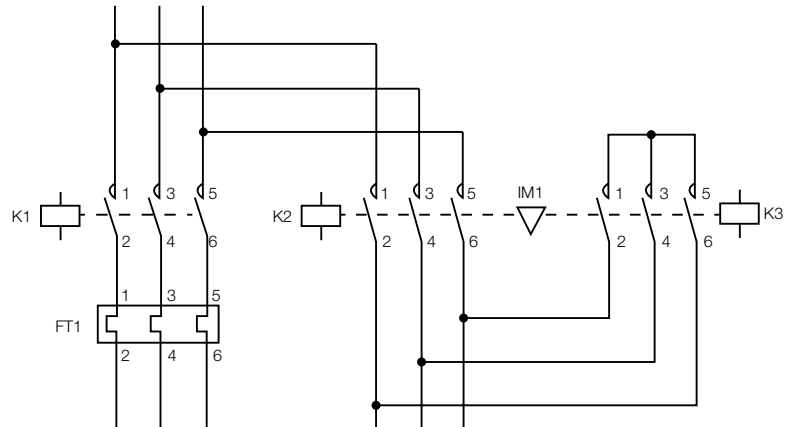
| Coil voltage code | C02 | C03 | C07 | C09 | C12 | C13 | C15 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|
| V dc | 12 | 24 | 48 | 60 | 110 | 125 | 220 |



Star-Delta Starter

CWB Contactor + RW27-2D Thermal Overload Relay

- Hand / auto / reset button
- Overload protection
- Allows assembly on a DIN rail by fixing a single component
- Remote load switching
- Phase-loss sensitivity
- Tripping class 10
- Temperature compensation



| Motor current I_n A | Contactor AC-3 | | Overload relay | | Accessories | | | CWB + RW27-2D | | Total weight kg |
|--------------------------|-----------------------------------|---------------------|----------------|---------------------------------------|-----------------------------|-------------------------------|-------------------------------------|--|--|--------------------|
| | Δ Contactor (K1 and K2) | Y Contactor (K3) | Reference code | Setting overload release I A | Mechanical interlock kit | Easy connection busbars | Electronic timer Y - Δ | Maximum gL/ gG fuse (type 1 coordination) A | Maximum gL/ gG fuse (type 2 coordination) A | |
| 0.5...0.7 | CWB9-11-30◆ | CWB9-11-30◆ | RW27-2D3-D004 | 0.28...0.4 | IM1 | EC-SD1 | RTW ET02- MATE05 | 2 | 2 | 1.12 |
| 0.7...1.1 | CWB9-11-30◆ | CWB9-11-30◆ | RW27-2D3-C063 | 0.4...0.63 | | | | 2 | 2 | 1.12 |
| 1.1...1.4 | CWB9-11-30◆ | CWB9-11-30◆ | RW27-2D3-D008 | 0.63...0.8 | | | | 2 | 2 | 1.12 |
| 1.4...2.1 | CWB9-11-30◆ | CWB9-11-30◆ | RW27-2D3-D012 | 0.8...1.2 | | | | 4 | 4 | 1.12 |
| 2.1...3.1 | CWB9-11-30◆ | CWB9-11-30◆ | RW27-2D3-D018 | 1.2...1.8 | | | | 6 | 6 | 1.12 |
| 3.1...4.8 | CWB9-11-30◆ | CWB9-11-30◆ | RW27-2D3-D028 | 1.8...2.8 | | | | 6 | 6 | 1.12 |
| 4.8...6.9 | CWB9-11-30◆ | CWB9-11-30◆ | RW27-2D3-U004 | 2.8...4 | | | | 10 | 10 | 1.12 |
| 6.9...10.9 | CWB9-11-30◆ | CWB9-11-30◆ | RW27-2D3-D063 | 4...6.3 | | | | 16 | 16 | 1.12 |
| 9.6...13.8 | CWB9-11-30◆ | CWB9-11-30◆ | RW27-2D3-U008 | 5.6...8 | | | | 20 | 20 | 1.12 |
| 12.1...17.2 | CWB12-11-30◆ | CWB9-11-30◆ | RW27-2D3-U010 | 7...10 | | | | 25 | 25 | 1.12 |
| 13.8...21.6 | CWB18-11-30◆ | CWB9-11-30◆ | RW27-2D3-D125 | 8...12.5 | | | | 25 | 25 | 1.12 |
| 17.2...25.9 | CWB18-11-30◆ | CWB9-11-30◆ | RW27-2D3-U015 | 10...15 | | | | 35 | 35 | 1.12 |
| 19...29.3 | CWB18-11-30◆ | CWB12-11-30◆ | RW27-2D3-U017 | 11...17 | | | | 40 | 35 | 1.12 |
| 25.9...39.7 | CWB25-11-30◆ | CWB18-11-30◆ | RW27-2D3-U023 | 15...23 | | | | 50 | 50 | 1.12 |
| 37.9...55.2 | CWB32-11-30◆ | CWB25-11-30◆ | RW27-2D3-U032 | 22...32 | | | | 63 | 63 | 1.13 |
| 43.1...65.5 | CWB38-11-30◆ | CWB25-11-30◆ | RW27-2D3-U040 | 25...40 | | | | 90 | 80 | 1.13 |

Notes: Orientative values valid for operational voltages up to 440 V, site altitude up to 2000 m, temperature range of -20 °C...+55 °C and maximum switching frequency up to 15 operations/hour.

For other conditions verify technical data of each individual component.

Find orientative diagrams on pages D-12 to D-14 and information related to the motor current on pages D-20 and D-21.

Electronic timer relay is not shown in the picture.

To complete the reference code, replace “◆” by the appropriate coil voltage code

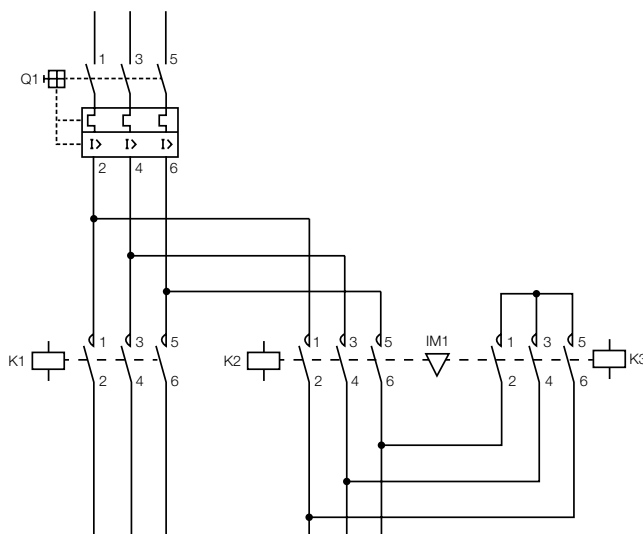
| Coil voltage code | D02 | D07 | D13 | D15 | D17 | D77 | D23 | D24 | D25 | D33 | D34 | D35 | D36 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V (50/60 Hz) | 24 | 48 | 110 | 120 | 127 | 208 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |

| Coil voltage code | C02 | C03 | C07 | C09 | C12 | C13 | C15 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|
| V dc | 12 | 24 | 48 | 60 | 110 | 125 | 220 |



MPW18 Motor Protective Circuit Breaker + CWB Contactor

- Supply disconnecting device acc. to IEC 60204-1
- Pushbutton operated
- Short-circuit protection
- High short-circuit breaking capacity
- Fixed short-circuit release $13 \times I_n$
- Overload protection
- Allows assembly on a DIN rail by fixing a single component
- Remote load switching
- Phase-loss sensitivity
- Tripping class 10
- Temperature compensation



| Motor current I_n A | Contactor AC-3 | | Motor protective circuit breaker | | | Accessories | | | | Total weight kg |
|--------------------------|-----------------------------------|------------------|----------------------------------|---------------------------------------|---|------------------------------------|-----------------------------|-------------------------------|----------------------------------|--------------------|
| | Δ Contactor (K1 and K2) | Y Contactor (K3) | Reference code | Setting overload release I A | Instantaneous magnetic trip I_{rm} A | Link module | Mechanical interlock kit | Easy connection busbars | Electronic timer Y - Δ | |
| 0.1...0.16 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-C016 | 0.1...0.16 | 2.0 | ECCMP- 18B38 (CWB - AC coil) | IM1 | EC-SD1 | RTW ET 02-MATE05 | 1.258 |
| 0.16...0.25 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-C025 | 0.16...0.25 | 3.2 | | | | | 1.258 |
| 0.25...0.4 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-D004 | 0.25...0.4 | 5.2 | | | | | 1.258 |
| 0.4...0.63 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-C063 | 0.4...0.63 | 8.1 | | | | | 1.258 |
| 0.63...1 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-U001 | 0.63...1 | 13 | | | | | 1.258 |
| 1...1.6 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-D016 | 1...1.6 | 20.8 | | | | | 1.258 |
| 1.6...2.5 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-D025 | 1.6...2.5 | 32.5 | | | | | 1.258 |
| 2.5...4 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-U004 | 2.5...4 | 52 | | | | | 1.258 |
| 4...6.3 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-D063 | 4...6.3 | 81.9 | | | | | 1.258 |
| 6.3...10 | CWB9-11-30◆ | CWB9-11-30◆ | MPW18-3-U010 | 6.3...10 | 130 | | | | | 1.258 |
| 10...16 | CWB12-11-30◆ | CWB9-11-30◆ | MPW18-3-U016 | 10...16 | 208 | | | | | 1.258 |
| 12...18 | CWB12-11-30◆ | CWB9-11-30◆ | MPW18-3-U018 | 12...18 | 260 | | | | | 1.258 |

Notes: Orientative values valid for operational voltages up to 440 V, site altitude up to 2000 m, temperature range of -20 °C...+55 °C and maximum switching frequency up to 15 operations/hour.

For other conditions verify technical data of each individual component.

Find orientative diagrams on pages D-12 to D-14 and information related to the motor current on pages D-20 and D-21.

Electronic timer relay is not shown in the picture.

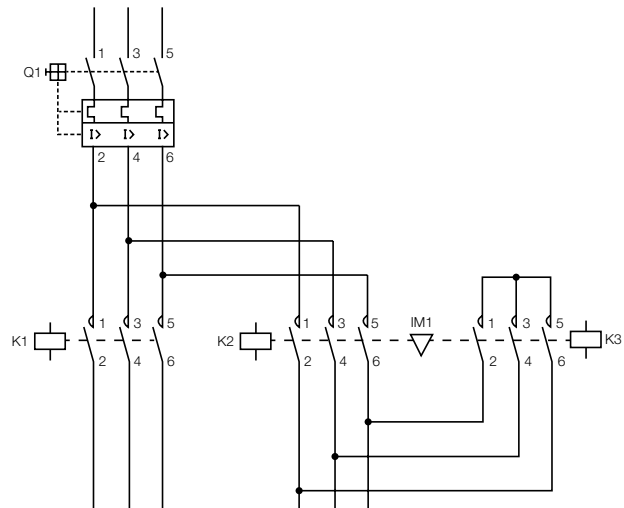
To complete the reference code, replace “◆” by the appropriate coil voltage code

| Coil voltage code | D02 | D07 | D13 | D15 | D17 | D77 | D23 | D24 | D25 | D33 | D34 | D35 | D36 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V (50/60 Hz) | 24 | 48 | 110 | 120 | 127 | 208 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |

| Coil voltage code | C02 | C03 | C07 | C09 | C12 | C13 | C15 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|
| V dc | 12 | 24 | 48 | 60 | 110 | 125 | 220 |

MPW40 Motor Protective Circuit Breaker + CWB Contactor

- Supply disconnecting device acc. to IEC 60204-1
- Rotary handle operated
- Short-circuit protection
- High short-circuit breaking capacity
- Fixed short-circuit release $13 \times I_n$
- Overload protection
- Allows assembly on a DIN rail by fixing a single component
- Remote load switching
- Phase-loss sensitivity
- Tripping class 10
- Temperature compensation



| Motor current I_n A | Contactor AC-3 | | Motor protective circuit breaker | | | Accessories | | | | Total weight kg |
|--------------------------|-----------------------------------|---------------------|----------------------------------|---------------------------------------|---|--|-----------------------------|-------------------------------|-------------------------------------|--------------------|
| | Δ Contactor (K1 and K2) | Y Contactor (K3) | Reference code | Setting overload release I A | Instantaneous magnetic trip I_{rm} A | Link module | Mechanical interlock kit | Easy connection busbars | Electronic timer Y - Δ | |
| 0.1...0.16 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-C016 | 0.1...0.16 | 2.0 | ECCMP-40B38 (CWB - AC coil) ECCMP-40B38DC (CWB - DC coil) | IM1 | EC-SD1 | RTW ET 02- MATE05 | 1.34 |
| 0.16...0.25 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-C025 | 0.16...0.25 | 3.2 | | | | | 1.34 |
| 0.25...0.4 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-D004 | 0.25...0.4 | 5.2 | | | | | 1.34 |
| 0.4...0.63 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-C063 | 0.4...0.63 | 8.1 | | | | | 1.34 |
| 0.63...1 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-U001 | 0.63...1 | 13 | | | | | 1.34 |
| 1...1.6 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-D016 | 1...1.6 | 20.8 | | | | | 1.34 |
| 1.6...2.5 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-D025 | 1.6...2.5 | 32.5 | | | | | 1.34 |
| 2.5...4 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-U004 | 2.5...4 | 52 | | | | | 1.34 |
| 4...6.3 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-D063 | 4...6.3 | 81.9 | | | | | 1.34 |
| 6.3...10 | CWB9-11-30◆ | CWB9-11-30◆ | MPW40-3-U010 | 6.3...10 | 130 | | | | | 1.34 |
| 10...16 | CWB12-11-30◆ | CWB9-11-30◆ | MPW40-3-U016 | 10...16 | 208 | | | | | 1.34 |
| 16...20 | CWB12-11-30◆ | CWB9-11-30◆ | MPW40-3-U020 | 16...20 | 260 | | | | | 1.34 |
| 20...25 | CWB18-11-30◆ | CWB9-11-30◆ | MPW40-3-U025 | 20...25 | 325 | | | | | 1.34 |
| 25...32 | CWB25-11-30◆ | CWB12-11-30◆ | MPW40-3-U032 | 25...32 | 416 | | | | | 1.34 |
| 32...40 | CWB25-11-30◆ | CWB18-11-30◆ | MPW40-3-U040 | 32...40 | 520 | | | | | 1.34 |

Notes: Orientative values valid for operational voltages up to 440 V, site altitude up to 2000 m, temperature range of -20 °C...+55 °C and maximum switching frequency up to 15 operations/hour.

For other conditions verify technical data of each individual component.

Find orientative diagrams on pages D-12 to D-14 and information related to the motor current on pages D-20 and D-21.

Electronic timer relay is not shown in the picture.

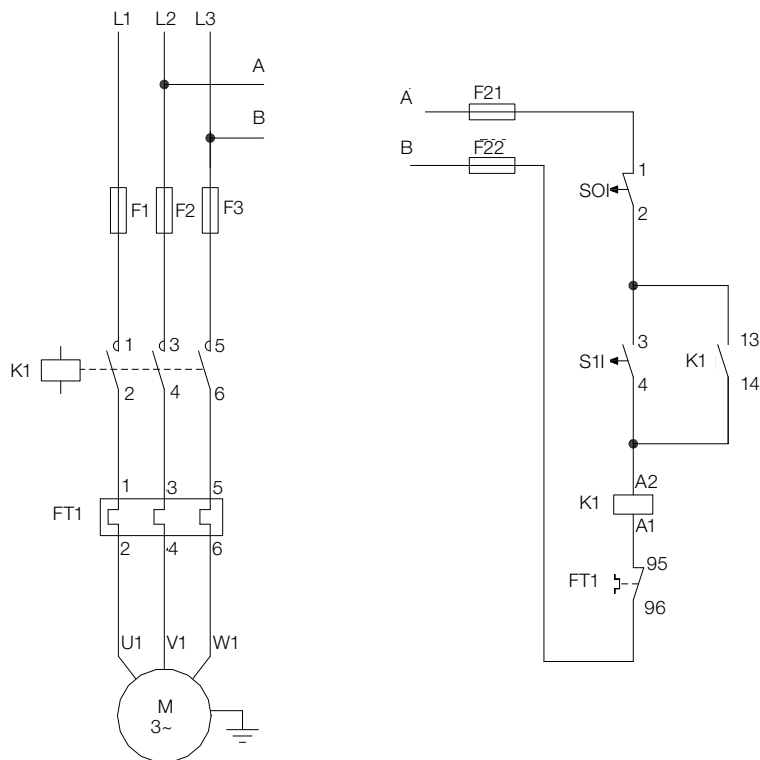
To complete the reference code, replace “◆” by the appropriate coil voltage code

| Coil voltage code | D02 | D07 | D13 | D15 | D17 | D77 | D23 | D24 | D25 | D33 | D34 | D35 | D36 |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| V (50/60 Hz) | 24 | 48 | 110 | 120 | 127 | 208 | 220 | 230 | 240 | 380 | 400 | 415 | 440 |
| Coil voltage code | C02 | C03 | C07 | C09 | C12 | C13 | C15 | | | | | | |
| V dc | 12 | 24 | 48 | 60 | 110 | 125 | 220 | | | | | | |

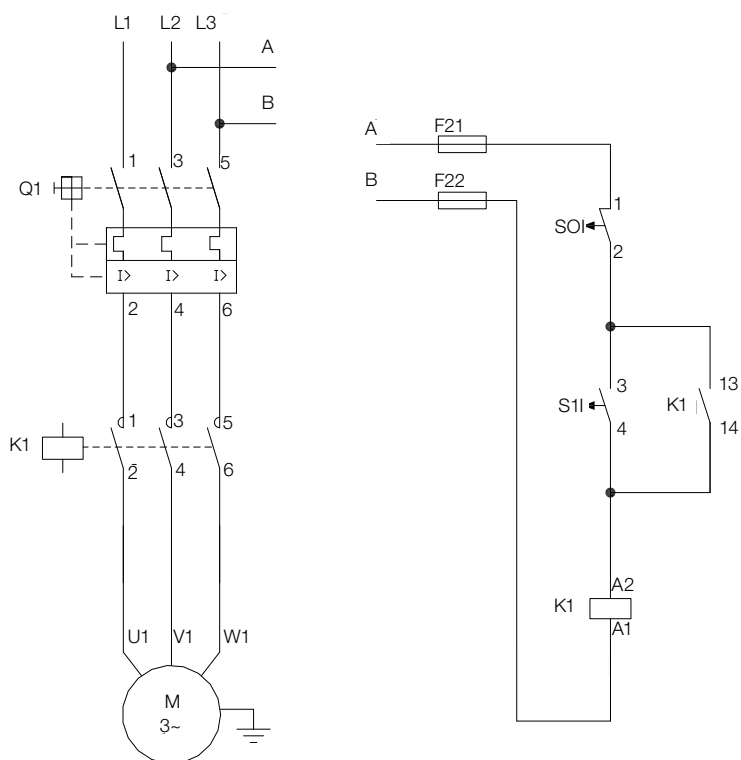


Orientative Diagrams

Direct On Line Starters with Overload Relay + Contactor

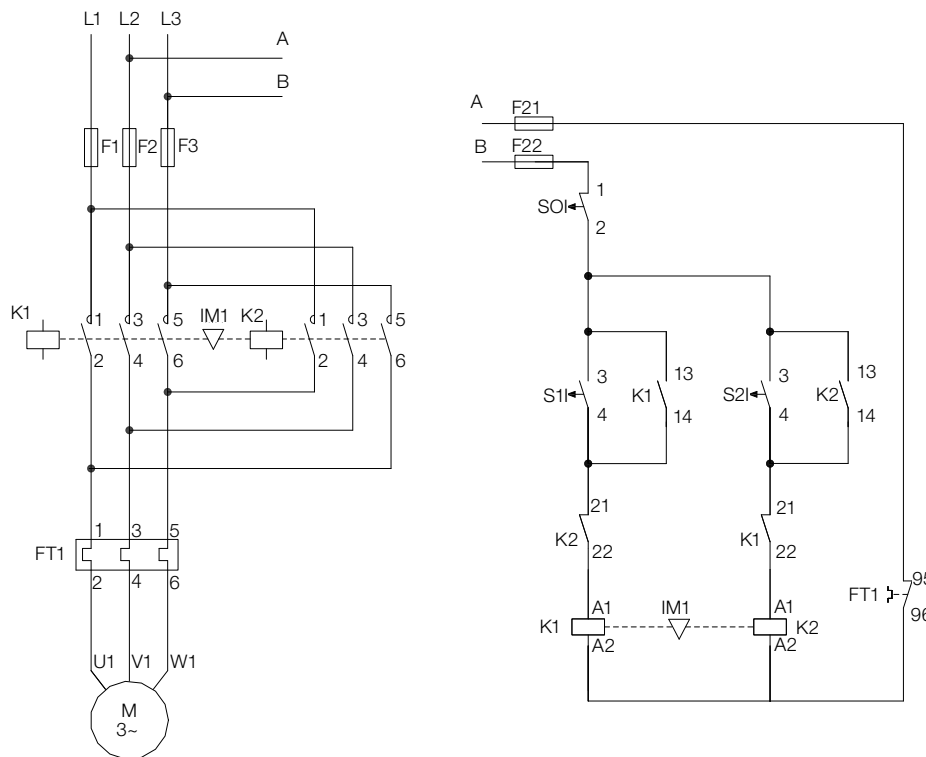


Direct On Line Starters with Motor Protective Circuit Breaker + Contactor

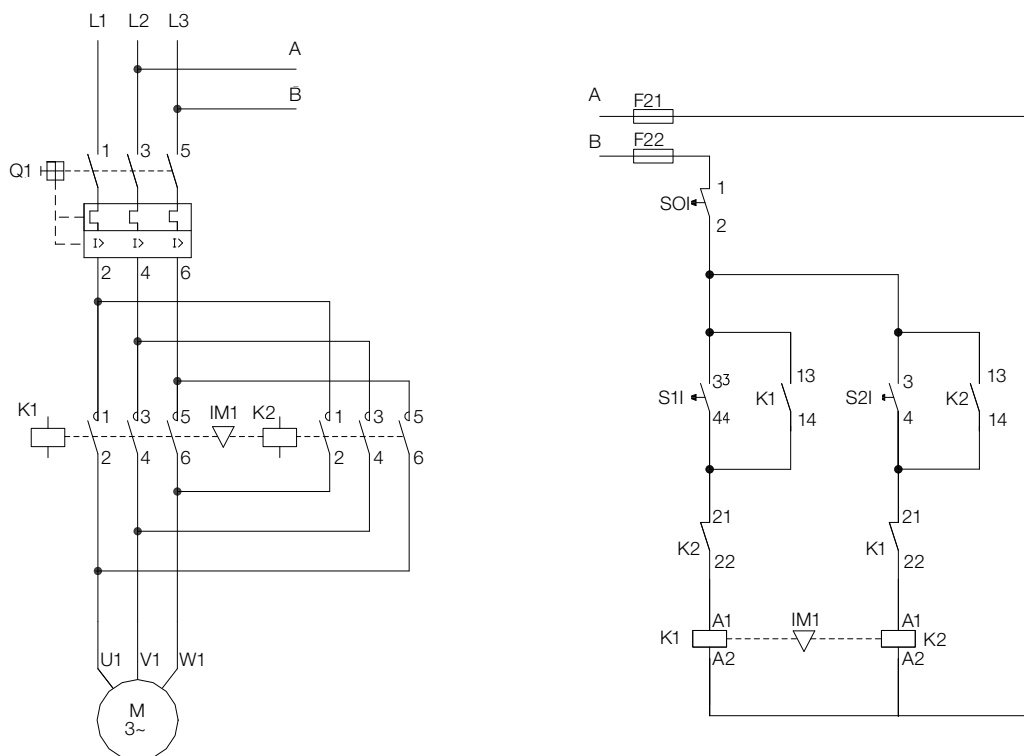




Reversing Starters with Overload Relay + Contactors

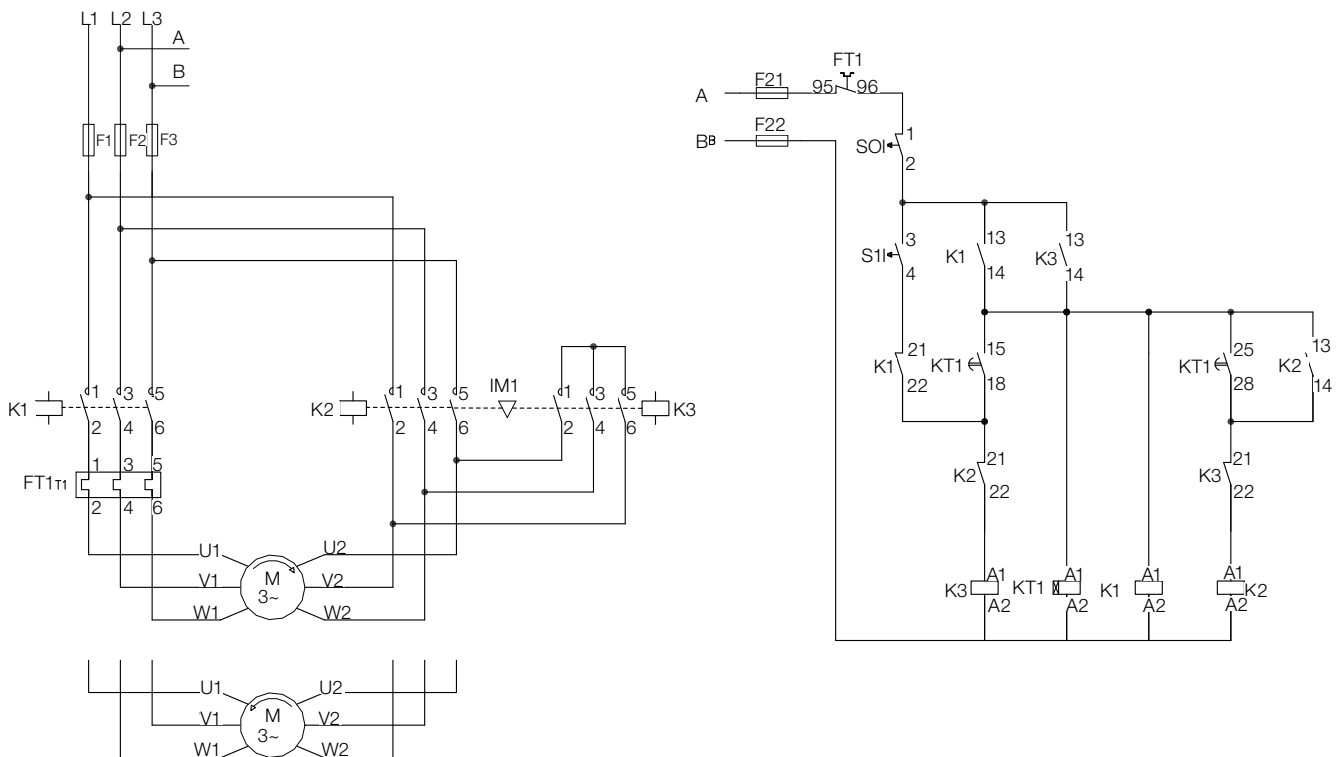


Reversing Starters with Motor Protective Circuit Breaker + Contactors

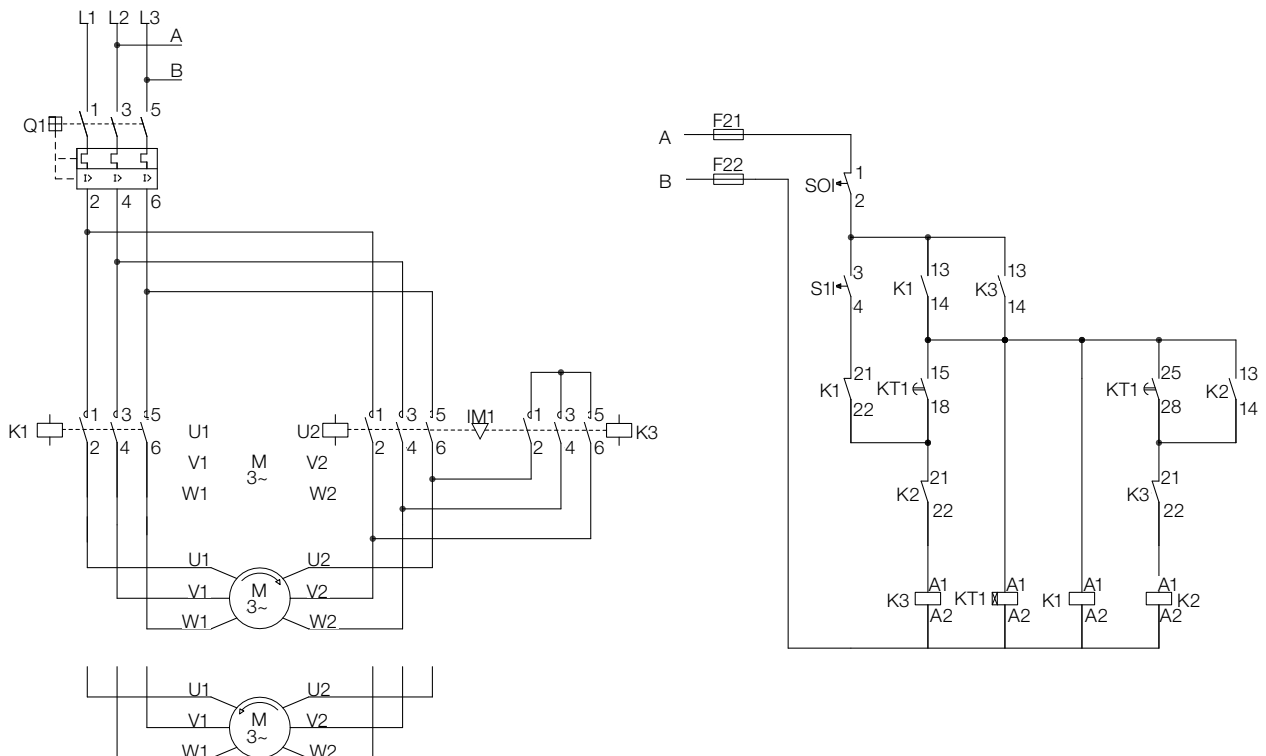




Star-Delta Starters with Overload Relay + Contactors



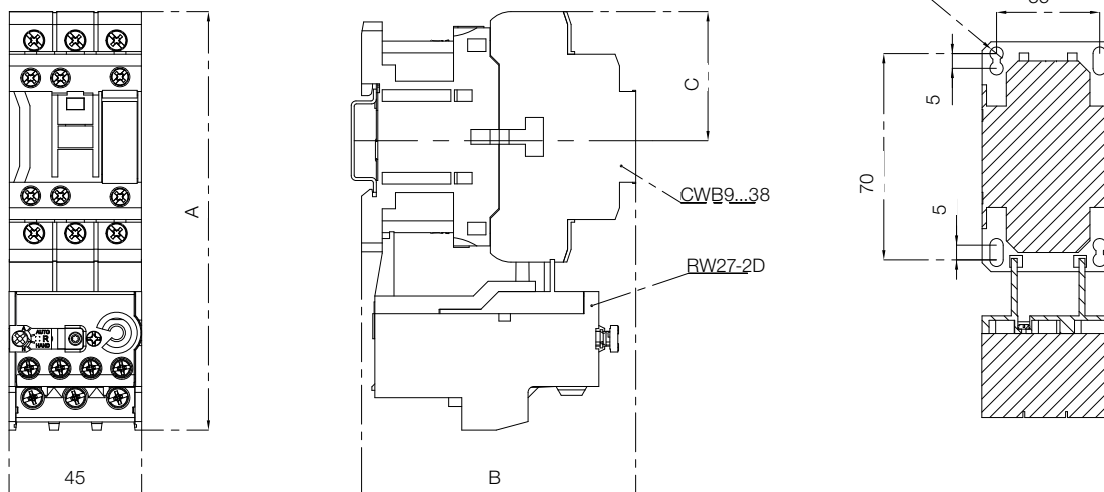
Star-Delta Starters with Motor Protective Circuit Breaker + Contactors





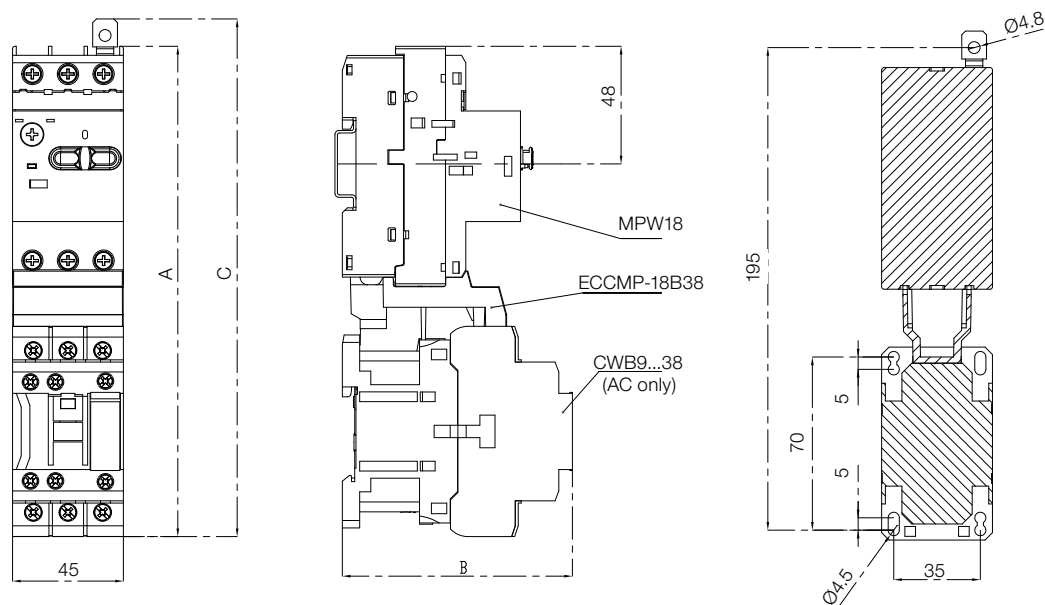
Dimensions (mm)

Direct On Line Starter - CWB + RW27-2D



| Dimensions | Coil | A | B | C |
|------------|------|-----|-------|----|
| CWB9...18 | AC | 140 | 89.5 | 42 |
| CWB25...38 | | 142 | 93 | 44 |
| CWB9...18 | DC | 140 | 95.7 | 42 |
| CWB25...38 | | 142 | 102.2 | 44 |

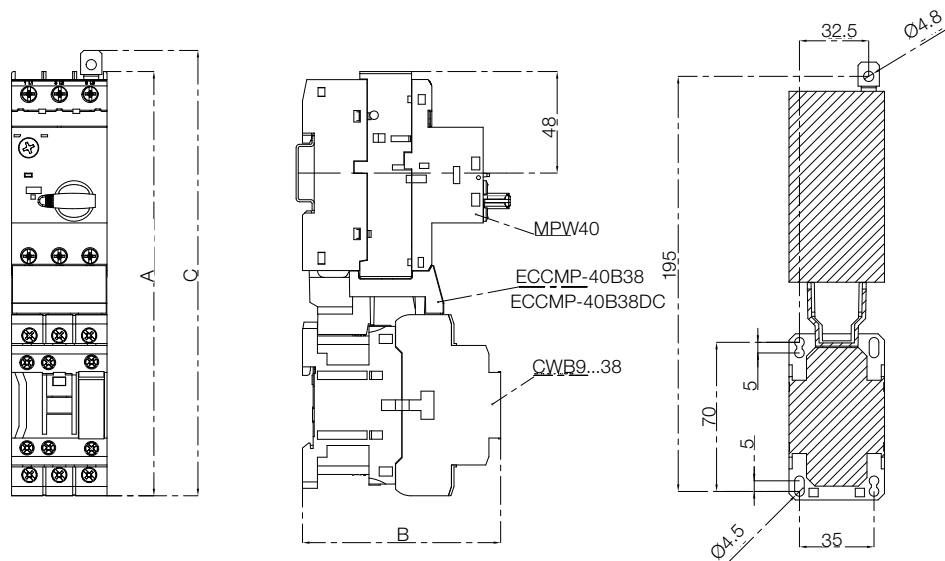
Direct On Line Starter - MPW18 + CWB



| Dimensions | Coil | A | B | C |
|------------|------|-----|------|-----|
| CWB9...18 | AC | 195 | 89.5 | 206 |
| CWB25...38 | | 198 | 93 | 209 |

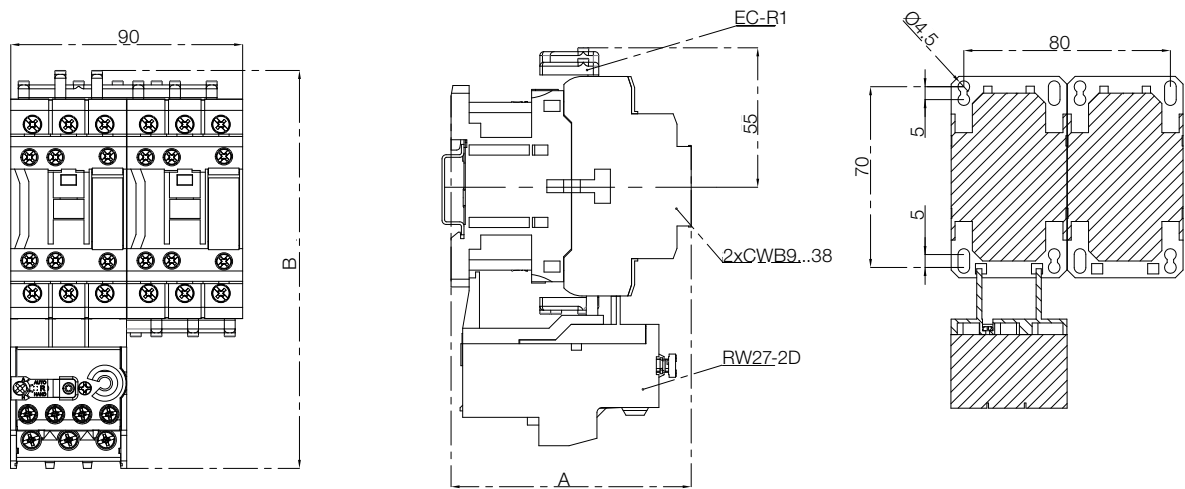


Direct On Line Starter - MPW40 + CWB



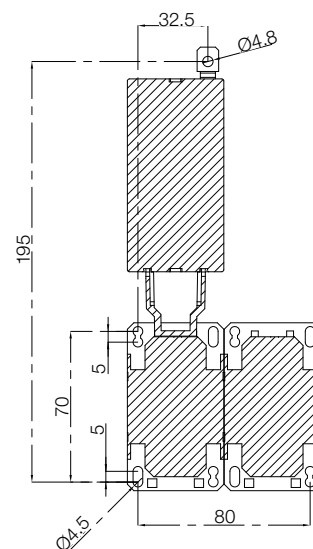
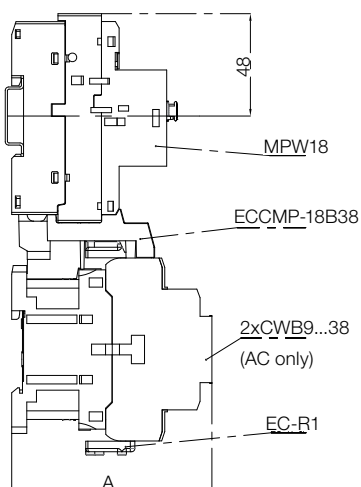
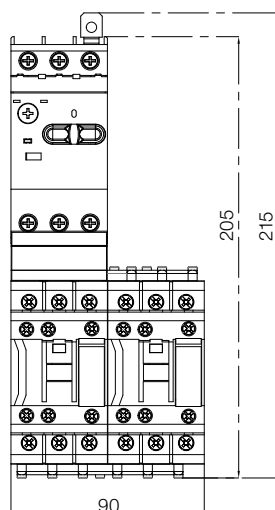
| Dimensions | Coil | A | B | C |
|------------|------|-----|-------|-----|
| CWB9...18 | AC | 196 | 89.5 | 206 |
| CWB25...38 | | 199 | 93 | 209 |
| CWB9...18 | DC | 196 | 95.7 | 206 |
| CWB25...38 | | 199 | 102.2 | 209 |

Reversing Starter - CWB + RW27-2D



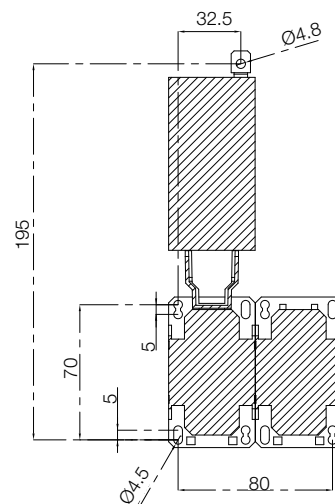
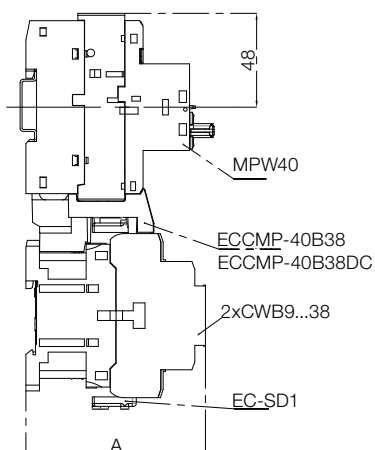
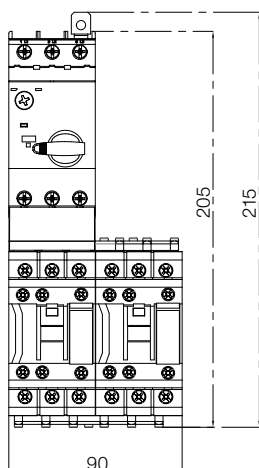
| Dimensions | Coil | A |
|------------|------|-------|
| CWB9...18 | AC | 89.5 |
| CWB25...38 | | 93 |
| CWB9...18 | DC | 95.7 |
| CWB25...38 | | 102.2 |

Reversing Starter - MPW18 + CWB



| Dimensions | Coil | A |
|------------|------|------|
| CWB9...18 | AC | 89.5 |
| CWB25...38 | | 93 |

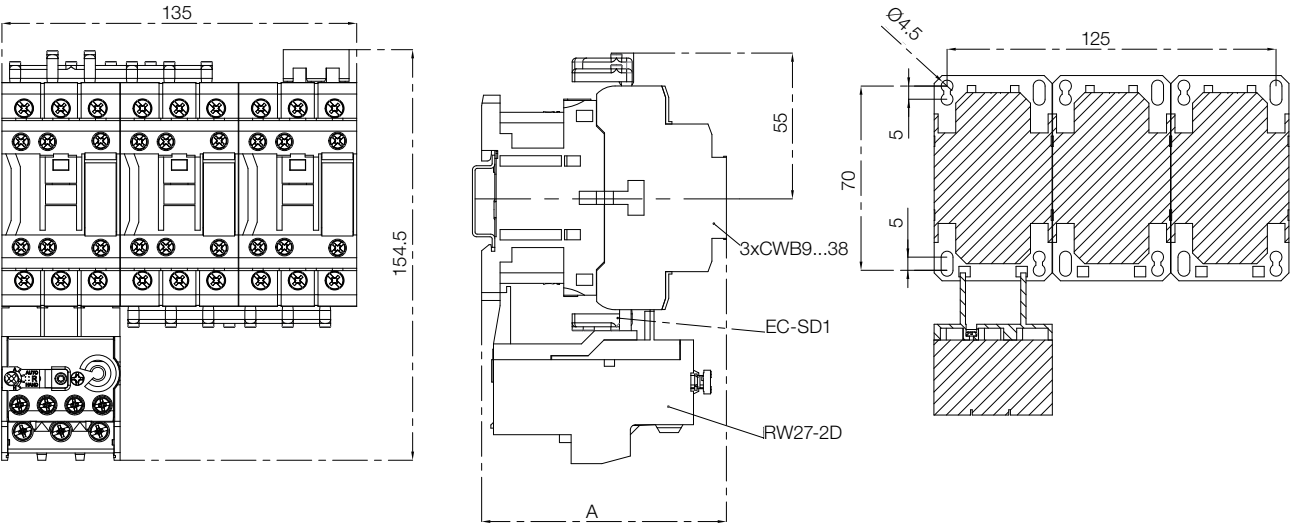
Reversing Starter - MPW40 + CWB



| Dimensions | Coil | A |
|------------|------|-------|
| CWB9...18 | AC | 89.5 |
| CWB25...38 | | 93 |
| CWB9...18 | DC | 95.7 |
| CWB25...38 | | 102.2 |

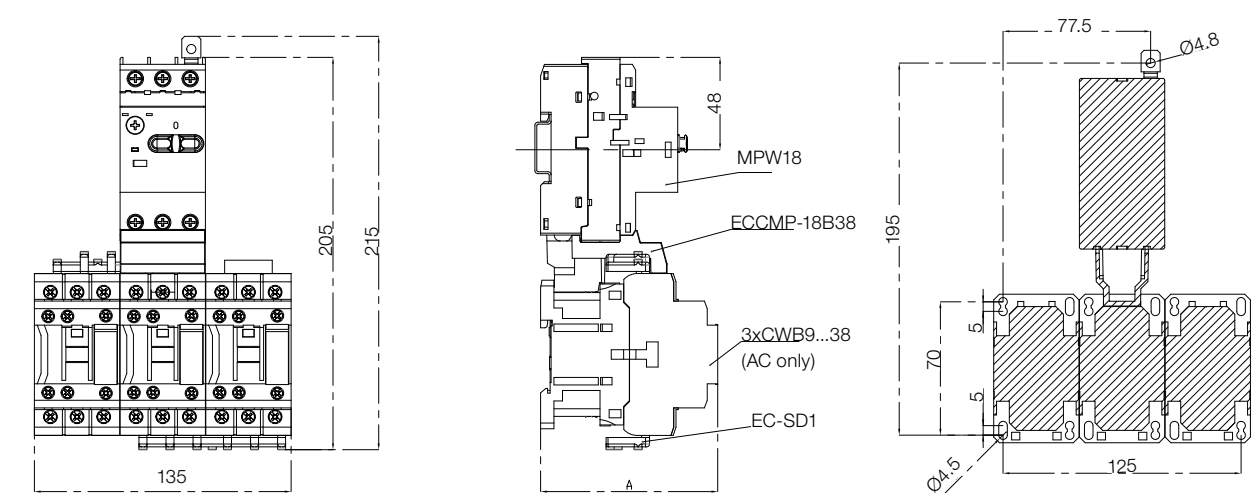


Star-Delta Starter - CWB + RW27-2D



| Dimensions | Coil | A |
|------------|------|-------|
| CWB9...18 | AC | 89.5 |
| CWB25...38 | | 93 |
| CWB9...18 | DC | 95.7 |
| CWB25...38 | | 102.2 |

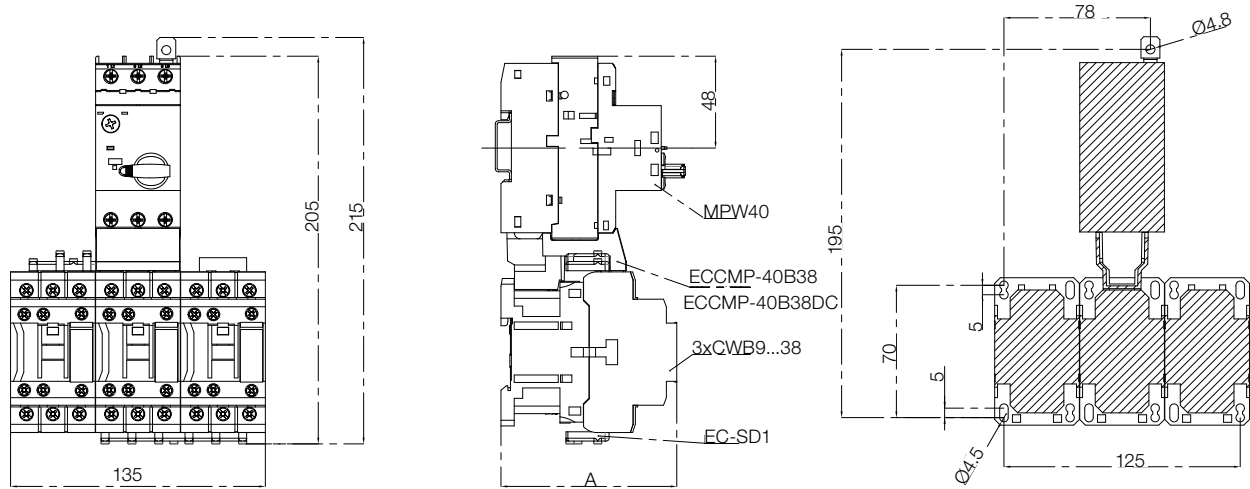
Star-Delta Starter - MPW18 + CWB



| Dimensions | Coil | A |
|------------|------|------|
| CWB9...18 | AC | 89.5 |
| CWB25...38 | | 93 |



Star-Delta Starter - MPW40 + CWB



| Dimensions | Coil | A |
|------------|------|-------|
| CWB9...18 | AC | 89.5 |
| CWB25...38 | | 93 |
| CWB9...18 | DC | 95.7 |
| CWB25...38 | | 102.2 |



Oriental Tables

Three Phase Motors 50 Hz

$$I_n (A) = \frac{P (W)}{V \times \sqrt{3} \times \cos \phi \times \eta}$$

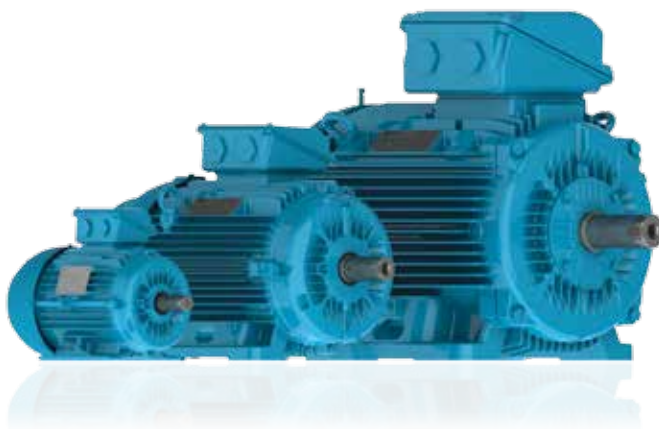
$I_n (A)$ = rated current

$P (W)$ = power

V = rated voltage

$\cos \phi$ = power factor

η = efficiency



| Output | | Rated current I_n | | | | | | Locked rotor current (I/L_p) | Locked rotor time | Frame | Efficiency (%) | | | Power factor | | |
|--------|--------|---------------------|-------|-------|-------|-------|-------|----------------------------------|-------------------|--------|----------------|------|------|--------------|------|------|
| kW | HP | 220 V | 230 V | 380 V | 400 V | 415 V | 440 V | | | | 50% | 75% | 100% | 50% | 75% | 100% |
| 0.12 | 0.16 | 0.69 | 0.66 | 0.40 | 0.38 | 0.37 | 0.35 | 3.9 | 51s | 63 | 55.0 | 58.0 | 59.0 | 0.54 | 0.67 | 0.77 |
| 0.18 | 0.25 | 1.08 | 1.03 | 0.62 | 0.59 | 0.57 | 0.54 | 4.1 | 40s | 63 | 53.0 | 59.0 | 61.0 | 0.50 | 0.63 | 0.72 |
| 0.25 | 0.33 | 1.42 | 1.36 | 0.82 | 0.78 | 0.75 | 0.71 | 4.5 | 68s | 71 | 59.0 | 65.0 | 66.0 | 0.49 | 0.62 | 0.71 |
| 0.37 | 0.50 | 1.92 | 1.84 | 1.11 | 1.06 | 1.02 | 0.96 | 4.3 | 48s | 71 | 63.0 | 66.0 | 68.0 | 0.50 | 0.64 | 0.74 |
| 0.55 | 0.75 | 2.38 | 2.28 | 1.38 | 1.31 | 1.26 | 1.19 | 6 | 18s | 80 | 72.0 | 73.8 | 74.0 | 0.60 | 0.73 | 0.82 |
| 0.75 | 1.00 | 2.96 | 2.83 | 1.71 | 1.63 | 1.57 | 1.48 | 6 | 15s | 80 | 79.0 | 79.6 | 79.8 | 0.63 | 0.76 | 0.81 |
| 1.10 | 1.50 | 4.36 | 4.17 | 2.52 | 2.40 | 2.31 | 2.18 | 6.5 | 14s | 90S | 81.0 | 81.8 | 81.8 | 0.62 | 0.75 | 0.81 |
| 1.50 | 2.00 | 5.93 | 5.67 | 3.43 | 3.26 | 3.14 | 2.96 | 6.3 | 10s | 90L | 81.5 | 83.0 | 83.0 | 0.57 | 0.71 | 0.80 |
| 2.20 | 3.00 | 8.44 | 8.07 | 4.88 | 4.64 | 4.47 | 4.22 | 7 | 11s | 100L | 83.0 | 84.5 | 84.5 | 0.60 | 0.73 | 0.81 |
| 3.00 | 4.00 | 11.19 | 10.70 | 6.48 | 6.15 | 5.93 | 5.59 | 6.5 | 14s | 100L | 85.0 | 85.6 | 85.6 | 0.63 | 0.75 | 0.82 |
| 4.00 | 5.50 | 15.16 | 14.50 | 8.78 | 8.34 | 8.04 | 7.58 | 6.6 | 13s | 112M | 86.0 | 86.7 | 86.7 | 0.62 | 0.74 | 0.80 |
| 5.50 | 7.50 | 19.1 | 18.3 | 11.1 | 10.5 | 10.1 | 9.6 | 7.3 | 8s | 132S | 87.5 | 88.0 | 88.1 | 0.68 | 0.80 | 0.86 |
| 7.50 | 10.00 | 25.6 | 24.5 | 14.8 | 14.1 | 13.6 | 12.8 | 7.2 | 8s | 132M | 88.7 | 89.0 | 89.0 | 0.71 | 0.81 | 0.86 |
| 9.20 | 12.50 | 31.5 | 30.1 | 18.2 | 17.3 | 16.7 | 15.7 | 7.7 | 7s | 132M | 89.2 | 89.5 | 89.5 | 0.69 | 0.80 | 0.85 |
| 11.00 | 15.00 | 38.6 | 36.9 | 22.3 | 21.2 | 20.5 | 19.3 | 6.4 | 10s | 160M | 89.0 | 90.2 | 90.2 | 0.65 | 0.76 | 0.83 |
| 15.00 | 20.00 | 52.2 | 49.9 | 30.2 | 28.7 | 27.7 | 26.1 | 6.2 | 10s | 160L | 90.6 | 91.0 | 91.0 | 0.66 | 0.76 | 0.83 |
| 18.50 | 25.00 | 63.8 | 61.0 | 36.9 | 35.1 | 33.8 | 31.9 | 6.6 | 14s | 180M | 91.5 | 91.8 | 91.6 | 0.68 | 0.78 | 0.83 |
| 22.00 | 30.00 | 73.6 | 70.4 | 42.6 | 40.5 | 39.0 | 36.8 | 6.8 | 15s | 180L | 92.2 | 92.5 | 92.3 | 0.70 | 0.80 | 0.85 |
| 30.00 | 40.00 | 102.1 | 97.7 | 59.1 | 56.2 | 54.1 | 51.1 | 6.3 | 16s | 200L | 92.6 | 93.0 | 92.8 | 0.68 | 0.78 | 0.83 |
| 37.00 | 50.00 | 121.3 | 116.0 | 70.2 | 66.7 | 64.3 | 60.6 | 6.6 | 12s | 225S/M | 93.0 | 93.2 | 93.2 | 0.74 | 0.83 | 0.86 |
| 45.00 | 60.00 | 146.4 | 140.0 | 84.7 | 80.5 | 77.6 | 73.2 | 6.8 | 10s | 225S/M | 93.2 | 93.7 | 93.6 | 0.74 | 0.83 | 0.86 |
| 55.00 | 75.00 | 176.7 | 169.0 | 102.3 | 97.2 | 93.7 | 88.3 | 6.4 | 14s | 250S/M | 93.6 | 93.9 | 94.0 | 0.75 | 0.84 | 0.87 |
| 75.00 | 100.00 | 241.5 | 231.0 | 139.8 | 132.8 | 128.0 | 120.8 | 7.2 | 22s | 280S/M | 93.8 | 94.4 | 94.4 | 0.74 | 0.83 | 0.86 |
| 90.00 | 125.00 | 287.5 | 275.0 | 166.4 | 158.1 | 152.4 | 143.8 | 7.2 | 20s | 280S/M | 94.1 | 94.7 | 94.7 | 0.76 | 0.84 | 0.87 |
| 110.00 | 150.00 | 349.2 | 334.0 | 202.2 | 192.1 | 185.1 | 174.6 | 7.6 | 18s | 280S/M | 94.3 | 95.0 | 95.0 | 0.75 | 0.83 | 0.87 |

Note: WEG W22 Motor - Cast Iron Frame High Efficiency - IE2.
4 poles - Standard Frame - IEC Standard - 60 Hz - Duty S1 - Service factor 1.00.

Three Phase Motors 60 Hz

$$I_n (A) = \frac{P (W)}{V \times \sqrt{3} \times \cos\phi \times \eta}$$

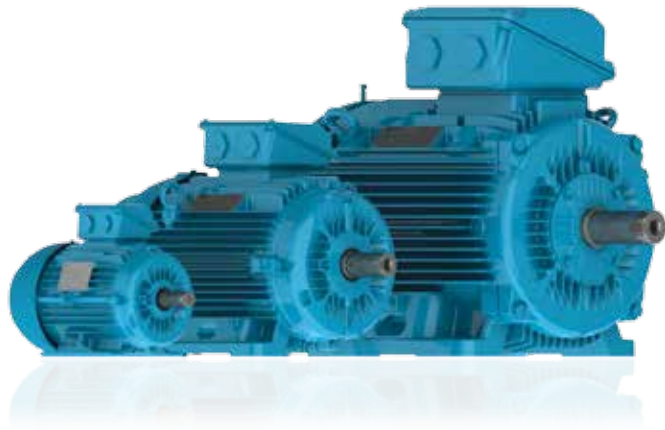
$I_n (A)$ = rated current

$P (W)$ = power

V = rated voltage

$\cos\phi$ = power factor

η = efficiency



| Output | | Rated current I_n | | | Locked rotor current (I/L_n) | Locked rotor time | Frame | Efficiency (%) | | | Power factor | | |
|--------|--------|---------------------|-------|-------|----------------------------------|-------------------|--------|----------------|------|------|--------------|------|------|
| kW | HP | 220 V | 380 V | 400 V | | | | 50% | 75% | 100% | 50% | 75% | 100% |
| 0.12 | 0.16 | 0.81 | 0.47 | 0.40 | 4.6 | 37s | 63 | 50.0 | 57.0 | 61.0 | 0.44 | 0.55 | 0.64 |
| 0.18 | 0.25 | 1.04 | 0.60 | 0.52 | 4.7 | 30s | 63 | 57.0 | 64.0 | 67.0 | 0.47 | 0.59 | 0.68 |
| 0.25 | 0.33 | 1.36 | 0.79 | 0.68 | 5.0 | 25s | 63 | 62.0 | 68.0 | 70.0 | 0.47 | 0.60 | 0.69 |
| 0.37 | 0.50 | 1.87 | 1.08 | 0.94 | 4.6 | 35s | 71 | 68.0 | 71.0 | 72.0 | 0.50 | 0.63 | 0.72 |
| 0.55 | 0.75 | 2.7 | 1.5 | 1.3 | 5.1 | 31s | 71 | 71.0 | 74.5 | 75.0 | 0.50 | 0.63 | 0.72 |
| 0.75 | 1.00 | 3.0 | 1.7 | 1.5 | 7.3 | 16s | 80 | 79.0 | 82.0 | 82.6 | 0.61 | 0.72 | 0.80 |
| 1.10 | 1.50 | 4.4 | 2.5 | 2.2 | 7.5 | 16s | 90S | 81.0 | 83.5 | 84.0 | 0.57 | 0.70 | 0.78 |
| 1.50 | 2.00 | 6.0 | 3.5 | 3.0 | 7.1 | 11s | 90S | 81.0 | 83.5 | 84.2 | 0.57 | 0.70 | 0.78 |
| 2.20 | 3.00 | 8.1 | 4.7 | 4.1 | 7.4 | 11s | L90L | 86.0 | 86.5 | 87.5 | 0.61 | 0.74 | 0.81 |
| 3.00 | 4.00 | 11.1 | 6.4 | 5.6 | 6.7 | 16s | 100L | 86.4 | 87.2 | 87.5 | 0.61 | 0.74 | 0.81 |
| 3.70 | 5.00 | 13.8 | 8.0 | 6.9 | 8.0 | 11s | 100L | 85.0 | 87.0 | 88.0 | 0.59 | 0.72 | 0.80 |
| 4.50 | 6.00 | 16.5 | 9.6 | 8.3 | 6.2 | 19s | 112M | 88.0 | 88.5 | 88.5 | 0.62 | 0.74 | 0.81 |
| 5.50 | 7.50 | 20.4 | 11.8 | 10.2 | 6.3 | 15s | 112M | 88.4 | 89.1 | 90.0 | 0.59 | 0.72 | 0.79 |
| 7.50 | 10.00 | 25.8 | 14.9 | 12.9 | 7.9 | 12s | 132S | 90.0 | 90.8 | 91.0 | 0.66 | 0.78 | 0.84 |
| 9.20 | 12.50 | 31.6 | 18.3 | 15.8 | 8.0 | 9s | 132M | 90.0 | 90.8 | 91.0 | 0.67 | 0.79 | 0.84 |
| 11.00 | 15.00 | 37.0 | 21.4 | 18.5 | 8.2 | 8s | 132M/L | 90.5 | 91.2 | 91.7 | 0.67 | 0.79 | 0.85 |
| 15.00 | 20.00 | 52.6 | 30.5 | 26.3 | 6.8 | 11s | 160M | 91.0 | 92.4 | 92.4 | 0.64 | 0.75 | 0.81 |
| 18.50 | 25.00 | 64.6 | 37.4 | 32.3 | 6.8 | 10s | 160L | 92.0 | 92.8 | 92.8 | 0.64 | 0.75 | 0.81 |
| 22.00 | 30.00 | 74.0 | 42.8 | 37.0 | 6.4 | 19s | 180M | 92.5 | 92.8 | 93.0 | 0.71 | 0.81 | 0.84 |
| 30.00 | 40.00 | 99.2 | 57.4 | 49.6 | 6.2 | 18s | 200M | 92.7 | 93.2 | 93.4 | 0.72 | 0.81 | 0.85 |
| 37.00 | 50.00 | 122 | 70.6 | 61 | 6.2 | 14s | 200L | 93.0 | 93.2 | 93.6 | 0.72 | 0.80 | 0.85 |
| 45.00 | 60.00 | 146 | 84.5 | 73 | 7.2 | 12s | 225S/M | 93.5 | 93.7 | 94.1 | 0.76 | 0.83 | 0.86 |
| 55.00 | 75.00 | 176 | 102 | 88 | 7.2 | 12s | 225S/M | 93.9 | 94.2 | 94.4 | 0.77 | 0.84 | 0.87 |
| 75.00 | 100.00 | 244 | 141 | 122 | 7.2 | 12s | 250S/M | 94.0 | 94.5 | 94.6 | 0.71 | 0.81 | 0.85 |
| 90.00 | 125.00 | 292 | 169 | 146 | 7.2 | 20s | 280S/M | 94.0 | 94.8 | 94.9 | 0.73 | 0.82 | 0.85 |
| 110.00 | 150.00 | 352 | 204 | 176 | 7.3 | 18s | 280S/M | 94.3 | 94.8 | 95.2 | 0.75 | 0.83 | 0.86 |

Note: WEG W22 Motor - Cast Iron Frame High Efficiency - IE2.
4 poles - Standard Frame - IEC Standard - 60 Hz - Duty S1 - Service factor 1.00.



AUCKLAND Unit 18, 761 Great South Road, Penrose, Auckland 1061, **P** +64 9 525 4440, **F** +64 9 525 4449
MATAMATA - HEAD OFFICE 2 Waihou Street, PO Box 242, Matamata 3440, **P** +64 7 881 9005, **F** +64 7 888 4317
CHRISTCHURCH 42 Hands Road, Middleton, Christchurch 8024, **P** +64 3 338 0000, **F** +64 3 338 0012

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