



**SEW**  
**EURODRIVE**

## Data sheet



MOVIDRIVE® MDX60B/61B/62B, MOVIDRIVE® MDR60A/61A,  
MOVIDRIVE® compact, MOVIDRIVE® A

**Information regarding UL**



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**1 MOVIDRIVE® MDX60B/61B****1.1 Information regarding UL****1.1.1 Field wiring power terminals**

- Use 75 °C copper wire only - models with suffix 0075, 0110, 0370, 0450, 0550, 0750, 0900, 1100, 1320, 1600, 2000, 2500.

Use 60/75 °C copper wire only - models with suffix 0005, 0008, 0011, 0014, 0015, 0022, 0030, 0037, 0040, 0055, 0150, 0220, 0300.

- Tighten terminals to in-lbs (Nm) as follows:

| Series                    | Size        | in-lbs | Nm  |
|---------------------------|-------------|--------|-----|
| MOVIDRIVE®<br>MDX 60B/61B | 0XS, 0S, 0L | 5      | 0.6 |
|                           | 1, 2S       | 5      | 0.6 |
|                           | 2           | 13     | 1.5 |
|                           | 3           | 31     | 3.5 |
|                           | 4, 5        | 120    | 14  |
|                           | 6           | 180    | 20  |
|                           | 7           | 620    | 70  |

Field wiring is to be made using listed ZMVV Lugs - models size 2, 3, 5.

**1.1.2 Short circuit current rating**

Suitable for use on a circuit capable of delivering not more than

- 200,000 rms symmetrical amperes when protected by fuses and circuit breakers as described in the tables below.
- 65,000 rms symmetrical amperes when protected by ABB and Rockwell Type E Combination Motor controllers as described in the tables below.
- MOVIDRIVE® MDX60B/61B 0005 - 2500 (400 V units only).  
Max. voltage is limited to 500 V.
- MOVIDRIVE® MDX60B/61B 0015 - 0300 (230 V units only).  
Max. voltage is limited to 240 V.

### 1.1.3 Branch circuit protection

Integral solid state short circuit protection does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes.

#### AC 400/500 V units

| Three Phase 380 V – 500 V Voltage Range |                                                             |                                          |                                                          |                                                                   |
|-----------------------------------------|-------------------------------------------------------------|------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------|
|                                         | SCCR: 200 kA/ 500 V<br>when protected by:                   | SCCR: 200 kA/ 500 V<br>when protected by | SCCR: 65 kA/ 480 V:<br>when protected by <sup>1)</sup> : | SCCR: 65 kA/ 460 V<br>when protected by:                          |
| Model                                   | Non Semiconductor<br>Fuses (currents are<br>maximum values) | Inverse-Time Circuit<br>Breaker          | Type E Combination Motor Controller                      |                                                                   |
| MOVIDRIVE MODEL,<br>0005 (Size 0S)      | 15 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-2.5<br>Rated 480 V, 1 HP                | Rockwell Automation<br>Model 140M-C2E-B25,<br>Rated 460 V, 1.5 HP |
| MOVIDRIVE MODEL,<br>0008 (Size 0S)      | 15 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-4.0<br>Rated 480 V, 2 HP                | Rockwell Automation<br>Model 140M-C2E-B40,<br>Rated 460 V, 3 HP   |
| MOVIDRIVE MODEL,<br>0011 (Size 0M)      | 15 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-4.0<br>Rated 480 V, 2 HP                | Rockwell Automation<br>Model 140M-C2E-B40,<br>Rated 460 V, 3 HP   |
| MOVIDRIVE MODEL,<br>0014 (Size 0M)      | 15 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-6.3<br>Rated 480 V, 3 HP                | Rockwell Automation<br>Model 140M-C2E-B63,<br>Rated 460 V, 5 HP   |
| MOVIDRIVE MODEL,<br>0015 (Size 1)       | 35 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-6.3<br>Rated 480 V, 3 HP                | Rockwell Automation<br>Model 140M-C2E-B63,<br>Rated 460 V, 5 HP   |
| MOVIDRIVE MODEL,<br>0022 (Size 1)       | 35 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-6.3<br>Rated 480 V, 3 HP                | Rockwell Automation<br>Model 140M-C2E-B63,<br>Rated 460 V, 5 HP   |
| MOVIDRIVE MODEL,<br>0030 (Size 1)       | 35 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-10<br>Rated 480 V, 5 HP                 | Rockwell Automation<br>Model 140M-C2E-C10,<br>Rated 460 V, 7.5 HP |
| MOVIDRIVE MODEL,<br>0040 (Size 1)       | 35 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-12<br>Rated 480 V, 7.5 HP               | Rockwell Automation<br>Model 140M-D8E-C16,<br>Rated 460 V, 10 HP  |
| MOVIDRIVE MODEL,<br>0055 (Size 2S)      | 60 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-16<br>Rated 480 V, 10 HP                | Rockwell Automation<br>Model 140M-D8E-C16,<br>Rated 460 V, 10 HP  |
| MOVIDRIVE MODEL,<br>0075 (Size 2S)      | 60 A / 600 V                                                | 25 A max / 500 V Min                     | ABB, Model MS132-20<br>Rated 480 V, 10 HP                | Rockwell Automation<br>Model 140M-D8E-C20,<br>Rated 460 V, 15 HP  |
| MOVIDRIVE MODEL,<br>0110 (Size 2)       | 60 A / 600 V                                                | -                                        | ABB, Model MS132-32<br>Rated 480 V, 20 HP                | Rockwell Automation<br>Model 140M-F8E-C32,<br>Rated 460 V, 25 HP  |
| MOVIDRIVE MODEL,<br>0150 (Size 3)       | 175 A / 600 V                                               | 90 A max / 500 V Min                     | ABB, Model MS450-40E<br>Rated 480 V, 30 HP               | Rockwell Automation<br>Model 140M-F8E-C45,<br>Rated 460 V, 30 HP  |
| MOVIDRIVE MODEL,<br>0220 (Size 3)       | 175 A / 600 V                                               | 90 A max / 500 V Min                     | ABB, Model MS495-63E<br>Rated 480 V, 50 HP               | -                                                                 |
| MOVIDRIVE MODEL,<br>0300 (Size 3)       | 175 A / 600 V                                               | 90 A max / 500 V Min                     | ABB, Model MS495-75E<br>Rated 480 V, 60 HP               | -                                                                 |
| MOVIDRIVE MODEL,<br>0370 (Size 4)       | 350 A / 600 V                                               | 175 A max / 500 V Min                    | ABB, Model MS495-90E<br>Rated 480 V, 75 HP               | -                                                                 |
| MOVIDRIVE MODEL,<br>0450 (Size 4)       | 350 A / 600 V                                               | 175 A max / 500 V Min                    | -                                                        | -                                                                 |
| MOVIDRIVE MODEL,<br>0550 (Size 5)       | 225 A / 600 V                                               | 175 A max / 500 V Min                    | -                                                        | -                                                                 |
| MOVIDRIVE MODEL,<br>0750 (Size 5)       | 225 A / 600 V                                               | 175 A max / 500 V Min                    | -                                                        | -                                                                 |
| MOVIDRIVE MODEL,<br>0900 (Size 6)       | 250 A / 600 V                                               | 300 A max / 500 V Min                    | -                                                        | -                                                                 |

| Three Phase 380 V – 500 V Voltage Range |                                                             |                                           |                                                          |                                          |
|-----------------------------------------|-------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------|------------------------------------------|
|                                         | SCCR: 200 kA/ 500 V<br>when protected by:                   | SCCR: 200 kA/ 500 V<br>when protected by: | SCCR: 65 kA/ 480 V:<br>when protected by <sup>1)</sup> : | SCCR: 65 kA/ 460 V<br>when protected by: |
| Model                                   | Non Semiconductor<br>Fuses (currents are<br>maximum values) | Inverse-Time Circuit<br>Breaker           | Type E Combination Motor Controller                      |                                          |
| MOVIDRIVE MODEL,<br>1100 (Size 6)       | 300 A / 600 V                                               | 300 A max / 500 V Min                     | -                                                        | -                                        |
| MOVIDRIVE MODEL,<br>1320 (Size 6)       | 400 A / 600 V                                               | 300 A max / 500 V Min                     | -                                                        | -                                        |
| MOVIDRIVE MODEL,<br>1600 (Size 7)       | 400 A / 600 V                                               | 600 A max / 500 V Min                     | -                                                        | -                                        |
| MOVIDRIVE MODEL,<br>2000 (Size 7)       | 500 A / 600 V                                               | 600 A max / 500 V Min                     | -                                                        | -                                        |
| MOVIDRIVE MODEL,<br>2500 (Size 7)       | 600 A / 600 V                                               | 600 A max / 500 V Min                     | -                                                        | -                                        |

1) Drives employing Type E Combination Motor Controller model MS132-12, -16, -20, -25, -32 must be installed with Current Limiter Series S803W-SCLxxx-SR manufactured by ABB, otherwise SCCR rated 30kA/ 480 Vrms.

### AC 230 V units

| Three Phase 200 V – 240 V Voltage Range |                                                             |                                           |                                                         |                                                                   |
|-----------------------------------------|-------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------|
|                                         | SCCR: 200 kA/ 240 V<br>when protected by:                   | SCCR: 200 kA/ 240 V<br>when protected by: | SCCR: 65 kA/ 240 V<br>when protected by <sup>1)</sup> : | SCCR: 65 kA/ 240 V<br>when protected by:                          |
| Model                                   | Non Semiconductor<br>Fuses (currents are<br>maximum values) | Inverse-Time Circuit<br>Breaker           | Type E Combination Motor Controller                     |                                                                   |
| MOVIDRIVE MODEL,<br>0015 (Size 1)       | 30 A / 250 V                                                | 25 A max / 240 V Min                      | ABB, Model MS132-10<br>Rated 480 V, 5 HP                | Rockwell Automation<br>Model 140M-C2E-C10,<br>Rated 460 V, 7.5 HP |
| MOVIDRIVE MODEL,<br>0022 (Size 1)       | 30 A / 250 V                                                | 25 A max / 240 V Min                      | ABB, Model MS132-10<br>Rated 480 V, 5 HP                | Rockwell Automation<br>Model 140M-C2E-C10,<br>Rated 460 V, 7.5 HP |
| MOVIDRIVE MODEL,<br>0037 (Size 1)       | 30 A / 250 V                                                | 25 A max / 240 V Min                      | ABB, Model MS132-20<br>Rated 480 V, 10 HP               | Rockwell Automation<br>Model 140M-D8E-C20,<br>Rated 460 V, 15 HP  |
| MOVIDRIVE MODEL,<br>0055 (Size 2)       | 60 A / 250 V                                                | 40 A max / 240 V Min                      | ABB, Model MS132-25<br>Rated 480 V, 15 HP               | Rockwell Automation<br>Model 140M-F8E-C25,<br>Rated 460 V, 20 HP  |
| MOVIDRIVE MODEL,<br>0075 (Size 2)       | 60 A / 250 V                                                | 40 A max / 240 V Min                      | ABB, Model MS450-40E<br>Rated 480 V, 30 HP              | Rockwell Automation<br>Model 140M-F8E-C45,<br>Rated 460 V, 30 HP  |
| MOVIDRIVE MODEL,<br>0110 (Size 3)       | 175 A / 250 V                                               | 90 A max / 240 V Min                      | ABB, Model MS450-50E<br>Rated 480 V, 40 HP              | -                                                                 |
| MOVIDRIVE MODEL,<br>0150 (Size 3)       | 175 A / 250 V                                               | 90 A max / 240 V Min                      | ABB, Model MS495-63E<br>Rated 480 V, 50 HP              | -                                                                 |
| MOVIDRIVE MODEL,<br>0220 (Size 4)       | 350 A / 250 V                                               | 175 A max / 240 V Min                     | ABB, Model MS495-90E<br>Rated 480 V, 75 HP              | -                                                                 |
| MOVIDRIVE MODEL,<br>0300 (Size 4)       | 350 A / 250 V                                               | 175 A max / 240 V Min                     | -                                                       | -                                                                 |

1) Drives employing Type E Combination Motor Controller model MS132-12, -16, -20, -25, -32 must be installed with Current Limiter Series S803W-SCLxxx-SR manufactured by ABB, otherwise SCCR rated 30kA/ 480 Vrms.

#### 1.1.4 Motor overload protection

The units are provided with load and speed-sensitive overload protection and thermal memory retention upon shutdown or power loss.

The trip current is adjusted to 150 % of the rated motor current.

#### 1.1.5 Ambient temperature

The units are suitable for an ambient temperature of 40 °C, max. 60 °C with derated output current.

To determine output current rating at higher than 40 °C, the output current should be derated 2.5 % per °C between 40 °C and 50 °C, and 3 % per °C between 50 °C and 60 °C.

### INFORMATION



- Use only tested units with a **limited output voltage** ( $V_{\max} = \text{DC } 30 \text{ V}$ ) and **limited output current** ( $I_{\max} = 8 \text{ A}$ ) as an **external DC 24 V voltage source**.

- UL certification does not apply to operation in voltage supply systems with a non-grounded star point (IT systems).

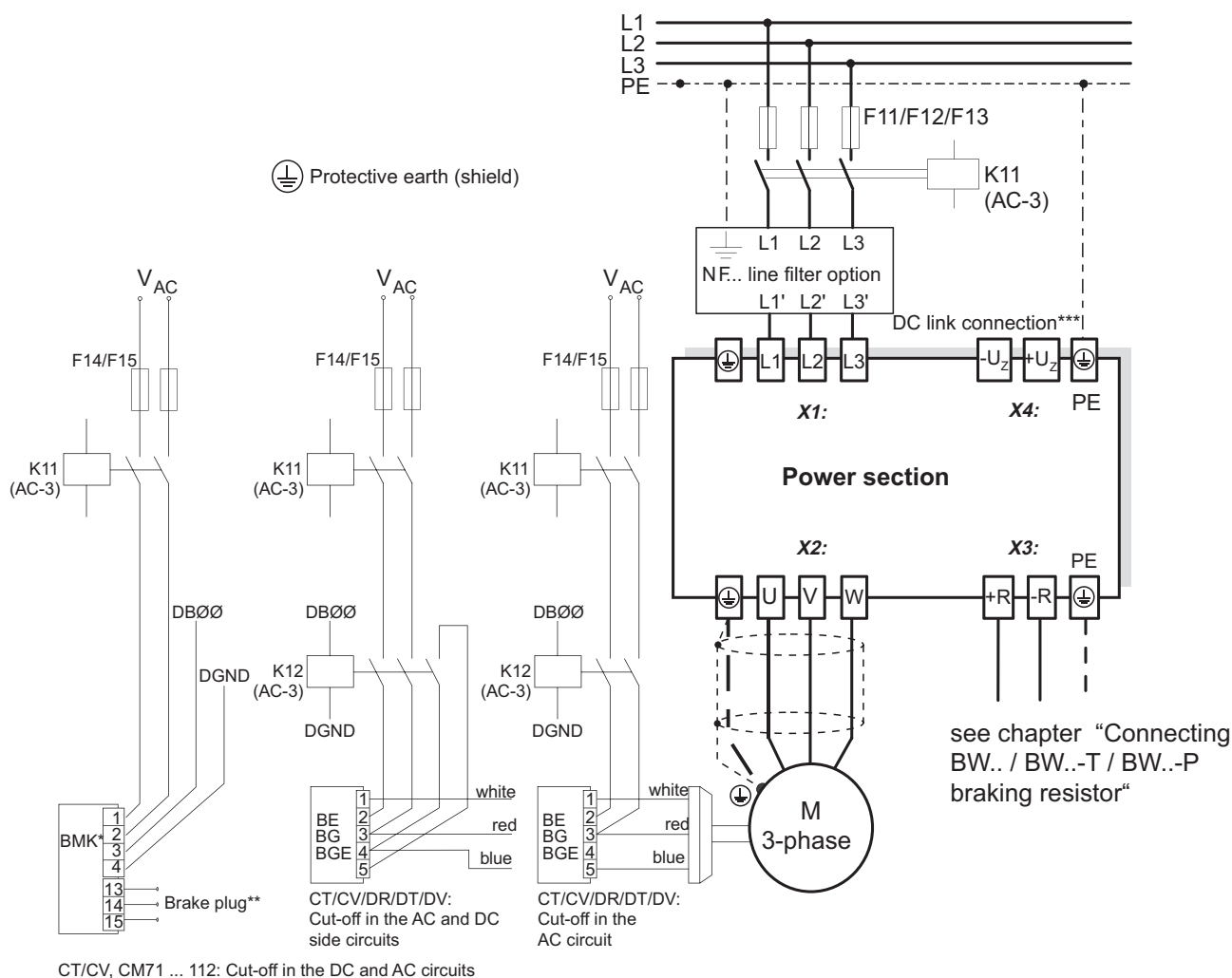
#### 1.1.6 Environmental Conditions

The units are for use in pollution degree 2 environments.



## 1.2 Wiring diagram for basic unit

### 1.2.1 Power section (sizes 0 – 6) and brake



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\* K12 is not required when K11 is used

\*\* **You must adhere to the connection sequence of the brake connector.** Incorrect connection will cause irreparable damage to the brake. **Read the operating instructions for the motors** when connecting the brake using the terminal box.

\*\*\* With sizes 1, 2 and 2S, there is no PE connection next to the supply system connection terminals and motor connection terminals (X1, X2). In this case, use the PE terminal next to the DC link connection (X4).

## INFORMATION



- Connect the brake rectifier using a separate supply system lead.
- **Supply via the motor voltage is not permitted!**

Always switch off the brake on the DC and AC sides with:

- all hoist applications,
- Drives that require a rapid brake response time
- CFC and SERVO operating modes

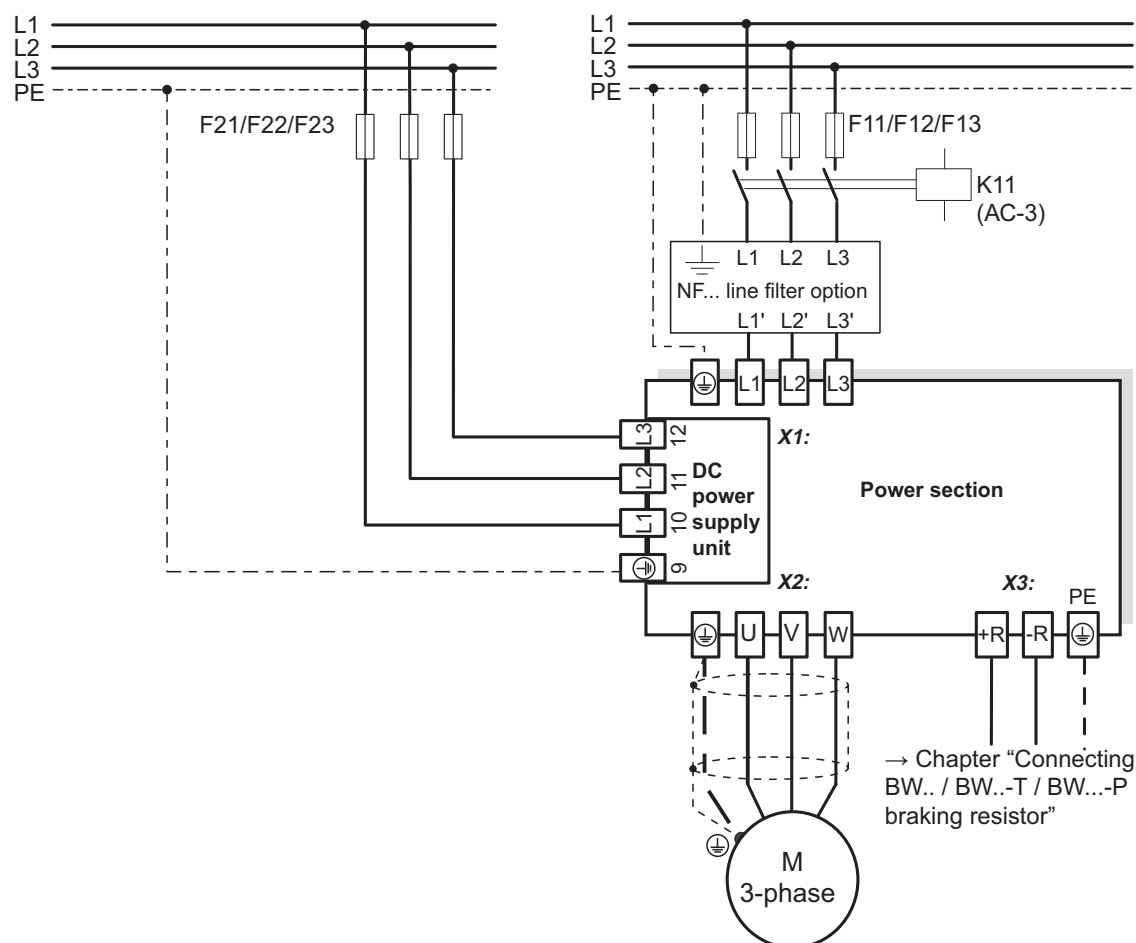


## Brake rectifier in the control cabinet

Install the connection cables between the brake rectifier and the brake separately from other power cables when installing the brake rectifier in the control cabinet. Joint installation is only permitted with shielded power cables.

### 1.2.2 Power section and DC power supply unit (size7)

For connecting the brake, refer to the wiring diagram of size 1-6.



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## Technical data of DC power supply unit:

- Rated current: AC 2.4 A
- Inrush current AC 30 A / AC 380 - 500 V

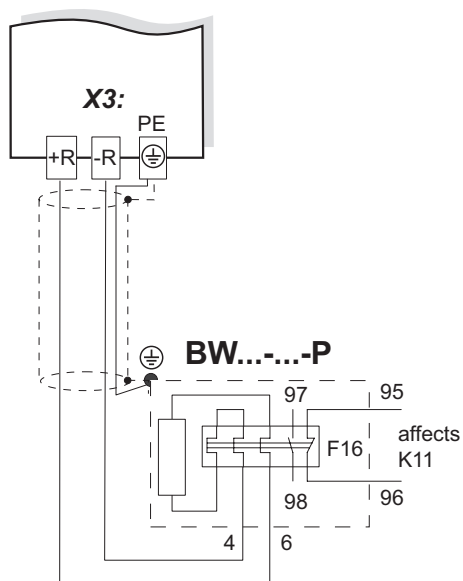
## INFORMATION



**Note** that the connection of external +24 V power supply units to the X10:9 control terminal is not permitted in backup mode via power supply unit. Incorrect connection prompts an error message.

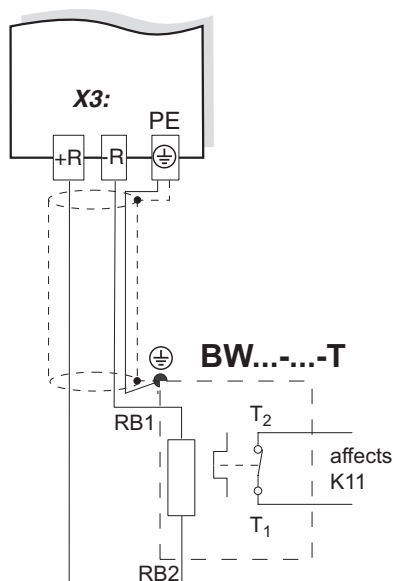
#### 1.2.3 Braking resistor BW... / BW...-T / BW...-P

##### Power section



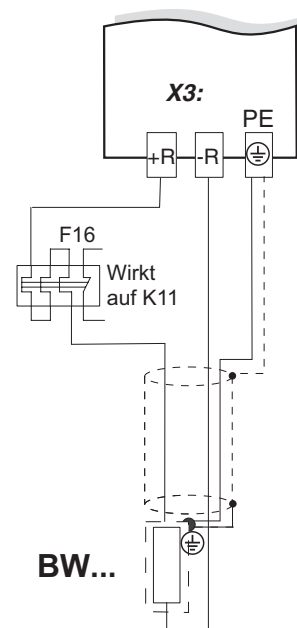
When the signal contact F16 trips, K11 must be opened and DIØØ"/Controller inhibit" must receive a "0" signal. The resistor circuit must not be interrupted!

##### Power section



When the internal temperature switch trips, K11 must be opened and DIØØ"/Controller inhibit" must receive a "0" signal. The resistor circuit must not be interrupted!

##### Power section



When the external bimetal relay (F16) trips, K11 must be opened and DIØØ "/Controller inhibit" must receive a "0" signal . The resistor circuit must not be interrupted!

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| Braking resistor type | Overload protection |                                                                                             |                                 |
|-----------------------|---------------------|---------------------------------------------------------------------------------------------|---------------------------------|
|                       | Design specified    | Internal temperature switch (..T)                                                           | External bimetallic relay (F16) |
| BW...                 | -                   | -                                                                                           | Required                        |
| BW...-T               | -                   | One of the two options (internal temperature switch/external bimetallic relay) is required. |                                 |
| BW...-003 / BW...-005 | Adequate            | -                                                                                           | Permitted                       |
| BW090-P52B            | Adequate            | -                                                                                           | -                               |

## 2 MOVIDRIVE® MDR60A/61B and MDX62B

### 2.1 Information regarding UL

#### 2.1.1 Field wiring power terminals

- Use 75 °C copper wire only - models with suffix 1600, 2000, 2500.  
Use 60/75 °C copper wire only - MOVIDRIVE® MDR60A0150 – 0750 and MOVIDRIVE® MDR61B1600 – 2500
- Tighten terminals to in-lbs (Nm) as follows:

| Series                             | Size | in-lbs | Nm  |
|------------------------------------|------|--------|-----|
| MOVIDRIVE®<br>MDR60A/61B<br>MDX62B | 2    | 16     | 1.8 |
|                                    | 3    | 31     | 3.5 |
|                                    | 4    | 120    | 14  |
|                                    | 7    | 620    | 70  |

Field wiring is to be made using listed ZMVV Lugs - models size 2, 3.

#### 2.1.2 Short circuit current rating

- MOVIDRIVE® MDR60A0150 – 0750 and MOVIDRIVE® MDR61B1600 – 2500:  
When these regenerative power supply units are installed with the appropriate MOVIDRIVE® inverter, the system can be marked with the short circuit rating of the inverter.  
Suitable for use on a circuit capable of delivering not more than
  - 200,000 rms symmetrical amperes when protected by fuses and circuit breakers as described in the tables below.
  - 65,000 rms symmetrical amperes when protected by ABB and Rockwell Type E Combination Motor controllers as described in the tables below.
  - Max. voltage is limited to 500 V.
- MOVIDRIVE® MDX62B1600 – 2500:  
Suitable for use on a circuit capable of delivering not more than
  - 200,000 rms symmetrical amperes when protected by fuses and circuit breakers as described in the tables below.
  - 65,000 rms symmetrical amperes when protected by ABB and Rockwell Type E Combination Motor controllers as described in the tables below.
  - Max. voltage is limited to 500 V.

### 2.1.3 Branch circuit protection

Integral solid state short circuit protection does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes.

#### MOVIDRIVE® MDR60A/61B

|            | SCCR: 200 kA/ 500 V<br>when protected by:                   | SCCR: 200 kA/ 500 V<br>when protected by: | SCCR: 65 kA/ 480 V<br>when protected by:  | SCCR: 65 kA/ 460 V<br>when protected by:                        |
|------------|-------------------------------------------------------------|-------------------------------------------|-------------------------------------------|-----------------------------------------------------------------|
| Model      | Non Semiconductor<br>Fuses (currents are<br>maximum values) | Inverse-Time Circuit<br>Breaker           | Type E Combination Motor Controller       |                                                                 |
| MDR60A0150 | 50 A / 600 V                                                | -                                         | ABB, Model MS450-50E<br>Rated 480V, 40 HP | Rockwell Automation<br>Model 140M-F8E-C45,<br>Rated 460V, 40 HP |
| MDR60A0370 | 100 A / 600 V                                               | -                                         | ABB, Model MS495-75E<br>Rated 480V, 60 HP | -                                                               |
| MDR60A0750 | 175 A / 600 V                                               | 175 A max / 500 V Min                     | -                                         | -                                                               |
| MDR61B1600 | 400 A / 600 V                                               | 600 A max / 500 V Min                     | -                                         | -                                                               |
| MDR61B2500 | 600 A / 600 V                                               | 600 A max / 500 V Min                     | -                                         | -                                                               |

#### MOVIDRIVE® MDX62B

| Three Phase 380 V – 500 V Voltage Range |                                                             |                                           |                                          |                                          |
|-----------------------------------------|-------------------------------------------------------------|-------------------------------------------|------------------------------------------|------------------------------------------|
|                                         | SCCR: 200 kA/ 500 V<br>when protected by:                   | SCCR: 200 kA/ 500 V<br>when protected by: | SCCR: 65 kA/ 480 V<br>when protected by: | SCCR: 65 kA/ 460 V<br>when protected by: |
| Model                                   | Non Semiconductor<br>Fuses (currents are<br>maximum values) | Inverse-Time Circuit<br>Breaker           | Type E Combination Motor Controller      |                                          |
| MOVIDRIVE MODEL,<br>1600 (Size 7)       | 400 A / 600 V                                               | 600 A max / 500 V Min                     | -                                        | -                                        |
| MOVIDRIVE MODEL,<br>2000 (Size 7)       | 500 A / 600 V                                               | 600 A max / 500 V Min                     | -                                        | -                                        |
| MOVIDRIVE MODEL,<br>2500 (Size 7)       | 600 A / 600 V                                               | 600 A max / 500 V Min                     | -                                        | -                                        |

#### 2.1.4 Motor overload protection

MOVIDRIVE® MDX62B1600 – 2500: The units are provided with load and speed-sensitive overload protection and thermal memory retention upon shutdown or power loss.

The trip current is adjusted to 150 % of the rated motor current.

#### 2.1.5 Ambient temperature

The units are suitable for an ambient temperature of 40 °C, max. 60 °C with derated output current.

MOVIDRIVE® MDR60A0150 – 0750: To determine the output current rating at higher than 40 °C, the output current should be derated 3.0 % per °C between 40 °C and 60 °C.

MOVIDRIVE® MDR61B1600 – 2500 and MOVIDRIVE® MDX62B1600 – 2500: To determine output current rating at higher than 40 °C, the output current should be derated 2.5% per °C between 40 °C and 50 °C, and 3% per °C between 50 °C and 60 °C.

### INFORMATION



- Use only tested units with a **limited output voltage** ( $V_{\max} = \text{DC } 30 \text{ V}$ ) and **limited output current** ( $I_{\max} = 8 \text{ A}$ ) as an **external DC 24 V voltage source**.

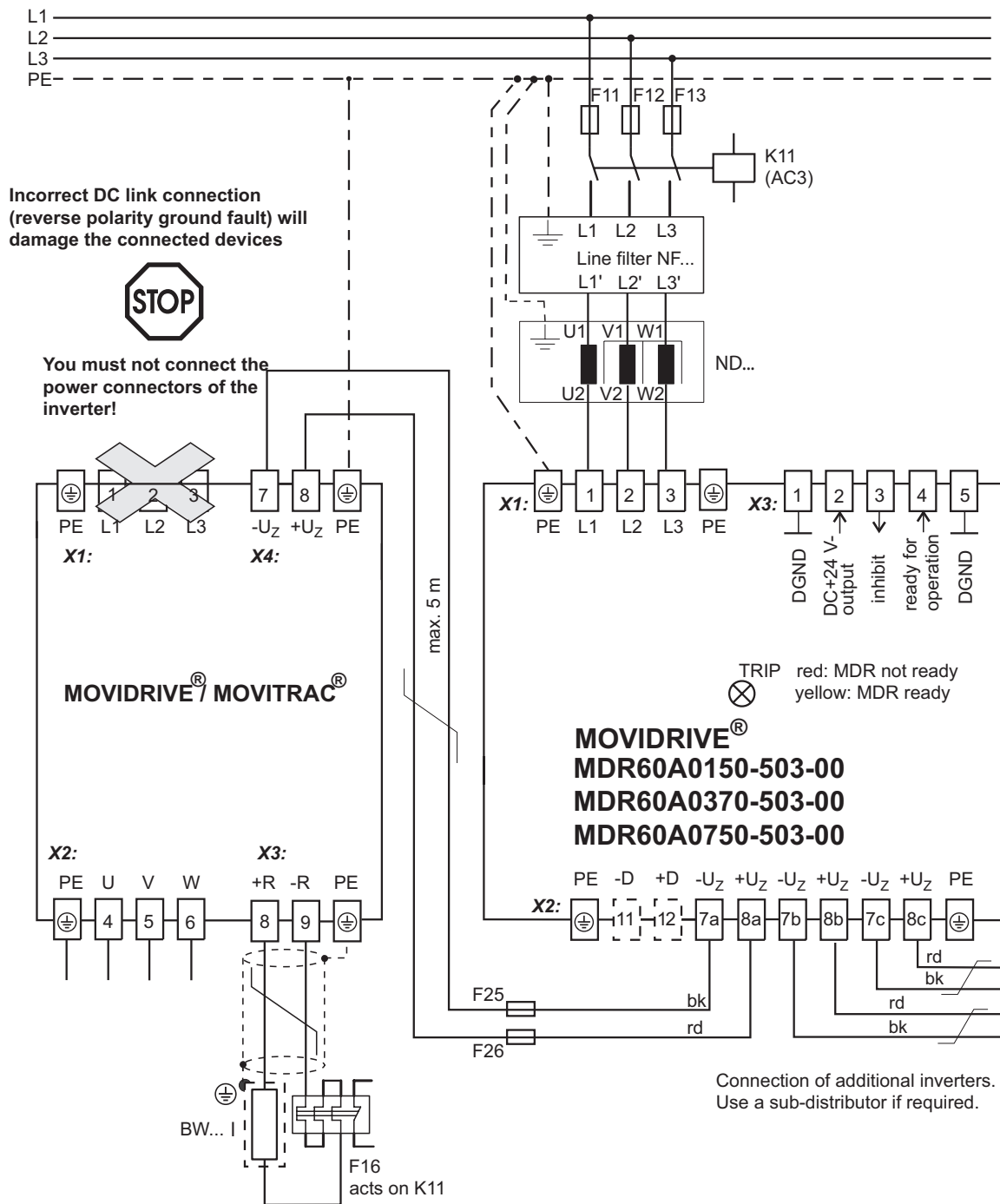
- UL certification does not apply to operation in voltage supply systems with a non-grounded star point (IT systems).

#### 2.1.6 Environmental Conditions

The units are for use in pollution degree 2 environments.

## 2.2 Wiring diagrams

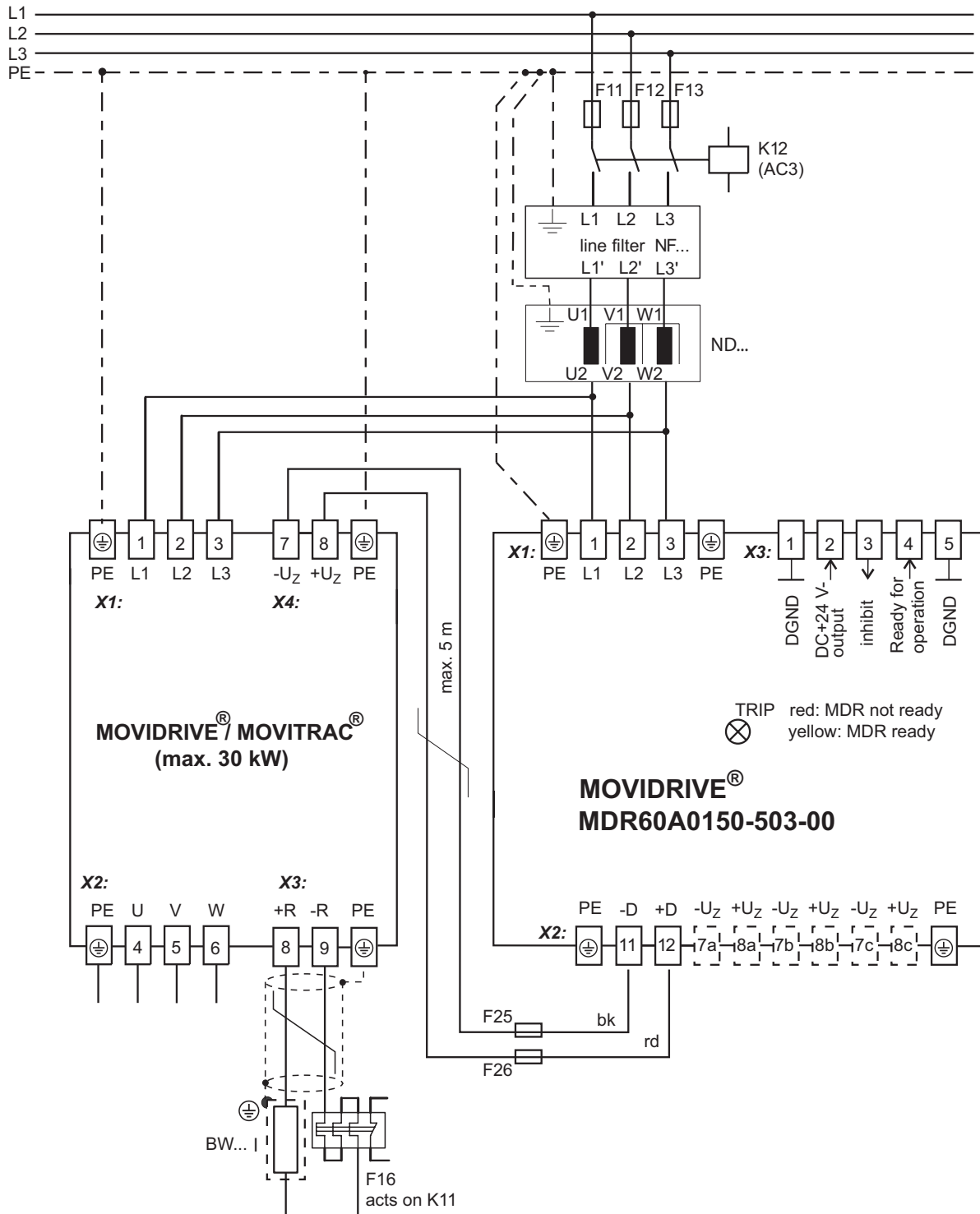
### 2.2.1 DC link connection with MDR60A0150/0370/0750 regenerative power supply unit



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23057319/EN – 12/2016

### 2.2.2 DC link connection with MDR60A0150 regenerative power supply unit with brake module function.

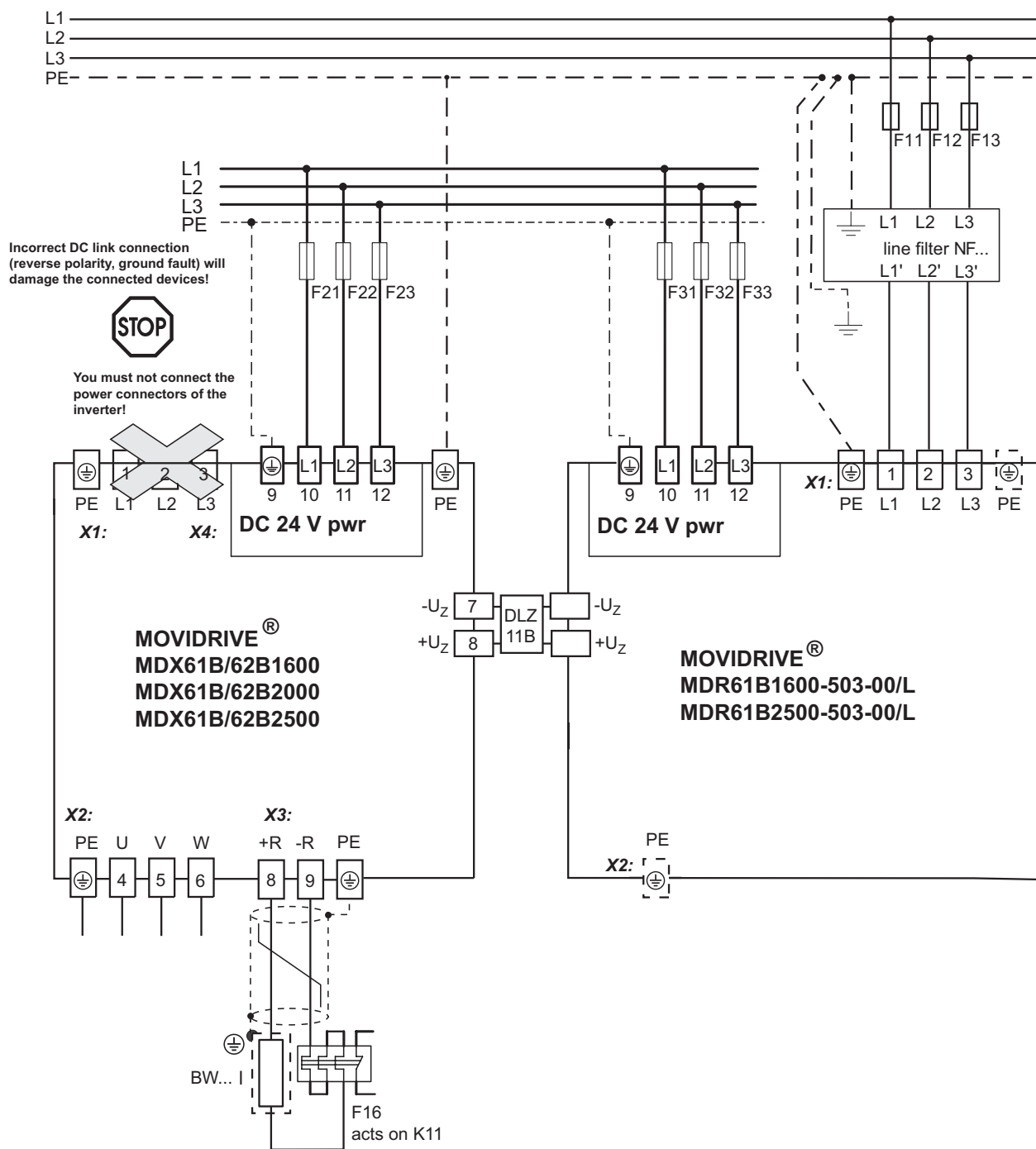


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## 2.2.3 DC link connection with MDR61B1600/2500 regenerative power supply unit

In conjunction with MOVIDRIVE® MDX61B/62B1600 – 2500 (size 7)



3347843723

23057319/EN – 12/2016

### 3 MOVIDRIVE® compact

#### 3.1 Information Regarding UL

##### 3.1.1 Field wiring power terminals

- Use 75 °C copper wire only – models with suffix 0075, 0110, 0370, 0450, 0550, 0750.  
Use 60/75 °C copper wire only – models with suffix 0015, 0022, 0030, 0037, 0040, 0055, 0150, 0220, 0300.
- Tighten terminals to in-lbs (Nm) as follows:

| Series             | Frame Size | in-lbs | Nm  |
|--------------------|------------|--------|-----|
| MOVIDRIVE® compact | 1          | 5      | 0.6 |
|                    | 2          | 13     | 1.5 |
|                    | 3          | 31     | 3.5 |
|                    | 4, 5       | 120    | 14  |

##### 3.1.2 Short circuit current rating

- Suitable for use on a circuit capable of delivering not more than 200,000 rms symmetrical amperes when protected by fuses as described in the tables below.
  - MOVIDRIVE® compact models with suffix 0015 to 0750 (400 V units only).  
Max. voltage is limited to 500 V.
  - MOVIDRIVE® compact models with suffix 0015 to 0300 (230 V units only).  
Max. voltage is limited to 240 V.

##### 3.1.3 Branch circuit protection

Integral solid state short circuit protection does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes.

For maximum fuse rating see tables below.

#### 400/500 V units

| MOVIDRIVE® compact<br>MC_4_A...5_3 | Max. supply short<br>circuit current | Max. supply voltage | Max. fuse rating<br>Non Semiconductor<br>Fuses |
|------------------------------------|--------------------------------------|---------------------|------------------------------------------------|
| 0015/0022/0030/0040                | AC 200000 A                          | AC 500 V            | AC 35 A / 600 V                                |
| 0055/0075/0110                     | AC 200000 A                          | AC 500 V            | AC 110 A / 600 V                               |
| 0150/0220                          | AC 200000 A                          | AC 500 V            | AC 175 A / 600 V                               |
| 0300                               | AC 200000 A                          | AC 500 V            | AC 225 A / 600 V                               |
| 0370/0450                          | AC 200000 A                          | AC 500 V            | AC 350 A / 600 V                               |
| 0550/0750                          | AC 200000 A                          | AC 500 V            | AC 500 A / 600 V                               |

#### 230 V units

| MOVIDRIVE® compact<br>MC_4_A...2_3 | Max. supply short<br>circuit current | Max. supply voltage | Max. fuse rating<br>Non Semiconductor<br>Fuses |
|------------------------------------|--------------------------------------|---------------------|------------------------------------------------|
| 0015/0022/0037                     | AC 200000 A                          | AC 240 V            | AC 30 A / 250 V                                |
| 0055/0075                          | AC 200000 A                          | AC 240 V            | AC 110 A / 250 V                               |
| 0110                               | AC 200000 A                          | AC 240 V            | AC 175 A / 250 V                               |
| 0150                               | AC 200000 A                          | AC 240 V            | AC 225 A / 250 V                               |
| 0220/0300                          | AC 200000 A                          | AC 240 V            | AC 350 A / 250 V                               |

**3.1.4 Motor overload protection**

Motor over temperature sensing is required.

**3.1.5 Ambient temperature**

The units are suitable for an ambient temperature of 40 °C, max. 60 °C with derated output current.

To determine output current rating at higher than 40 °C, the output current should be derated 2.5 % per °C between 40 °C and 50 °C, and 3 % per °C between 50 °C and 60 °C.

**INFORMATION**

- An external DC 24 V voltage supply has to be limited to a max. voltage  $U_{\max} = \text{DC } 30 \text{ V}$  and max. current  $I_{\max} = 8 \text{ A}$ .

- UL certification does not apply to operation in voltage supply systems with a non-grounded star point (IT systems).

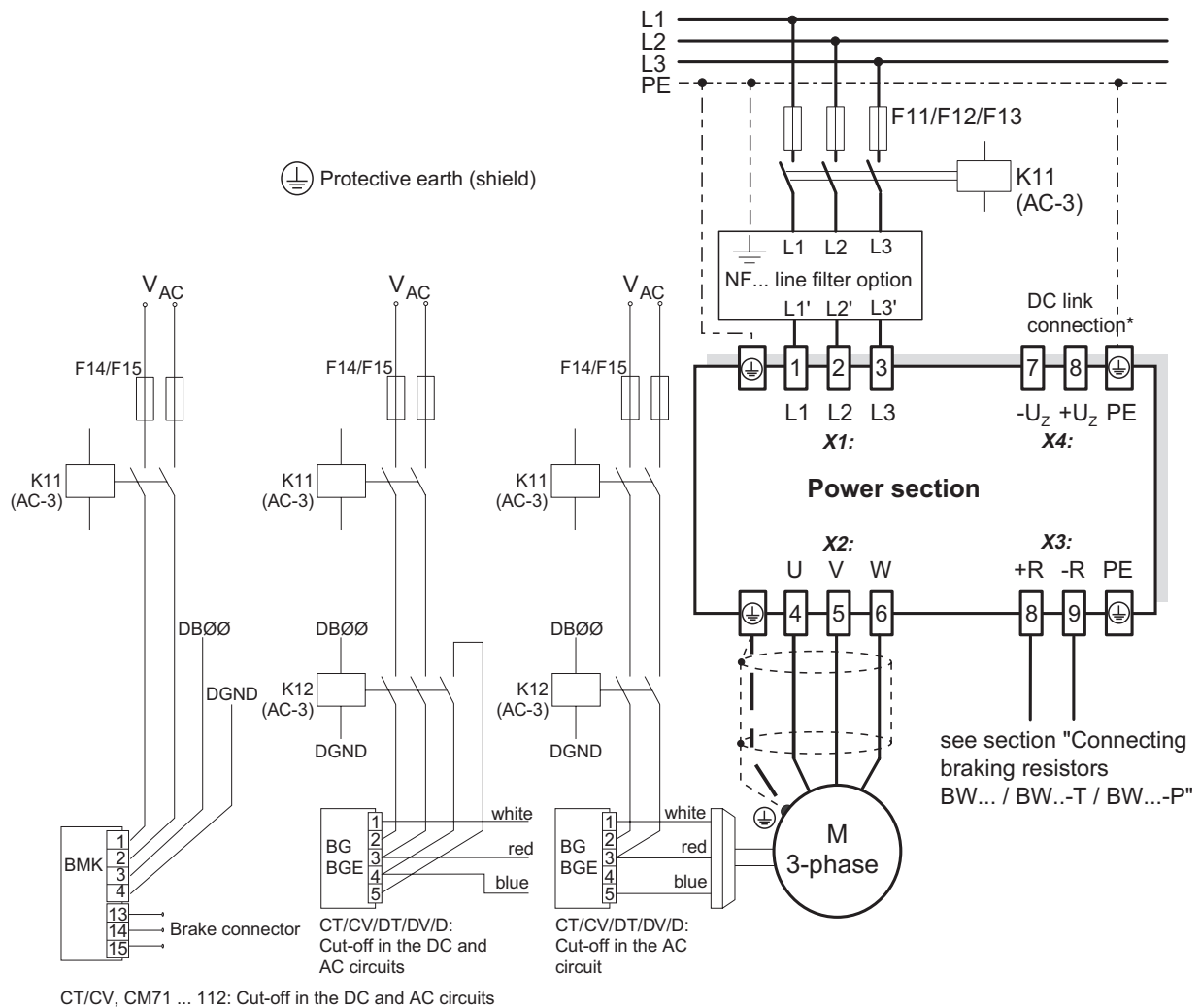
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**3.1.6 Environmental Conditions**

The units are for use in pollution degree 2 environments.

## 3.2 Wiring diagram for basic unit

### 3.2.1 Wiring the power section and brake



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\* With sizes 1 and 2, there is no PE connection next to the supply system connection terminals and motor connection terminals (X1, X2). In this case, use the PE terminal next to the DC link connection (X4).

**Important:** Read the operating instructions for the motors when connecting the brake.

## INFORMATION



If the brake rectifier is connected via the supply system lead, the braking function is restricted.

- Connect the brake rectifier using a separate supply system lead.
- Supply via the motor voltage is not permitted!

Always switch off the brake on the DC and AC sides with:

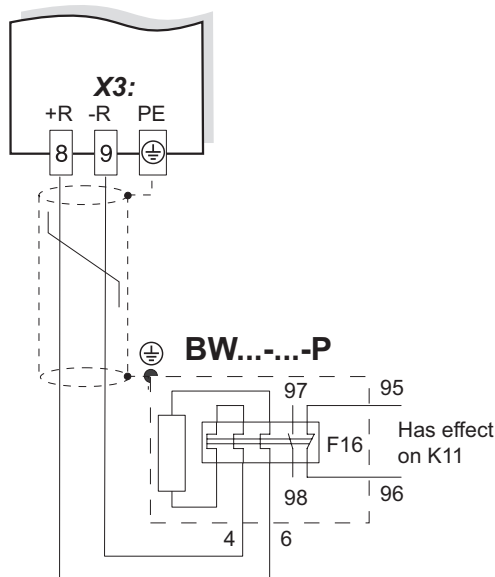
- All hoist applications
- Drives that require a rapid brake response time
- CFC and SERVO operating modes

### Brake rectifier in control cabinet

Install the connection cables between the brake rectifier and the brake separately from other power cables when installing the brake rectifier in the control cabinet. Joint installation is only permitted with shielded power cables.

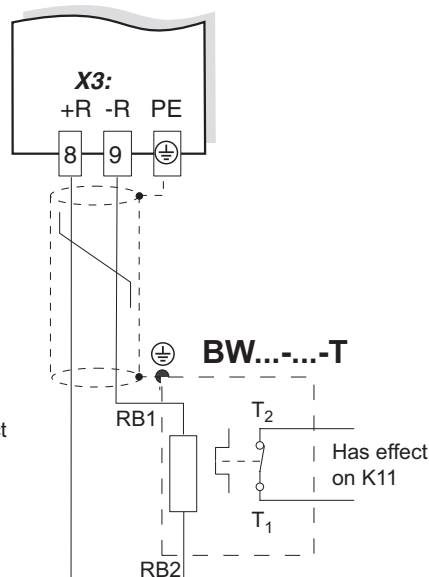
#### 3.2.2 Connecting BW... / BW...-...-T / BW...-...-P braking resistors

##### Power section



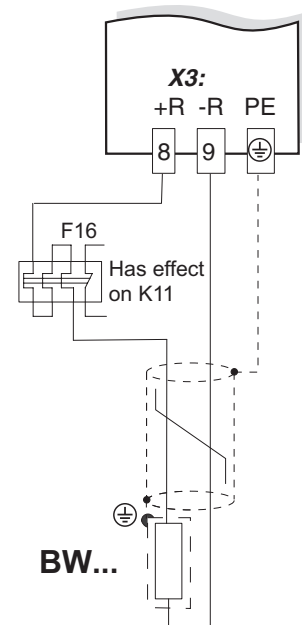
When the auxiliary contact trips, K11 must be opened and DIØØ"/Controller inhibit" assigned a "0" signal. Do not interrupt the resistor circuit!

##### Power section



When the internal temperature switch triggers, K11 must be opened and DIØØ"/Controller inhibit" assigned a "0" signal. Do not interrupt the resistor circuit!

##### Power section



When the external bimetallic relay (F16) triggers, K11 must be opened and DIØØ"/Controller inhibit" assigned a "0" signal. Do not interrupt the resistor circuit!

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| Braking resistor type | Overload protection |                                                                                               |                                 |
|-----------------------|---------------------|-----------------------------------------------------------------------------------------------|---------------------------------|
|                       | Design specified    | Internal temperature switch (..T)                                                             | External bimetallic relay (F16) |
| BW...                 | -                   | -                                                                                             | Required                        |
| BW...-...-T           | -                   | One of the two options (internal temperature switch / external bimetallic relay) is required. |                                 |
| BW...-003 / BW...-005 | Adequate            | -                                                                                             | Permitted                       |

## **4 MOVIDRIVE® A**

### **4.1 Information Regarding UL**

#### **4.1.1 Field Wiring Power Terminals**

- Use 75 °C copper wire only – models with suffix 0370 to 0750.  
Use 60/75 °C copper wire only – models with suffix 0003 to 0300.
- Tighten terminals to in-lbs (Nm) as follows:

| Series       | Frame Size | in-lbs | Nm  |
|--------------|------------|--------|-----|
| MOVIDRIVE® A | 1          | 5      | 0.6 |
|              | 2          | 13     | 1.5 |
|              | 3          | 31     | 3.5 |
|              | 4, 5       | 120    | 14  |

#### **4.1.2 Short Circuit Current Rating**

- Suitable for use on a circuit capable of delivering not more than 5,000 rms symmetrical amperes:
  - MOVIDRIVE® B models with suffix 0005 to 0014 and 0055 to (400 V units only).  
Max. voltage is limited to 500 V.
  - MOVIDRIVE® B models with suffix 0015 to 0150 (230 V units only).  
Max. voltage is limited to 240 V.
- Suitable for use on a circuit capable of delivering not more than 10,000 rms symmetrical amperes:
  - MOVIDRIVE® B models with suffix 0015 to 0040 and 0370 to 0750 (400 V units only).  
Max. voltage is limited to 500 V.
  - MOVIDRIVE® B models with suffix 0220 to 0300 (230 V units only).  
Max. voltage is limited to 240 V.

#### 4.1.3 Branch Circuit Protection

Integral solid state short circuit protection does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes.

For maximum fuse rating see tables below.

##### 400/500 V devices

| MOVIDRIVE®<br>MD_60A...5_3 | max. Netzstrom        | max. Netzspannung   | Sicherungen   |
|----------------------------|-----------------------|---------------------|---------------|
| 0015/0022/0030/0040        | 10000 A <sub>AC</sub> | 500 V <sub>AC</sub> | 30 A / 600 V  |
| 0055/0075/0110             | 10000 A <sub>AC</sub> | 500 V <sub>AC</sub> | 30 A / 600 V  |
| 0150/0220                  | 5000 A <sub>AC</sub>  | 500 V <sub>AC</sub> | 175 A / 600 V |
| 0300                       | 5000 A <sub>AC</sub>  | 500 V <sub>AC</sub> | 225 A / 600 V |
| 0370/0450                  | 10000 A <sub>AC</sub> | 500 V <sub>AC</sub> | 350 A / 600 V |
| 0550/0750                  | 10000 A <sub>AC</sub> | 500 V <sub>AC</sub> | 500 A / 600 V |

##### 230 V devices

| MOVIDRIVE®<br>MD_60A...2_3 | Max. supply short<br>circuit current | Max. supply voltage | Max. fuse rating<br>Non Semiconductor<br>Fuses |
|----------------------------|--------------------------------------|---------------------|------------------------------------------------|
| 0015/0022/0037             | AC 200000 A                          | 240 VAC             | 30 A / 250 V                                   |
| 0055/0075                  | AC 200000 A                          | 240 VAC             | 110 A / 250 V                                  |
| 0110                       | AC 200000 A                          | 240 VAC             | 175 A / 250 V                                  |
| 0150                       | AC 200000 A                          | 240 VAC             | 225 A / 250 V                                  |
| 0220/0300                  | AC 200000 A                          | 240 VAC             | 350 A / 250 V                                  |

#### 4.1.4 Motor overload protection

Motor over temperature sensing is required.

#### 4.1.5 Ambient Temperature

The units are suitable for an ambient temperature of 40 °C, max. 60 °C with derated output current.

To determine output current rating at higher than 40 °C, the output current should be derated 2.5 % per °C between 40 °C and 50 °C, and 3 % per °C between 50 °C and 60 °C.

### INFORMATION



- Use only tested units with a **limited output voltage** ( $U_{\max} = \text{DC } 30 \text{ V}$ ) and **limited output power** ( $P \leq 100 \text{ VA}$ ) as an **external DC 24 V voltage source**.

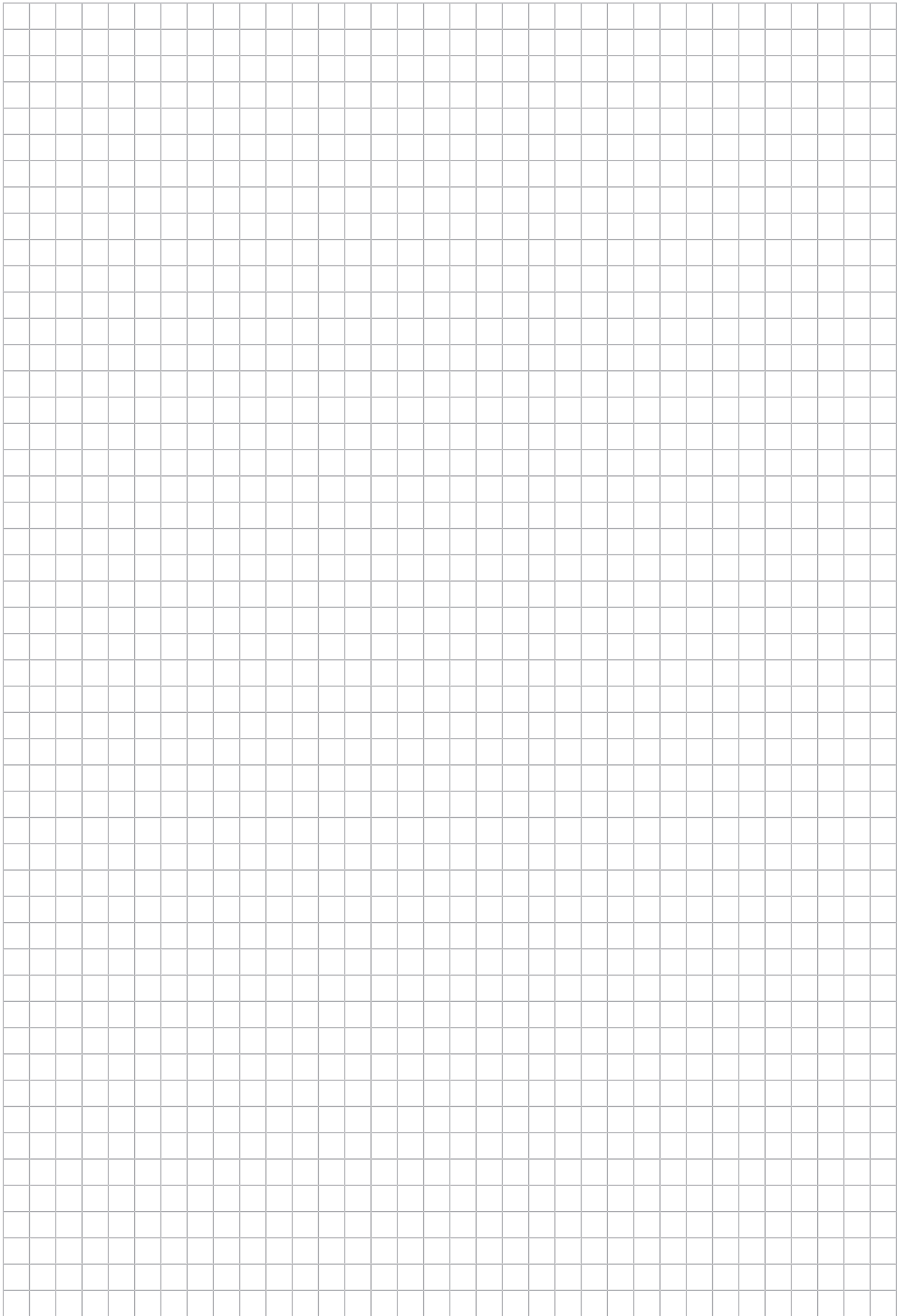
- UL certification does not apply to operation in voltage supply systems with a non-grounded star point (IT systems).

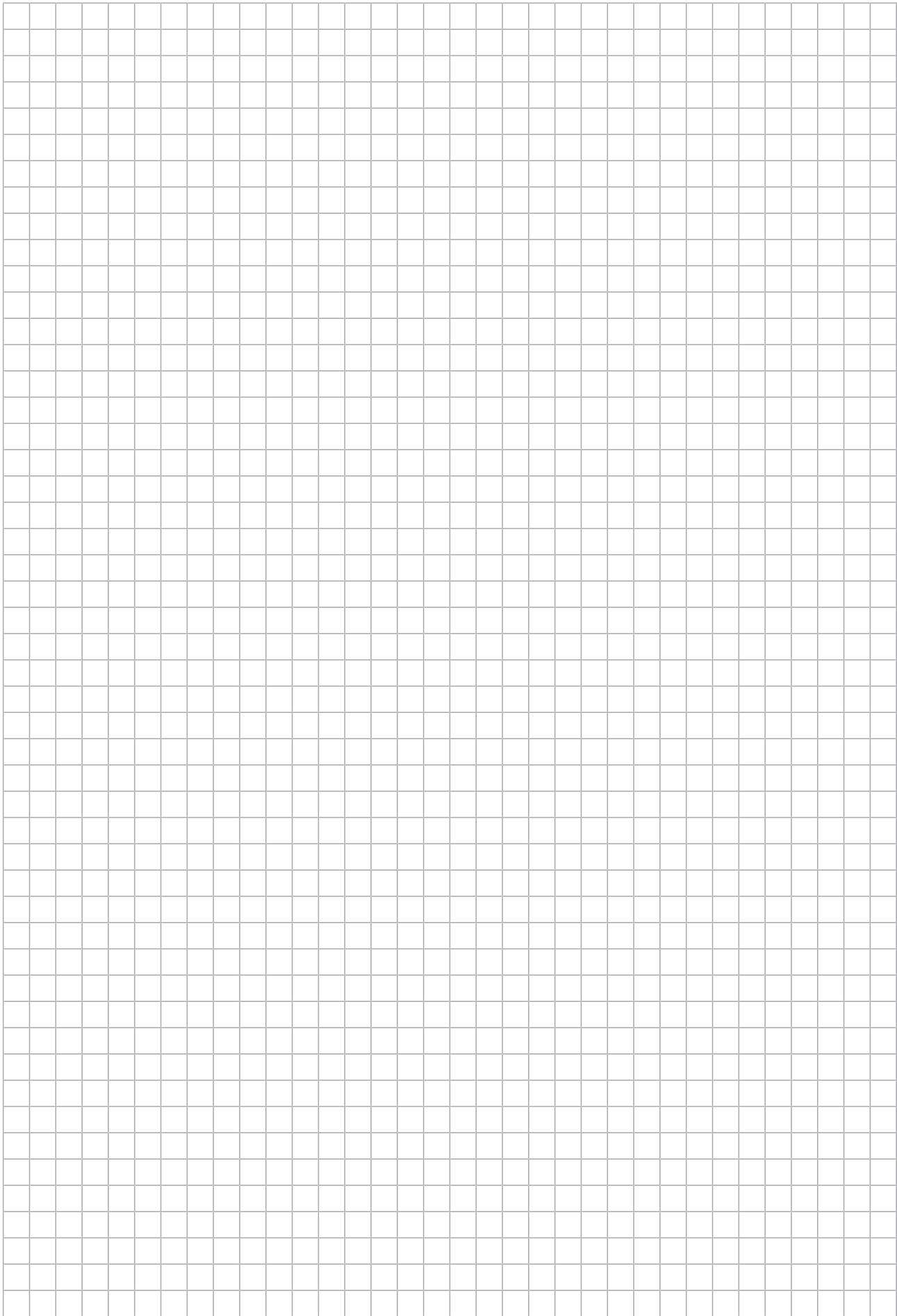


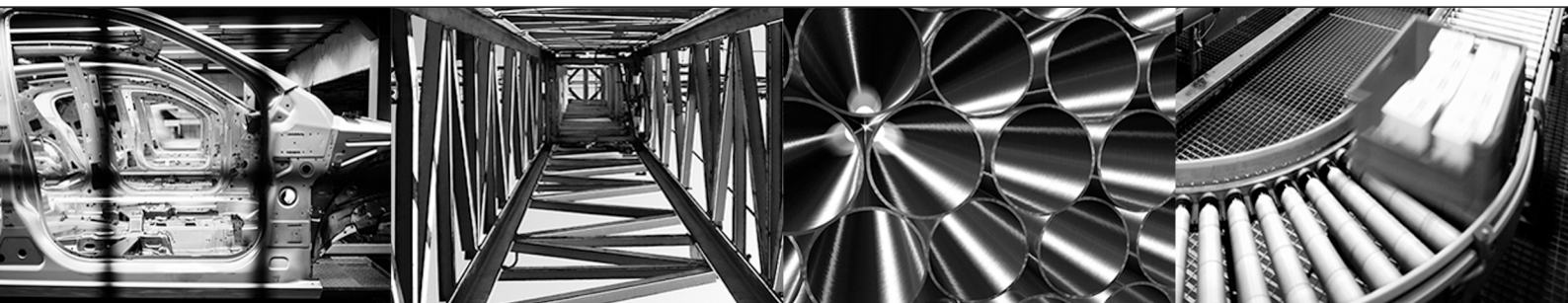


**Brake rectifier in switch cabinet**

Route the connection cables between the brake rectifier and the brake separately from other power cables when installing the brake rectifier in the switch cabinet. Joint routing is only permitted if the power cables are shielded.









**SEW-EURODRIVE**  
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