



Catalog



Frequency Inverters **MOVITRAC® LTP-B**



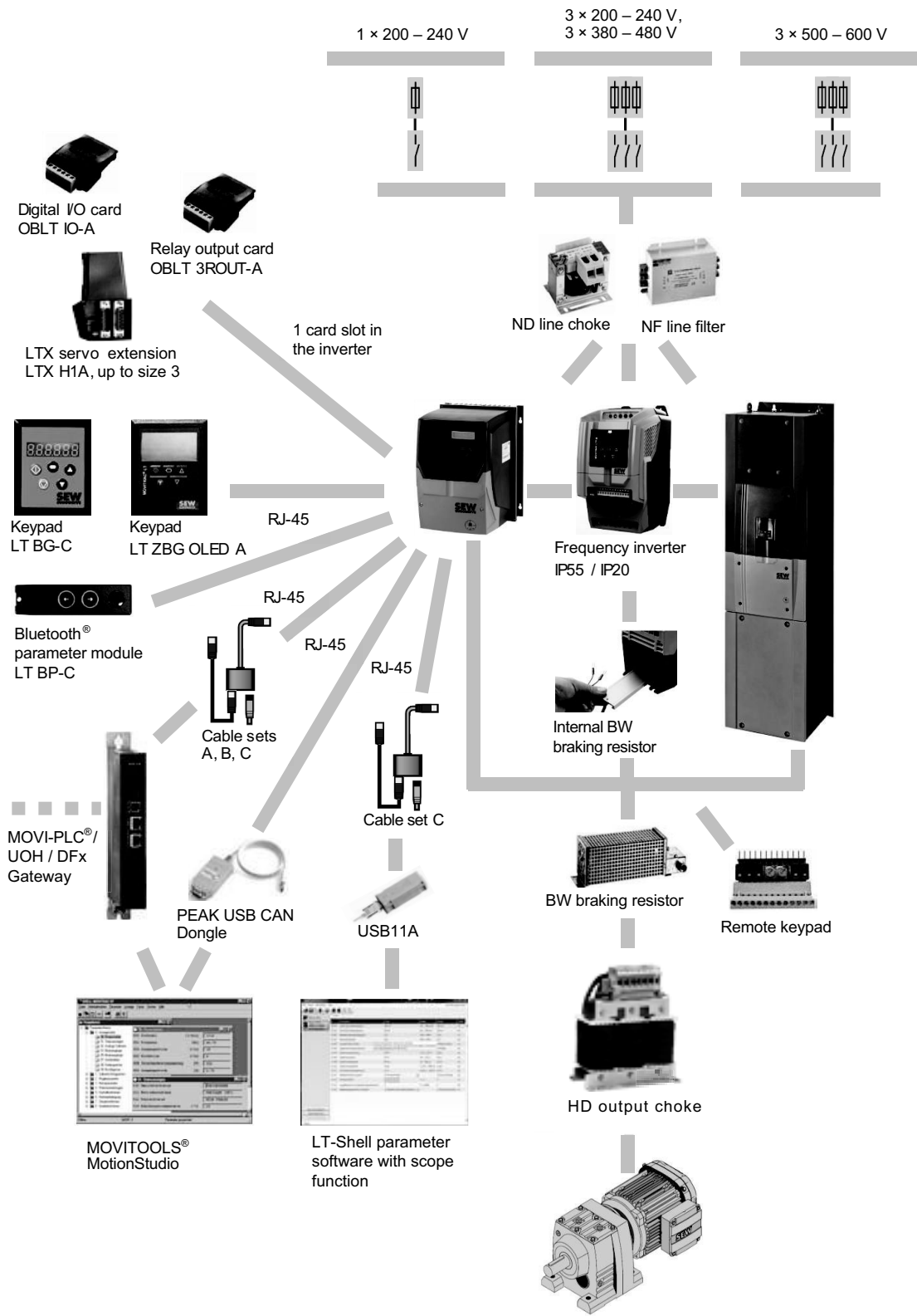
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1 System description

1.1 System overview



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1.2 The inverters at a glance

| Line connection | Motor power | Nominal output current | Type designation | Degree of protection | Size |
|------------------|-----------------|------------------------|------------------------|----------------------|------|
| 230 V 1-phase | 0.75 kW / 1 PS | 4.3 A | MC LTP-B-0008-2B1-4-00 | IP20 | 2 |
| | | | MC LTP-B-0008-2B1-4-10 | IP55 | 2 |
| | 1.5 kW / 2 PS | 7 A | MC LTP-B-0015-2B1-4-00 | IP20 | 2 |
| | | | MC LTP-B-0015-2B1-4-10 | IP55 | 2 |
| | 2.2 kW / 3 PS | 10.5 A | MC LTP-B-0022-2B1-4-00 | IP20 | 2 |
| | | | MC LTP-B-0022-2B1-4-10 | IP55 | 2 |
| 230 V 3-phase | 0.75 kW / 1 PS | 4.3 A | MC LTP-B-0008-2A3-4-00 | IP20 | 2 |
| | | | MC LTP-B-0008-2A3-4-10 | IP55 | 2 |
| | 1.5 kW / 2 PS | 7 A | MC LTP-B-0015-2A3-4-00 | IP20 | 2 |
| | | | MC LTP-B-0015-2A3-4-10 | IP55 | 2 |
| | 2.2 kW / 3 PS | 10.5 A | MC LTP-B-0022-2A3-4-00 | IP20 | 2 |
| | | | MC LTP-B-0022-2A3-4-10 | IP55 | 2 |
| | 3 kW / 4 PS | 14 A | MC LTP-B-0030-2A3-4-00 | IP20 | 3 |
| | | | MC LTP-B-0030-2A3-4-10 | IP55 | 3 |
| | 4 kW / 5.4 PS | 18 A | MC LTP-B-0040-2A3-4-00 | IP20 | 3 |
| | | | MC LTP-B-0040-2A3-4-10 | IP55 | 3 |
| | 5.5 kW / 7.4 PS | 24 A | MC LTP-B-0055-2A3-4-00 | IP20 | 3 |
| | | | MC LTP-B-0055-2A3-4-10 | IP55 | 4 |
| | 7.5 kW / 10 PS | 30 A | MC LTP-B-0075-2A3-4-10 | IP55 | 4 |
| | 11 kW / 15 PS | 46 A | MC LTP-B-0110-2A3-4-10 | IP55 | 4 |
| | 15 kW / 20 PS | 61 A | MC LTP-B-0150-2A3-4-10 | IP55 | 5 |
| | 18.5 kW / 25 PS | 72 A | MC LTP-B-0185-2A3-4-10 | IP55 | 5 |
| | 22 kW / 30 PS | 90 A | MC LTP-B-0220-2A3-4-10 | IP55 | 6 |
| | 30 kW / 40 PS | 110 A | MC LTP-B-0300-2A3-4-10 | IP55 | 6 |
| | 37 kW / 50 PS | 150 A | MC LTP-B-0370-2A3-4-10 | IP55 | 6 |
| | 45 kW / 60 PS | 180 A | MC LTP-B-0450-2A3-4-10 | IP55 | 6 |
| 55 kW / 74 PS | 202 A | MC LTP-B-0550-2A3-4-10 | IP55 | 7 | |
| 75 kW / 100 PS | 248 A | MC LTP-B-0750-2A3-4-10 | IP55 | 7 | |
| 400 V 3-phase | 0.75 kW / 1 PS | 2.2 A | MC LTP-B-0008-5A3-4-00 | IP20 | 2 |
| | | | MC LTP-B-0008-5A3-4-10 | IP55 | 2 |
| | 1.5 kW / 2 PS | 4.1 A | MC LTP-B-0015-5A3-4-00 | IP20 | 2 |
| | | | MC LTP-B-0015-5A3-4-10 | IP55 | 2 |
| | 2.2 kW / 3 PS | 5.8 A | MC LTP-B-0022-5A3-4-00 | IP20 | 2 |
| | | | MC LTP-B-0022-5A3-4-10 | IP55 | 2 |
| | 4 kW / 5.4 PS | 9.5 A | MC LTP-B-0040-5A3-4-00 | IP20 | 2 |
| | | | MC LTP-B-0040-5A3-4-10 | IP55 | 2 |
| | 5.5 kW / 7.4 PS | 14 A | MC LTP-B-0055-5A3-4-00 | IP20 | 3 |
| | | | MC LTP-B-0055-5A3-4-10 | IP55 | 3 |
| | 7.5 kW / 10 PS | 18 A | MC LTP-B-0075-5A3-4-00 | IP20 | 3 |
| | | | MC LTP-B-0075-5A3-4-10 | IP55 | 3 |
| | 11 kW / 15 PS | 24 A | MC LTP-B-0110-5A3-4-00 | IP20 | 3 |
| | | | MC LTP-B-0110-5A3-4-10 | IP55 | 4 |
| | 15 kW / 20 PS | 30 A | MC LTP-B-0150-5A3-4-10 | IP55 | 4 |
| | 18.5 kW / 25 PS | 39 A | MC LTP-B-0185-5A3-4-10 | IP55 | 4 |
| | 22 kW / 30 PS | 46 A | MC LTP-B-0220-5A3-4-10 | IP55 | 4 |
| | 30 kW / 40 PS | 61 A | MC LTP-B-0300-5A3-4-10 | IP55 | 5 |
| | 37 kW / 50 PS | 72 A | MC LTP-B-0370-5A3-4-10 | IP55 | 5 |
| | 45 kW / 60 PS | 90 A | MC LTP-B-0450-5A3-4-10 | IP55 | 6 |
| 55 kW / 74 PS | 110 A | MC LTP-B-0550-5A3-4-10 | IP55 | 6 | |
| 75 kW / 100 PS | 150 A | MC LTP-B-0750-5A3-4-10 | IP55 | 6 | |
| 90 kW / 120 PS | 180 A | MC LTP-B-0900-5A3-4-10 | IP55 | 6 | |

| Line connection | Motor power | Nominal output current | Type designation | Degree of protection | Size |
|------------------|-----------------|------------------------|------------------------|----------------------|------|
| | 110 kW / 148 PS | 202 A | MC LTP-B-1100-5A3-4-10 | IP55 | 7 |
| | 132 kW / 177 PS | 240 A | MC LTP-B-1320-5A3-4-10 | IP55 | 7 |
| | 160 kW / 215 PS | 302 A | MC LTP-B-1600-5A3-4-10 | IP55 | 7 |
| 575 V 3-phase | 0.75 kW / 1 PS | 2.1 A | MC LTP-B-0008-603-4-00 | IP20 | 2 |
| | | | MC LTP-B-0008-603-4-10 | IP55 | 2 |
| | 1.5 kW / 2 PS | 3.1 A | MC LTP-B-0015-603-4-00 | IP20 | 2 |
| | | | MC LTP-B-0015-603-4-10 | IP55 | 2 |
| | 2.2 kW / 3 PS | 4.1 A | MC LTP-B-0022-603-4-00 | IP20 | 2 |
| | | | MC LTP-B-0022-603-4-10 | IP55 | 2 |
| | 4.0 kW / 5.4 PS | 6.5 A | MC LTP-B-0040-603-4-00 | IP20 | 2 |
| | | | MC LTP-B-0040-603-4-10 | IP55 | 2 |
| | 5.5 kW / 7.4 PS | 9 A | MC LTP-B-0055-603-4-00 | IP20 | 2 |
| | | | MC LTP-B-0055-603-4-10 | IP55 | 2 |
| | 7.5 kW / 10 PS | 12 A | MC LTP-B-0075-603-4-00 | IP20 | 3 |
| | | | MC LTP-B-0075-603-4-10 | IP55 | 3 |
| | 11 kW / 15 PS | 17 A | MC LTP-B-0110-603-4-00 | IP20 | 3 |
| | | | MC LTP-B-0110-603-4-10 | IP55 | 3 |
| | 15 kW / 20 PS | 22 A | MC LTP-B-0150-603-4-00 | IP20 | 3 |
| | | | MC LTP-B-0150-603-4-10 | IP55 | 4 |
| | 18.5 kW / 25 PS | 28 A | MC LTP-B-0185-603-4-10 | IP55 | 4 |
| | 22 kW / 30 PS | 34 A | MC LTP-B-0220-603-4-10 | IP55 | 4 |
| | 30 kW / 40 PS | 43 A | MC LTP-B-0300-603-4-10 | IP55 | 4 |
| | 37 kW / 50 PS | 54 A | MC LTP-B-0370-603-4-10 | IP55 | 5 |
| | 45 kW / 60 PS | 65 A | MC LTP-B-0450-603-4-10 | IP55 | 5 |
| 55 kW / 74 PS | 78 A | MC LTP-B-0550-603-4-10 | IP55 | 6 | |
| 75 kW / 100 PS | 105 A | MC LTP-B-0750-603-4-10 | IP55 | 6 | |
| 90 kW / 120 PS | 130 A | MC LTP-B-0900-603-4-10 | IP55 | 6 | |
| 110 kW / 148 PS | 150 A | MC LTP-B-1100-603-4-10 | IP55 | 6 | |

1.3 Markets and applications

Frequency inverters of the MOVITRAC® LTP-B series are optimally matched to meet the requirements of indoor applications outside a control cabinet.

They have been designed and developed for controlling the speed of asynchronous and synchronous motors without encoder and are particularly economical in conveyor applications, hoists, as well as in fans and pumps.

For applications in dirty or moist environments indoors, MOVITRAC® LTP-B is also available in degree of protection IP55 in the power range from 0.75 kW to 160 kW. Optionally, it is available up to 11 kW with a control cabinet housing in degree of protection IP20.

1.4 Accessories

- Braking resistors
- Line choke
- Output choke
- Line filter
- Remote operator terminals
- Cable splitter
- Network packages
- Interface adapter
- Relay output card
- Digital I/O card
- Parameter module
- Fieldbus gateway
- LTX HIPERFACE® encoder card
- Shield plate

1.5 Input voltage ranges

Depending on the model and power range, the inverters can be connected directly to the following supply systems:

MOVITRAC® LTP-B, size 2 (200 – 240 V):

200 V – 240 V according to EN 50160, 1-phase*, 50 – 60 Hz ± 5%

MOVITRAC® LTP-B, all sizes (200 – 240 V):

200 V – 240 V according to EN 50160, 3-phase, 50 – 60 Hz ± 5%

MOVITRAC® LTP-B, all sizes (380 – 480 V):

380 V – 480 V according to EN 50160, 3-phase, 50 – 60 Hz ± 5%

MOVITRAC® LTP-B, all sizes (500 – 600 V):

500 V – 600 V according to EN 50160, 3-phase, 50 – 60 Hz ± 5%

Inverters that are connected to a 3-phase supply system are designed for a maximum power grid imbalance of 3% between the phases. For supply systems with a power grid imbalance of more than 3% (for example in India and parts of the Asia-Pacific region including China), SEW-EURODRIVE recommends that you use input chokes.

• **INFORMATION**

* Single-phase MOVITRAC® LTP-B inverters can also be connected to two phases of a three-phase power supply system of 200 – 240 V.

1.6 Overload capacity

| | | | |
|----------|--|-------------------|------------------|
| Inverter | Overload capacity based on nominal inverter current | 60 seconds | 2 seconds |
| | MOVITRAC® LTP-B | 150% | 175% |

| | | | |
|--------|---|-------------------|--------------------|
| Motors | Overload capacity based on nominal motor current | 60 seconds | 2 seconds |
| | Asynchronous motor (factory setting) | 150% | 175% |
| | Synchronous motors (CMP and third-party motors) | 200% | 250% ¹⁾ |

1) Only 200% for size 3; 5.5 kW

| | | |
|--|---|-------------------|
| | Overload capacity based on nominal motor current | 60 seconds |
| | MGF2 with LTP-B, 1.5 kW MGF4 with LTP-B, 2.2 kW | 200% |

1.7 Protection function

- Output short circuit, phase-phase, phase-ground
- Output overcurrent
- Overload protection
 - Inverter responds to overload as described in chapter "Overload capacity" (→ 9).
- Overvoltage fault
 - Set to 123% of the maximum nominal line voltage of the inverter.
- Undervoltage fault
- Overtemperature fault
- Undertemperature fault
 - The inverter is shut down at a temperature of under -10 °C.
- Line phase failure
 - A running inverter shuts down when one phase of a three-phase system fails for longer than 15 seconds.

1.8 Conformity

All products meet the following international standards:

- CE marking according to low voltage directive
- UL 508C power converter
- EN 61800-3 Variable-speed electrical drives – part 3
- EN 61000-6 / -2, -3, -4 Generic standard for interference immunity/interference emission (EMC)
- Degree of protection according to NEMA 250, EN 60529
- Flammability class according to UL 94
- C-Tick
- cUL
- ROHS
- Ghost R

1.9 Type designation

| Example: MCLTP-B 0015-2B1-4-00 (60 Hz) | | |
|--|---------|---|
| Product name | MCLTP | MOVITRAC® LTP-B |
| Version | B | Version status of the unit series |
| Recommended motor power | 0015 | 0015 = 1.5 kW |
| Supply voltage | 2 | <ul style="list-style-type: none"> • 2 = 200 – 240 V • 5 = 380 – 480 V • 6 = 500 – 600 V |
| Interference suppression on the input | B | <ul style="list-style-type: none"> • 0 = Class 0 • A = Class C2 • B = Class C1 |
| Connection type | 1 | <ul style="list-style-type: none"> • 1 = 1-phase • 3 = 3-phase |
| Quadrants | 4 | 4 = 4Q operation with brake chopper |
| Design | 00 | <ul style="list-style-type: none"> • 00 = Standard IP20 housing • 10 = IP55/NEMA-12K housing |
| Country-specific variant | (60 Hz) | 60 Hz = 60 Hz variant |

1 System description

User interface

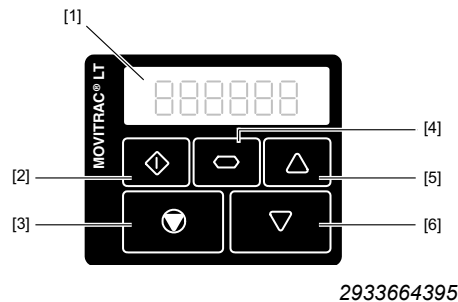
1.10 User interface

1.10.1 Keypad

Each MOVITRAC® LTP-B inverter is equipped with a keypad as standard that allows for operating and setting up the drive without any further devices.

The keypad has 5 keys with the following functions:

| | |
|-----------------|---|
| Start (execute) | <ul style="list-style-type: none">• Enables the motor.• Reverses the direction of rotation if bidirectional keypad mode is activated. |
| Stop/reset | <ul style="list-style-type: none">• Stops the motor.• Acknowledges an error. |
| Navigate | <ul style="list-style-type: none">• Shows real time information.• Press and hold to enable/disable parameter edit mode.• Saves parameter changes. |
| Up | <ul style="list-style-type: none">• Increases the speed in keypad mode.• Increases the parameter values in parameter edit mode. |
| Down | <ul style="list-style-type: none">• Decreases the speed in keypad mode.• Decreases the parameter values in parameter edit mode. |



- | | |
|----------------|--------------|
| [1] Display | [4] Navigate |
| [2] Start | [5] Up |
| [3] Stop/reset | [6] Down |

1.10.2 Display

A 6-digit 7-segment display is integrated in each drive. It can be used to monitor drive functions and to set parameters.

1.10.3 Software

The following software is available for the inverters.

MOVITOOLS® MotionStudio

Functions:

- Data backup
- Parameter changes

PC inverter connection:

- SBus with CAN dongle + interface cable¹⁾
or
- SBus gateway or MOVI-PLC®

1) A prefabricated cable is not available. The cable must be manufactured according to the RJ45 assignment of the inverter interface.

LT Shell

Functions:

- Data backup
- Switching languages
- Firmware update
- Parameter changes
- Export parameters
- Manual mode
- Scope (in preparation)

PC inverter connection:

- USB11A + cable set C or
- Bluetooth® parameter module (LTBP-C)

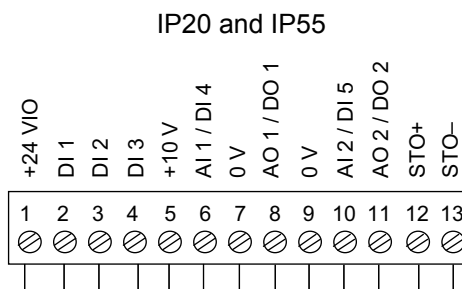
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System description

Overview of signal terminals

1.11 Overview of signal terminals

1.11.1 Main terminals



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The signal terminal block is equipped with the following signal connections:

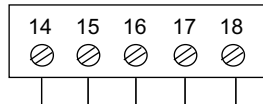
| Terminal no. | Signal | Connection | Description |
|--------------|-------------|---|--|
| 1 | +24 VIO | +24 V: Reference voltage | Reference voltage for activating DI1 – DI3 (max. 100 mA) |
| 2 | DI 1 | Digital input 1 | Positive logic "Logic 1" input voltage range: DC 8 – 30 V "Logic 0" input voltage range: DC 0 – 2 V Compatible with PLC requirement if 0 V is connected to terminal 7 or 9. |
| 3 | DI 2 | Digital input 2 | |
| 4 | DI 3 | Digital input 3 | |
| 5 | +10 V | Output +10 V: Reference voltage | 10 V: Reference voltage for analog input (Potential supply +, 10 mA max., 1 – 10 kΩ) |
| 6 | AI 1 / DO 4 | Analog input 1 (12 bit) Digital input 4 | analog: 0 – 10 V, 10 – 0 V, -10-10 V, 0 – 20 mA, 4 – 20 mA, 20 – 4 mA "Logic 1" input voltage range: DC 8 – 30 V |
| 7 | 0 V | 0 V: Reference potential | 0 V: Reference potential |
| 8 | AO 1 / DO 1 | Analog output 1 (10 bit) Digital output 1 | analog: 0 – 10 V, 10 – 0 V, 0 – 20 mA, 20 – 0 mA, 4 – 20 mA, 20 – 4 mA digital: 0 / 24 V maximum output current: 20 mA |
| 9 | 0 V | 0 V: Reference potential | 0 V: Reference potential |
| 10 | AI 2 / DO 5 | Analog input 2 (12 bit) Digital input 5 / thermistor contact | analog: 0 – 10 V, 10 – 0 V, PTC-th, 0 – 20 mA, 4 – 20 mA, 20 – 4 mA "Logic 1" input voltage range: DC 8 – 30 V |
| 11 | AO 2 / DO 2 | Analog output 2 (10 bit) Digital output 2 | analog: 0 – 10 V, 10 – 0 V, 0 – 20 mA, 20 – 0 mA, 4 – 20 mA, 20 – 4 mA digital: 0 / 24 V maximum output current: 20 mA |
| 12 | STO+ | Output stage enable | DC +24 V input, max. 100 mA current consumption STO safety contact, high = DC 18 – 30 V |
| 13 | STO- | | GND reference potential for DC +24 V input STO safety contact |

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All digital inputs are enabled with an input voltage in the range of 830 V. This means they are +24 V compatible.

The response time of the digital and analog inputs is less than 4 ms. The resolution of the analog inputs is 12 Bit at an accuracy of $\pm 2\%$ in reference to the set maximum scaling.

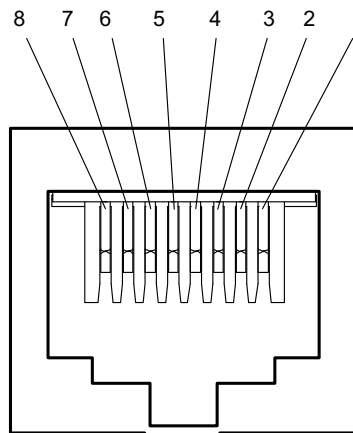
1.11.2 Relay terminals



| Terminal no. | Signal | Description |
|--------------|------------------------------------|--|
| 14 | Relay output 1 reference potential | Relay contact (AC 250 V / DC 30 V, max. 5 A) |
| 15 | Relay output 1 NO contact | |
| 16 | Relay output 1 NC contact | |
| 17 | Relay output 2 reference potential | |
| 18 | Relay output 2 NO contact | |

1.12 Communication socket RJ45

Socket at unit



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- [1] RS485+ (Modbus)
- [2] RS485- (Modbus)
- [3] +24 V (output voltage)
- [4] RS485+ (engineering)
- [5] RS485- (engineering)
- [6] 0 V
- [7] SBus+/ CANBus+
- [8] SBus-/ CANBus-

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2 Technical data – basic unit

2.1 Electromagnetic compatibility

The MOVITRAC® LTP-B frequency inverter series is suited for use in machines and systems. It complies with the EMC product standard EN 61800-3 for variable-speed inverters. Observe the specifications of Directive 2004/108/EC (EMC) for EMC-compliant installation of the inverter system.

MOVITRAC® LTP-B meets the interference immunity requirements of the EN 61800-3 standard for industry and household applications (light industry).

With regard to interference emission, MOVITRAC® LTP-B meets the limit values of the standards EN 61800-3 and EN 55014 and can therefore be used in the industry and for household applications (light industry).

To ensure best possible electromagnetic compatibility, install the inverters as described in the operating instructions. Use shielded motor cables to comply with interference emission regulations.

The table below specifies the conditions for using MOVITRAC® LTP-B in inverter applications:

| Inverter type | Cat. C1 (class B) | Cat. C2 (class A) | Cat. C3 |
|---------------------------------------|--|----------------------------------|---------|
| | According to EN 61800-3 | | |
| 230 V, 1-phase LTP-B xxxx 2B1-x-xx | No additional filtering required Use a shielded motor cable | | |
| 230 V, 3-phase LTP-B xxxx 2A3-x-xx | Use an external filter of the type NF LT xxx xxx | No additional filtering required | |
| 400 V, 3-phase LTP-B xxxx 5A3-x-xx | Use a shielded motor cable. | | |
| 575 V, 3-phase LTP-B xxxx 603-x-xx | If necessary, you can use a line filter of the type NF LT xxx to minimize the electromagnetic interference emission. However, compliance with the limit classes cannot be guaranteed. Use a shielded motor cable. | | |

2.2 Ambient conditions

| | |
|---|---|
| Ambient temperature range during operation | -10 °C to +50 °C with standard PWM frequency (IP20, NEMA 1) -10 °C to +40 °C with standard PWM frequency (IP55, NEMA 12 K) |
| Maximum derating depending on the ambient temperature | 4 % / °C to 55 °C for IP20 inverters 4 % / °C to 50 °C for IP55, NEMA 12 K |
| Ambient temperature range for storage | -40 °C to +60 °C |
| Maximum installation altitude for nominal operation | 1000 m |
| Derating above 1000 m | 1 % / 100 m to max. 2000 m |
| Maximum relative humidity | 95% (condensation not permitted) |
| Housing variants / degree of protection | IP20, NEMA 1 (for use indoors) IP20, NEMA 12 K (for use indoors) |

2

2.3 Output power and current load

2.3.1 1-phase system AC 200 – 240 V

INFORMATION



The cable cross sections and fusing recommended below apply to the use of copper conductors with PVC insulation laid in cable ducts at an ambient temperature of 25 °C. Also comply with the regulations issued by specific countries and for specific machines regarding fusing and the selection of cable cross sections.

| MOVITRAC® LTP-B – EMC filter class C1 according to EN 61800-3 | | | | | |
|---|-----------------|-------------|---------------------|---------------|-----------------------|
| Power in kW | | | 0.75 | 1.5 | 2.2 |
| IP20/NEMA-1 housing | Type | MC LTP-B... | 0008-2B1-4-00 | 0015-2B1-4-00 | 0022-2B1-4-00 |
| | Part number | | 18251382 | 18251528 | 18251641 |
| IP55/NEMA-12K housing | Type | MC LTP-B... | 0008-2B1-4-10 | 0015-2B1-4-10 | 0022-2B1-4-10 |
| | Part number | | 18251390 | 18251536 | 18251668 |
| INPUT | | | | | |
| Line voltage V_{line} according to EN 50160 | V | | 1 × AC 200 – 240 | | |
| Line frequency f_{line} | Hz | | 50 / 60 ± 5% | | |
| Recommended power supply cable cross section | mm ² | | 1.5 | | 2.5 |
| | AWG | | 14 | | 12 |
| Line fuse | A | | 16 | | 25 (35) ¹⁾ |
| Nominal input current | A | | 8.5 | 13.9 | 19.5 |
| OUTPUT | | | | | |
| Recommended motor power | kW | | 0.75 | 1.5 | 2.2 |
| | PS | | 1 | 2 | 3 |
| Output voltage V_{motor} | V | | 3 × 20 - V_{line} | | |
| Output current | A | | 4.3 | 7 | 10.5 |
| Cross section of motor cable Cu 75C | mm ² | | 1.5 | | 2.5 |
| | AWG | | 14 | | 12 |
| Max. motor cable length | Shielded | m | 100 | | |
| | Unshielded | | 150 | | |
| GENERAL INFORMATION | | | | | |
| Size | | | 2 | | |
| Heat loss at nominal output power | W | | 22 | 45 | 66 |
| Minimum braking resistance value | Ω | | 27 | | |
| Maximum unit terminal cross section | AWG | | 8 | | |
| | mm ² | | 10 | | |

1) Recommended values for UL compliance

2.3.2 3-phase system AC 200 – 240 V

Sizes 2 and 3

| MOVITRAC® LTP-B – EMC filter class C2 according to EN 61800-3 | | | | | | | | |
|---|-----------------|---------------------|---------------|---------------|-----------------------|---------------|-----------------------|---------------------|
| Power in kW | | | 0.75 | 1.5 | 2.2 | 3 | 4 | 5.5 |
| IP20/ NEMA-1 housing | Type | MC LTP-B... | 0008-2A3-4-00 | 0015-2A3-4-00 | 0022-2A3-4-00 | 0030-2A3-4-00 | 0040-2A3-4-00 | 0055-2A3-4-00 |
| | Part number | | 18251358 | 18251471 | 18251617 | 18251722 | 18251765 | 18251846 |
| IP55/ NEMA-12K housing | Type | MC LTP-B... | 0008-2A3-4-10 | 0015-2A3-4-10 | 0022-2A3-4-10 | 0030-2A3-4-10 | 0040-2A3-4-10 | 0055-2A3-4-10 |
| | Part number | | 18251366 | 18251498 | 18251625 | 18251730 | 18251773 | 18251854 |
| INPUT | | | | | | | | |
| Line voltage V_{line} according to EN 50160 | V | 3 × AC 200 – 240 | | | | | | |
| Line frequency f_{line} | Hz | 50 / 60 ± 5% | | | | | | |
| Recommended power supply cable cross section | mm ² | 1.5 | | 2.5 | | 4.0 | | 6.0 |
| | AWG | 16 | | 14 | | 12 | | 10 |
| Line fuse | A | 10 | | 16 | 20 (35) ¹⁾ | | 25 (35) ¹⁾ | 35 |
| Nominal input current | A | 4.5 | 7.3 | 11 | 16.1 | 18.8 | 24.8 | |
| OUTPUT | | | | | | | | |
| Recommended motor power | kW | 0.75 | 1.5 | 2.2 | 3 | 4 | 5.5 | |
| | PS | 1 | 2 | 3 | 4 | 5.4 | 7.4 | |
| Output voltage V_{motor} | V | 3 × 20 - V_{line} | | | | | | |
| Output current | A | 4.3 | 7 | 10.5 | 14 | 18 | 24 | |
| Cross section of motor cable Cu 75C | mm ² | 1.5 | | 2.5 | | 4.0 | | 6.0 |
| | AWG | 16 | | 14 | | 12 | | 10 |
| Max. motor cable length | Shielded | 100 | | | | | | |
| | Unshielded | 150 | | | | | | |
| GENERAL INFORMATION | | | | | | | | |
| Size | | 2 | | | 3 | | 3/4 ²⁾ | |
| Heat loss at nominal output power | W | 22 | 45 | 66 | 90 | 120 | 165 | |
| Minimum braking resistance value | Ω | 27 | | | | | | 22 |
| Maximum unit terminal cross section | AWG | 8 | | | | | | 8/6 ²⁾ |
| | mm ² | 10 | | | | | | 10/16 ²⁾ |

1) Recommended values for UL compliance

2) IP20 housing – size 3 / IP55 housing – size 4

2 Technical data – basic unit

Output power and current load

Sizes 4 and 5

| MOVITRAC® LTP-B – EMC filter class C2 according to EN 61800-3 | | | | | | |
|---|-------------|-----------------|---------------------|---------------|---------------|---------------|
| Power in kW | | | 7.5 | 11 | 15 | 18.5 |
| IP55/NEMA-12K housing | Type | MC LTP-B... | 0075-2A3-4-10 | 0110-2A3-4-10 | 0150-2A3-4-10 | 0185-2A3-4-10 |
| | Part number | | 18251919 | 18251978 | 18252036 | 18252060 |
| INPUT | | | | | | |
| Line voltage V_{line} according to EN 50160 | | V | 3 × AC 200 – 240 | | | |
| Line frequency f_{line} | | Hz | 50 / 60 ± 5% | | | |
| Recommended power supply cable cross section | | mm ² | 10 | 16 | 25 | 35 |
| | | AWG | 8 | 6 | 4 | 2 |
| Line fuse | | A | 50 | 63 | 80 | 100 |
| Nominal input current | | A | 40 | 47.1 | 62.4 | 74.1 |
| OUTPUT | | | | | | |
| Recommended motor power | | kW | 7.5 | 11 | 15 | 18.5 |
| | | PS | 10 | 15 | 20 | 25 |
| Output voltage V_{motor} | | V | 3 × 20 - V_{line} | | | |
| Output current | | A | 30 | 46 | 61 | 72 |
| Cross section of motor cable Cu 75C | | mm ² | 10 | 16 | 25 | 35 |
| | | AWG | 8 | 6 | 4 | 2 |
| Max. motor cable length | | Shielded | 100 | | | |
| | | Unshielded | 150 | | | |
| GENERAL INFORMATION | | | | | | |
| Size | | | 4 | | 5 | |
| Heat loss at nominal output power | | W | 225 | 330 | 450 | 555 |
| Minimum braking resistance value | | Ω | 22 | 12 | | 6 |
| Maximum unit terminal cross section | | AWG | 6 | | 2 | |
| | | mm ² | 16 | | 35 | |

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Size 6

| MOVITRAC® LTP-B – EMC filter class C2 according to EN 61800-3 | | | | | | |
|---|-------------|-----------------|--|---------------|---------------|---------------|
| Power in kW | | | 22 | 30 | 37 | 45 |
| IP55/NEMA-12K housing | Type | MC LTP-B... | 0220-2A3-4-10 | 0300-2A3-4-10 | 0370-2A3-4-10 | 0450-2A3-4-10 |
| | Part number | | 18252087 | 18252117 | 18252141 | 18252176 |
| INPUT | | | | | | |
| Line voltage V_{line} according to EN 50160 | | V | 3 × AC 200 – 240 | | | |
| Line frequency f_{line} | | Hz | 50 / 60 ± 5% | | | |
| Recommended power supply cable cross section | | mm ² | 35 | 50 | 95 | |
| | | AWG | 2 | 1 | 3/0 | |
| Line fuse | | A | 100 | 150 | 200 | |
| Nominal input current | | A | 92.3 | 112.7 | 153.5 | 183.8 |
| OUTPUT | | | | | | |
| Recommended motor power | | kW | 22 | 30 | 37 | 45 |
| | | PS | 30 | 40 | 50 | 60 |
| Output voltage V_{motor} | | V | 3 × 20 - V_{line} | | | |
| Output current | | A | 90 | 110 | 150 | 180 |
| Cross section of motor cable Cu 75C | | mm ² | 35 | 50 | 95 | |
| | | AWG | 2 | 1 | 3/0 | |
| Max. motor cable length | | Shielded | m | | | |
| | | Unshielded | 150 | | | |
| GENERAL INFORMATION | | | | | | |
| Size | | | 6 | | | |
| Heat loss at nominal output power | | W | 660 | 900 | 1110 | 1350 |
| Minimum braking resistance value | | Ω | 6 | 3 | | |
| Maximum unit terminal cross section | | AWG | - | | | |
| | | | M10 stud with nut max. 70 mm ² Press cable lug DIN 46235 | | | |

2 Technical data – basic unit

Output power and current load

Size 7

| MOVITRAC® LTP-B – EMC filter class C2 according to EN 61800-3 | | | | |
|---|-------------|-----------------|--|---------------|
| Power in kW | | | 55 | 75 |
| IP55/NEMA-12K housing | Type | MC LTP-B... | 0550-2A3-4-10 | 0750-2A3-4-10 |
| | Part number | | 18252206 | 18252230 |
| INPUT | | | | |
| Line voltage V_{line} according to EN 50160 | | V | 3 × AC 200 – 240 | |
| Line frequency f_{line} | | Hz | 50 / 60 ± 5% | |
| Recommended power supply cable cross section | | mm ² | 120 | 150 |
| | | AWG | 4/0 | – |
| Line fuse | | A | 250 | 315 |
| Nominal input current | | A | 206.2 | 252.8 |
| OUTPUT | | | | |
| Recommended motor power | | kW | 55 | 75 |
| | | PS | 74 | 100 |
| Output voltage V_{motor} | | V | 3 × 20 - V_{line} | |
| Output current | | A | 202 | 248 |
| Cross section of motor cable Cu 75C | | mm ² | 120 | 150 |
| | | AWG | 4/0 | – |
| Max. motor cable length | | Shielded | m | |
| | | Unshielded | 100 | 150 |
| GENERAL INFORMATION | | | | |
| Size | | | 7 | |
| Heat loss at nominal output power | | W | 1650 | 2250 |
| Minimum braking resistance value | | Ω | 3 | |
| Maximum unit terminal cross section | | AWG | – | |
| | | | M10 stud with nut max. 70 mm ² Press cable lug DIN 46235 | |

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2.3.3 3-phase system AC 380 – 480 V

Sizes 2 and 3

| MOVITRAC® LTP-B – EMC filter class C2 according to EN 61800-3 | | | | | | | | | | |
|---|----------------------|---------------|---------------------|---------------|-----------------------|---------------|---------------|-------------------|---------------------|--|
| Power in kW | | | 0.75 | 1.5 | 2.2 | 4 | 5.5 | 7.5 | 11 | |
| IP20/ NEMA- 1 hous- ing | Type | MC LTP-B.. | 0008-5A3-4-00 | 0015-5A3-4-00 | 0022-5A3-4-00 | 0040-5A3-4-00 | 0055-5A3-4-00 | 0075-5A3-4-00 | 0110-5A3-4-00 | |
| | Part number | | 18251412 | 18251552 | 18251684 | 18251803 | 18251870 | 18251927 | 18251986 | |
| IP55/ NEMA- 12K housing | Type | MC LTP-B.. | 0008-5A3-4-10 | 0015-5A3-4-10 | 0022-5A3-4-10 | 0040-5A3-4-10 | 0055-5A3-4-10 | 0075-5A3-4-10 | 0110-5A3-4-10 | |
| | Part number | | 18251420 | 18251560 | 18251692 | 18251811 | 18251889 | 18251935 | 18251994 | |
| INPUT | | | | | | | | | | |
| Line voltage V_{line} according to EN 50160 | | V | 3 × AC 380 – 480 | | | | | | | |
| Line frequency f_{line} | | Hz | 50 / 60 ± 5% | | | | | | | |
| Recommended power supply cable cross sec- tion | mm ² | | 1.5 | | | 2.5 | | 6 | | |
| | AWG | | 16 | | | 14 | | 10 | | |
| Line fuse | A | | 10 | | 16 (15) ¹⁾ | | 16 | 20 | 35 | |
| Nominal input current | A | | 2.4 | 4.3 | 6.1 | 9.8 | 14.6 | 18.1 | 24.7 | |
| OUTPUT | | | | | | | | | | |
| Recommended motor power | kW | | 0.75 | 1.5 | 2.2 | 4 | 5.5 | 7.5 | 11 | |
| | PS | | 1 | 2 | 3 | 5.4 | 7.4 | 10 | 15 | |
| Output voltage V_{motor} | V | | 3 × 20 - V_{line} | | | | | | | |
| Output current | A | | 2.2 | 4.1 | 5.8 | 9.5 | 14 | 18 | 24 | |
| Cross section of motor cable Cu 75C | mm ² | | 1.5 | | | 2.5 | | 6 | | |
| | AWG | | 16 | | | 14 | | 10 | | |
| Max. motor cable length | Shield- ed | m | 100 | | | | | | | |
| | Un- shiel- ded | | 150 | | | | | | | |
| GENERAL INFORMATION | | | | | | | | | | |
| Size | | | 2 | | | 3 | | 3/4 ²⁾ | | |
| Heat loss at nominal output power | W | | 22 | 45 | 66 | 120 | 165 | 225 | 330 | |
| Minimum brak- ing resistance value | Ω | | 68 | | | | 39 | | | |
| Maximum unit terminal cross section | AWG | | 8 | | | | | | 8/6 ²⁾ | |
| | mm ² | | 10 | | | | | | 10/16 ²⁾ | |

1) Recommended values for UL compliance

2) IP20 housing – size 3 / IP55 housing – size 4

2 Technical data – basic unit

Output power and current load

Sizes 4 and 5

| MOVITRAC® LTP-B – EMC filter class C2 according to EN 61800-3 | | | | | | | |
|---|-----------------|-------------|---------------------|---------------|---------------|---------------|---------------|
| Power in kW | | | 15 | 18.5 | 22 | 30 | 37 |
| IP55/ NEMA-12K housing | Type | MC LTP-B... | 0150-5A3-4-10 | 0185-5A3-4-10 | 0220-5A3-4-10 | 0300-5A3-4-10 | 0370-5A3-4-10 |
| | Part number | | 18252044 | 18252079 | 18252095 | 18252125 | 18252168 |
| INPUT | | | | | | | |
| Line voltage V_{line} according to EN 50160 | V | | 3 × AC 380 – 480 | | | | |
| Line frequency f_{line} | Hz | | 50 / 60 ± 5% | | | | |
| Recommended power supply cable cross section | mm ² | | 6 | 10 | 16 | 25 | 35 |
| | AWG | | 10 | 8 | 6 | 4 | 2 |
| Line fuse | A | | 35 | 50 | 63 | 80 | 100 |
| Nominal input current | A | | 30.8 | 40 | 47.1 | 62.8 | 73.8 |
| OUTPUT | | | | | | | |
| Recommended motor power | kW | | 15 | 18.5 | 22 | 30 | 37 |
| | PS | | 20 | 25 | 30 | 40 | 50 |
| Output voltage V_{motor} | V | | 3 × 20 - V_{line} | | | | |
| Output current | A | | 30 | 39 | 46 | 61 | 72 |
| Cross section of motor cable Cu 75C | mm ² | | 6 | 10 | 16 | 25 | 35 |
| | AWG | | 10 | 8 | 6 | 4 | 2 |
| Max. motor cable length | Shielded | m | 100 | | | | |
| | Unshielded | | 150 | | | | |
| GENERAL INFORMATION | | | | | | | |
| Size | | | 4 | | | 5 | |
| Heat loss at nominal output power | W | | 450 | 555 | 660 | 900 | 1110 |
| Minimum braking resistance value | Ω | | 22 | | | 12 | |
| Maximum unit terminal cross section | AWG | | 6 | | | 2 | |
| | mm ² | | 16 | | | 35 | |

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Size 6

| MOVITRAC® LTP-B – EMC filter class C2 according to EN 61800-3 | | | | | | |
|---|-----------------|--|---------------|---------------|---------------|---------------|
| Power in kW | | 45 | 55 | 75 | 90 | |
| IP55/ NEMA-12K housing | Type | MC LTP-B... | 0450-5A3-4-10 | 0550-5A3-4-10 | 0750-5A3-4-10 | 0900-5A3-4-10 |
| | Part number | | 18252184 | 18252214 | 18252249 | 18252273 |
| INPUT | | | | | | |
| Line voltage V_{line} according to EN 50160 | V | 3 × AC 380 – 480 | | | | |
| Line frequency f_{line} | Hz | 50 / 60 ± 5% | | | | |
| Recommended power supply cable cross section | mm ² | 50 | 70 | 95 | 120 | |
| | AWG | 1 | 2/0 | 3/0 | 4/0 | |
| Line fuse | A | 125 | 150 | 200 | 250 | |
| Nominal input current | A | 92.2 | 112.5 | 153.2 | 183.7 | |
| OUTPUT | | | | | | |
| Recommended motor power | kW | 45 | 55 | 75 | 90 | |
| | PS | 60 | 74 | 100 | 120 | |
| Output voltage V_{motor} | V | 3 × 20 - V_{line} | | | | |
| Output current | A | 90 | 110 | 150 | 180 | |
| Cross section of motor cable Cu 75C | mm ² | 50 | 70 | 95 | 120 | |
| | AWG | 1 | 2/0 | 3/0 | 4/0 | |
| Max. motor cable length | Shielded | m | 100 | | | |
| | Unshielded | | 150 | | | |
| GENERAL INFORMATION | | | | | | |
| Size | | 6 | | | | |
| Heat loss at nominal output power | W | 1350 | 1650 | 2250 | 2700 | |
| Minimum braking resistance value | Ω | 6 | | | | |
| Maximum unit terminal cross section | AWG | - | | | | |
| | | M10 stud with nut max. 70 mm ² Press cable lug DIN 46235 | | | | |

2 Technical data – basic unit

Output power and current load

Size 7

| MOVITRAC® LTP-B – EMC filter class C2 according to EN 61800-3 | | | | | |
|---|-----------------|-------------|--|---------------|---------------|
| Power in kW | | | 110 | 132 | 160 |
| IP55/NEMA-12K housing | Type | MC LTP-B... | 1100-5A3-4-10 | 1320-5A3-4-10 | 1600-5A3-4-10 |
| | Part number | | 18252303 | 18252311 | 18252346 |
| INPUT | | | | | |
| Line voltage V_{line} according to EN 50160 | V | | 3 × AC 380 – 480 | | |
| Line frequency f_{line} | Hz | | 50 / 60 ± 5% | | |
| Recommended power supply cable cross section | mm ² | | 120 | 150 | 185 |
| | AWG | | 4/0 | – | – |
| Line fuse | A | | 250 | 315 | 355 |
| Nominal input current | A | | 205.9 | 244.5 | 307.8 |
| OUTPUT | | | | | |
| Recommended motor power | kW | | 110 | 132 | 160 |
| | PS | | 148 | 177 | 215 |
| Output voltage V_{motor} | V | | 3 × 20 - V_{line} | | |
| Output current | A | | 202 | 240 | 302 |
| Cross section of motor cable Cu 75C | mm ² | | 120 | 150 | 185 |
| | AWG | | 4/0 | – | – |
| Max. motor cable length | Shielded | m | 100 | | |
| | Unshielded | | 150 | | |
| GENERAL INFORMATION | | | | | |
| Size | | | 7 | | |
| Heat loss at nominal output power | W | | 3300 | 3960 | 4800 |
| Minimum braking resistance value | Ω | | 6 | | |
| Maximum unit terminal cross section | AWG | | – | | |
| | | | M10 stud with nut max. 70 mm ² Press cable lug DIN 46235 | | |

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2.3.4 3-phase system AC 500 – 600 V

Size 2

| MOVITRAC® LTP-B – EMC filter class 0 according to EN 61800-3 | | | | | | | |
|--|-------------|-----------------|----------------------|---------------|---------------|---------------|-----------------------|
| Power in kW | | | 0.75 | 1.5 | 2.2 | 4 | 5.5 |
| IP20/ NEMA-1 housing | Type | MC LTP-B... | 0008-603-4-00 | 0015-603-4-00 | 0022-603-4-00 | 0040-603-4-00 | 0055-603-4-00 |
| | Part number | | 18251447 | 18251587 | 18251714 | 18410812 | 18410839 |
| IP55/ NEMA-12K housing | Type | MC LTP-B... | 0008-603-4-10 | 0015-603-4-10 | 0022-603-4-10 | 0040-603-4-10 | 0055-603-4-10 |
| | Part number | | 18251455 | 18251595 | 18410804 | 18410820 | 18410847 |
| INPUT | | | | | | | |
| Line voltage V_{line} according to EN 50160 | | V | 3 × AC 500 – 600 | | | | |
| Line frequency f_{line} | | Hz | 50/60 Hz ± 5% | | | | |
| Recommended power supply cable cross section | | mm ² | 1.5 | | | | 2.5 |
| | | AWG | 16 | | | | 14 |
| Line fuse | | A | 10/(6) ¹⁾ | | 10 | | 16/(15) ¹⁾ |
| Nominal input current | | A | 2.5 | 3.7 | 4.9 | 7.8 | 10.8 |
| OUTPUT | | | | | | | |
| Recommended motor power | | kW | 0.75 | 1.5 | 2.2 | 4 | 5.5 |
| | | PS | 1 | 2 | 3 | 5.4 | 7.4 |
| Output voltage V_{motor} | | V | 3 × 20 - V_{line} | | | | |
| Output current | | A | 2.1 | 3.1 | 4.1 | 6.5 | 9 |
| Cross section of motor cable Cu 75C | | mm ² | 1.5 | | | | 2.5 |
| | | AWG | 16 | | | | 14 |
| Max. motor cable length | | Shielded | 100 | | | | |
| | | Unshielded | 150 | | | | |
| GENERAL INFORMATION | | | | | | | |
| Size | | | 2 | | | | |
| Heat loss at nominal output power | | W | 22 | 45 | 66 | 120 | 165 |
| Minimum braking resistance value | | Ω | 68 | | | | |
| Maximum unit terminal cross section | | AWG | 8 | | | | |
| | | mm ² | 10 | | | | |

1) Recommended values for UL compliance

2 Technical data – basic unit

Output power and current load

Sizes 3 and 4

| MOVITRAC® LTP-B – EMC filter class 0 according to EN 61800-3 | | | | | | | | |
|--|-----------------|---------------------|-----------------------|---------------------|-----------------------|-----------------------|-----------------------|---------------|
| Power in kW | | | 7.5 | 11 | 15 | 18.5 | 22 | 30 |
| IP20/ NEMA-1 housing | Type | MC LTP-B... | 0075-603-4-00 | 0110-603-4-00 | 0150-603-4-00 | - | - | - |
| | Part number | | 18410855 | 18410863 | 18410871 | - | - | - |
| IP55/ NEMA-12K housing | Type | MC LTP-B... | 0075-603-4-10 | 0110-603-4-10 | 0150-603-4-10 | 0185-603-4-10 | 0220-603-4-10 | 0300-603-4-10 |
| | Part number | | 18251951 | 18252028 | 18252052 | 18410898 | 18252109 | 18252133 |
| INPUT | | | | | | | | |
| Line voltage V_{line} according to EN 50160 | V | 3 × AC 500 – 600 | | | | | | |
| Line frequency f_{line} | Hz | 50/60 Hz ± 5% | | | | | | |
| Recommended power supply cable cross section | mm ² | 2.5 | 4 | 6 | | 10 | 14 | |
| | AWG | 14 | 12 | 10 | | 8 | 6 | |
| Line fuse | A | 20 | 25/(30) ¹⁾ | 35 | 40/(45) ¹⁾ | 50/(60) ¹⁾ | 63/(70) ¹⁾ | |
| Nominal input current | A | 14.4 | 20.6 | 26.7 | 34 | 41.2 | 49.5 | |
| OUTPUT | | | | | | | | |
| Recommended motor power | kW | 7.5 | 11 | 15 | 18.5 | 22 | 30 | |
| | PS | 10 | 15 | 20 | 25 | 30 | 40 | |
| Output voltage V_{motor} | V | 3 × 20 - V_{line} | | | | | | |
| Output current | A | 12 | 17 | 22 | 28 | 34 | 43 | |
| Cross section of motor cable Cu 75C | mm ² | 2.5 | 4 | 6 | | 10 | 14 | |
| | AWG | 14 | 12 | 10 | | 8 | 6 | |
| Max. motor cable length | Shielded | m | | 100 | | | | |
| | Unshielded | m | | 150 | | | | |
| GENERAL INFORMATION | | | | | | | | |
| Size | | 3 | | 3/4 ²⁾ | 4 | | | |
| Heat loss at nominal output power | W | 225 | 330 | 450 | 555 | 660 | 900 | |
| Minimum braking resistance value | Ω | 39 | | | 22 | | | |
| Maximum unit terminal cross section | AWG | 8 | | 8/6 ²⁾ | 6 | | | |
| | mm ² | 10 | | 10/16 ²⁾ | 16 | | | |

1) Recommended values for UL compliance

2) IP20 housing: size 3 / IP55 housing: Size 4

Sizes 5 and 6

| MOVITRAC® LTP-B – EMC filter class 0 according to EN 61800-3 | | | | | | | | |
|--|-------------|-----------------|--|---------------|-------------------------|-------------------------|---------------|---------------|
| Power in kW | | | 37 | 45 | 55 | 75 | 90 | 110 |
| IP55/ NEMA-12K housing | Type | MC LTP-B... | 0370-603-4-10 | 0450-603-4-10 | 0550-603-4-10 | 0750-603-4-10 | 0900-603-4-10 | 1100-603-4-10 |
| | Part number | | 18410901 | 18252192 | 18252222 | 18252257 | 18252281 | 18410928 |
| INPUT | | | | | | | | |
| Line voltage V_{line} according to EN 50160 | | V | 3 × AC 500 – 600 | | | | | |
| Line frequency f_{line} | | Hz | 50/60 Hz ± 5% | | | | | |
| Recommended power supply cable cross section | | mm ² | 25 | 35 | 50 | 70 | 95 | |
| | | AWG | 4 | 2 | 1 | 2/0 | 3/0 | |
| Line fuse | | A | 80 | 100 | 125/(150) ¹⁾ | 160/(175) ¹⁾ | 200 | |
| Nominal input current | | A | 62.2 | 75.8 | 90.9 | 108.2 | 127.7 | 158.4 |
| OUTPUT | | | | | | | | |
| Recommended motor power | | kW | 37 | 45 | 55 | 75 | 90 | 110 |
| | | PS | 50 | 60 | 74 | 100 | 120 | 148 |
| Output voltage V_{motor} | | V | 3 × 20 - V_{line} | | | | | |
| Output current | | A | 54 | 65 | 78 | 105 | 130 | 150 |
| Cross section of motor cable Cu 75C | | mm ² | 25 | 35 | 50 | 70 | 95 | |
| | | AWG | 4 | 2 | 1 | 2/0 | 3/0 | |
| Max. motor cable length | Shielded | m | 100 | | | | | |
| | Unshielded | m | 150 | | | | | |
| GENERAL INFORMATION | | | | | | | | |
| Size | | | 5 | | | 6 | | |
| Heat loss at nominal output power | | W | 1110 | 1350 | 1650 | 2250 | 2700 | 3300 |
| Minimum braking resistance value | | Ω | 22 | | 12 | | 6 | |
| Maximum unit terminal cross section | | AWG | - | | | | | |
| | | | M10 stud with nut max. 70 mm ² Press cable lug DIN 46235 | | | | | |

1) Recommended values for UL compliance

2.4 Housing variants and dimensions

2.4.1 Housing variants

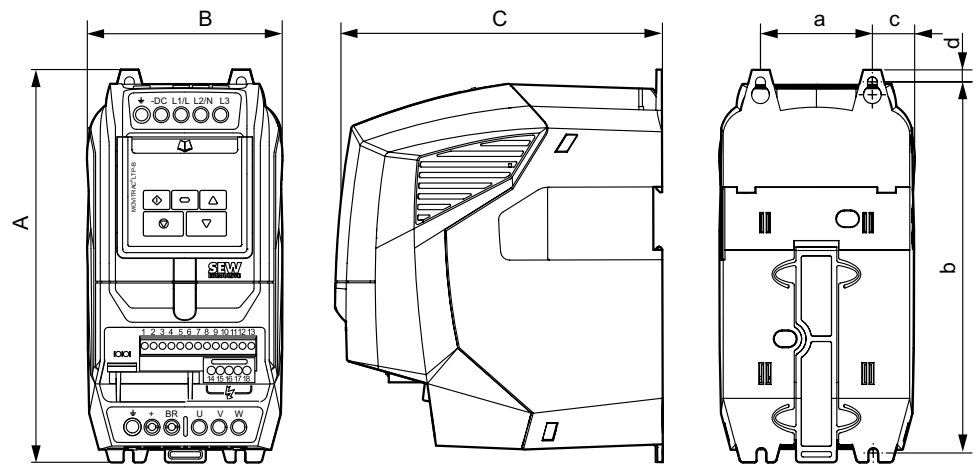
MOVITRAC® LTP-B is available with two housing variants:

- IP20 housing for use in control cabinets
- IP55 / NEMA 12 K

The IP55/NEMA 12 K housing is protected against humidity and dust. This allows for operating the inverter indoors under difficult conditions. The electronics of the inverters does not differ. The only difference is in the dimensions of the housing and the weight.

2.4.2 Dimensions

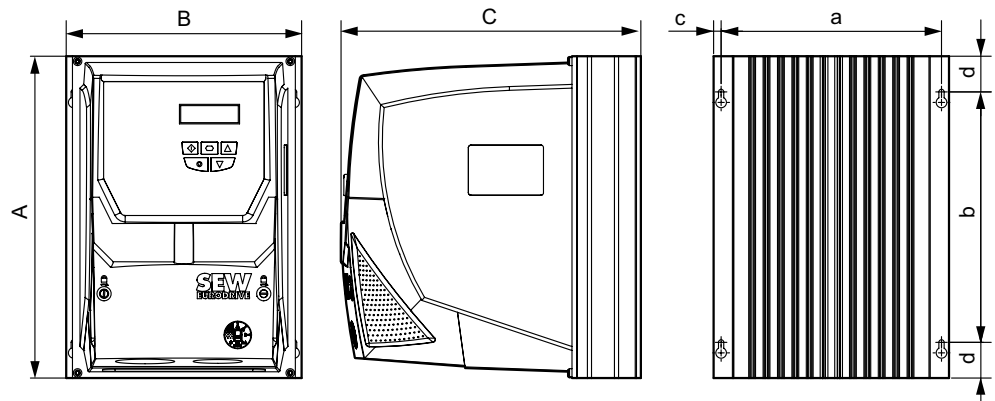
IP20 housing, sizes 2 and 3



4765982731

| Dimension | | Size 2 | Size 3 |
|------------------------|----|--------|--------|
| Height (A) | mm | 220 | 261 |
| | in | 8.66 | 10.28 |
| Width (B) | mm | 110 | 132 |
| | in | 4.33 | 5.20 |
| Depth (C) | mm | 185 | 205 |
| | in | 7.28 | 8.07 |
| Weight | kg | 1.8 | 3.5 |
| | lb | 3.97 | 7.72 |
| a | mm | 63 | 80 |
| | in | 2.48 | 3.15 |
| b | mm | 209 | 247 |
| | in | 8.23 | 9.72 |
| c | mm | 23 | 25.5 |
| | in | 0.91 | 1.01 |
| d | mm | 7 | 7.75 |
| | in | 0.28 | 0.30 |
| Recommended screw size | | 4 × M4 | 4 × M4 |

IP55/NEMA-12K housing, sizes 2 and 3



4766970251

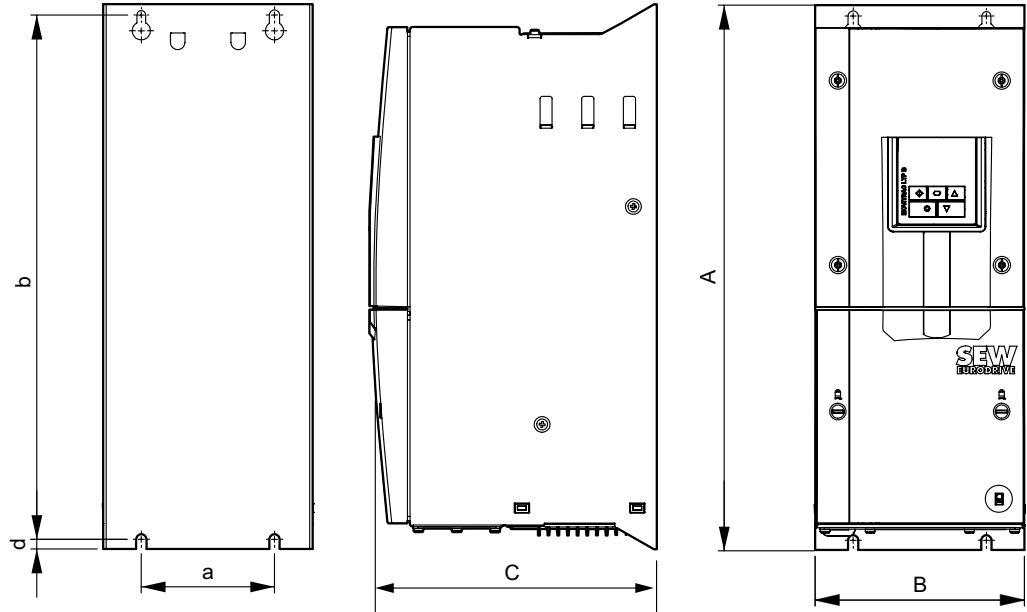
| Dimension | | Size 2 | Size 3 |
|------------------------|----|--------|--------|
| Height (A) | mm | 257 | 310 |
| | in | 10.12 | 12.20 |
| Width (B) | mm | 188 | 210.5 |
| | in | 7.40 | 8.29 |
| Depth (C) | mm | 239 | 251 |
| | in | 9.41 | 2.88 |
| Weight | kg | 4.8 | 6.4 |
| | lb | 10.5 | 14.1 |
| a | mm | 176 | 197.5 |
| | in | 6.93 | 7.78 |
| b | mm | 200 | 251.5 |
| | in | 7.87 | 9.90 |
| c | mm | 6 | 6.5 |
| | in | 0.24 | 0.26 |
| d | mm | 28.5 | 25.1 |
| | in | 1.12 | 0.99 |
| Recommended screw size | | 4 × M5 | |

2 Technical data – basic unit

Housing variants and dimensions

IP55/NEMA-12K housing, sizes 4 – 7

Inverter sizes 4 – 7 are each delivered with a base plate with and without bores for the cable bushing.



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| Dimension | | Size 4 | Size 5 | Size 6 | Size 7 |
|------------------------|----|--------|--------|---------|--------|
| Height (A) | mm | 450 | 540 | 865 | 1280 |
| | in | 17.72 | 21.26 | 34.06 | 50.39 |
| Width (B) | mm | 171 | 235 | 330 | 330 |
| | in | 6.73 | 9.25 | 12.99 | 12.99 |
| Depth (C) | mm | 235 | 268 | 335 | 365 |
| | in | 9.25 | 10.55 | 13.19 | 14.37 |
| Weight | kg | 11.5 | 22.5 | 50 | 80 |
| | lb | 25.35 | 49.60 | 110.23 | 176.37 |
| a | mm | 110 | 175 | 200 | 200 |
| | in | 4.33 | 6.89 | 7.87 | 7.87 |
| b | mm | 423 | 520 | 840 | 1255 |
| | in | 16.65 | 20.47 | 33.07 | 49.41 |
| c | mm | 61 | 60 | 130 | 130 |
| | in | 2.40 | 2.36 | 5.12 | 5.12 |
| d | mm | 8 | 8 | 10 | 10 |
| | in | 0.32 | 0.32 | 0.39 | 0.39 |
| Recommended screw size | | 4 × M8 | | 4 × M10 | |

2.5 Installation in the control cabinet with IP20 housing

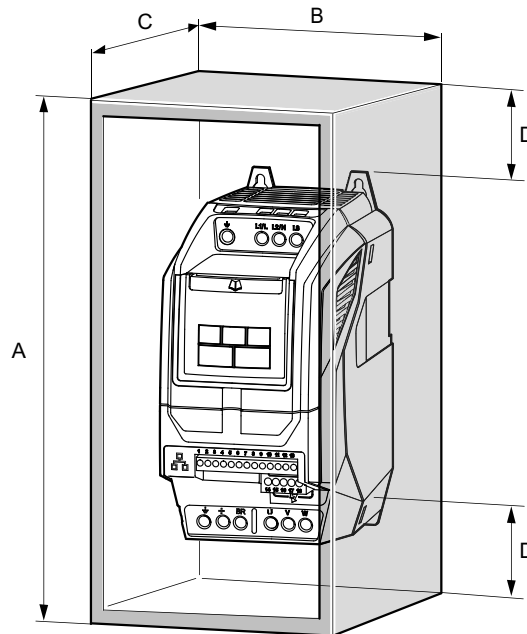
2

For applications that require a higher IP protection level than IP20, the inverter must be installed in a control cabinet. Observe the following requirements:

- The control cabinet must be made of a heat conductive material unless it has forced cooling.
- When using a control cabinet with ventilation openings, the openings must be provided above and underneath the inverter to allow for unobstructed circulation of air. The air must be supplied underneath the inverter and dissipated above it.
- If the inverter is operated in environments with particles of dirt (such as dust), ventilation openings either have to be equipped with a suitable particle filter or forced cooling has to be used. The filter has to be serviced and cleaned.
- In environments with a high level of humidity, salt or chemicals, a suitable enclosed control cabinet (without ventilation openings) must be used.
- The inverters with degree of protection IP20 can be installed right next to each other without clearance.

2.5.1 Dimensions of control cabinets without ventilation openings

| Power rating | | Sealed control cabinet | | | | | | | |
|--------------|--|------------------------|-------|-----|-------|-----|-------|-----|------|
| | | A | | B | | C | | D | |
| | | mm | in | mm | in | mm | in | mm | in |
| Size 2 | 230 V: 1.5 kW, 0.75 kW 400 V: 1.5 kW, 2.2 kW, 0.75 kW | 400 | 15.75 | 300 | 11.81 | 250 | 9.84 | 60 | 2.36 |
| Size 2 | 230 V: 2.2 kW | 600 | 23.62 | 450 | 17.72 | 300 | 11.81 | 100 | 3.94 |
| Size 3 | All power ranges | 800 | 31.50 | 600 | 23.62 | 350 | 13.78 | 150 | 5.91 |



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2.5.2 Dimensions of control cabinet with ventilation openings

| Power rating | | Control cabinet with ventilation openings | | | | | | | |
|--------------|--|---|-------|-----|-------|-----|-------|-----|------|
| | | A | | B | | C | | D | |
| | | mm | in | mm | in | mm | in | mm | in |
| Size 2 | 230 V: 1.5 kW, 0.75 kW 400 V: 1.5 kW, 2.2 kW, 0.75 kW | 400 | 15.75 | 300 | 11.81 | 250 | 9.84 | 60 | 2.36 |
| Size 2 | 230 V: 2.2 kW | 600 | 23.62 | 400 | 15.75 | 300 | 11.81 | 100 | 3.94 |
| Size 3 | All power ranges | 800 | 31.50 | 600 | 23.62 | 350 | 13.78 | 150 | 5.91 |

2.5.3 Dimensions of control cabinet with forced cooling fan

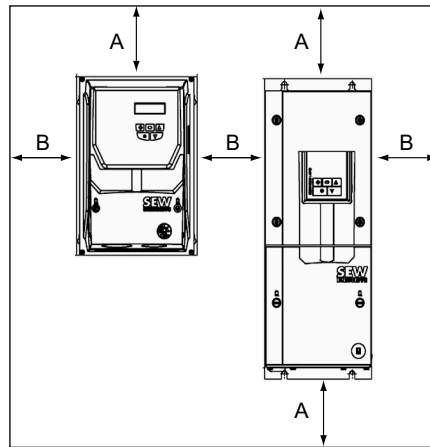
| Power rating | | Control cabinet with forced cooling | | | | | | | | |
|--------------|--|-------------------------------------|-------|-----|-------|-----|------|-----|------|---------------|
| | | A | | B | | C | | D | | Air flow rate |
| | | mm | in | mm | in | mm | in | mm | in | |
| Size 2 | 230 V: 1.5 kW, 0.75 kW 400 V: 1.5 kW, 2.2 kW, 0.75 kW | 400 | 15.75 | 300 | 11.81 | 250 | 9.84 | 60 | 2.36 | > 45 m³/h |
| Size 2 | 230 V: 2.2 kW | 400 | 15.75 | 300 | 11.81 | 250 | 9.84 | 100 | 3.94 | > 45 m³/h |
| Size 3 | All power ranges | 600 | 23.62 | 400 | 15.75 | 250 | 9.84 | 150 | 5.91 | > 80 m³/h |

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2.6 Installation with IP55 housing

In control cabinets or in field, the following minimum distances must not be underrun.

2



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| Size | A | | B | |
|------|-----|------|----|------|
| | mm | in | mm | in |
| 2 | 100 | 3.94 | 10 | 0.39 |
| 3 | 100 | 3.94 | 10 | 0.39 |
| 4 | 200 | 7.87 | 10 | 0.39 |
| 5 | 200 | 7.87 | 10 | 0.39 |
| 6 | 200 | 7.87 | 10 | 0.39 |
| 7 | 200 | 7.87 | 10 | 0.39 |

3 Technical data of options and variants

External keypad LT BG-C

3 Technical data of options and variants

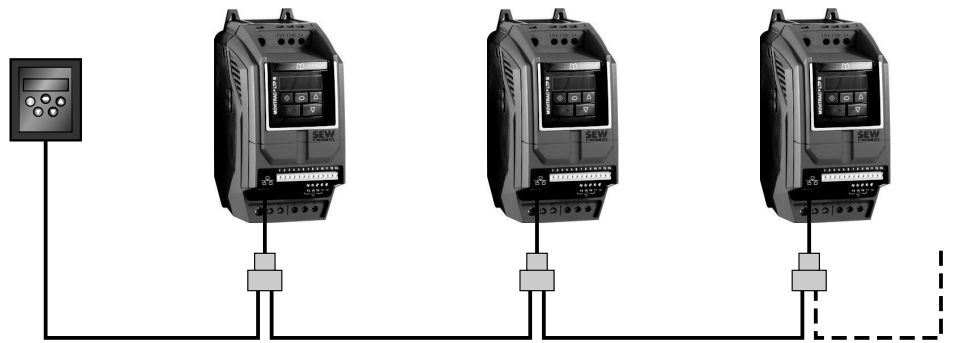
3.1 External keypad LT BG-C

The MOVITRAC® LTP-B basic unit has an integrated keypad. Some applications require a remote keypad of the inverter. The keypad option comes equipped with a self-adhesive gasket and a 3 m cable, which is plugged into the RJ45 socket of MOVITRAC® LTP-B. This option is supplied with 24 V via the RJ45 cable of the inverter. The maximum cable length between keypad and inverter is 25 m with shielded cables.

| Type | Part number |
|---------|-------------|
| LT BG-C | 18241522 |



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One keypad can be used for controlling up to 63 inverters in one network. The length of all the cables in the network must not exceed 25 m for unshielded cables, and 100 m for shielded cables.

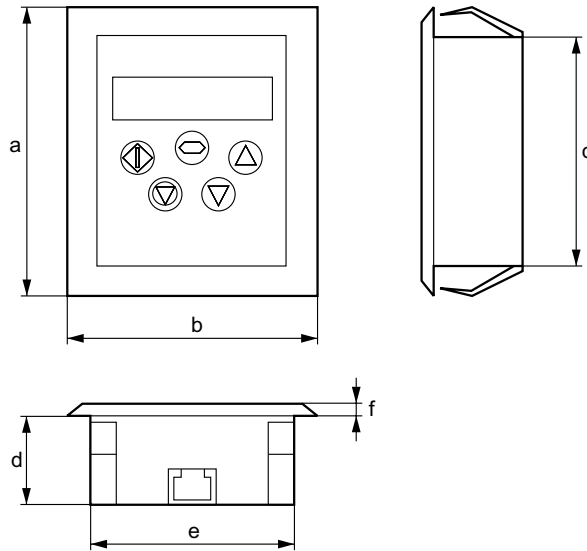
A maximum of two keypads may be integrated into an existing network.

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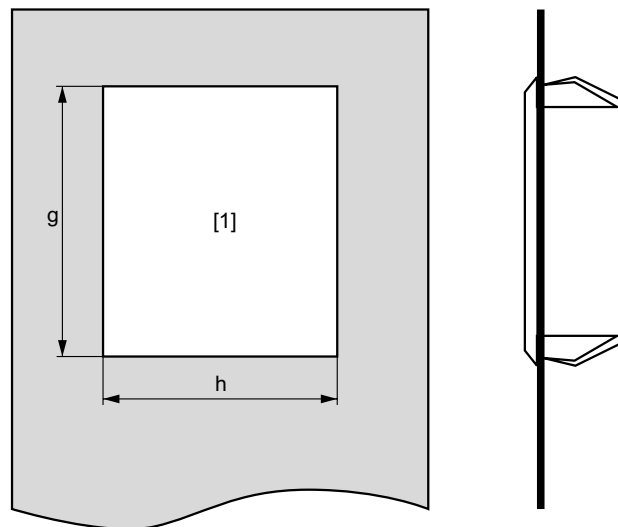
3.1.1 Installation in the control cabinet or control panel

For installing an LT BG-C in the door of a control cabinet or in a control panel, the metal has to be cut as shown in the below illustration. The installed keypad meets standard IP54 / NEMA 13 if the self-adhesive gasket enclosed in the delivery is used.

3



3186131467



3186133131

| | | | |
|-----|-------|-----|--------|
| [a] | 81 mm | [f] | 3 mm |
| [b] | 55 mm | [g] | 70 mm |
| [c] | 65 mm | [h] | 55 mm |
| [d] | 21 mm | [1] | Recess |
| [e] | 55 mm | | |

3 Technical data of options and variants

External keypad LT BG-C

3.1.2 Technical data

| | |
|--------------------------------------|---|
| Unit connections | RJ45 |
| Supply voltage | DC 24 V \pm 10% |
| Supply current | 30 mA |
| Degree of protection | IP20 (if not installed in the control cabinet) IP54 / NEMA 13 (if installed in the control cabinet door) |
| Ambient temperature during operation | 0 to +50 °C |
| Maximum relative humidity | 95%, condensation not permitted |

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3.2 External OLED operator terminal

We offer a full text OLED operator terminal as an additional option. It is used to connect up to 63 inverters in one network.

The keypad option comes equipped with a self-adhesive gasket and a 3 m cable, which is plugged into the RJ45 socket of MOVITRAC® LTP-B.

This option is supplied with 24 V via the RJ45 cable of the inverter. The maximum cable length between keypad and inverter is 25 m with shielded cables.

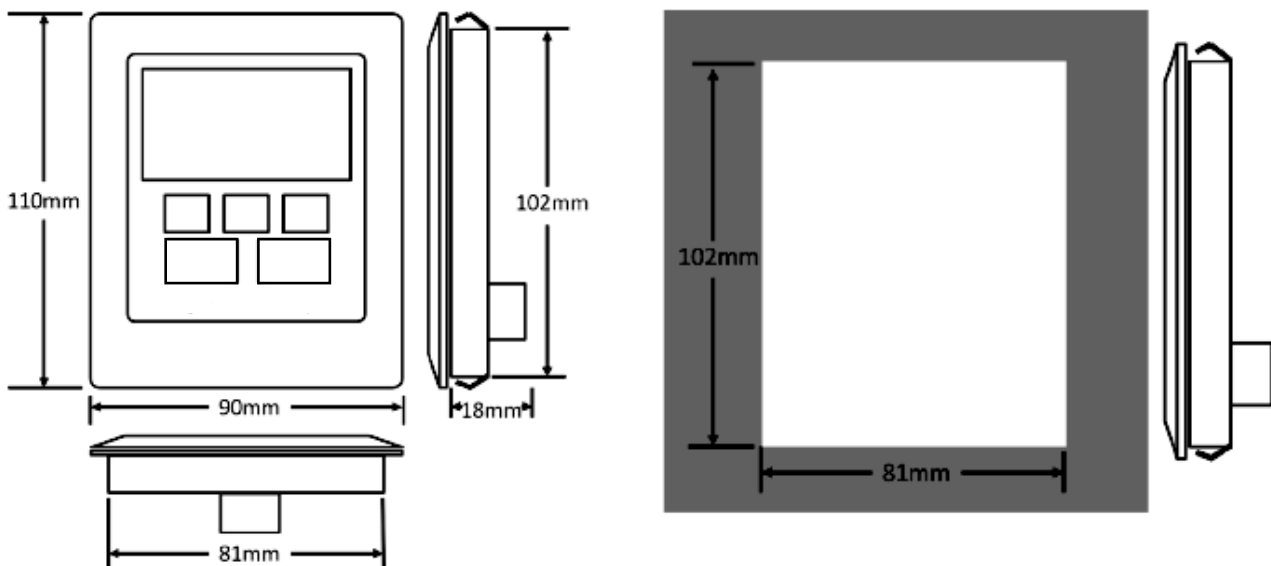
| Type | Part number |
|---------------|-------------|
| LT ZBG OLED A | 28205731 |



9661213707

3.2.1 Installation in the control cabinet or control panel

For installing an LT ZBG OLED in the door of a control cabinet or in a control panel, the metal has to be cut as shown in the below illustration. The installed keypad meets standard IP54 / NEMA 13 if the self-adhesive gasket enclosed in the delivery is used.



9288183563

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3 Technical data of options and variants

External OLED operator terminal

3.2.2 Technical data

| | |
|--------------------------------------|---|
| Unit connections | RJ45 |
| Supply voltage | DC 24 V \pm 10% |
| Supply current | 30 mA |
| Degree of protection | IP20 (if not installed in the control cabinet) IP54 / NEMA 13 (if installed in the control cabinet door) |
| Ambient temperature during operation | -10 to +50 °C |
| Maximum relative humidity | 95%, condensation not permitted |

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3.3 Network packages

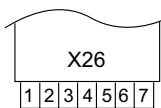
For a network connection between MOVITRAC® LTP-B or LTP-B and a gateway in a UOx housing, network packages with respective components are available.

3.3.1 Basic package (cable set A)

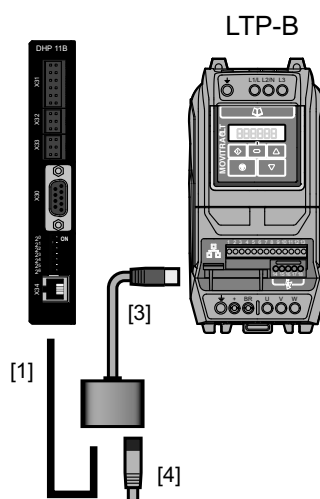
The basic package (cable set A) contains all components to connect the inverter to a gateway, MOVI-PLC® or a CCU.

| Type | Quantity | Description | length | Part number |
|--------------|----------|--------------------------|--------|-------------|
| OP LT 005 A2 | 1 | RJ45 cable with open end | 0.5 m | 28202554 |
| | 1 | Cable splitter | | |
| | 1 | Terminating connector | | |

Connect the RJ45 cable with the 7-pole connector of the MOVI-PLC® or the gateway.

| Side view Single unit | Description | Terminal | | Connection to the RJ45 connector |
|--|--|----------|----------|-------------------------------------|
|  X26 1 2 3 4 5 6 7 2108496651 | X26 connector: CAN 1 and voltage supply (plug-in terminal) | X26:1 | CAN 1H | SBus + |
| | | X26:2 | CAN 1L | SBus |
| | | X26:3 | DGND | 0 V |
| | | X26:4 | Reserved | – |
| | | X26:5 | Reserved | – |
| | | X26:6 | DGND | – |
| | | X26:7 | DC 24 V | – |

The terminating connector must be plugged into the Y adapter of the last inverter in the network.



9288388363

- [1] RJ45 cable with open end
- [2] RJ45 cable
- [3] Cable splitter
- [4] Terminating connector (120 Ω)

3 Technical data of options and variants

Network packages

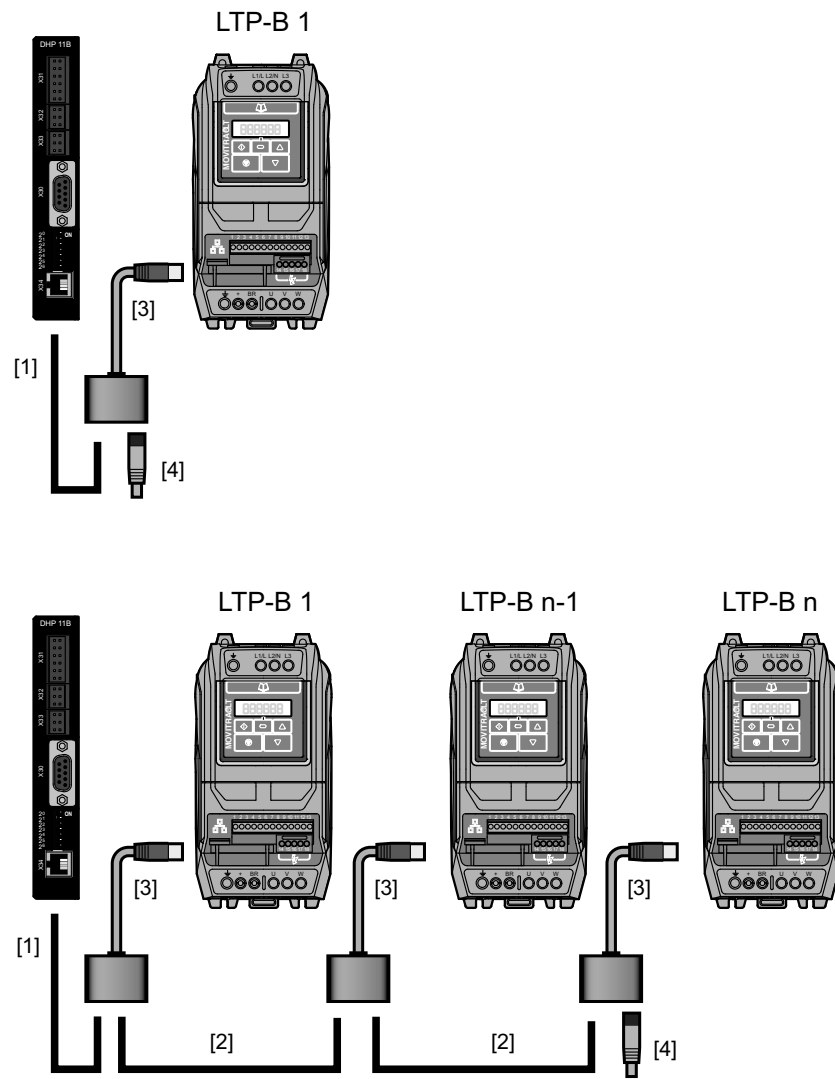
3.3.2 Extension package (cable set B)

The extension package is used in addition to the basic package (A) to connect more inverters in the network.

| Type | Quantity | Description | length | Part number |
|--------------|----------|--------------------|--------|-------------|
| OP LT 005 B2 | 1 | RJ45 to RJ45 cable | 0.5 m | 28202546 |
| | 1 | Cable splitter | | |
| OP LT 010 B2 | 1 | RJ45 to RJ45 cable | 1 m | 28202562 |
| | 1 | Cable splitter | | |

Example

The following example shows the operation of three inverters at one gateway (controller). This requires cable set A and two times the extension package (cable set B).



9288460171

- [1] RJ45 cable with open end
- [2] RJ45 to RJ45 cable

- [3] Cable splitter
- [4] Terminating connector (120 Ω)

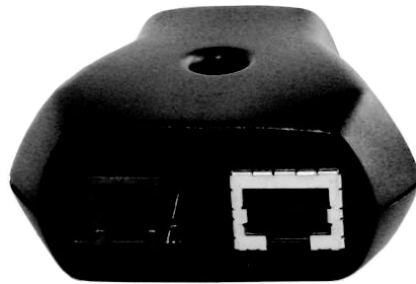
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3.3.3 PC engineering package (cable set C)

This cable set is used to connect the inverters to the engineering software LT Shell for software updates or for configuration purposes. In addition, an USB11A interface adapter is required.

The PC engineering package (C) contains all components for the connection to a network with MOVITRAC® LTE-B, LTP-B, LTP-A or MOVIFIT® *basic* via RS485.

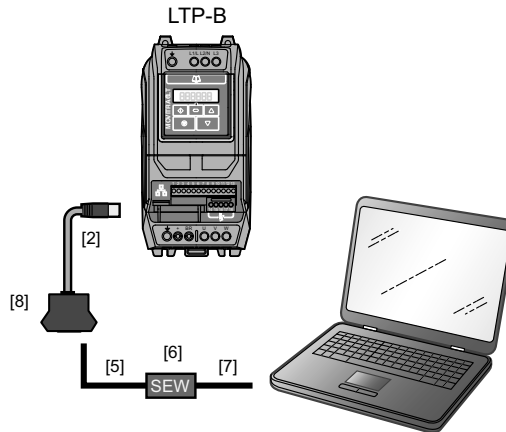
| Type | Quantity | Description | Part number |
|-------------|----------|--|-------------|
| OP LT 003 C | 1 | RJ adapter (RJ45, RJ45, RJ10) | 18243681 |
| | 1 | 1 x RJ45 to RJ45 cable (LTE-B, LTP-B) | |
| | 1 | 1 x RJ45 to RJ11 cable (LTP-A, MOVIFIT® <i>basic</i>) | |



3805148171

Example 1

This shows the use of cable set C.



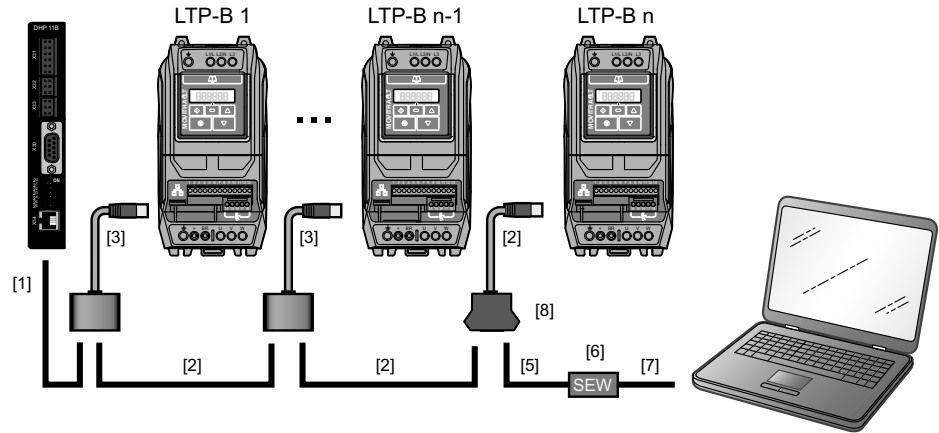
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3 Technical data of options and variants

Network packages

Example 2

This shows the use of cable set C within an existing fieldbus network.



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- | | |
|-----------------------------------|-------------------------------------|
| [1] RJ45 cable with open end | [5] RJ10 to RJ10 cable |
| [2] RJ45 to RJ45 cable | [6] USB11A |
| [3] Cable splitter | [7] Cable USB A-B |
| [4] Terminating connector (120 Ω) | [8] RJ adapter (2 x RJ45, 1 x RJ10) |

In an SBus network, the terminating connector or RJ adapter is equipped with a terminating resistor. If you use the PC engineering package (C) with the basic package (A), you have to replace the terminating connector with the RJ adapter.

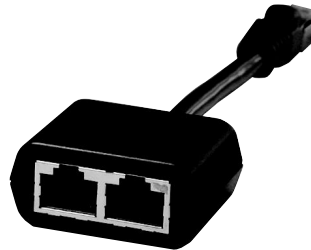
Connect the RJ10 connector (4-pole) to USB11A.

• INFORMATION

Only use the RJ45-RJ45 cable for MOVITRAC® LTP-B. The RJ11 connector for MOVIFIT® *basic* and the RJ10 connector of the USB11A damage the RJ45 socket of the inverter.

3.3.4 Cable splitter 1 to 2

| Type | Part number |
|---------------|-------------|
| LT-RJ-CS-21-C | 28201140 |



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The RJ cable splitter is required to connect the RJ45 communication interface of the MOVITRAC® LTP-B to another inverter or keypad.

Typical applications are with a communication connection between one of the following sources and several inverters forming a network.

- Remote keypad
- Inverter network to MOVI-PLC® via SBus
- Fieldbus communication via UOH / DFx gateway

INFORMATION

The cable sets A and B contain all components for unit connection. No additional splitter is required.

3.3.5 Terminating resistor

The terminating resistor of 120 Ohm is integrated in the RJ45 connector and is used as bus termination in SBus, CANopen and Modbus.

| Type | Part number |
|-----------|-------------|
| LT CSTR B | 18218261 |

INFORMATION

Cable set A contains a terminating resistor; in cable set C, the terminating resistor is integrated. No additional terminating resistor is required.

3 Technical data of options and variants

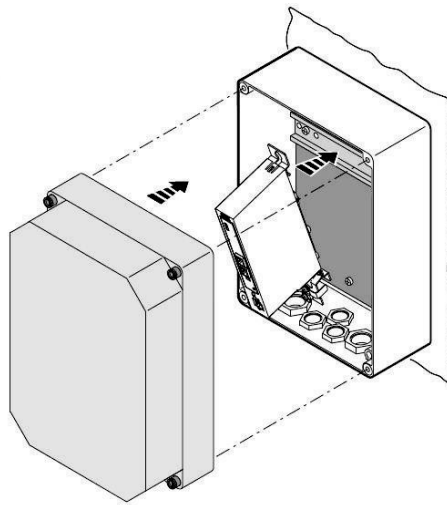
Network packages

3.3.6 UOH65A housing

With the UOH65A housing option, gateways or controllers can be installed with UOx housing in the field.

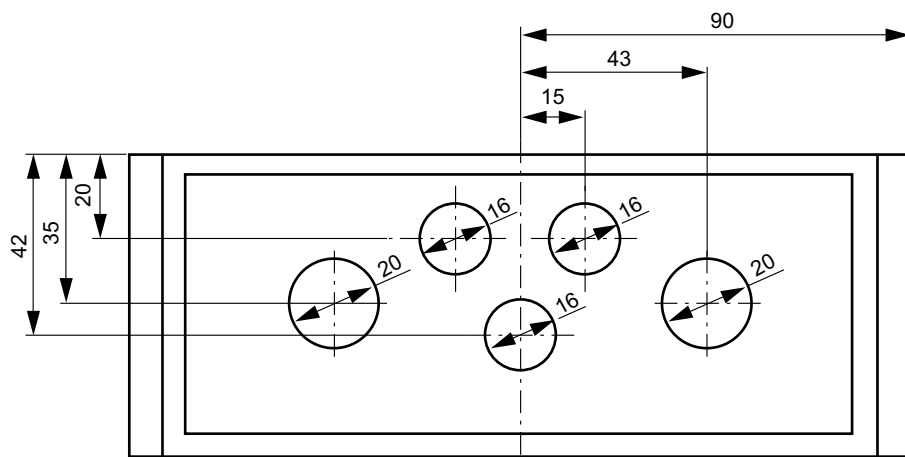
The housing is delivered with prefabricated screw fittings and mounting rail with appropriate accessories for mounting.

| Type | Part number |
|--------|-------------|
| UOH65A | 18149227 |



9450040203

Dimensions of the cable bushings



12263605515

Housing dimensions

| Width | Height | Depth |
|--------|--------|--------|
| 254 mm | 180 mm | 165 mm |

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Technical data

| | | |
|--------------------------------------|-------------|---|
| Housing material | Bottom part | Glass fiber reinforced polycarbonate color RAL 7035 |
| | Top part | Glass fibre reinforced polycarbonate transparent |
| Degree of protection | | IP65 (EN 60529) |
| Ambient temperature during operation | | -10 to +55 °C |

3 Technical data of options and variants

USB11A interface adapter USB to RS485

3.4 USB11A interface adapter USB to RS485

With the USB11A option, a PC or laptop with USB interface can be connected to the RJ adapter. The USB11A interface adapter supports USB1.1 and USB2.0.

The connection between USB11A and PC is made using a standard USB cable type USB A-B (shielded).

The USB11A adapter is required to connect the inverter to the engineering software LT Shell.

- **INFORMATION**

The engineering package (cable set C) is required additionally.

| Type | Part number |
|--------|-------------|
| USB11A | 8248311 |

3.4.1 Scope of delivery

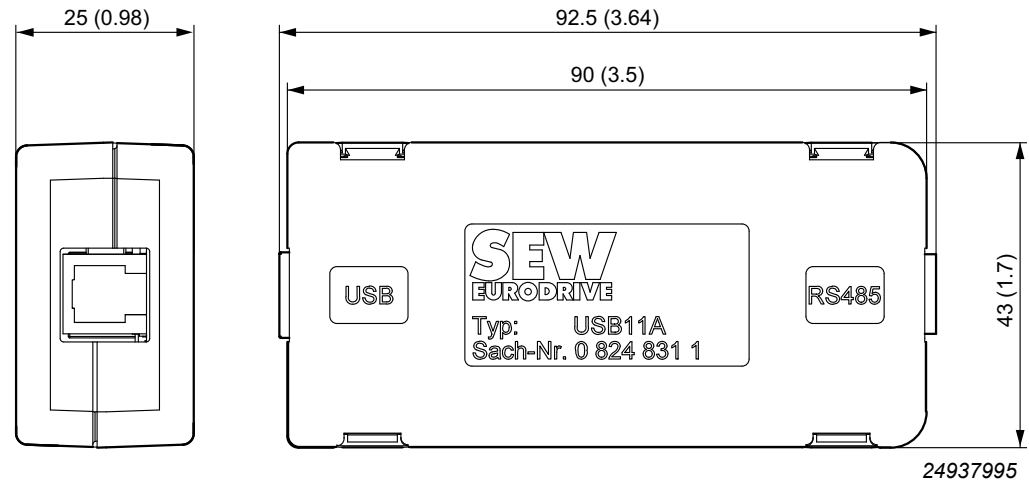
- USB11A unit
- USB connection cable type USB A-B to connect PC to USB11A.
- Serial interface cable with 2 x RJ10 connectors to connect USB11A to RJ adapter.
- CD-ROM with drivers and MOVITOOLS® MotionStudio software.

3.4.2 Technical data

| | |
|--------------------------------------|---------------|
| Ambient temperature during operation | 0 °C to 40 °C |
| Degree of protection | IP20 |

3.4.3 Dimensions

The dimensions are specified in mm (in).



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3.4.4 RS485 interface

A maximum of 63 MOVITRAC® LTP-B and LTE-B units can be connected via the RS485 interface of the USB11A for communication purposes.

The maximum shielded cable length is 100 m.

Each inverter needs a unique address.

3 Technical data of options and variants

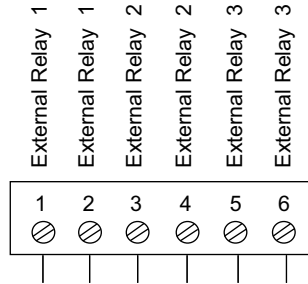
Relay output card

3.5 Relay output card

| Type | Part number |
|--------------|-------------|
| OBLT 3ROUT-A | 28201159 |



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9007203348785547

You can use the relay output card if an application requires more relay outputs than provided by the inverter.

The relay output card contains 3 additional relays. Relay 3 and 4 can be individually programmed according to the inverter parameters specified in the table below. Relay 5 is set to motor speed ≥ 0 .

| Set-ting | Function | Explanation |
|----------|---|---|
| 0 | Inverter enabled | Relay contacts closed when drive is enabled. |
| 1 | Inverter ok (digital) | Relay contacts closed when inverter is ok (no fault). |
| 2 | Motor runs at target speed (digital) | Relay contacts closed when output frequency = setpoint frequency ± 0.1 Hz. |
| 3 | Motor speed ≥ 0 (digital) | Relay contacts closed when output frequency is greater than "zero frequency" (0.3 % of base frequency). |
| 4 | Motor speed \geq limit value (digital) | Relay contacts closed when output frequency is greater than limit value. |
| 5 | Motor current \geq limit value (digital) | Relay contacts closed when motor current/torque is greater than limit value. |
| 6 | Motor torque \geq limit value (digital) | |
| 7 | Analog input 2 \geq limit value (digital) | Relay contacts closed when value at 2nd analog input is greater than limit value. |

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| Set-ting | Function | Explanation |
|----------|-------------------------|---|
| 8 | Hoist (only for P2-18) | This parameter is displayed when <i>P4-12 hoist function</i> is set to "1". The inverter now controls the relay contact for hoist mode. |
| 9 | STO state | Relay contacts open when STO circuit is open. Inverter indicates "inhibit". |
| 10 | PID error ≥ limit value | If the control error is greater than the user relay upper limit, the relay output is closed. If the control error is smaller than the user relay lower limit, the relay output is opened. The re-lay opens also with negative control errors. |

3.5.1 Technical data

| | |
|--------------------------------------|--------------------------------|
| Maximum relay switching voltage | AC 250 V / DC 30 V |
| Maximum relay switching current | AC 6 A (250 V) / DC 5 A (30 V) |
| Degree of protection | IP20, UL94V-0 |
| Ambient temperature during operation | -10 °C to +50 °C |
| Tightening torque for terminals | 0.5 Nm (4.5 lb-in) |

• **INFORMATION**

If you use a relay output card, the RTU Modbus is no longer available. Only one option card can be inserted into the inverter.

3 Technical data of options and variants

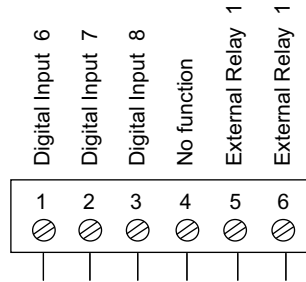
Digital I/O card

3.6 Digital I/O card

| Type | Part number |
|-----------|-------------|
| OBLT IO-A | 28201167 |



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The digital I/O card offers 3 binary inputs and one additional relay output. The binary inputs can be assigned to various functions in the inverter. In addition, their status can be read by the higher-level controller via process data communication.

The relay output can be assigned as follows:

| Setting | Function | Explanation |
|---------|---|---|
| 0 | Inverter enabled | Relay contacts closed when inverter is enabled. |
| 1 | Inverter ok (digital) | Relay contacts closed when inverter is ok (no fault). |
| 2 | Motor runs at target speed (digital) | Relay contacts closed when output frequency = setpoint frequency ± 0.1 Hz. |
| 3 | Motor speed ≥ 0 (digital) | Relay contacts closed when output frequency is greater than "zero frequency" (0.3 % of base frequency). |
| 4 | Motor speed \geq limit value (digital) | Relay contacts closed when output frequency is greater than limit value. |
| 5 | Motor current \geq limit value (digital) | Relay contacts closed when motor current/torque is greater than limit value. |
| 6 | Motor torque \geq limit value (digital) | |
| 7 | Analog input 2 \geq limit value (digital) | Relay contacts closed when value at 2nd analog input is greater than limit value. |

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| Set-ting | Function | Explanation |
|----------|-------------------------|--|
| 8 | Hoist (only for P2-18) | This parameter is displayed when <i>P4-12 hoist function</i> is set to "1". The inverter now controls the relay contact for hoist mode. |
| 9 | STO state | Relay contacts open when STO circuit is open. Inverter indicates "inhibit". |
| 10 | PID error ≥ limit value | If the control error is greater than the user relay upper limit, the relay output is closed. If the control error is smaller than the user relay lower limit, the relay output is opened. The relay opens also with negative control errors. |

3.6.1 Technical data

| | |
|--------------------------------------|--------------------------------|
| Maximum relay switching voltage | AC 250 V / DC 30 V |
| Maximum relay switching current | AC 6 A (250 V) / DC 5 A (30 V) |
| Degree of protection | IP20, UL94V-0 |
| Ambient temperature during operation | -10 °C to +50 °C |
| Tightening torque for terminals | 0.5 Nm (4.5 lb-in) |

• **INFORMATION**

If you use a digital I/O card, the RTU Modbus is no longer available. Only one option card can be inserted into the inverter.

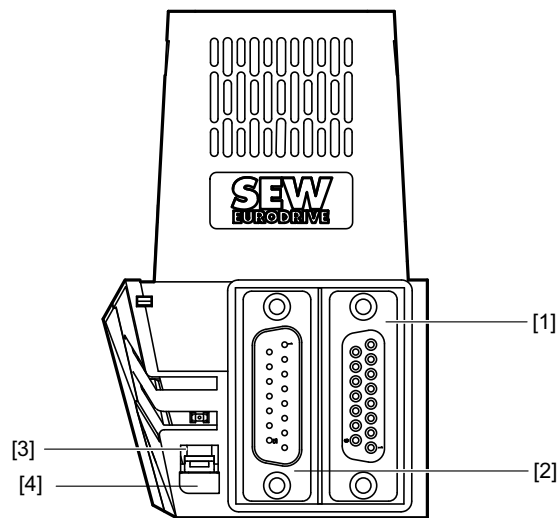
3.7 LTX servo module

With the LTX servo module, CMP motors can be operate with Hiperface® encoders. The following conditions must be met:

- LTP-B size 2 und 3 (230 V and 400 V inverter) in IP20 or in IP55 design
- CMP40M – CMP71L, speed classes 4500 rpm, AK0H Hiperface® encoder

Choose only combinations listed in the Smart Servo Brochure. Especially for 400 V units in IP20 design, SEW-EURODRIVE recommends using the shield terminal listed in the following chapter "Shield terminal".

| Type | Part number |
|---------|-------------|
| LTX-H1A | 18239226 |



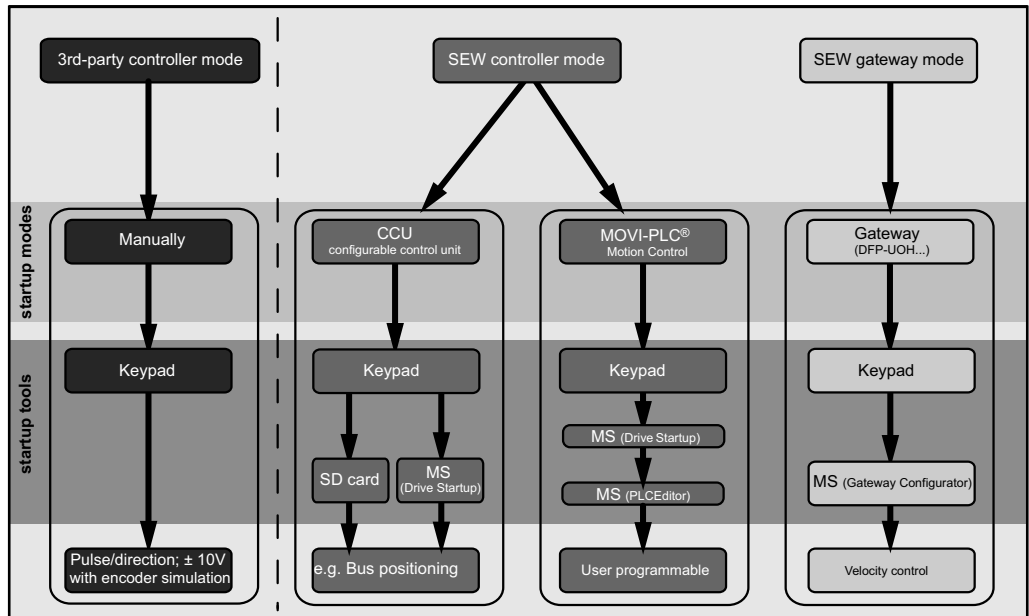
3575503499

- [1] X13 motor encoder connection
- [2] X14 application connection
- [3] Detent
- [4] Push button and operating state display (LED)

• **INFORMATION**

If you use the LTX servo card, the RTU Modbus is no longer available. Only one option card can be inserted into the inverter.

The following diagram shows all possible control types:



18014402140520459

3 Technical data of options and variants

Shield terminal

3.8 Shield terminal

The shield terminal can be used optionally with IP20 units of size 2 and 3. It is recommended to use it with LTX applications.

| Type | Part number |
|------------|-------------|
| LTZ SB LTX | 28214994 |



11908692619

- [1] Terminal for motor cable shield and encoder cable shield
- [2] PE terminal
- [3] Adjusting screw for size 2, 3 adjustment

3.9 Parameter module

The parameter module is exclusively designed for operation in the RJ45 port of the LTP-B.

| Type | Part number |
|--------|-------------|
| LTBP-C | 18241549 |



9007202440910859

- Functionality
 - Saves data from the inverter to the parameter module
 - The optional parameter lock prevents overwriting of saved parameters
 - Loads data back from the parameter module to the inverter
 - Bluetooth® interface for communication between engineering software LT Shell and MOVITRAC® LTP-B or directly with the parameter module.

A Bluetooth® interface at the PC is required for communication with PC. The pairing code of the parameter module is "0000" and must be entered the first time.

3.9.1 Technical data

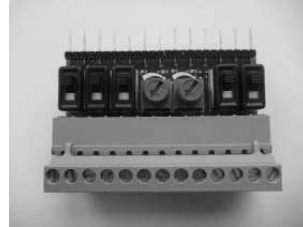
| | |
|--------------------------------------|----------------------|
| Degree of protection | IP20, NEMA 1 |
| Ambient temperature during operation | -10 to +50 °C |
| Range | <10 m, EMC dependent |
| Data transmission | Bluetooth® |

3 Technical data of options and variants

Control board

3.10 Control board

| Type | Part number |
|-------------|-------------|
| LTZOBLOCMOB | 28205758 |



9671847947

The control board allows the user to operate the inverter easily and quickly via the terminal control. The control board is connected to the 13-pole terminal and supplied with 24 V via terminal 1.

Depending on the configuration of the input terminals, diverse switches and potentiometers can be used. Switches 1 – 3 are fixed digital inputs, potentiometer 1 and 2 can be configured as analog or digital input. Left stop of the potentiometer corresponds to a logical "0". Right stop corresponds to a logical "1".

The switches 4 and 5 separate the STO+ and STO- input. Both switches must be closed to change the inverter state from "inhibit" to "stop".

3.10.1 Technical data

| | |
|------------------------|--|
| Degree of protection | IP00 |
| Switch position | Up -> open -> 0 V -> logical "0" Down -> closed-> 24 V -> logical "1" |
| Potentiometer position | Left stop = 0 V Right stop = 10 V |

3.11 Fieldbus interface via gateway

The fieldbus gateways convert standard fieldbuses to the SBus of SEW-EURODRIVE. This means that up to 8 inverters can be triggered via 3 process data each using one gateway.

The controller (PLC or PC) and the MOVITRAC® LTP-B frequency inverter exchange process data, such as control words or speed, using the fieldbus.

You can also connect and operate other SEW-EURODRIVE units (e. g. MOVIDRIVE® inverters) via SBus.

3.11.1 Available gateways

For the fieldbus interfaces, gateways are available for the following bus systems:

| Bus | Separate housing |
|-------------|------------------|
| PROFIBUS | DFP21B / UOH11B |
| EtherCAT® | DFE24 / UOH11B |
| DeviceNet | DFD11 / UOH11B |
| PROFINET | DFE32 / UOH11B |
| EtherNet/IP | DFE33B / UOH11B |
| Interbus | UFI11A |

3.11.2 Available controllers

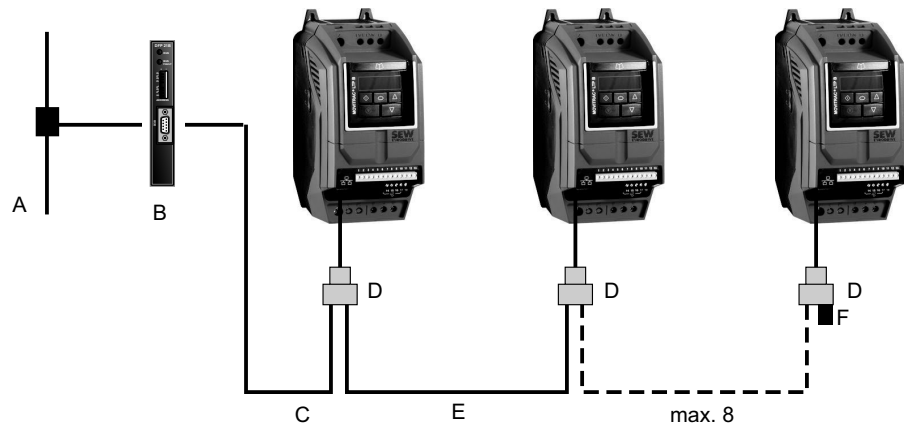
| Type | Fieldbus interfaces |
|------------------------|--|
| DHE21B / 41B in UOH11B | <ul style="list-style-type: none"> • Ethernet TCP/IP • UDP |
| DHF21B / 41B in UOH21B | <ul style="list-style-type: none"> • Ethernet TCP/IP • UDP • PROFIBUS DP-V1 • DeviceNet |
| DHR21B / 41B in UOH21B | <ul style="list-style-type: none"> • Ethernet TCP/IP • UDP • PROFINET • EtherNet/IP • Modbus TCP/IP |

3 Technical data of options and variants

Fieldbus interface via gateway

3.11.3 Operating principle

The fieldbus gateways have standardized interfaces. Connect lower-level MOVITRAC® LTP-B units to the fieldbus gateway via the SBus unit system bus.



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| Key | | Further information |
|-----|-----------------------|--|
| A | Bus connection | – |
| B | Gateway | See chapter "Available gateways" (→ 59) |
| C | Prefabricated cable | See chapter "Network packages" (→ 41) |
| D | Splitter | See chapter "Cable splitter 1 to 2" (→ 45) |
| E | Prefabricated cable | See chapter "Network packages" (→ 41) |
| F | Terminating connector | See chapter "Network packages" (→ 41) |

3.12 Software LT Shell

The LT Shell software allows for easy and fast startup of MOVITRAC® LTP-B. It can be downloaded from the SEW-EURODRIVE website. After the installation, perform software updates on a regular basis.

In combination with the engineering package (cable set C) and the USB11A interface adapter, the inverter can be connected to the software.

The software can be used to carry out the following tasks:

- Observe, upload and download parameter
- Save parameter settings
- Export inverter parameters to Microsoft® Word
- Monitor the state of the inputs and outputs and the motor
- Control inverter / manual mode
- Scope¹⁾

1) in preparation

3.13 MOVITOOLS® MotionStudio engineering software

The software can be connected to the inverter as follows:

- Via an SBus-connection between PC and inverter. A CAN dongle is required. A prefabricated cable is not available and must be manufactured according to the RJ45 assignment and the inverter interface.
- Via a connection of the PC with a gateway or a MOVI-PLC®. The connection between PC and gateway/MOVI-PLC® is possible via USB11A, USB or Ethernet.

The following functions are available in MOVITOOLS® MotionStudio:

- Observe, upload and download parameter
- Save parameter settings
- Monitor the state of the inputs and outputs and the motor

4 Technical data – system accessories

4.1 Braking resistors

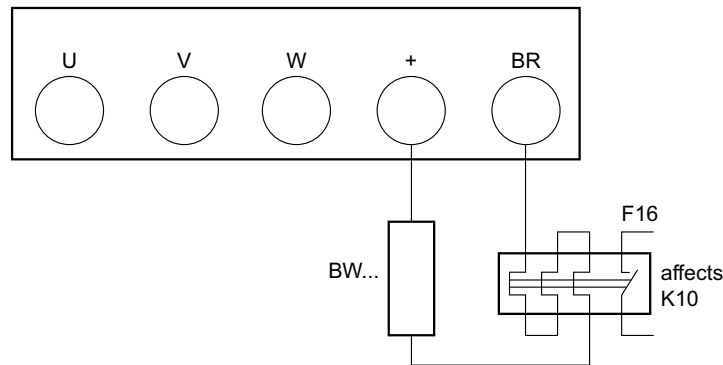
4.1.1 Braking resistor circuit

A braking resistor connected to the MOVITRAC® LTP-B can be used to convert braking energy generated by the motor into thermal energy. This brake circuit is usually necessary for applications with short deceleration ramp or high mass moment of inertia.

SEW-EURODRIVE recommends to additionally protect the wire and grid resistors against overload using a bimetallic relay as shown in the figure below. The relay output disconnects the MOVITRAC® LTP-B from the supply system. It **must not** disconnect the connection between braking resistor and MOVITRAC® LTP-B.

The bimetallic relay is not needed for braking resistors BW LT 100 002, for SEW-EURODRIVE flat-type braking resistors, and for all other overload protected braking resistors.

The following figure shows the wiring diagram for the braking resistor.



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4.1.2 BW... braking resistors / BW...-T / BW...-P

General information

- Braking resistors BW... / BW...-T and BW...-P match the technical features of the MOVITRAC® LTP-B inverters.
- Take account of a power reduction of 4% per 10 K from an ambient temperature of 40 °C. Do not exceed a maximum ambient temperature of 80 °C.

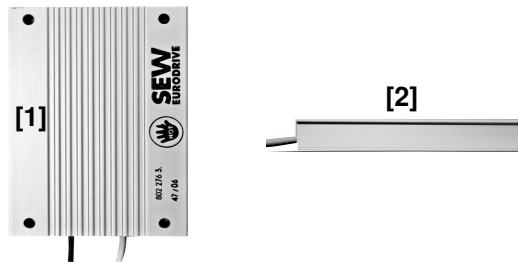
PTC resistor BW090-P52B

- The resistor protects itself (reversible) against regenerative overload by changing abruptly to high resistance and no longer consuming any more energy. The inverter then trips with the "overvoltage DC link" error.

Flat-type braking resistors

- Protection against contact (IP54).
- With internal thermal overload protection.
- With a touch guard on the mounting rail.

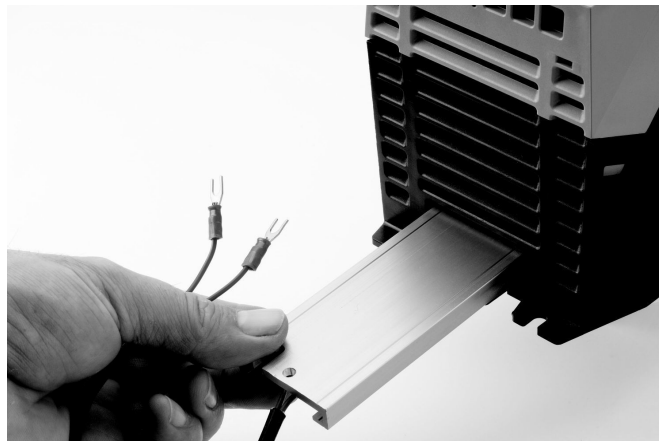
INFORMATION: The load capacity specified in the assignment tables applies to a horizontal mounting position [2]. Values are reduced by 10% for a vertical mounting position [1].



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Plug-in flat-type resistors

A special resistor in flat design is available for MOVITRAC® LTE-B.



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- This resistor can be installed in the inverter.
- No additional space is required for the resistor.
- The resistor is suited for all MOVITRAC® LTP-B units in applications with a low mass moment of inertia.

| Braking resistor BW LT 100 002 | |
|--------------------------------|--|
| Part number | 18208770 |
| Degree of protection | IP20 |
| Load capacity at | |
| • Continuous duty | 200 W |
| • 0,125 s | 12 kW |
| Resistance value | 100 Ω |
| Suited for MOVITRAC® LTP-B | Size 2 and 3 (only with degree of protection IP20) |

4 Technical data – system accessories

Braking resistors

Wire and grid resistors

- Perforated sheet cover (IP20) open to mounting surface.
- The short-time load capacity of the wire and grid resistors is greater than in the flat-type braking resistors.
- A temperature switch is integrated in the BW...-T braking resistor.
- A thermal overcurrent relay is integrated in the BW...-P braking resistor.

SEW-EURODRIVE recommends implementing additional protection against overload for the wire and grid resistors by using a bimetallic relay with trip characteristics of trip class 10 or 10 A (in accordance with EN 60947-4-1). Set the tripping current to the value I_F (→ following tables). Do not use electronic or electromagnetic fuses because these can be triggered even in case of short-term excess currents that are still within the tolerance range.

For braking resistors in the BW...-T / BW...-P series, you can connect the integrated temperature sensor / overcurrent relay using a 2-core, shielded cable as an alternative to a bimetallic relay. The cable entry for BW...-T and BW...-P series braking resistors can be run from the front or the back (→ dimension drawing for BW... / BW...-T / BW...-P). Use filler plugs for tapped holes that are not connected.

The surfaces of the resistors get very hot if loaded with P_N . Make sure that you select an installation site that will accommodate these high temperatures. Braking resistors are therefore usually mounted on the control cabinet roof.

The performance data listed in the tables below show the load capacity of the braking resistors according to their cyclic duration factor (cyclic duration factor = cdf of the braking resistor in % in relation to a cycle duration ≤ 120 s).

cUL approval

The BW...-T and BW...-P braking resistors have cRUus approval independent of the MOVITRAC® LTP-B inverters.

Parallel connection

Two braking resistors with the same value must be connected in parallel for some inverter/resistor combinations. In this case, the tripping current must be set on the bimetallic relay to twice the value of I_F entered in the table. For the BW...-T / BW...-P braking resistors, the temperature switch/overcurrent relay must be connected in series.

Assignment of braking resistors to AC 230 V units (...-2A3-.../...-2B1-...)

| Braking resistor type BW... | BW039-003 | BW039-006 | BW039-012 | | BW027-006 | BW027-012 |
|---|--|-----------|----------------------|-------------|-----------|-----------|
| Part number | 8216878 | 8216886 | 8216894 | | 8224226 | 8224234 |
| Braking resistor type BW...-T | | | BW039-012-T | BW039-026-T | | |
| Part number | | | 18201369 | 18204155 | | |
| Continuous braking power (= 100% cdf) | 0.3 kW | 0.6 kW | 1.2 kW | 2.6 kW | 0.6 kW | 1.2 kW |
| | 0.5 kW | 1.1 kW | 2.1 kW | 4.6 kW | 1.1 kW | 2.1 kW |
| Load capacity 50% cdf ¹⁾ | 1.0 kW | 1.9 kW | 3.8 kW | 6.0 kW | 1.9 kW | 3.8 kW |
| At 25% cdf | 1.8 kW | 3.6 kW | 6.0 kW ²⁾ | 6.0 kW | 3.6 kW | 7.2 kW |
| 12% cdf | 2.8 kW | 5.7 kW | 6.0 kW | 6.0 kW | 5.7 kW | 8.7 kW |
| 6% cdf | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | | | | |
| Resistance value R _{BW} | 39 Ω ±10 % | | | 27 Ω ±10 % | | |
| Tripping current (of F16) I _F | 2.7 A | 3.9 A | 5.5 A | 8.1 A | 4.7 A | 6.6 A |
| Design | Wire resistor | | | | | |
| Connections / Tightening torque | Ceramic terminals 2.5 mm ² (AWG12) 0.5 Nm | | | | | |
| Degree of protection | IP20 (when installed) | | | | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | | | | |
| Type of cooling | KS = natural cooling | | | | | |
| For MOVITRAC® LTP-B (recom- mendation) | 0008 – 0022 | | | 0015 – 0040 | | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration of TD ≤ 120 s.

2) Physical power limit due to DC link voltage and resistance value

| Braking resistor type | BW027-003 | BW027-005 | BW047-003 | BW047-005 |
|---|------------------|-----------|-------------|-------------|
| Part number | 8269491 | 8269505 | 8262659 | 8262683 |
| 100% cdf | 230 W | 450 W | 250 W | 450 W |
| 50% cdf | 310 W | 610 W | 330 W | 610 W |
| 25% cdf | 410 W | 840 W | 430 W | 840 W |
| 12% cdf | 550 W | 1200 W | 580 W | 1200 W |
| 6% cdf | 980 W | 2360 W | 1050 W | 2360 W |
| Resistance value R _{BW} | 27 Ω ±10% | | 47 Ω ±10% | |
| Tripping current of external bimetallic relay | 1.0 A | 1.4 A | 0.8 A | 1.2 A |
| Ambient temperature ϑ_A | -20 °C to +45 °C | | | |
| For MOVITRAC® LTP-B 230 V | 0008 – 0040 | | 0008 – 0055 | 0008 – 0075 |
| Motors | Flat design | | | |
| Degree of protection | IP65 | | | |

4 Technical data – system accessories

Braking resistors

| Braking resistor type BW...- | BW012-025 | | |
|---------------------------------------|--|------------|-------------|
| Part number | 8216800 | | |
| Braking resistor type BW...-T/-P | BW012-025-P | BW012-050T | BW012-100-T |
| Part number | 18204147 | 18201407 | 18201415 |
| Continuous braking power (= 100% cdf) | 2.5 kW | 5.0 kW | 10 kW |
| Load capacity 50% cdf ¹⁾ | 4.2 kW | 8.5 kW | 17 kW |
| At 25% cdf | 7.5 kW | 15.0 kW | 30 kW |
| 12% cdf | 11.2 kW | 22.5 kW | 45 kW |
| 6% cdf | 19.0 kW | 38.0 kW | 76 kW |
| | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | |
| Resistance value R_{BW} | 12 Ω \pm 10 % | | |
| Tripping current (of F16) I_F | 14.4 A | 20.4 A | 28.8 A |
| Design | Grid resistor | | |
| Connections / Tightening torque | Bolt M8 / 6 Nm | | |
| Degree of protection | IP20 (when installed) | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | |
| Type of cooling | KS = natural cooling | | |
| For MOVITRAC® LTP-B (recommendation) | 0110/0150 | | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

| Braking resistor type BW... | BW018-015 | | |
|---------------------------------------|--|----------------|-----------------------|
| Part number | 8216843 | | |
| Braking resistor type BW...-T/-P | BW018-015-P | BW018-035-T | BW018-075-T |
| Part number | 18204163 | 18201385 | 18201393 |
| Continuous braking power (= 100% cdf) | 1.5 kW | 3.5 kW | 7.5 kW |
| Load capacity 50% cdf ¹⁾ | 2.5 kW | 5.9 kW | 12.7 kW |
| At 25% cdf | 4.5 kW | 10.5 kW | 22.5 kW |
| 12% cdf | 6.7 kW | 15.7 kW | 33.7 kW |
| 6% cdf | 11.4 kW | 26.6 kW | 52.2 kW ²⁾ |
| | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | |
| Resistance value R_{BW} | 18 Ω \pm 10 % | | |
| Tripping current (of F16) I_F | 9.1 A | 13.9 A | 20.4 A |
| Design | Wire resistor on ceramic core | Grid resistor | |
| Connections / Tightening torque | BW018-015: Ceramic terminal 2.5 mm ² (AWG13) / 0.5 Nm BW018-015-P: Terminal 2.5 mm ² (AWG13) / 1 Nm | Bolt M8 / 6 Nm | |
| Degree of protection | IP20 (when installed) | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | |
| Type of cooling | KS = natural cooling | | |
| For MOVITRAC® LTP-B (recommendation) | 0110 – 0185 | 0110 – 0370 | 0220 – 0750 |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

2) Physical power limit due to DC link voltage and resistance value

| Braking resistor type BW... | BW147 | BW247 | BW347 |
|---------------------------------------|--|----------|---------------------|
| Part number | 8207135 | 8207143 | 8207984 |
| Braking resistor type BW...-T | BW147-T | BW247-T | BW347-T |
| Part number | 18201342 | 18200842 | 18201350 |
| Continuous braking power (= 100% cdf) | 1.2 kW | 2.0 kW | 4.0 kW |
| Load capacity 50% cdf ¹⁾ | 2.2 kW | 3.6 kW | 7.2 kW |
| At 25% cdf | 3.8 kW | 6.4 kW | 12.8 kW |
| 12% cdf | 7.2 kW | 12 kW | 20 kW ²⁾ |
| 6% cdf | 11 kW | 19 kW | 20 kW |
| | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | |
| Resistance value R_{BW} | 47 $\Omega \pm 10\%$ | | |
| Tripping current (of F16) I_F | 5 A | 6.5 A | 9.2 A |
| Design | Wire resistor on ceramic core | | |
| Connections / Tightening torque | Ceramic terminals 2.5 mm ² (AWG13) / 0.5 Nm BW347-T: Ceramic terminals 10 mm ² (AWG8) / 1.6 Nm | | |
| Degree of protection | IP20 (when installed) | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | |
| Type of cooling | KS = natural cooling | | |
| For MOVITRAC® LTP-B (recommendation) | | | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

2) Physical power limit due to DC link voltage and resistance value

| Braking resistor type BW...-T/-P | BW915-T | BW106-T | BW206-T |
|---------------------------------------|--|---|---------------|
| Part number | 18204139 | 18200834 | 18204120 |
| Continuous braking power (= 100% cdf) | 16 kW | 13.5 kW | 18 kW |
| Load capacity 50% cdf ¹⁾ | 27.2 kW | 23 kW | 30.6 kW |
| At 25% cdf | 48 kW | 39.2 kW | 39.2 kW |
| 12% cdf | 62.7 kW | 39.2 kW | 39.2 kW |
| 6% cdf | 62.7 kW | 39.2 kW | 39.2 kW |
| | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | |
| Resistance value R_{BW} | 15 $\Omega \pm 10\%$ | 6 $\Omega \pm 10\%$ | |
| Tripping current (of F16) I_F | 32.6 A | 47.4 A | 54.7 A |
| Design | Grid resistor | | Grid resistor |
| Connections / Tightening torque | M8 stud / 6 Nm | | |
| Degree of protection | IP20 (when installed) | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | |
| Type of cooling | KS = natural cooling | | |
| For MOVITRAC® LTP-B (recommendation) | 0150 – 0185 | 0185 – 0370 and 2 × parallel with 0450 – 0750 ²⁾ | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

2) When connected in parallel, the load capacity and tripping current are doubled.

4 Technical data – system accessories

Braking resistors

Assignment of braking resistors to AC 400 V units

| Braking resistor type BW... | BW090-P52B | BW100-005 | BW100-006 | BW072-003 | BW072-005 |
|---------------------------------------|--|-------------------------|--|------------------------|-----------|
| Part number | 8245630 | 8262691 | 8217017 | 8260583 | 8260605 |
| Braking resistor type BW...-T | - | - | BW100-006-T | - | - |
| Part number | - | - | 1 820 419 8 | - | - |
| Continuous braking power (= 100% cdf) | 0.10 kW | 0.45 kW | 0.6 kW | 0.23 kW | 0.45 kW |
| Load capacity 50% cdf ¹⁾ | 0.15 kW | 0.60 kW | 1.1 kW | 0.31 kW | 0.60 kW |
| At 25% cdf | 0.2 kW | 0.83 kW | 1.9 kW | 0.42 kW | 0.83 kW |
| 12% cdf | 0.4 kW | 1.11 kW | 3.6 kW | 0.58 kW | 1.11 kW |
| 6% cdf | 0.7 kW | 2.00 kW | 5.7 kW | 1.00 kW | 2.00 kW |
| | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | | | |
| Resistance value R_{BW} | 90 Ω \pm 35 % | 100 Ω \pm 10 % | | 72 Ω \pm 10 % | |
| Tripping current (of F16) I_F | - | 0.8 A | 2.4 A | 0.6 A | 1 A |
| Design | PTC | Flat design | Wire resistor on ceramic core | Flat design | |
| Connections / Tightening torque | Cable | Cable | Ceramic terminals 2.5 mm ² (AWG13) 0.5 Nm | Cable | |
| Degree of protection | IP20 | IP54 | IP20 (when installed) | IP54 | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | | | |
| Type of cooling | KS = natural cooling | | | | |
| For MOVITRAC® LTP-B (recommendation) | 0008 – 0015 | 0008 – 0022 | 0015 – 0040 | 0008 – 0015 | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

| Braking resistor type BW... | BW168 | BW268 | BW047-003 | BW047-005 |
|---------------------------------------|--|-------------|------------------------|-----------|
| Part number | 820604X | 8207151 | 8262659 | 8262683 |
| Braking resistor type BW...-T | BW168-T | BW268-T | - | - |
| Part number | 1 820 133 4 | 1 820 417 1 | - | - |
| Continuous braking power (= 100% cdf) | 0.8 kW | 1.2 kW | 250 W | 450 W |
| Load capacity 50% cdf ¹⁾ | 1.4 kW | 2.2 kW | 330 W | 610 W |
| At 25% cdf | 2.6 kW | 3.8 kW | 430 W | 840 W |
| 12% cdf | 4.8 kW | 7.2 kW | 580 W | 1200 W |
| 6% cdf | 7.6 kW | 11 kW | 1050 W | 2360 W |
| | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | | |
| Resistance value R_{BW} | 68 Ω \pm 10 % | | 47 Ω \pm 10 % | |
| Tripping current (of F16) I_F | 3.4 A | 4.2 A | 0.8 A | 1.2 A |
| Design | Wire resistor on ceramic core | | Flat design | |
| Connections / Tightening torque | Ceramic terminals 2.5 mm ² (AWG13) 0.5 Nm | | Cable | |
| Degree of protection | IP20 (when installed) | | IP54 | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | | |
| Type of cooling | KS = natural cooling | | | |
| For MOVITRAC® LTP-B (recommendation) | 0008 – 0040 | 0015 – 0040 | 0055 – 0110 | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

| Braking resistor type BW... | BW147 | BW247 | BW347 | BW039-012 | | |
|---------------------------------------|--|--|---------------------|------------------------|-------------|----------------|
| Part number | 8207135 | 8207143 | 8207984 | 8216894 | | |
| Braking resistor type BW...-T | BW147-T | BW247-T | BW347-T | BW039-012-T | BW039-026-T | BW039-050-T |
| Part number | 18201342 | 18200842 | 18201350 | 18201369 | 18204155 | 18201377 |
| Continuous braking power (= 100% cdf) | 1.2 kW | 2.0 kW | 4.0 kW | 1.2 kW | 2.6 kW | 5.0 kW |
| Load capacity 50% cdf ¹⁾ | 2.2 kW | 3.6 kW | 7.2 kW | 2.1 kW | 4.7 kW | 8.5 kW |
| At 25% cdf | 3.8 kW | 6.4 kW | 12.8 kW | 3.8 kW | 8.3 kW | 15.0 kW |
| 12% cdf | 7.2 kW | 12 kW | 20 kW ²⁾ | 7.2 kW | 15.6 kW | 24.0 kW |
| 6% cdf | 11 kW | 19 kW | 20 kW | 11.4 kW | 24.0 kW | 24.0 kW |
| | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | | | | |
| Resistance value R_{BW} | 47 Ω \pm 10 % | | | 39 Ω \pm 10 % | | |
| Tripping current (of F16) I_F | 5 A | 6.5 A | 9.2 A | 5.5 A | 8.1 A | 11.3 A |
| Design | Wire resistor on ceramic core | | | | | Grid resistor |
| Connections / Tightening torque | Ceramic terminals 2.5 mm ² (AWG13) / 0.5 Nm BW347-T: Ceramic terminals 10 mm ² (AWG8) / 1.6 Nm | | | | | M8 stud / 6 Nm |
| Degree of protection | IP20 (when installed) | | | | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | | | | |
| Type of cooling | KS = natural cooling | | | | | |
| For MOVITRAC® LTP-B (recommendation) | 0055/0075 | 0055 – 0075 and 2 × parallel with 0150/0185/0220 ³⁾ | | 0055 – 0110 | | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

2) Physical power limit due to DC link voltage and resistance value

3) When connected in parallel, the load capacity and tripping current are doubled.

| Braking resistor type BW... | BW018-015 | | |
|---------------------------------------|--|----------------|-----------------------|
| Part number | 8216843 | | |
| Braking resistor type BW...-T/-P | BW018-015-P | BW018-035-T | BW018-075-T |
| Part number | 18204163 | 18201385 | 18201393 |
| Continuous braking power (= 100% cdf) | 1.5 kW | 3.5 kW | 7.5 kW |
| Load capacity 50% cdf ¹⁾ | 2.5 kW | 5.9 kW | 12.7 kW |
| At 25% cdf | 4.5 kW | 10.5 kW | 22.5 kW |
| 12% cdf | 6.7 kW | 15.7 kW | 33.7 kW |
| 6% cdf | 11.4 kW | 26.6 kW | 52.2 kW ²⁾ |
| | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | |
| Resistance value R_{BW} | 18 Ω \pm 10 % | | |
| Tripping current (of F16) I_F | 9.1 A | 13.9 A | 20.4 A |
| Design | Wire resistor on ceramic core | Grid resistor | |
| Connections / Tightening torque | BW018-015: Ceramic terminal 2.5 mm ² (AWG13) / 0.5 Nm BW018-015-P: Terminal 2.5 mm ² (AWG13) / 1 Nm | Bolt M8 / 6 Nm | |
| Degree of protection | IP20 (when installed) | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | |
| Type of cooling | KS = natural cooling | | |
| For MOVITRAC® LTP-B (recommendation) | 2 × parallel with 0450 ³⁾ | | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

2) Physical power limit due to DC link voltage and resistance value

3) When connected in parallel, the load capacity and tripping current are doubled.

4 Technical data – system accessories

Braking resistors

| | | | |
|---------------------------------------|--|------------|-------------|
| Braking resistor type BW...- | BW012-025 | | |
| Part number | 8216800 | | |
| Braking resistor type BW...-T/-P | BW012-025-P | BW012-050T | BW012-100-T |
| Part number | 18204147 | 18201407 | 18201415 |
| Continuous braking power (= 100% cdf) | 2.5 kW | 5.0 kW | 10 kW |
| | 4.2 kW | 8.5 kW | 17 kW |
| Load capacity 50% cdf ¹⁾ | 7.5 kW | 15.0 kW | 30 kW |
| At 25% cdf | 11.2 kW | 22.5 kW | 45 kW |
| 12% cdf | 19.0 kW | 38.0 kW | 76 kW |
| 6% cdf | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | |
| Resistance value R_{BW} | 12 Ω \pm 10 % | | |
| Tripping current (of F16) I_F | 14.4 A | 20.4 A | 28.8 A |
| Design | Grid resistor | | |
| Connections / Tightening torque | Bolt M8 / 6 Nm | | |
| Degree of protection | IP20 (when installed) | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | |
| Type of cooling | KS = natural cooling | | |
| For MOVITRAC® LTP-B (recommendation) | 0300/0370 | | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

| | | |
|---------------------------------------|---------------------------|---------------------------|
| Braking resistor type BW... | BW106-T | BW206-T |
| Part number | 18200834 | 18204120 |
| Continuous braking power (= 100% cdf) | 13.5 kW | 18 kW |
| | 23 kW | 30.6 kW |
| Load capacity 50% cdf ¹⁾ | 40 kW | 54 kW |
| At 25% cdf | 61 kW | 81 kW |
| 12% cdf | 102 kW | 136.8 kW |
| 6% cdf | | |
| Resistance value R_{BW} | 6 Ω \pm 10 % | |
| Tripping current (of F16) I_F | 47.4 A | 54.7 A |
| Design | Grid resistor | |
| Connections / Tightening torque | Bolt M8 / 6 Nm | |
| Degree of protection | IP20 (when installed) | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | |
| Type of cooling | KS = natural cooling | |
| For MOVITRAC® LTP-B (recommendation) | 0450 – 0750 ²⁾ | 0900 – 1600 ²⁾ |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

2) Bear in mind that the resistive load capacity might be insufficient for these sizes. In this case, third party resistors have to be used. Accurate calculation is required.

Assignment of braking resistors to AC 575 V units

| Braking resistor type BW... | BW090-P52B | BW100-005 | BW100-006 | BW072-003 | BW072-005 | BW168 | BW268 |
|--|----------------------|-------------|--|-------------|------------|--|--------------|
| Part number | 8245630 | 8262691 | 8217017 | 8260583 | 8260605 | 820604X | 8207151 |
| Braking resistor type BW...-T | - | - | BW100-006-T | - | - | BW168-T | BW268-T |
| Part number | - | - | 18204198 | - | - | 18201334 | 18204171 |
| Continuous braking power (= 100% cdf) | 0.10 kW | 0.45 kW | 0.6 kW | 0.23 kW | 0.45 kW | 0.8 kW | 1.2 kW |
| Load capacity 50% cdf ¹⁾ | 0.15 kW | 0.60 kW | 1.1 kW | 0.31 kW | 0.60 kW | 1.4 kW | 2.2 kW |
| At 25% cdf | 0.2 kW | 0.83 kW | 1.9 kW | 0.42 kW | 0.83 kW | 2.6 kW | 3.8 kW |
| 12% cdf | 0.4 kW | 1.11 kW | 3.6 kW | 0.58 kW | 1.11 kW | 4.8 kW | 7.2 kW |
| 6% cdf | 0.7 kW | 2.00 kW | 5.7 kW | 1.00 kW | 2.00 kW | 7.6 kW | 11 kW |
| Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | | | | | | |
| Resistance value R _{BW} | 90 Ω ±35 % | | 100 Ω ±10 % | | 72 Ω ±10 % | | 68 Ω ±10 % |
| Tripping current (of F16) I _F | - | | 0.8 A | 2.4 A | 0.6 A | 1 A | 3.4 A, 4.2 A |
| Design | PTC | Flat design | Wire resistor on ceramic core | Flat design | | Wire resistor on ceramic core | |
| Connections / Tightening torque | Cable | Cable | Ceramic terminals 2.5 mm ² (AWG13) 0.5 Nm | Cable | | Ceramic terminals 2.5 mm ² (AWG13) 0.5 Nm | |
| Degree of protection | IP20 | IP54 | IP20 (when installed) | IP54 | | IP20 (when installed) | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | | | | | |
| Type of cooling | KS = natural cooling | | | | | | |
| For MOVITRAC® LTP-B (recommendation) | 0008 – 0015 | 0008 – 0022 | 0015 – 0040 | 0008 – 0015 | | 0008 – 0055 | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration T D ≤ 120 s.

| Braking resistor type BW... | BW147 | BW247 | BW347 | - | - |
|--|---|--|---------------------|-------------------------|----------|
| Part number | 8207135 | 8207143 | 8207984 | - | - |
| Braking resistor type BW...-T | BW147-T | BW247-T | BW347-T | BW106-T | BW206-T |
| Part number | 18201342 | 18200842 | 18201350 | 18200834 | 18204120 |
| Continuous braking power (= 100% cdf) | 1.2 kW | 2.0 kW | 4.0 kW | 13.5 kW | 18 kW |
| Load capacity 50% cdf ¹⁾ | 2.2 kW | 3.6 kW | 7.2 kW | 23 kW | 30.6 kW |
| At 25% cdf | 3.8 kW | 6.4 kW | 12.8 kW | 40 kW | 54 kW |
| 12% cdf | 7.2 kW | 12 kW | 20 kW ²⁾ | 61 kW | 81 kW |
| 6% cdf | 11 kW | 19 kW | 20 kW | 102 kW | 136.8 kW |
| Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | | | | |
| Resistance value R _{BW} | 47 Ω ±10 % | | | 6 Ω ±10 % | |
| Tripping current (of F16) I _F | 5 A | 6.5 A | 9.2 A | 47.4 A | 547 A |
| Design | Wire resistor on ceramic core | | | Grid resistor | |
| Connections / Tightening torque | Ceramic terminals 2.5 mm ² (AWG13) / 0.5 Nm BW347-T: Ceramic terminals 10 mm ² (AWG8) / 1.6 Nm | | | Bolt M8 / 6 Nm | |
| Degree of protection | IP20 (when installed) | | | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | | | |
| Type of cooling | KS = natural cooling | | | | |
| For MOVITRAC® LTP-B (recommendation) | 0075 | 0075/0110/0150 and 2 × in parallel for 0185 – 0220 ³⁾ and 0300 – 0450 ³⁾⁴⁾ | | 0900/1100 ⁴⁾ | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration T D ≤ 120 s.

2) Physical power limit due to DC link voltage and resistance value.

3) Load rating and tripping current double with parallel connection.

4) Bear in mind that the resistive load capacity might be insufficient for these sizes. In this case, third party resistors have to be used. Accurate calculation is required.

4 Technical data – system accessories

Braking resistors

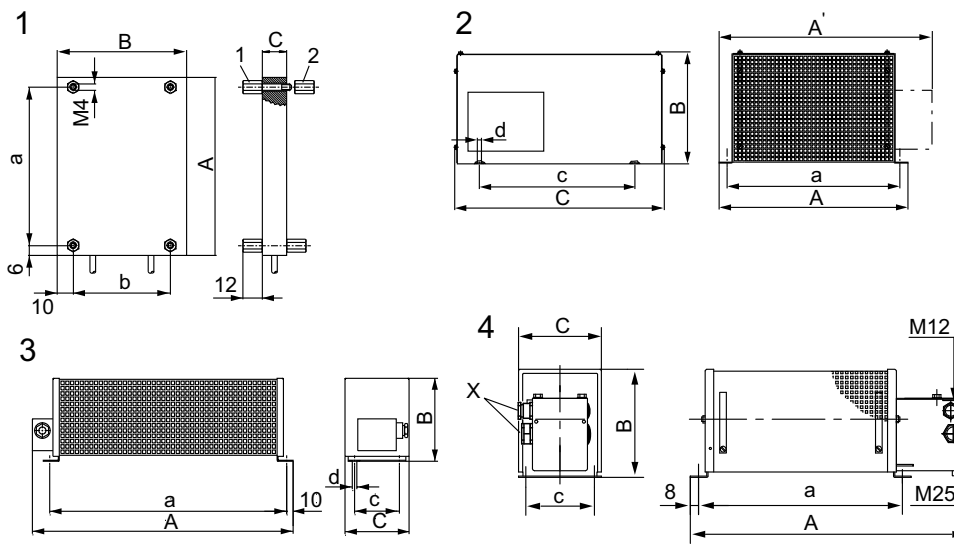
| | | | |
|---------------------------------------|--|------------------|----------------|
| Braking resistor type BW...- | BW012-025 | - | - |
| Part number | 8216800 | - | - |
| Braking resistor type BW...-T/-P | BW012-025-P | BW012-050T | BW012-100-T |
| Part number | 18204147 | 18201407 | 18201415 |
| Continuous braking power (= 100% cdf) | 2.5 kW 4.2 kW | 5.0 kW 8.5 kW | 10 kW 17 kW |
| Load capacity 50% cdf ¹⁾ | 7.5 kW | 15.0 kW | 30 kW |
| At 25% cdf | 11.2 kW | 22.5 kW | 45 kW |
| 12% cdf | 19.0 kW | 38.0 kW | 76 kW |
| 6% cdf | Observe the regenerative power limit of the inverter. (= 150% of the recommended motor power → technical data) | | |
| Resistance value R_{BW} | 12 Ω \pm 10 % | | |
| Tripping current (of F16) I_F | 14.4 A | 20.4 A | 28.8 A |
| Design | Grid resistor | | |
| Connections / Tightening torque | Bolt M8 / 6 Nm | | |
| Degree of protection | IP20 (when installed) | | |
| Ambient temperature ϑ_{amb} | -20 to +40 °C | | |
| Type of cooling | KS = natural cooling | | |
| For MOVITRAC® LTP-B (recommendation) | 0550/0750 ²⁾ | | |

1) cdf = Cyclic duration factor of the braking resistor in relation to a cycle duration $T D \leq 120$ s.

2) Bear in mind that the resistive load capacity might be insufficient for these sizes. In this case, third party resistors have to be used. Accurate calculation is required.

Dimension drawing of BW.. braking resistors / BW...-T / BW...-P

The following figure shows the mechanical dimensions in mm (in):



BW... :

- 1 = Flat design
The connection lead is 500 mm (19.7 in) long. The scope of delivery includes 4 M4 stud bolts each of type 1 and 2.
- 2 = Grid resistor
- 3 = Wire resistor
- 4 = Wire resistor with temperature switch (-T/-P)
Cable entry (X) is possible from both sides.

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| BW... type | Mounting position | Main dimensions mm (in) | | | Fastening parts mm (in) | | | Cable gland | Weight kg (lb) |
|-------------|-------------------|-------------------------|------------|------------|-------------------------|------------|-------------|-------------|----------------|
| | | A/A' | B | C | a | b/c | d | | |
| BW106-T | 2 | 795 (31.3) | 270 (10.6) | 490 (19.3) | 770 (30.3) | 380 (15) | 10.5 (0.41) | - | 32 (71) |
| BW206-T | 2 | 995 (39.2) | 270 (10.6) | 490 (19.3) | 970 (38.2) | 380 (15) | 10.5 (0.41) | - | 40 (88) |
| BW012-025 | 2 | 295 (11.6) | 260 (10.2) | 490 (19.3) | 270 (10.6) | 380 (15) | 10.5 (0.41) | M12 + M25 | 8.0 (18) |
| BW012-025-P | 2 | 295/355 (11.6)/(14) | 260 (10.2) | 490 (19.3) | 270 (10.6) | 380 (15) | 10.5 (0.41) | M12 + M25 | 8.0 (18) |
| BW012-050-T | 2 | 395 (15.6) | 260 (10.2) | 490 (19.3) | 370 (14.6) | 380 (15) | 10.5 (0.41) | - | 12 (26) |
| BW012-100-T | 2 | 595 (23.4) | 270 (10.6) | 490 (19.3) | 570 (22.4) | 380 (15) | 10.5 (0.41) | - | 21 (46) |
| BW915-T | 2 | 795 (31.3) | 270 (10.6) | 490 (19.3) | 770 (30.3) | 380 (15) | 10.5 (0.41) | - | 30 (66) |
| BW018-015 | 3 | 620 (24.4) | 120 (4.72) | 92 (3.6) | 544 (21.4) | 64 (2.5) | 6.5 (0.26) | PG11 | 4.0 (8.8) |
| BW018-015-P | 4 | 649 (25.6) | 120 (4.72) | 185 (7.28) | 530 (20.9) | 150 (5.91) | 6.5 (0.26) | M12 + M25 | 5.8 (13) |
| BW018-035-T | 2 | 295 (11.6) | 270 (10.6) | 490 (19.3) | 270 (10.6) | 380 (15) | 10.5 (0.41) | - | 9.0 (20) |
| BW018-075-T | 2 | 595 (23.4) | 270 (10.6) | 490 (19.3) | 570 (22.4) | 380 (15) | 10.5 (0.41) | - | 18.5 (40.8) |
| BW027-006 | 3 | 486 (19.1) | 120 (4.72) | 92 (3.6) | 430 (16.9) | 64 (2.5) | 6.5 (0.26) | PG11 | 2.2 (4.9) |
| BW027-012 | 3 | 486 (19.1) | 120 (4.72) | 185 (7.28) | 426 (16.8) | 150 (5.91) | 6.5 (0.26) | PG11 | 4.3 (9.5) |
| BW039-003 | 3 | 286 (11.3) | 120 (4.72) | 92 (3.6) | 230 (9.06) | 64 (2.5) | 6.5 (0.26) | PG11 | 1.5 (3.3) |
| BW039-006 | 3 | 486 (19.1) | 120 (4.72) | 92 (3.6) | 430 (16.9) | 64 (2.5) | 6.5 (0.26) | PG11 | 2.2 (4.9) |
| BW039-012 | 3 | 486 (19.1) | 120 (4.72) | 185 (7.28) | 426 (16.8) | 150 (5.91) | 6.5 (0.26) | PG11 | 4.3 (9.5) |
| BW039-012-T | 4 | 549 (21.6) | 120 (4.72) | 185 (7.28) | 426 (16.8) | 150 (5.91) | 6.5 (0.26) | M12 + M25 | 4.9 (11) |
| BW039-026-T | 4 | 649 (25.6) | 120 (4.72) | 275 (10.8) | 530 (20.9) | 240 (9.45) | 6.5 (0.26) | M12 + M25 | 7.5 (17) |
| BW039-050-T | 2 | 395 (15.6) | 260 (10.2) | 490 (19.3) | 370 (14.6) | 380 (15) | 10.5 (0.41) | - | 12 (26) |
| BW147 | 3 | 465 (18.3) | 120 (4.72) | 185 (7.28) | 426 (16.8) | 150 (5.91) | 6.5 (0.26) | PG13.5 | 4.3 (9.5) |
| BW147-T | 4 | 549 (21.6) | 120 (4.72) | 185 (7.28) | 426 (16.8) | 150 (5.91) | 6.5 (0.26) | M12 + M25 | 4.9 (11) |
| BW247 | 3 | 665 (26.2) | 120 (4.72) | 185 (7.28) | 626 (24.6) | 150 (5.91) | 6.5 (0.26) | PG13.5 | 6.1 (13) |
| BW247-T | 4 | 749 (29.5) | 120 (4.72) | 185 (7.28) | 626 (24.6) | 150 (5.91) | 6.5 (0.26) | M12 + M25 | 9.2 (20) |
| BW347 | 3 | 670 (26.4) | 145 (5.71) | 340 (13.4) | 630 (24.8) | 300 (11.8) | 6.5 (0.26) | PG13.5 | 13.2 (29.1) |
| BW347-T | 4 | 749 (29.5) | 210 (8.27) | 185 (7.28) | 630 (24.8) | 150 (5.91) | 6.5 (0.26) | M12 + M25 | 12.4 (27.3) |
| BW168 | 3 | 365 (14.4) | 120 (4.72) | 185 (7.28) | 326 (12.8) | 150 (5.91) | 6.5 (0.26) | PG13.5 | 3.5 (7.7) |
| BW168-T | 4 | 449 (17.7) | 120 (4.72) | 185 (7.28) | 326 (12.8) | 150 (5.91) | 6.5 (0.26) | M12 + M25 | 3.6 (7.9) |
| BW268 | 3 | 465 (18.3) | 120 (4.72) | 185 (7.28) | 426 (16.8) | 150 (5.91) | 6.5 (0.26) | PG13.5 | 4.3 (9.5) |
| BW268-T | 4 | 549 (21.6) | 120 (4.72) | 185 (7.28) | 426 (16.8) | 150 (5.91) | 6.5 (0.26) | M12 + M25 | 4.9 (11) |

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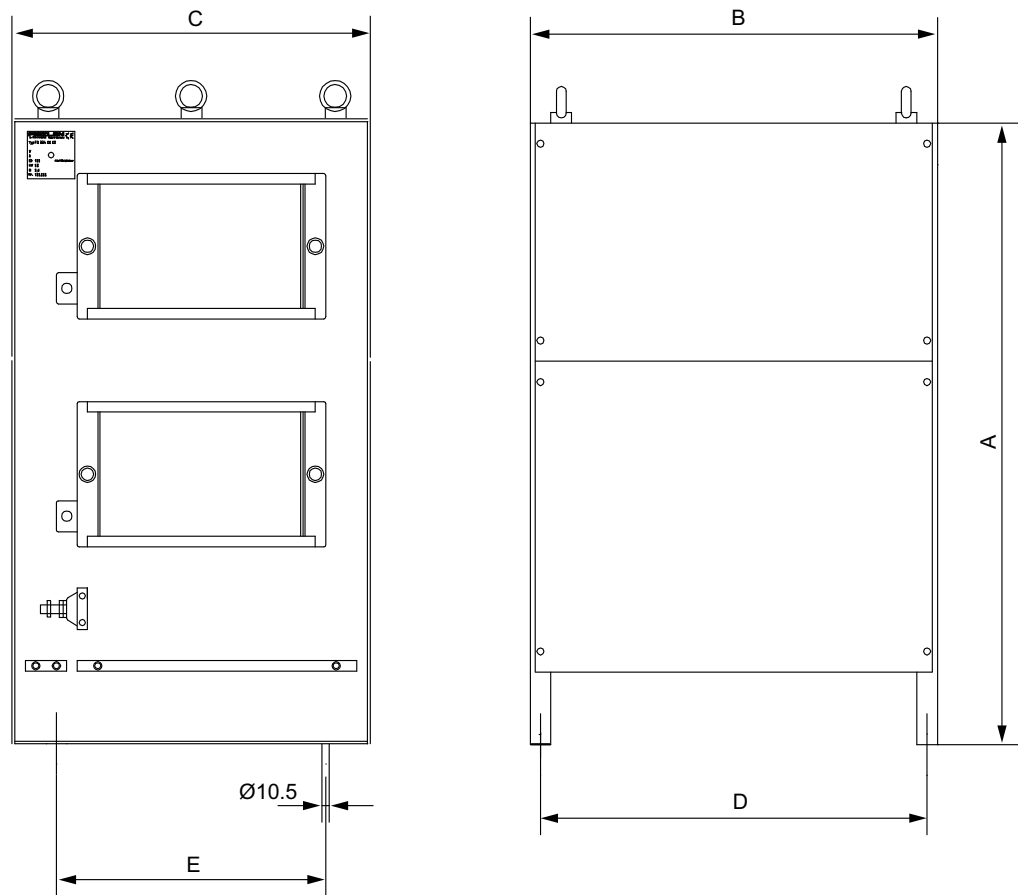
4 Technical data – system accessories

Braking resistors

| BW... type | Mounting position | Main dimensions mm (in) | | | Fastening parts mm (in) | | | Cable gland | Weight kg (lb) |
|-------------|-------------------|-------------------------|------------|------------|-------------------------|------------|-------------|-------------|----------------|
| | | A/A' | B | C | a | b/c | d | | |
| BW072-003 | 1 | 110 (4.33) | 80 (3.1) | 15 (0.59) | 98 (3.9) | 60 (2.4) | - | - | 0.3 (0.7) |
| BW072-005 | 1 | 216 (8.5) | 80 (3.1) | 15 (0.59) | 204 (8.03) | 60 (2.4) | - | - | 0.6 (1) |
| BW100-005 | 1 | 216 (8.5) | 80 (3.1) | 15 (0.59) | 204 (8.03) | 60 (2.4) | - | - | 0.6 (1) |
| BW100-006 | 4 | 486 (19.1) | 120 (4.72) | 92 (3.6) | 430 (16.9) | 64 (2.5) | 6.5 (0.26) | PG11 | 2.2 (4.9) |
| BW100-006-T | 4 | 549 (21.6) | 120 (4.72) | 92 (3.6) | 430 (16.9) | 80 (3.1) | 6.5 (0.26) | M12 + M25 | 3.0 (6.6) |
| BW206-120-T | 2 | 595 (23.4) | 270 (10.6) | 490 (19.3) | 570 (22.4) | 380 (15.0) | 10.5 (0.41) | 2×2×M8 | 22.0 |

Dimension drawings of BW1.4-170 and BW003-420-T braking resistors

The following figure shows the mechanical dimensions in mm (in):



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| BW... type | Main dimensions mm (in) | | | | | Terminal stud / tightening torque | Weight kg (lb) |
|-------------|-------------------------|------------|------------|------------|------------|-----------------------------------|----------------|
| | A | B | C | D | E | | |
| BW1.4-170 | 460 (18.1) | 795 (31.3) | 490 (19.3) | 770 (30.3) | 380 (15.0) | M12 / 15.5 Nm | 51 (112) |
| BW003-420-T | 710 (28.0) | 995 (39.2) | 490 (19.3) | 970 (38.2) | 380 (15.0) | M12 / 15.5 Nm | 93 (205) |

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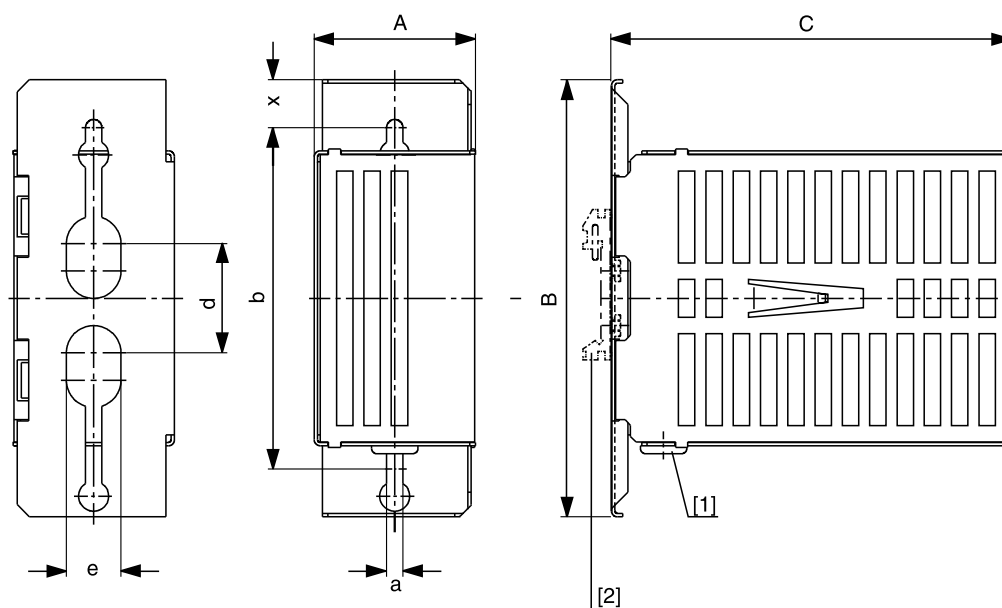
BS... touch guard

Description

A BS.. touch guard is available for braking resistors in flat design.

| Touch guard | BS003 | BS005 |
|----------------------|------------------------|-------------------------------------|
| Part number | 8131511 | 813152X |
| for braking resistor | BW027-003 BW072-003 | BW027-005 BW072-005 BW100-005 |

Dimension drawing for BS...



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[1] Grommet

[2] Support rail mounting

| Type | Main dimensions mm (in) | | | Mounting dimensions mm (in) | | | | | Weight kg (lb) |
|-------|-------------------------|-----------|------------|-----------------------------|----------|-----------|---------|-------------|----------------|
| | A | B | C | b | d | e | a | x | |
| BS-03 | 60 (2.4) | 160 (6.3) | 146 (5.75) | 125 (4.92) | 40 (1.6) | 20 (0.79) | 6 (0.2) | 17.5 (0.69) | 0.35 (0.77) |
| BS-05 | 60 (2.4) | 160 (6.3) | 252 (9.92) | 125 (4.92) | 4 (1.6) | 20 (0.79) | 6 (0.2) | 17.5 (0.69) | 0.5 (1) |

Mounting rail installation

A mounting rail attachment HS001 is available from SEW-EURODRIVE, part number 8221944, for mounting the touch guard on a mounting rail.

4 Technical data – system accessories

Line chokes

4.2 Line chokes

Using line chokes is optional in the following instances:

- Reduction of harmonic distortions in the power supply
- To support overvoltage protection
- To smoothen the line current, to reduce harmonics
- Protection in the event of distorted line voltage
- To limit the charging current when several inverters are connected together in parallel on the input end with shared line contactors (nominal current of line choke = total of inverter currents)

The following units are equipped with a DC choke and thus do not necessarily need an external choke:

- 240 V, BG 5 – 7
- 480 V, BG 5 – 7

4.2.1 Technical data

IP20

| Type | | ND LT 010 290 21 | ND LT 025 110 21 | ND LT 006 480 53 | ND LT 010 290 53 | ND LT 036 081 53 |
|---|-----------------|------------------------|---------------------|------------------------------|---------------------|---------------------|
| Part number | | 18201644 | 18201652 | 18201660 | 18201679 | 18201687 |
| Nominal voltage (according to EN 50160) | V_N | 1 x AC 230 V, 50/60 Hz | | 3 x AC 230 – 500 V, 50/60 Hz | | |
| Rated current | I_N | 16 A | 25 A | 6 A | 10 A | 36 A |
| Inductance | L_N | 1.8 mH | 1.1 mH | 4.8 mH | 2.9 mH | 0.81 mH |
| Ambient temperature | | -25 to +45 °C | | | | |
| IP protection | | IP20 (EN 60529) | | | | |
| Weight | m in kg (lb) | 1.1 / 2.43 | 1.8 / 3.97 | 1.3 / 2.87 | 2.5 / 5.51 | 7.2 / 15.87 |
| Assignment to AC 400 V | | - | - | 0008 / 0015 | 0022 / 0040 | 0055 – 0150 |
| Assignment to AC 230 V | | 0008 / 0015 | 0022 | 0008 | 0015 | 0022 – 0055 |
| UL/cUL approval | | Yes / Yes | Yes / Yes | Yes / Yes | Yes / Yes | Yes / Yes |

IP20 / IP00

| Type | | ND LT 050 058 53-20 | ND LT 090 032 53-20 | ND LT 200 735 53-00 | ND LT 300 049 53-00 |
|---|----------------|------------------------------|---------------------|---------------------|---------------------|
| Part number | | 18410936 | 18410944 | 18410952 | 18410960 |
| Nominal voltage (according to EN 50160) | V _N | 3 x AC 230 – 500 V, 50/60 Hz | | | |
| Rated current | I _N | 50 A | 90 A | 200 A | 300 A |
| Inductance | L _N | 0.58 mH | 0.32 mH | 0.0735 mH | 0,049 mH |
| Ambient temperature | | -25 to +40 °C | | | |
| IP protection | | IP20 (EN 60529) | | IP00 (EN 60529) | |
| Weight | m in kg (lb) | 8.7 / 19.8 | 16 / 35.27 | 35 / 77.16 | 48 / 105.82 |
| Assignment to AC 400 V | | 0185 – 0220 | 0300 – 0370 | 0450 – 0900 | 1100 – 1600 |
| Assignment to AC 230 V | | 0075 – 0110 | 0150 – 0185 | 0220 – 0450 | 0550 / 0750 |
| UL/cUL approval | | No / No | No / No | No / No | No / No |

IP66

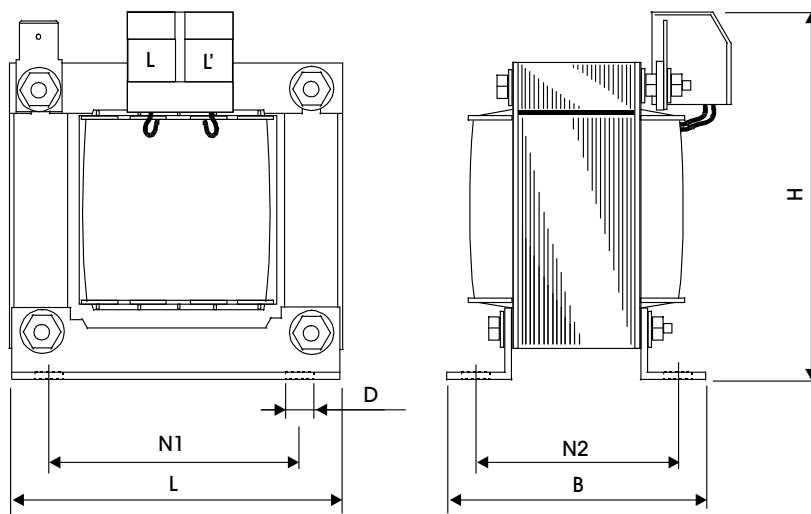
| Type | | ND LT 016 183 21-55 | ND LT 025 117 21-55 | ND LT 006 613 63-55 | ND LT 010 386 63-55 | ND LT 020 183 63-55 |
|---|----------------|------------------------|------------------------|------------------------------|------------------------|------------------------|
| Part number | | 18217680 | 18217699 | 18217702 | 18217710 | 18217729 |
| Nominal voltage (according to EN 50160) | V _N | 1 x AC 230 V, 50/60 Hz | | 3 x AC 230 – 600 V, 50/60 Hz | | |
| Rated current | I _N | 16 A | 25 A | 6 A | 10 A | 18 A |
| Inductance | L _N | 1.83 mH | 1.17 mH | 4.8 mH | 3.86 mH | 2.04 mH |
| Ambient temperature | | -25 to +40 °C | | | | |
| IP protection | | IP66 (EN 60529) | | | | |
| Weight | m in kg (lb) | 1 / 2.21 | 1.3 / 2.87 | 1.6 / 3.53 | 3.5 / 7.72 | 7 / 15.43 |
| Assignment to AC 230 V | | 0008 / 0015 | 0022 | 0008 | 0015 | 0022 / 0030 |
| Assignment to AC 400 V | | - | - | 0008 / 0015 | 0022 | 0040 / 0055 |
| Assignment to AC 575 V | | - | - | 0008 – 0022 | 0040 | 0055 / 0075 |
| UL/cUL approval | | Yes / Yes | Yes / Yes | Yes / Yes | Yes / Yes | Yes / Yes |

4 Technical data – system accessories

Line chokes

4.2.2 Dimensions

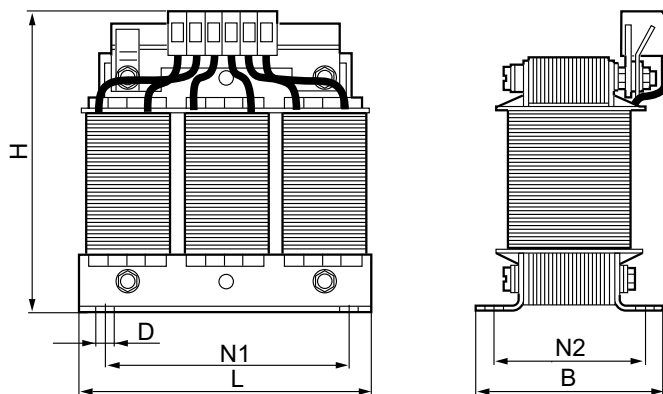
IP20, 1 × 230 V



9007202440854667

| Type | L | | B | | H | | N1 | | N2 | | D | |
|------------------|----|------|----|------|-----|------|-----|------|----|------|-----|------|
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| ND LT 010 290 21 | 78 | 3.07 | 78 | 3.07 | 80 | 3.15 | 56 | 2.20 | 49 | 1.92 | 4.8 | 0.18 |
| ND LT 025 110 21 | 85 | 3.34 | 76 | 2.99 | 158 | 6.22 | 100 | 3.93 | 55 | 2.16 | 5 | 0.19 |

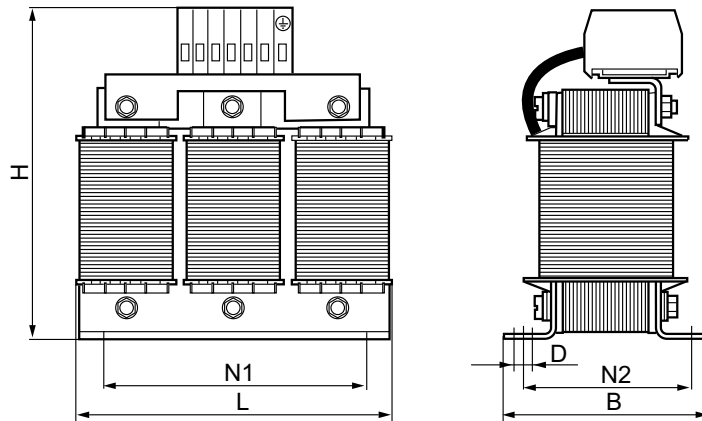
IP20, 3 × 230 – 500 V



9453581067

| Type | L | | B | | H | | N1 | | N2 | | D | |
|------------------|-----|------|----|------|-----|------|-----|------|----|------|-------|-------------|
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| ND LT 006 480 53 | 95 | 3.7 | 56 | 2.20 | 107 | 4.21 | 56 | 2.20 | 43 | 1.69 | 5 x 9 | 0.19 x 0.35 |
| ND LT 010 290 53 | 125 | 4.92 | 71 | 2.79 | 127 | 5 | 100 | 3.93 | 55 | 2.16 | 5 x 8 | 0.19 x 0.31 |

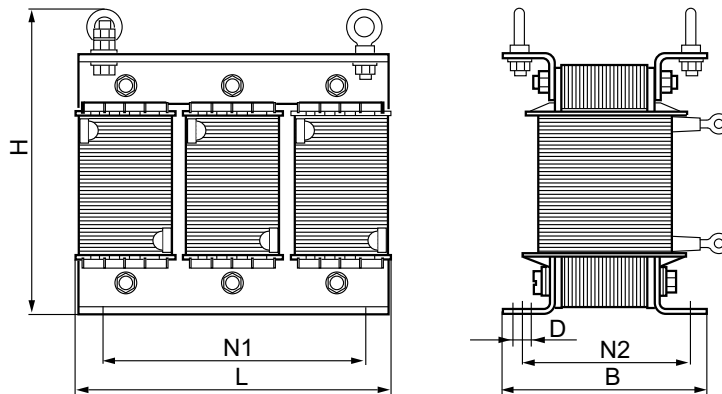
IP20, 3 × 230 – 500 V



9453583371

| Type | L | | B | | H | | N1 | | N2 | | D | |
|---------------------|-----|------|-----|------|-----|-------|-----|------|----|------|--------|-------------|
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| ND LT 036 081 53 | 190 | 7.48 | 82 | 3.22 | 205 | 8.07 | 170 | 6.69 | 58 | 2.28 | 8 x 12 | 0.31 x 0.47 |
| ND LT 050 058 53-20 | 190 | 7.48 | 102 | 4.01 | 220 | 8.66 | 170 | 6.69 | 78 | 3.07 | 8 x 12 | 0.31 x 0.47 |
| ND LT 090 032 53-20 | 240 | 9.44 | 107 | 4.21 | 280 | 11.02 | 185 | 7.28 | 85 | 3.34 | 10x18 | 0.39 x 0.70 |

IP00, 3 × 230 – 500 V



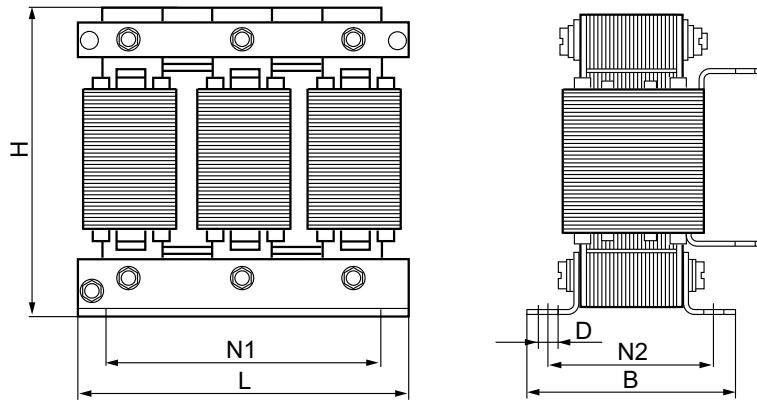
9453586059

| Type | L | | B | | H | | N1 | | N2 | | D | |
|---------------------|-----|------|-----|------|-----|-------|-----|------|-----|------|-------|-------------|
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| ND LT 200 735 53-00 | 310 | 12.2 | 180 | 7.08 | 260 | 10.24 | 224 | 8.81 | 117 | 4.60 | 10x18 | 0.39 x 0.70 |

4 Technical data – system accessories

Line chokes

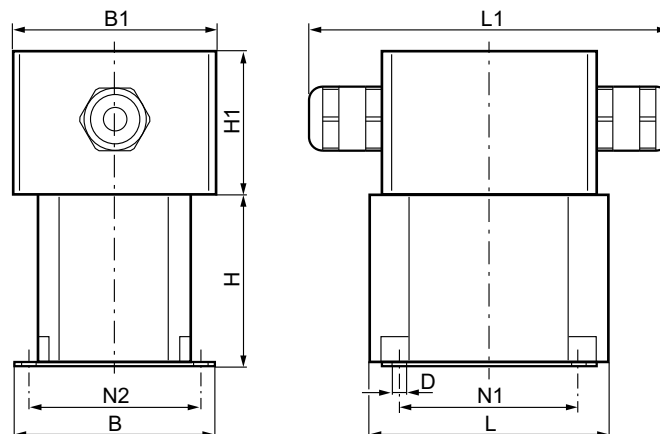
IP00, 3 × 230 – 500 V



9453588107

| Type | L | | B | | H | | N1 | | N2 | | D | |
|---------------------|-----|-------|-----|------|-----|------|-----|------|-----|------|-------|-------------|
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| ND LT 300 049 53-00 | 370 | 14.57 | 180 | 7.08 | 310 | 12.2 | 248 | 9.76 | 139 | 5.47 | 10x18 | 0.39 x 0.70 |

IP66, 1 × 230 V, 3 × 230 – 600 V



9453666955

| Type | L | | B | | H | | N1 | | N2 | | D | |
|---------------------|-----|------|-----|------|-----|------|-----|------|----|------|--------|-----------|
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| ND LT 016 183 21-55 | 82 | 3.22 | 70 | 2.75 | 70 | 2.75 | 70 | 2.75 | 58 | 2.28 | 6 | 0.23 |
| ND LT 025 117 21-55 | 90 | 3.54 | 84 | 3.30 | 75 | 2.95 | 84 | 3.30 | 72 | 2.83 | 6 | 0.23 |
| ND LT 006 613 63-55 | 115 | 4.52 | 74 | 2.91 | 88 | 3.46 | 80 | 3.15 | 60 | 2.36 | 5.5x7 | 0.21x0.27 |
| ND LT 010 386 63-55 | 175 | 6.89 | 99 | 3.89 | 137 | 5.39 | 130 | 5.11 | 79 | 3.11 | 5.5x12 | 0.21x0.47 |
| ND LT 020 183 63-55 | 175 | 6.89 | 114 | 4.48 | 137 | 5.39 | 130 | 5.11 | 94 | 3.70 | 5.5x12 | 0.21x0.47 |

| Type | L1 | | B1 | | H1 | |
|---------------------|-----|------|----|------|----|------|
| | mm | in | mm | in | mm | in |
| ND LT 016 183 21-55 | 151 | 5.94 | 85 | 3.34 | 60 | 2.36 |
| ND LT 025 117 21-55 | 151 | 5.94 | 85 | 3.34 | 60 | 2.36 |
| ND LT 006 613 63-55 | 151 | 5.94 | 85 | 3.34 | 60 | 2.36 |
| ND LT 010 386 63-55 | 151 | 5.94 | 85 | 3.34 | 60 | 2.36 |
| ND LT 020 183 63-55 | 151 | 5.94 | 85 | 3.34 | 60 | 2.36 |

4.3 Output chokes

Output chokes improve the quality of the output wave shape. When using an output choke, you can use twice the length of the maximum cable length indicated in the tables in chapter "Output power and current load (→ 18)".

Just like most inverters, MOVITRAC® LTP-B also has unfiltered outputs. In most applications, a satisfactory performance is achieved this way. For a few applications, an output filter is highly recommended to improve the functionality, reliability and service life of the system. These include:

- Long motor cables up to 300 m (the nominal length can be doubled when using an output choke), requires PWM frequency ≤ 4 kHz
- High capacity motor cable (e.g. "Pyro" wire for fire protection)
- Several motors connected in parallel
- Motors without insulation suited for inverters (usually older motors)

A series of high-quality output chokes with the following main features are available for MOVITRAC® LTP-B:

- Limiting the output voltage drop, usually < 200 V/ μ s
- Limiting transient overvoltages at the motor terminals, usually < 1000 V
- Suppressing line-related interference in low frequency ranges
- Compensating capacitive load currents
- Reducing HF interference emission of the motor cable
- Reducing motor losses and audible noise caused by ripple

4.3.1 Technical data

IP20

| Type | | HD LT 008 200 53 | HD LT 012 130 53 | HD LT 030 050 53 | HD LT 075 022 53 |
|------------------------|-----------------|--------------------|------------------|------------------|------------------|
| Part number | | 18201695 | 18201709 | 18201717 | 18201725 |
| Nominal voltage | V_N | 3 x AC 200 – 500 V | | | |
| Rated current | I_N | 8 A | 12 A | 30 A | 75 A |
| Inductance | L_N | 2 mH | 1.3 mH | 0.5 mH | 0.22 mH |
| Degree of protection | | IP20 (EN 60529) | | | |
| Weight | m in kg (lb) | 1.5 (3.31) | 2.8 (6.17) | 4.2 (9.26) | 8.6 (18.96) |
| Assignment to AC 400 V | | 0008 – 0022 | 0040 | 0055 / 0150 | 0185 – 0370 |
| Assignment to AC 230 V | | 0008 / 0015 | 0022 | 0030 – 0075 | 0110 – 0185 |
| UL/cUL approval | | Yes / Yes | Yes / Yes | Yes / Yes | No / No |

4 Technical data – system accessories

Output chokes

IP00

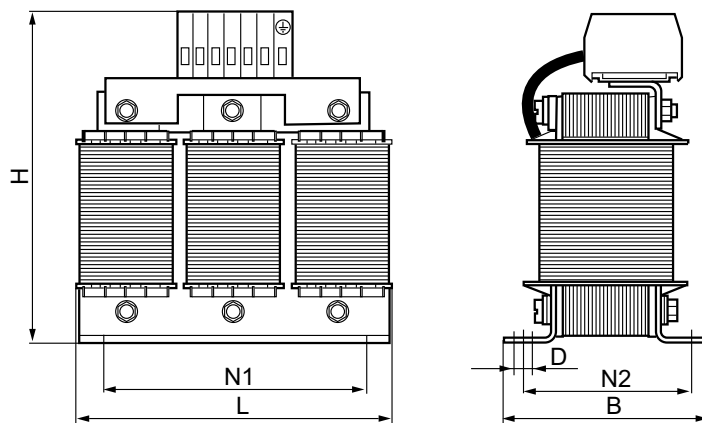
| Type | | HD LT 180 009 53 | HD LT 250 007 53 | HD LT 300 530 53 |
|------------------------|-----------------|--------------------|------------------|------------------|
| Part number | | 18201733 | 18201741 | 18408133 |
| Nominal voltage | V_N | 3 x AC 200 – 400 V | | |
| Rated current | I_N | 180 A | 250 A | 300 A |
| Inductance | L_N | 0.09 mH | 0,065 mH | 0,053 mH |
| Degree of protection | | IP00 (EN 60529) | | |
| Weight | m in kg (lb) | 30 (66.14) | 35 (77.16) | 48 (105.82) |
| Assignment to AC 400 V | | 0450 – 0900 | 1100/1320 | 1600 |
| Assignment to AC 230 V | | 0220 – 0450 | 0550 / 0750 | - |
| UL/cUL approval | | No / No | No / No | No / No |

IP66

| Type | | HD LT 008 200 63-55 | HD LT 012 120 63-55 | HD LT 018 090 63-55 |
|------------------------|-----------------|---------------------|---------------------|---------------------|
| Part number | | 18216757 | 18216765 | 18216773 |
| Nominal voltage | V_N | 3 x AC 200 – 600 V | | |
| Rated current | I_N | 8 A | 12 A | 18 A |
| Inductance | L_N | 2 mH | 1.2 mH | 0.9 mH |
| Degree of protection | | IP66 (EN 60529) | | |
| Weight | m in kg (lb) | 1.7 (3.75) | 3.2 (7.05) | 3.2 (7.05) |
| Assignment to AC 230 V | | 0008 / 0015 | 0022 | 0030 / 0040 |
| Assignment to AC 400 V | | 0008 – 0022 | 0040 | 0055 / 0075 |
| Assignment to AC 575 V | | 0008 – 0040 | 0055 / 0075 | 0110 |
| UL/cUL approval | | Yes / Yes | Yes / Yes | Yes / Yes |

4.3.2 Dimensions

IP20, 3 × 200 – 500 V

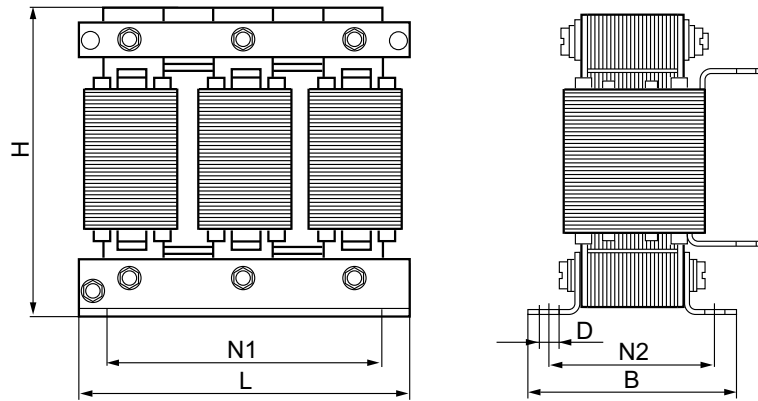


9453583371

| Type | L | | B | | H | | N1 | | N2 | | D | |
|------------------|-----|------|----|------|-----|------|-----|------|----|------|----|------|
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| HD LT 008 200 53 | 95 | 3.7 | 61 | 2.4 | 107 | 4.21 | 56 | 2.2 | 43 | 1.69 | 4 | 0.15 |
| HD LT 012 130 53 | 125 | 4.92 | 76 | 2.99 | 158 | 6.22 | 100 | 3.93 | 55 | 2.16 | 5 | 0.19 |
| HD LT 030 050 53 | 155 | 6.1 | 66 | 2.59 | 185 | 7.28 | 130 | 5.11 | 57 | 2.24 | 8 | 0.31 |
| HD LT 075 022 53 | 190 | 7.48 | 92 | 3.62 | 223 | 8.77 | 170 | 6.69 | 68 | 2.67 | 8 | 0.31 |

20214545 / EN – 05/2014

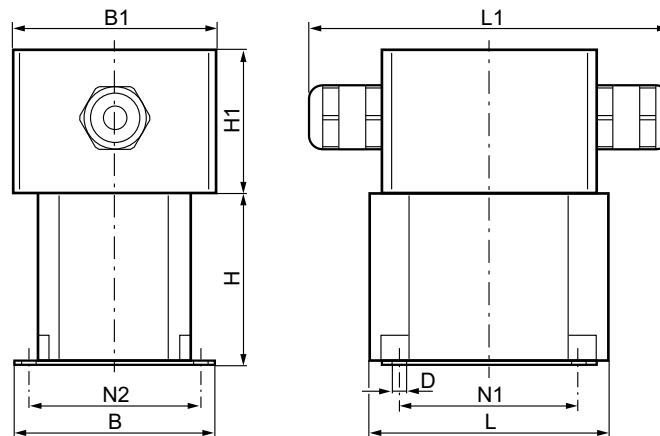
IP00, 3 × 200 – 400 V



9453588107

| Type | L | | B | | H | | N1 | | N2 | | D | |
|------------------|-----|-------|-----|------|-----|-------|-----|-------|-----|------|-------|----------|
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| HD LT 180 009 53 | 360 | 14.17 | 180 | 7.08 | 263 | 10.35 | 264 | 10.39 | 122 | 4.8 | 10x18 | 0.39x0.7 |
| HD LT 250 007 53 | 310 | 12.2 | 180 | 7.08 | 260 | 10.23 | 224 | 8.81 | 117 | 4.6 | 10x18 | 0.39x0.7 |
| HD LT 300 530 53 | 380 | 14.96 | 180 | 7.08 | 310 | 12.2 | 248 | 9.76 | 139 | 5.47 | 10x18 | 0.39x0.7 |

IP66, 3 200 – 600 V



9453666955

| Type | L | | B | | H | | N1 | | N2 | | D | |
|---------------------|-----|------|----|------|-----|------|-----|------|----|------|--------|-----------|
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| HD LT 008 200 63-55 | 115 | 4.52 | 74 | 2.91 | 85 | 3.34 | 80 | 3.14 | 60 | 2.36 | 5.5x7 | 0.21x0.27 |
| HD LT 012 120 63-55 | 140 | 5.51 | 87 | 3.42 | 110 | 4.33 | 100 | 3.93 | 70 | 2.75 | 5.5x12 | 0.21x0.47 |
| HD LT 018 090 63-55 | 140 | 5.51 | 87 | 3.42 | 110 | 4.33 | 100 | 3.93 | 70 | 2.75 | 5.5x12 | 0.21x0.47 |

| Type | L1 | | B1 | | H1 | |
|---------------------|-----|------|----|------|----|------|
| | mm | in | mm | in | mm | in |
| HD LT 008 200 63-55 | 151 | 5.94 | 85 | 3.34 | 60 | 2.36 |
| HD LT 012 120 63-55 | 151 | 5.94 | 85 | 3.34 | 60 | 2.36 |
| HD LT 018 090 63-55 | 151 | 5.94 | 85 | 3.34 | 60 | 2.36 |

20214545 / EN – 05/2014

4 Technical data – system accessories

Line filter

4.4 Line filter

Most electrical units generate unwanted electrical interferences which affect the line voltage. All MOVITRAC® LTP-B inverters are designed in such way that the interference is minimized. They offer a high degree of electromagnetic compatibility. If necessary, you can use additional line filters to minimize the electromagnetic interference emission.

4.4.1 Technical data

Nominal voltage 200 – 250 V

| Type | | NF LT 010 201-20 | NF LT 025 201-20 | NF LT 010 201-66 | NF LT 025 201-66 |
|---|---------|--------------------------------|------------------|------------------|------------------|
| Part number | | 18411029 | 18411037 | 18411134 | 18411142 |
| Nominal voltage (according to EN 50160) | V_N | 1 x AC 200 – 250 V, 48 – 62 Hz | | | |
| Rated current | I_N | 10 A | 25 A | 10 A | 25 A |
| Leakage current | I | < 5 mA | | | |
| Operating temperature | T | -25 to +40 °C | | | |
| Degree of protection | | IP20 | | IP66 | |
| Weight | kg / lb | 1.32 / 2.91 | 1.5 / 3.31 | 1.4 / 3.09 | 1.6 / 3.53 |
| Assignment to AC 230 V | | 0008 | 0015 / 0022 | 0008 | 0015 / 0022 |
| UL/cUL approval | | No / No | No / No | No / No | No / No |

Nominal voltage 380 – 400 V

| Type | | NF LT 006 503-20 | NF LT 016 503-20 | NF LT 025 503-20 |
|---|---------|--------------------------------|------------------|------------------|
| Part number | | 18411045 | 18411053 | 18411061 |
| Nominal voltage (according to EN 50160) | V_N | 3 x AC 380 – 480 V, 48 – 62 Hz | | |
| Rated current | I_N | 6 A | 16 A | 25 A |
| Leakage current | I | < 10 mA | < 35 mA | < 35 mA |
| Operating temperature | T | -25 to +40 °C | | |
| Degree of protection | | IP20 | | |
| Weight | kg / lb | 1.58 / 3.48 | 2.5 / 5.51 | 2.7 / 5.95 |
| Assignment to AC 400 V | | 0008 – 0022 | 0040 / 0055 | 0075 / 0110 |
| UL/cUL approval | | No / No | No / No | No / No |

| Type | | NF LT 006 503-66 | NF LT 016 503-66 | NF LT 025 503-66 |
|---|---------|--------------------------------|------------------|------------------|
| Part number | | 18411150 | 18411169 | 18411177 |
| Nominal voltage (according to EN 50160) | V_N | 3 x AC 380 – 480 V, 48 – 62 Hz | | |
| Rated current | I_N | 6 A | 16 A | 25 A |
| Leakage current | I | < 10 mA | < 35 mA | < 35 mA |
| Operating temperature | T | -25 to +40 °C | | |
| Degree of protection | | IP66 | | |
| Weight | kg / lb | 1.6 / 3.53 | 2.5 / 5.51 | 2.7 / 5.95 |
| Assignment to AC 400 V | | 0008 – 0022 | 0040 / 0055 | 0075 / 0110 |
| UL/cUL approval | | No / No | No / No | No / No |

| Type | | NF LT 050 503-20 | NF LT 080 503-20 | NF LT 180 503-20 | NF LT 300 503-00 |
|---|---------|--------------------------------|------------------|------------------|------------------|
| Part number | | 18411088 | 18411096 | 18411118 | 18411126 |
| Nominal voltage (according to EN 50160) | V_N | 3 x AC 380 – 480 V, 48 – 62 Hz | | | |
| Rated current | I_N | 50 A | 80 A | 180 A | 300 A |
| Leakage current | I | < 100 mA | < 100 mA | < 180 mA | < 180 mA |
| Operating temperature | T | -25 to +40 °C | | | |
| Degree of protection | | IP20 | | | IP00 |
| Weight | kg / lb | 2.63 / 5.80 | 7.35 / 16.20 | 9.98 / 22.00 | 17.5 / 38.58 |
| Assignment to AC 400 V | | 0150 – 0220 | 0300 / 0370 | 0450 – 0750 | 0900 – 1600 |
| UL/cUL approval | | Yes / No | Yes / No | Yes / No | Yes / No |

Nominal voltage 600 V

| Type | | NF LT 006 603-20 | NF LT 016 603-20 | NF LT 025 603-20 |
|---|---------|--------------------------|------------------|------------------|
| Part number | | 18411223 | 18411231 | 18411258 |
| Nominal voltage (according to EN 50160) | V_N | 3 x AC 600 V, 48 – 62 Hz | | |
| Rated current | I_N | 6 A | 16 A | 25 A |
| Leakage current | I | < 10 mA | < 35 mA | < 35 mA |
| Operating temperature | T | -25 to +40 °C | | |
| Degree of protection | | IP20 | | |
| Weight | kg / lb | 2.7/5.95 | | |
| Assignment to AC 600 V | | 0008 – 0022 | 0040 – 0075 | 0110 |
| UL/cUL approval | | No / No | No / No | No / No |

4 Technical data – system accessories

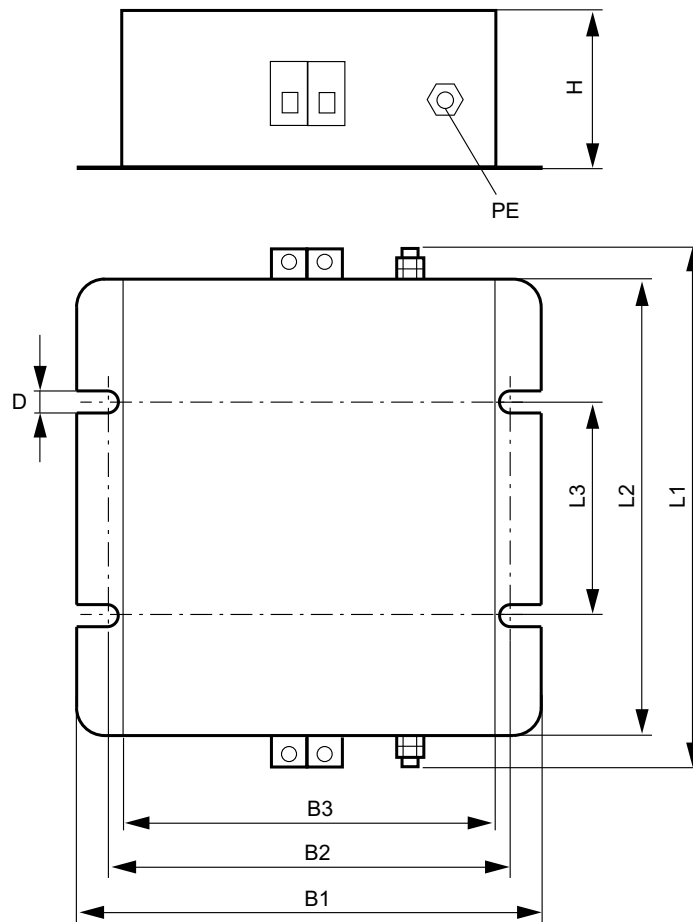
Line filter

Nominal voltage 690 V

| Type | | NF LT 050 603-20 | NF LT 080 603-20 | NF LT 180 603-20 |
|---|---------|--------------------------|------------------|------------------|
| Part number | | 18411266 | 18411274 | 18411282 |
| Nominal voltage (according to EN 50160) | V_N | 3 x AC 690 V, 48 – 62 Hz | | |
| Rated current | I_N | 50 A | 80 A | 180 A |
| Leakage current | I | < 80 mA | < 100 mA | < 100 mA |
| Operating temperature | T | -25 to +40 °C | | |
| Degree of protection | | IP20 | | |
| Weight | kg / lb | 3.38/7.45 | 5.67/12.50 | 6.99/15.41 |
| Assignment to AC 600 V | | 0150 – 0300 | 0370/0450 | 0550 – 1100 |
| UL/cUL approval | | No / No | No / No | No / No |

4.4.2 Dimensions

1 x AC 200 – 250 V, 10 – 25 A, IP20



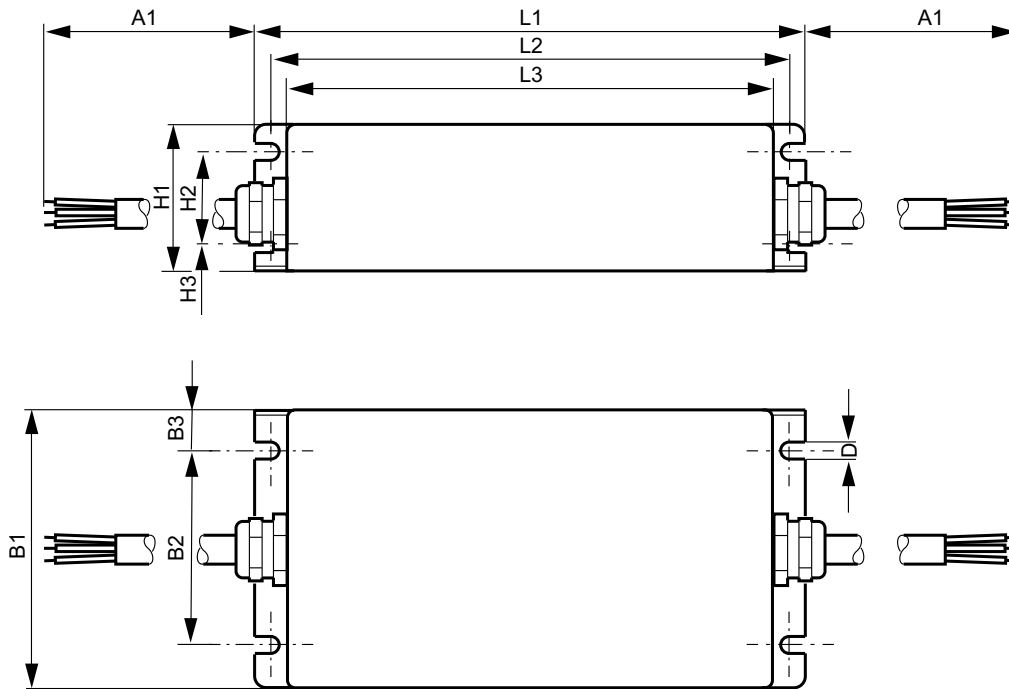
12694590091

| Part number | PE connection | L1 mm | L2 mm | L3 mm | B1 mm | B2 mm | B3 mm | H mm | D mm |
|------------------|---------------|----------|----------|----------|----------|----------|----------|---------|---------|
| NF LT 010 201-20 | 2 x M6 | 180 | 160 | 150 | 70 | 45 | 12.5 | 65 | 6.2 |
| NF LT 025 201-20 | 2 x M6 | 250 | 236 | 220 | 70 | 45 | 12.5 | 65 | 6.2 |

4 Technical data – system accessories

Line filter

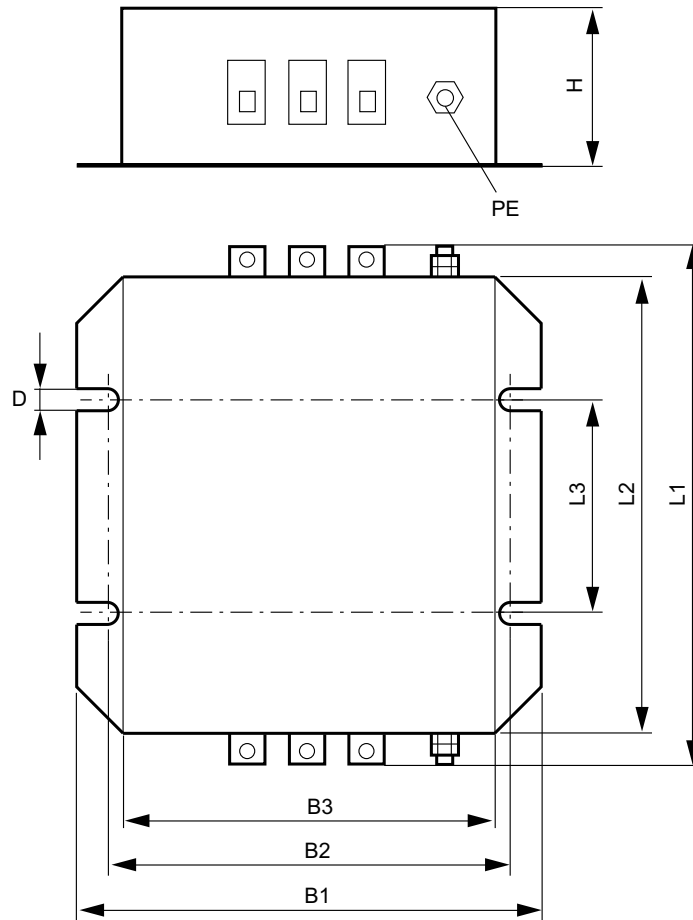
1 x AC 200 – 250 V, 10 – 25 A, IP66



12263312139

| Part number | PE connection | L1 mm | L2 mm | L3 mm | B1 mm | B2 mm | B3 mm | H1 mm | H2 mm | H3 mm | D mm | A1 mm |
|------------------|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------|----------|
| NF LT 010 201-66 | 3G2.5 | 180 | 166 | 150 | 70 | 45 | 12.5 | 65 | 40 | 12.5 | 6.2 | 500 |
| NF LT 025 201-66 | 3G4.0 | 250 | 236 | 220 | 70 | 45 | 12.5 | 65 | 40 | 12.5 | 6.2 | 500 |

3 x AC 380 – 480 V, 6 – 50 A, IP20



12263306379

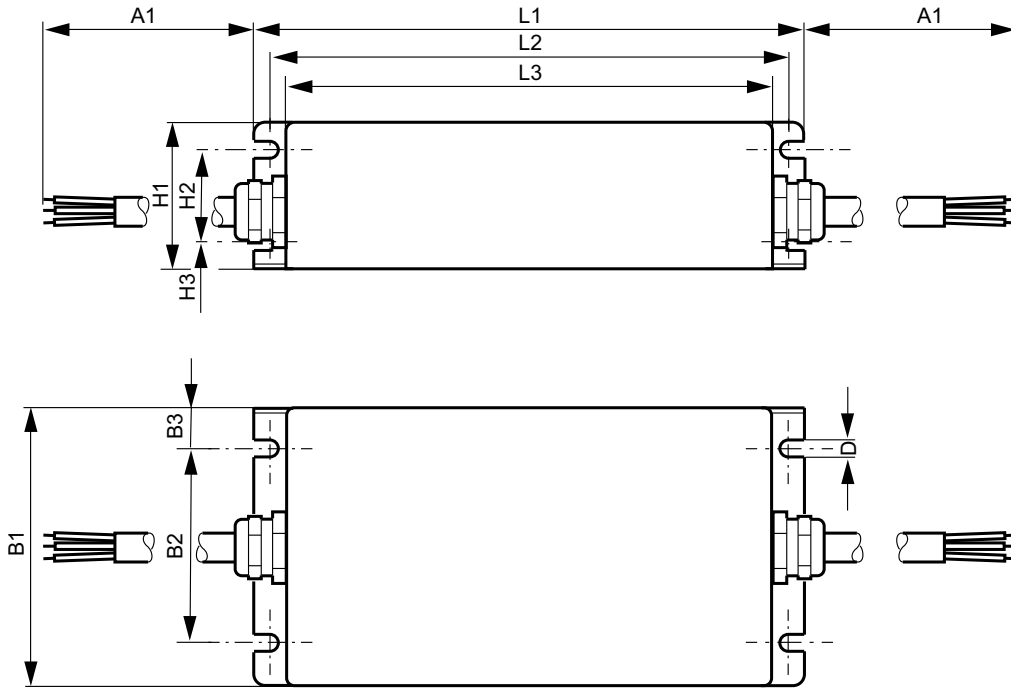
| Part number | PE connection | L1 mm | L2 mm | L3 mm | B1 mm | B2 mm | B3 mm | H mm | D mm |
|------------------|---------------|-------|-------|-------|-------|-------|-------|------|------|
| NF LT 006 503-20 | 2 x M6 | 210 | 196 | 180 | 85 | 55 | 15 | 60 | 6.2 |
| NF LT 016 503-20 | 2 x M6 | 230 | 216 | 200 | 120 | 80 | 20 | 65 | 6.2 |
| NF LT 025 503-20 | 2 x M6 | 230 | 216 | 200 | 120 | 80 | 20 | 65 | 6.2 |
| NF LT 050 503-20 | 2 x M6 | 247 | 200 | 115 | 150 | 136 | 120 | 65 | 6.2 |

4 Technical data – system accessories

Line filter

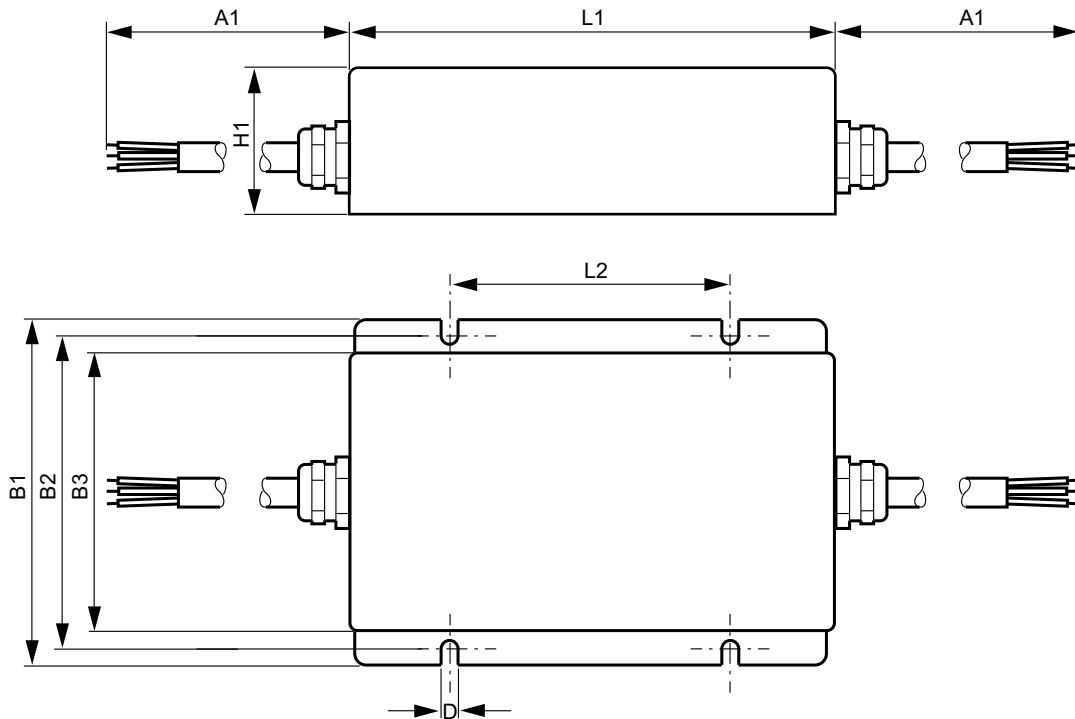
3 x AC 380 – 480 V, 6 – 25 A, IP66

NF LT 006 503-66, NF LT 016 503-66



12263312139

NF LT 025 503-66

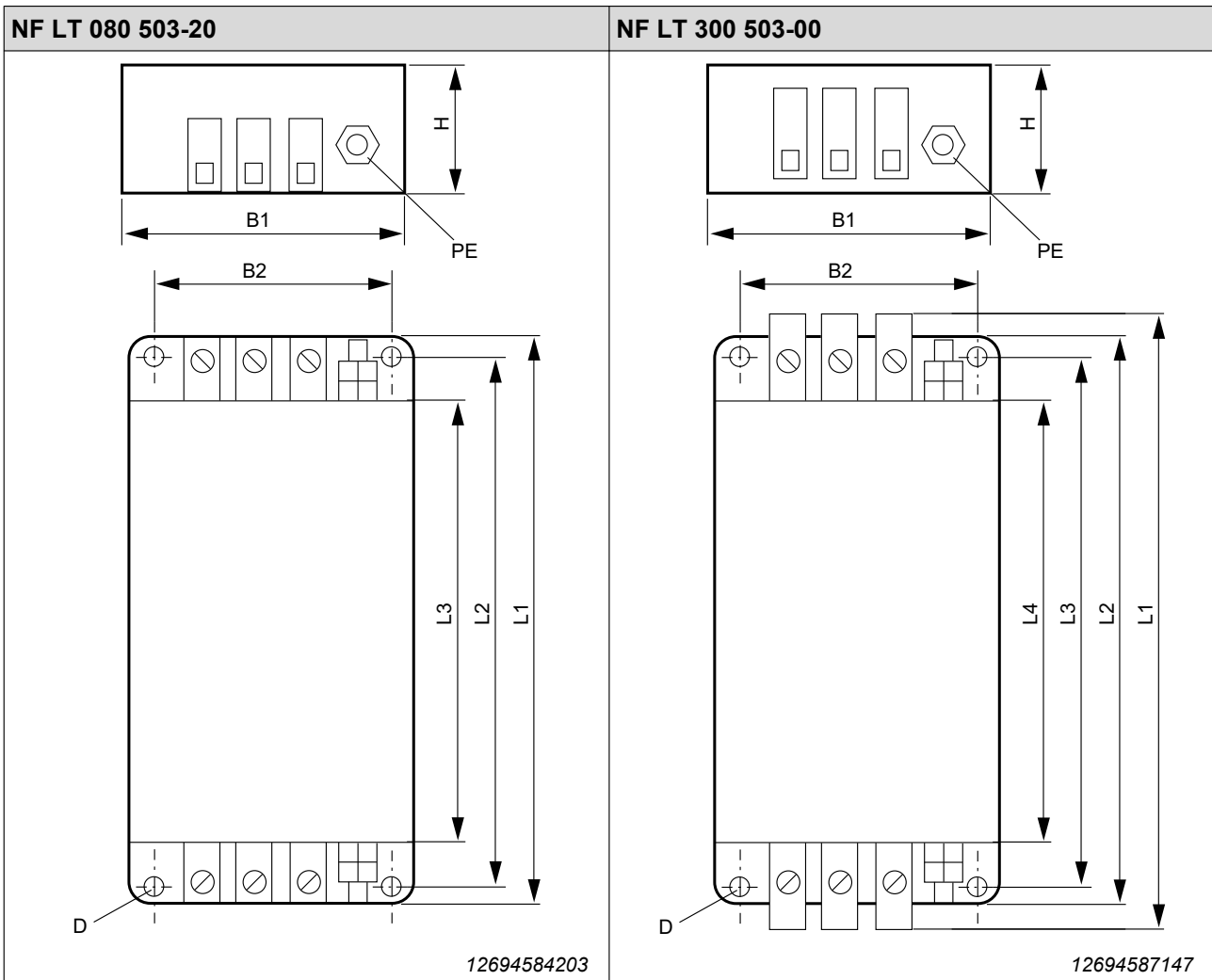


12686783883

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| Part number | PE connection | L1 mm | L2 mm | L3 mm | B1 mm | B2 mm | B3 mm | H1 mm | H2 mm | H3 mm | D mm | A1 mm |
|------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| NF LT 006 503-66 | 4G1.5 | 210 | 196 | 180 | 85 | 55 | 15 | 60 | 40 | 10 | 6.2 | 500 |
| NF LT 016 503-66 | 4G2.5 | 230 | 216 | 200 | 120 | 80 | 20 | 65 | 40 | 12.5 | 6.2 | 500 |
| NF LT 025 503-66 | 4G4.0 | 200 | 115 | - | 150 | 136 | 120 | 65 | - | - | 6.2 | 500 |

3 x AC 380 – 400 V, 80 – 300 A, IP20 / IP00



| Part number | PE connection | L1 mm | L2 mm | L3 mm | L4 mm | B1 mm | B2 mm | H mm | D mm |
|------------------|---------------|-------|-------|-------|-------|-------|-------|------|------|
| NF LT 080 503-20 | 2 x M10 | 400 | 373 | 350 | - | 170 | 130 | 90 | 8.5 |
| NF LT 180 503-20 | 2 x M10 | 510 | 470 | 360 | - | 180 | 156 | 115 | 10 |
| NF LT 300 503-00 | 2 x M10 | 730 | 700 | 660 | 530 | 260 | 220 | 130 | 12 |

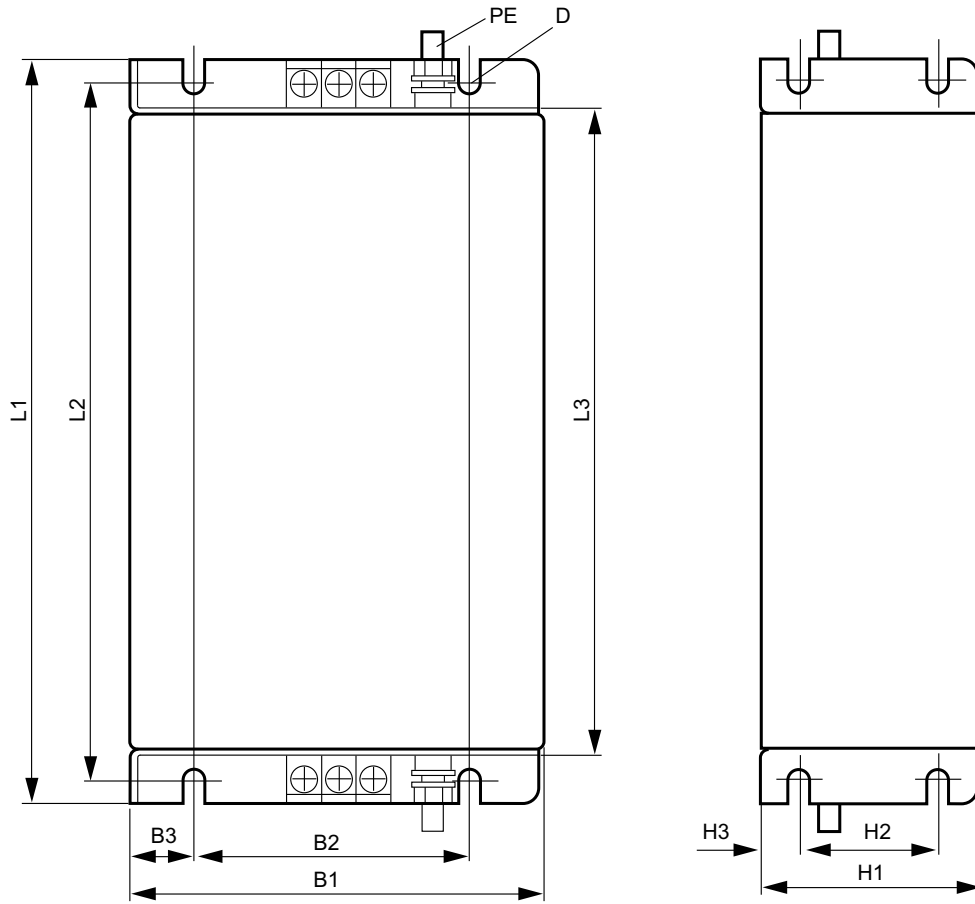
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4 Technical data – system accessories

Line filter

3 x AC 600 V / 690 V, 6 – 25 A, IP20

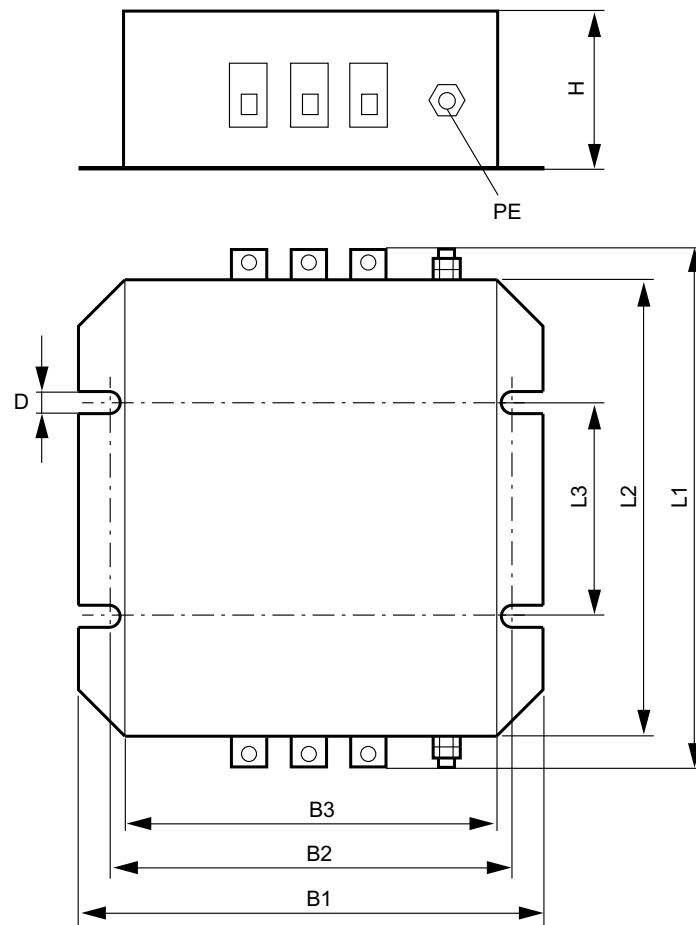
NF LT 006 603-20, NF LT 016 603-20, NF LT 025 603-20



12263310219

3 x AC 600 V / 690 V, 50 A, IP20

NF LT 050 603-20



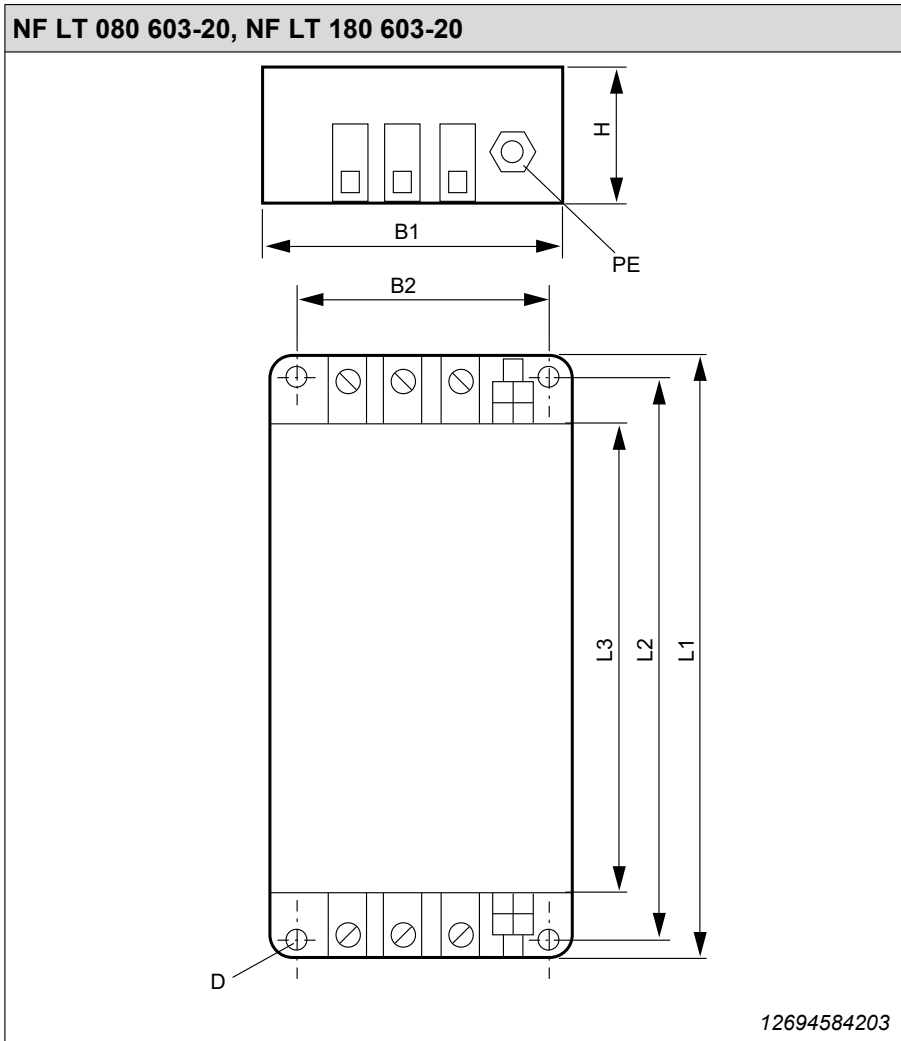
12263306379

4

4 Technical data – system accessories

Line filter

3 x AC 600 V / 690 V, 80 – 180 A, IP20

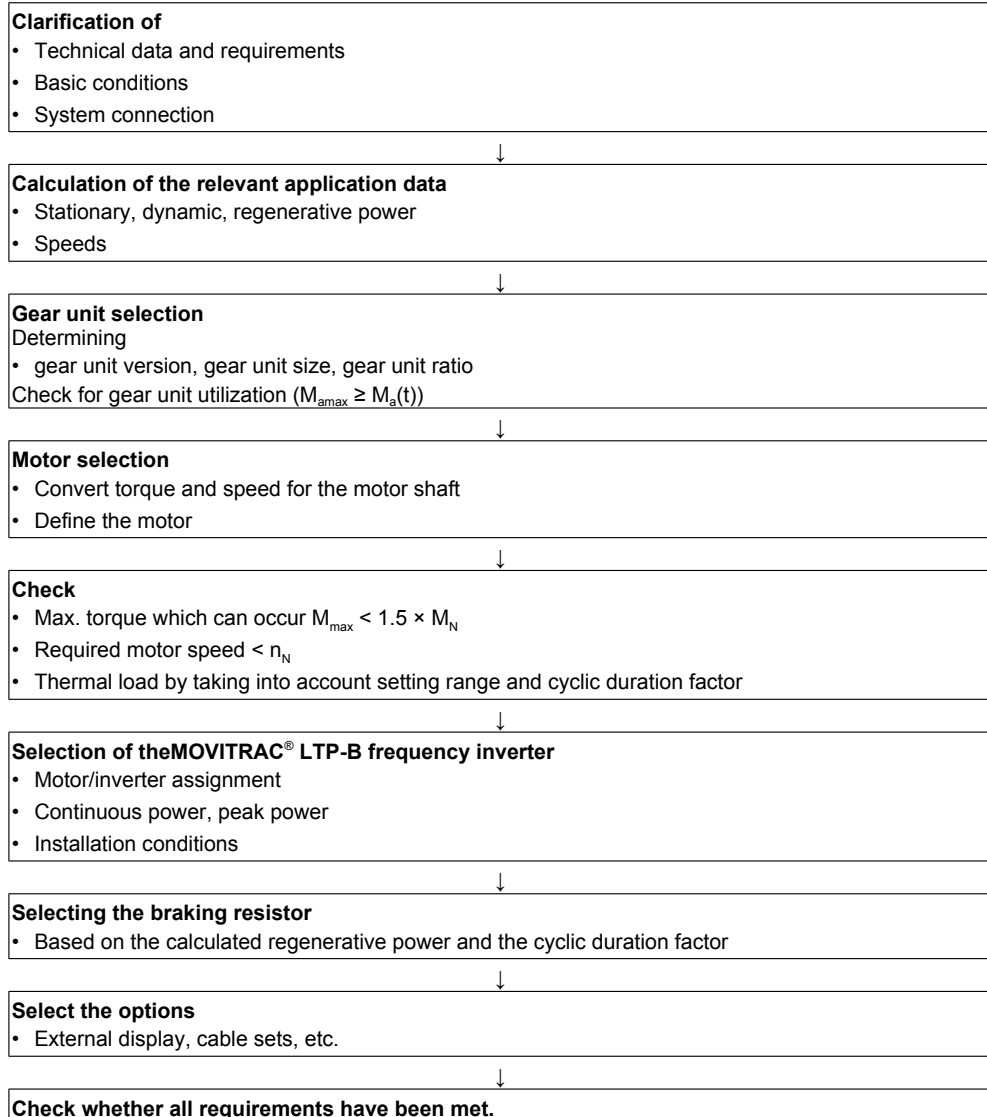


| Part number | PE connection | L1 mm | L2 mm | L3 mm | B1 mm | B2 mm | B3 mm | H1 mm | H2 mm | H3 mm | D mm |
|------------------|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------|
| NF LT 006 603-20 | 2 x M6 | 210 | 196 | 180 | 85 | 55 | 15 | 60 | 40 | 10 | 6.2 |
| NF LT 016 603-20 | 2 x M6 | 230 | 216 | 200 | 120 | 80 | 20 | 65 | 40 | 12.5 | 6.2 |
| NF LT 025 603-20 | 2 x M6 | 230 | 216 | 200 | 120 | 80 | 20 | 65 | 40 | 12.5 | 6.2 |
| NF LT 050 603-20 | 2 x M6 | 270 | 240 | 160 | 148 | 130 | 120 | 70 | - | - | 7 |
| NF LT 080 603-20 | 2 x M10 | 400 | 373 | 350 | 170 | 130 | - | 90 | - | - | 8.5 |
| NF LT 180 603-20 | 2 x M10 | 510 | 470 | 360 | 180 | 156 | - | 115 | - | - | 10 |

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5 Selecting a motor

5.1 Project planning flowchart



6 Address list

| Germany | | | |
|--|--|---|---|
| Headquarters Production Sales | Bruchsal | SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal P.O. Box Postfach 3023 • D-76642 Bruchsal | Tel. +49 7251 75-0 Fax +49 7251 75-1970 http://www.sew-eurodrive.de sew@sew-eurodrive.de |
| Production / Industrial Gears | Bruchsal | SEW-EURODRIVE GmbH & Co KG Christian-Pähr-Str.10 D-76646 Bruchsal | Tel. +49 7251 75-0 Fax +49 7251 75-2970 |
| Service Competence Center | Mechanics / Mechatronics | SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 D-76676 Graben-Neudorf | Tel. +49 7251 75-1710 Fax +49 7251 75-1711 sc-mitte@sew-eurodrive.de |
| | Electronics | SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal | Tel. +49 7251 75-1780 Fax +49 7251 75-1769 sc-elektronik@sew-eurodrive.de |
| Drive Technology Center | North | SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Straße 40-42 D-30823 Garbsen (near Hannover) | Tel. +49 5137 8798-30 Fax +49 5137 8798-55 sc-nord@sew-eurodrive.de |
| | East | SEW-EURODRIVE GmbH & Co KG Dänkritzer Weg 1 D-08393 Meerane (near Zwickau) | Tel. +49 3764 7606-0 Fax +49 3764 7606-30 sc-ost@sew-eurodrive.de |
| | South | SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 D-85551 Kirchheim (near München) | Tel. +49 89 909552-10 Fax +49 89 909552-50 sc-sued@sew-eurodrive.de |
| | West | SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 D-40764 Langenfeld (near Düsseldorf) | Tel. +49 2173 8507-30 Fax +49 2173 8507-55 sc-west@sew-eurodrive.de |
| | Drive Service Hotline / 24 Hour Service | | +49 800 SEWHELP +49 800 7394357 |
| Additional addresses for service in Germany provided on request. | | | |
| France | | | |
| Production Sales Service | Haguenau | SEW-USOCOME 48-54 route de Soufflenheim B. P. 20185 F-67506 Haguenau Cedex | Tel. +33 3 88 73 67 00 Fax +33 3 88 73 66 00 http://www.usocome.com sew@usocome.com |
| Production | Forbach | SEW-USOCOME Zone industrielle Technopôle Forbach Sud B. P. 30269 F-57604 Forbach Cedex | Tel. +33 3 87 29 38 00 |
| Assembly Sales Service | Bordeaux | SEW-USOCOME Parc d'activités de Magellan 62 avenue de Magellan - B. P. 182 F-33607 Pessac Cedex | Tel. +33 5 57 26 39 00 Fax +33 5 57 26 39 09 |
| | Lyon | SEW-USOCOME Parc d'affaires Roosevelt Rue Jacques Tati F-69120 Vaulx en Velin | Tel. +33 4 72 15 37 00 Fax +33 4 72 15 37 15 |
| | Nantes | SEW-USOCOME Parc d'activités de la forêt 4 rue des Fontenelles F-44140 Le Bignon | Tel. +33 2 40 78 42 00 Fax +33 2 40 78 42 20 |
| | Paris | SEW-USOCOME Zone industrielle 2 rue Denis Papin F-77390 Verneuil l'Etang | Tel. +33 1 64 42 40 80 Fax +33 1 64 42 40 88 |
| Additional addresses for service in France provided on request. | | | |

| Algeria | | | |
|----------------------------------|-------------------------|---|---|
| Sales | Algiers | REDUCOM Sarl 16, rue des Frères Zaghroune Bellevue 16200 El Harrach Alger | Tel. +213 21 8214-91 Fax +213 21 8222-84 info@reducom-dz.com http://www.reducom-dz.com |
| Argentina | | | |
| Assembly Sales | Buenos Aires | SEW EURODRIVE ARGENTINA S.A. Ruta Panamericana Km 37.5, Lote 35 (B1619IEA) Centro Industrial Garín Prov. de Buenos Aires | Tel. +54 3327 4572-84 Fax +54 3327 4572-21 sewar@sew-eurodrive.com.ar http://www.sew-eurodrive.com.ar |
| Australia | | | |
| Assembly Sales Service | Melbourne | SEW-EURODRIVE PTY. LTD. 27 Beverage Drive Tullamarine, Victoria 3043 | Tel. +61 3 9933-1000 Fax +61 3 9933-1003 http://www.sew-eurodrive.com.au enquires@sew-eurodrive.com.au |
| | Sydney | SEW-EURODRIVE PTY. LTD. 9, Sleigh Place, Wetherill Park New South Wales, 2164 | Tel. +61 2 9725-9900 Fax +61 2 9725-9905 enquires@sew-eurodrive.com.au |
| Austria | | | |
| Assembly Sales Service | Wien | SEW-EURODRIVE Ges.m.b.H. Richard-Strauss-Strasse 24 A-1230 Wien | Tel. +43 1 617 55 00-0 Fax +43 1 617 55 00-30 http://www.sew-eurodrive.at sew@sew-eurodrive.at |
| Belarus | | | |
| Sales | Minsk | SEW-EURODRIVE BY RybalkoStr. 26 BY-220033 Minsk | Tel.+375 17 298 47 56 / 298 47 58 Fax +375 17 298 47 54 http://www.sew.by sales@sew.by |
| Belgium | | | |
| Assembly Sales Service | Brussels | SEW-EURODRIVE n.v./s.a. Researchpark Haasrode 1060 Evenementenlaan 7 BE-3001 Leuven | Tel. +32 16 386-311 Fax +32 16 386-336 http://www.sew-eurodrive.be info@sew-eurodrive.be |
| Service Competence Center | Industrial Gears | SEW-EURODRIVE n.v./s.a. Rue de Parc Industriel, 31 BE-6900 Marche-en-Famenne | Tel. +32 84 219-878 Fax +32 84 219-879 http://www.sew-eurodrive.be service-wallonie@sew-eurodrive.be |
| Brazil | | | |
| Production Sales Service | São Paulo | SEW-EURODRIVE Brasil Ltda. Avenida Amâncio Gaiolli, 152 - Rodovia Presidente Dutra Km 208 Guarulhos - 07251-250 - SP SAT - SEW ATENDE - 0800 7700496 | Tel. +55 11 2489-9133 Fax +55 11 2480-3328 http://www.sew-eurodrive.com.br sew@sew.com.br |
| Assembly Sales Service | Rio Claro | SEW-EURODRIVE Brasil Ltda. Rodovia Washington Luiz, Km 172 Condomínio Industrial Conpark Caixa Postal: 327 13501-600 – Rio Claro / SP | Tel. +55 19 3522-3100 Fax +55 19 3524-6653 montadora.rc@sew.com.br |
| | Joinville | SEW-EURODRIVE Brasil Ltda. Rua Dona Francisca, 12.346 – Pirabeiraba 89239-270 – Joinville / SC | Tel. +55 47 3027-6886 Fax +55 47 3027-6888 filial.sc@sew.com.br |
| | Indaiatuba | SEW-EURODRIVE Brasil Ltda. Estrada Municipal Jose Rubim, 205 Rodovia Santos Dumont Km 49 13347-510 - Indaiatuba / SP | Tel. +55 19 3835-8000 sew@sew.com.br |

6 Address list

| Bulgaria | | | |
|---|------------------|--|---|
| Sales | Sofia | BEVER-DRIVE GmbH Bogdanovetz Str.1 BG-1606 Sofia | Tel. +359 2 9151160 Fax +359 2 9151166 bever@bever.bg |
| Cameroon | | | |
| Sales | Douala | Electro-Services Rue Drouot Akwa B.P. 2024 Douala | Tel. +237 33 431137 Fax +237 33 431137 electrojemba@yahoo.fr |
| Canada | | | |
| Assembly Sales Service | Toronto | SEW-EURODRIVE CO. OF CANADA LTD. 210 Walker Drive Bramalea, ON L6T 3W1 | Tel. +1 905 791-1553 Fax +1 905 791-2999 http://www.sew-eurodrive.ca l.watson@sew-eurodrive.ca |
| | Vancouver | SEW-EURODRIVE CO. OF CANADA LTD. Tilbury Industrial Park 7188 Honeyman Street Delta, BC V4G 1G1 | Tel. +1 604 946-5535 Fax +1 604 946-2513 b.wake@sew-eurodrive.ca |
| | Montreal | SEW-EURODRIVE CO. OF CANADA LTD. 2555 Rue Leger Lasalle, PQ H8N 2V9 | Tel. +1 514 367-1124 Fax +1 514 367-3677 a.peluso@sew-eurodrive.ca |
| Additional addresses for service in Canada provided on request. | | | |
| Chile | | | |
| Assembly Sales Service | Santiago | SEW-EURODRIVE CHILE LTDA. Las Encinas 1295 Parque Industrial Valle Grande LAMP RCH-Santiago de Chile P.O. Box Casilla 23 Correo Quilicura - Santiago - Chile | Tel. +56 2 75770-00 Fax +56 2 75770-01 http://www.sew-eurodrive.cl ventas@sew-eurodrive.cl |
| China | | | |
| Production Assembly Sales Service | Tianjin | SEW-EURODRIVE (Tianjin) Co., Ltd. No. 46, 7th Avenue, TEDA Tianjin 300457 | Tel. +86 22 25322612 Fax +86 22 25323273 info@sew-eurodrive.cn http://www.sew-eurodrive.cn |
| Assembly Sales Service | Suzhou | SEW-EURODRIVE (Suzhou) Co., Ltd. 333, Suhong Middle Road Suzhou Industrial Park Jiangsu Province, 215021 | Tel. +86 512 62581781 Fax +86 512 62581783 suzhou@sew-eurodrive.cn |
| | Guangzhou | SEW-EURODRIVE (Guangzhou) Co., Ltd. No. 9, JunDa Road East Section of GETDD Guangzhou 510530 | Tel. +86 20 82267890 Fax +86 20 82267922 guangzhou@sew-eurodrive.cn |
| | Shenyang | SEW-EURODRIVE (Shenyang) Co., Ltd. 10A-2, 6th Road Shenyang Economic Technological Development Area Shenyang, 110141 | Tel. +86 24 25382538 Fax +86 24 25382580 shenyang@sew-eurodrive.cn |
| | Wuhan | SEW-EURODRIVE (Wuhan) Co., Ltd. 10A-2, 6th Road No. 59, the 4th Quanli Road, WEDA 430056 Wuhan | Tel. +86 27 84478388 Fax +86 27 84478389 wuhan@sew-eurodrive.cn |
| | Xi'An | SEW-EURODRIVE (Xi'An) Co., Ltd. No. 12 Jinye 2nd Road Xi'An High-Technology Industrial Development Zone Xi'An 710065 | Tel. +86 29 68686262 Fax +86 29 68686311 xian@sew-eurodrive.cn |
| Additional addresses for service in China provided on request. | | | |

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| Colombia | | | |
|-------------------------------|---|---|--|
| Assembly Sales Service | Bogotá | SEW-EURODRIVE COLOMBIA LTDA. Calle 22 No. 132-60 Bodega 6, Manzana B Santafé de Bogotá | Tel. +57 1 54750-50 Fax +57 1 54750-44 http://www.sew-eurodrive.com.co sew@sew-eurodrive.com.co |
| Croatia | | | |
| Sales Service | Zagreb | KOMPEKS d. o. o. Zeleni dol 10 HR 10 000 Zagreb | Tel. +385 1 4613-158 Fax +385 1 4613-158 kompeks@inet.hr |
| Czech Republic | | | |
| Sales Assembly Service | Hostivice | SEW-EURODRIVE CZ s.r.o. Floriánova 2459 253 01 Hostivice | Tel. +420 255 709 601 Fax +420 235 350 613 http://www.sew-eurodrive.cz sew@sew-eurodrive.cz |
| | Drive Service Hot-line / 24 Hour Service | HOT-LINE +420 800 739 739 (800 SEW SEW) | Servis: Tel. +420 255 709 632 Fax +420 235 358 218 servis@sew-eurodrive.cz |
| Denmark | | | |
| Assembly Sales Service | Copenhagen | SEW-EURODRIVE A/S Geminivej 28-30 DK-2670 Greve | Tel. +45 43 9585-00 Fax +45 43 9585-09 http://www.sew-eurodrive.dk sew@sew-eurodrive.dk |
| Egypt | | | |
| Sales Service | Cairo | Copam Egypt for Engineering & Agencies 33 El Hegaz ST, Heliopolis, Cairo | Tel. +20 2 22566-299 +1 23143088 Fax +20 2 22594-757 http://www.copam-egypt.com/ copam@datum.com.eg |
| Estonia | | | |
| Sales | Tallin | ALAS-KUUL AS Reti tee 4 EE-75301 Peetri küla, Rae vald, Harjumaa | Tel. +372 6593230 Fax +372 6593231 veiko.soots@alas-kuul.ee |
| Finland | | | |
| Assembly Sales Service | Hollola | SEW-EURODRIVE OY Vesimäentie 4 FIN-15860 Hollola 2 | Tel. +358 201 589-300 Fax +358 3 780-6211 http://www.sew-eurodrive.fi sew@sew.fi |
| Service | Hollola | SEW-EURODRIVE OY Keskikankaantie 21 FIN-15860 Hollola | Tel. +358 201 589-300 Fax +358 3 780-6211 http://www.sew-eurodrive.fi sew@sew.fi |
| Production Assembly | Karkkila | SEW Industrial Gears Oy Valurinkatu 6, PL 8 FI-03600 Karkkila, 03601 Karkkila | Tel. +358 201 589-300 Fax +358 201 589-310 sew@sew.fi http://www.sew-eurodrive.fi |
| Gabon | | | |
| Sales | Libreville | ESG Electro Services Gabun Feu Rouge Lalala 1889 Libreville Gabun | Tel. +241 741059 Fax +241 741059 esg_services@yahoo.fr |
| Great Britain | | | |
| Assembly Sales Service | Normanton | SEW-EURODRIVE Ltd. DeVilliers Way Trident Park Normanton West Yorkshire WF6 1GX | Tel. +44 1924 893-855 Fax +44 1924 893-702 http://www.sew-eurodrive.co.uk info@sew-eurodrive.co.uk |

6 Address list

| Great Britain | | | |
|---|------------------|---|--|
| | | Drive Service Hotline / 24 Hour Service | Tel. 01924 896911 |
| Greece | | | |
| Sales | Athens | Christ. Boznos & Son S.A. 12, K. Mavromichali Street P.O. Box 80136 GR-18545 Piraeus | Tel. +30 2 1042 251-34 Fax +30 2 1042 251-59 http://www.boznos.gr info@boznos.gr |
| Hong Kong | | | |
| Assembly Sales Service | Hong Kong | SEW-EURODRIVE LTD. Unit No. 801-806, 8th Floor Hong Leong Industrial Complex No. 4, Wang Kwong Road Kowloon, Hong Kong | Tel. +852 36902200 Fax +852 36902211 contact@sew-eurodrive.hk |
| Hungary | | | |
| Sales Service | Budapest | SEW-EURODRIVE Kft. H-1037 Budapest Kunigunda u. 18 | Tel. +36 1 437 06-58 Fax +36 1 437 06-50 http://www.sew-eurodrive.hu office@sew-eurodrive.hu |
| India | | | |
| Registered Office Assembly Sales Service | Vadodara | SEW-EURODRIVE India Private Limited Plot No. 4, GIDC POR Ramangamdi • Vadodara - 391 243 Gujarat | Tel. +91 265 3045200, +91 265 2831086 Fax +91 265 3045300, +91 265 2831087 http://www.seweurodriveindia.com salesvadodara@seweurodriveindia.com |
| Assembly Sales Service | Chennai | SEW-EURODRIVE India Private Limited Plot No. K3/1, Sipcot Industrial Park Phase II Mambakkam Village Sriperumbudur - 602105 Kancheepuram Dist, Tamil Nadu | Tel. +91 44 37188888 Fax +91 44 37188811 saleschennai@seweurodriveindia.com |
| Ireland | | | |
| Sales Service | Dublin | Alperton Engineering Ltd. 48 Moyle Road Dublin Industrial Estate Glasnevin, Dublin 11 | Tel. +353 1 830-6277 Fax +353 1 830-6458 info@alperton.ie http://www.alperton.ie |
| Israel | | | |
| Sales | Tel-Aviv | Liraz Handasa Ltd. Ahofer Str 34B / 228 58858 Holon | Tel. +972 3 5599511 Fax +972 3 5599512 http://www.liraz-handasa.co.il office@liraz-handasa.co.il |
| Italy | | | |
| Assembly Sales Service | Solaro | SEW-EURODRIVE di R. Blicke & Co.s.a.s. Via Bernini,14 I-20020 Solaro (Milano) | Tel. +39 02 96 9801 Fax +39 02 96 980 999 http://www.sew-eurodrive.it sewit@sew-eurodrive.it |
| Ivory Coast | | | |
| Sales | Abidjan | SICA Société Industrielle & Commerciale pour l'Afrique 165, Boulevard de Marseille 26 BP 1173 Abidjan 26 | Tel. +225 21 25 79 44 Fax +225 21 25 88 28 sicamot@aviso.ci |
| Japan | | | |
| Assembly Sales Service | Iwata | SEW-EURODRIVE JAPAN CO., LTD 250-1, Shimoman-no, Iwata Shizuoka 438-0818 | Tel. +81 538 373811 Fax +81 538 373855 http://www.sew-eurodrive.co.jp sewjapan@sew-eurodrive.co.jp |

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| Kazakhstan | | | |
|--|--------------|--|--|
| Sales | Almaty | ТОО "СЕВ-ЕВРОДРАЙВ" пр.Райымбека, 348 050061 г. Алматы Республика Казахстан | Тел. +7 (727) 334 1880 Факс +7 (727) 334 1881 http://www.sew-eurodrive.kz sew@sew-eurodrive.kz |
| Kenya | | | |
| Sales | Nairobi | Barico Maintenances Ltd Kamutaga Place Commercial Street Industrial Area P.O.BOX 52217 - 00200 Nairobi | Tel. +254 20 6537094/5 Fax +254 20 6537096 info@barico.co.ke |
| Latvia | | | |
| Sales | Riga | SIA Alas-Kuul Katlakalna 11C LV-1073 Riga | Tel. +371 6 7139253 Fax +371 6 7139386 http://www.alas-kuul.com info@alas-kuul.com |
| Lebanon | | | |
| Sales Lebanon | Beirut | Gabriel Acar & Fils sarl B. P. 80484 Bourj Hammoud, Beirut | Tel. +961 1 510 532 Fax +961 1 494 971 ssacar@inco.com.lb |
| | | After Sales Service | service@medrives.com |
| Sales Jordan / Kuwait / Saudi Arabia / Syria | Beirut | Middle East Drives S.A.L. (offshore) Sin El Fil. B. P. 55-378 Beirut | Tel. +961 1 494 786 Fax +961 1 494 971 info@medrives.com http://www.medrives.com |
| | | After Sales Service | service@medrives.com |
| Lithuania | | | |
| Sales | Alytus | UAB Irseva Statybininku 106C LT-63431 Alytus | Tel. +370 315 79204 Fax +370 315 56175 irmantas@irseva.lt http://www.sew-eurodrive.lt |
| Luxembourg | | | |
| Assembly Sales Service | Brussels | SEW-EURODRIVE n.v./s.a. Researchpark Haasrode 1060 Evenementenlaan 7 BE-3001 Leuven | Tel. +32 16 386-311 Fax +32 16 386-336 http://www.sew-eurodrive.lu info@sew-eurodrive.be |
| Madagascar | | | |
| Sales | Antananarivo | Ocean Trade BP21bis. Andraharo Antananarivo. 101 Madagascar | Tel. +261 20 2330303 Fax +261 20 2330330 oceanrtrbp@moov.mg |
| Malaysia | | | |
| Assembly Sales Service | Johor | SEW-EURODRIVE SDN BHD No. 95, Jalan Seroja 39, Taman Johor Jaya 81000 Johor Bahru, Johor West Malaysia | Tel. +60 7 3549409 Fax +60 7 3541404 sales@sew-eurodrive.com.my |
| Mexico | | | |
| Assembly Sales Service | Quéretaro | SEW-EURODRIVE MEXICO SA DE CV SEM-981118-M93 Tequisquiapan No. 102 Parque Industrial Quéretaro C.P. 76220 Quéretaro, México | Tel. +52 442 1030-300 Fax +52 442 1030-301 http://www.sew-eurodrive.com.mx scmexico@seweurodrive.com.mx |

6 Address list

| Mongolia | | | |
|-------------------------------|----------------------------|--|---|
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| Morocco | | | |
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| | Cape Town | SEW-EURODRIVE (PROPRIETARY) LIMITED Rainbow Park Cnr. Racecourse & Omuramba Road Montague Gardens Cape Town P.O.Box 36556 Chempet 7442 Cape Town | Tel. +27 21 552-9820 Fax +27 21 552-9830 Telex 576 062 bgriffiths@sew.co.za |
| | Durban | SEW-EURODRIVE (PROPRIETARY) LIMITED 48 Prospecton Road Isipingo Durban P.O. Box 10433, Ashwood 3605 | Tel. +27 31 902 3815 Fax +27 31 902 3826 cdejager@sew.co.za |
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| | Busan | SEW-EURODRIVE KOREA Co., Ltd. No. 1720 - 11, Songjeong - dong Gangseo-ku Busan 618-270 | Tel. +82 51 832-0204 Fax +82 51 832-0230 master@sew-korea.co.kr |
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| Assembly Sales Service | Bilbao | SEW-EURODRIVE ESPAÑA, S.L. Parque Tecnológico, Edificio, 302 E-48170 Zamudio (Vizcaya) | Tel. +34 94 43184-70 Fax +34 94 43184-71 http://www.sew-eurodrive.es sew.spain@sew-eurodrive.es |
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| Assembly Sales Service | Jönköping | SEW-EURODRIVE AB Gnejsvägen 6-8 S-55303 Jönköping Box 3100 S-55003 Jönköping | Tel. +46 36 3442 00 Fax +46 36 3442 80 http://www.sew-eurodrive.se jonkoping@sew.se |

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| Assembly Sales Service | Chonburi | SEW-EURODRIVE (Thailand) Ltd. 700/456, Moo.7, Donhuaroh Muang Chonburi 20000 | Tel. +66 38 454281 Fax +66 38 454288 sewthailand@sew-eurodrive.com |
| Tunisia | | | |
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| Assembly Sales Service | Kocaeli-Gebze | SEW-EURODRIVE Sistemleri San. Ve TIC. Ltd. Sti Gebze Organize Sanayi Böl. 400 Sok No. 401 41480 Gebze Kocaeli | Tel. +90-262-9991000-04 Fax +90-262-9991009 http://www.sew-eurodrive.com.tr sew@sew-eurodrive.com.tr |
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| Additional addresses for service in the USA provided on request. | | | |

6 Address list

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| Vietnam | | | |
| Sales | Ho Chi Minh City | All sectors except harbor and offshore: Nam Trung Co., Ltd 250 Binh Duong Avenue, Thu Dau Mot Town, Binh Duong Province HCM office: 91 Tran Minh Quyen Street District 10, Ho Chi Minh City | Tel. +84 8 8301026 Fax +84 8 8392223 namtrungco@hcm.vnn.vn truongtantam@namtrung.com.vn khanh-nguyen@namtrung.com.vn |
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| | Hanoi | Nam Trung Co., Ltd R.205B Tung Duc Building 22 Lang ha Street Dong Da District, Hanoi City | Tel. +84 4 37730342 Fax +84 4 37762445 namtrunghn@hn.vnn.vn |
| Zambia | | | |
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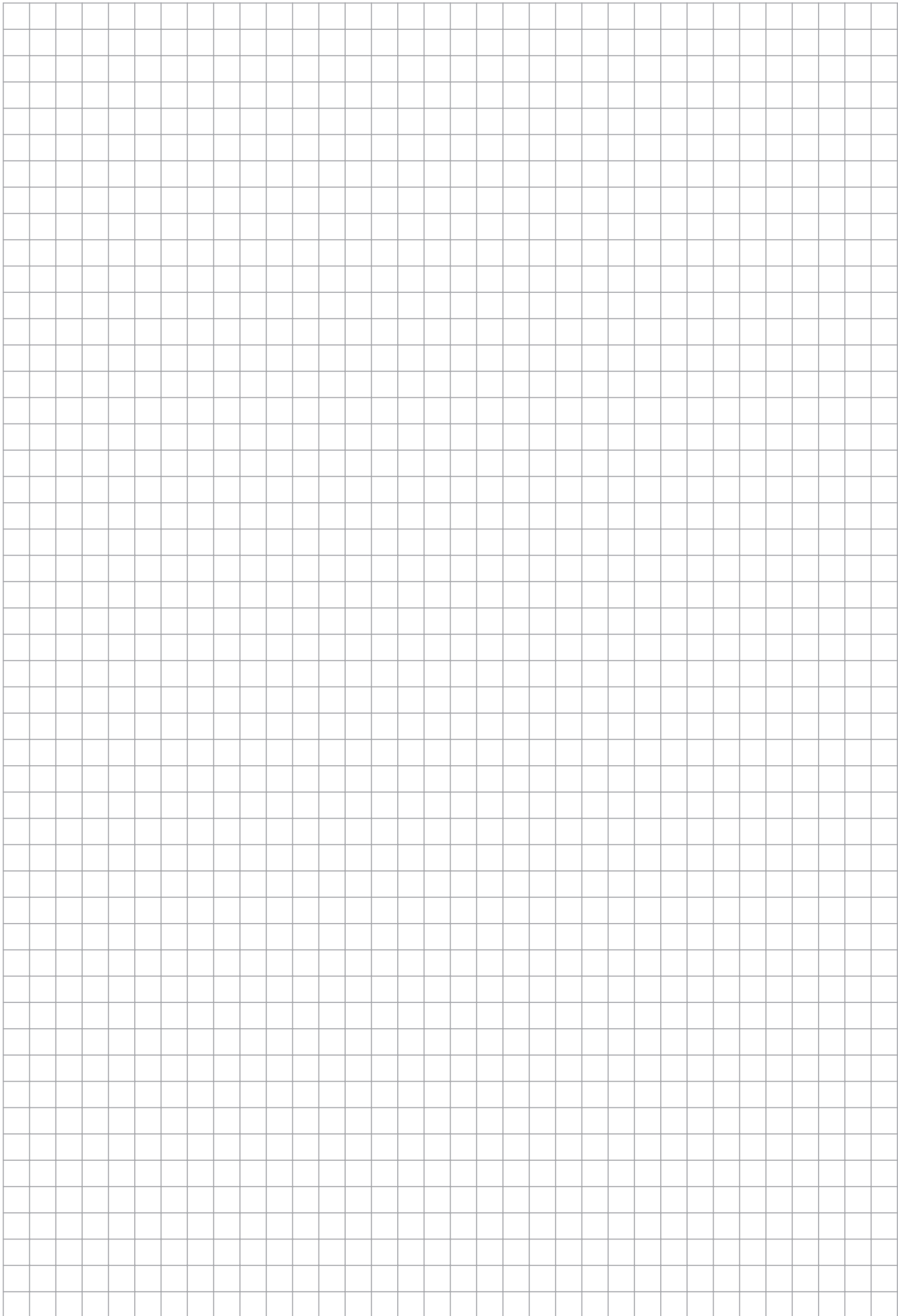
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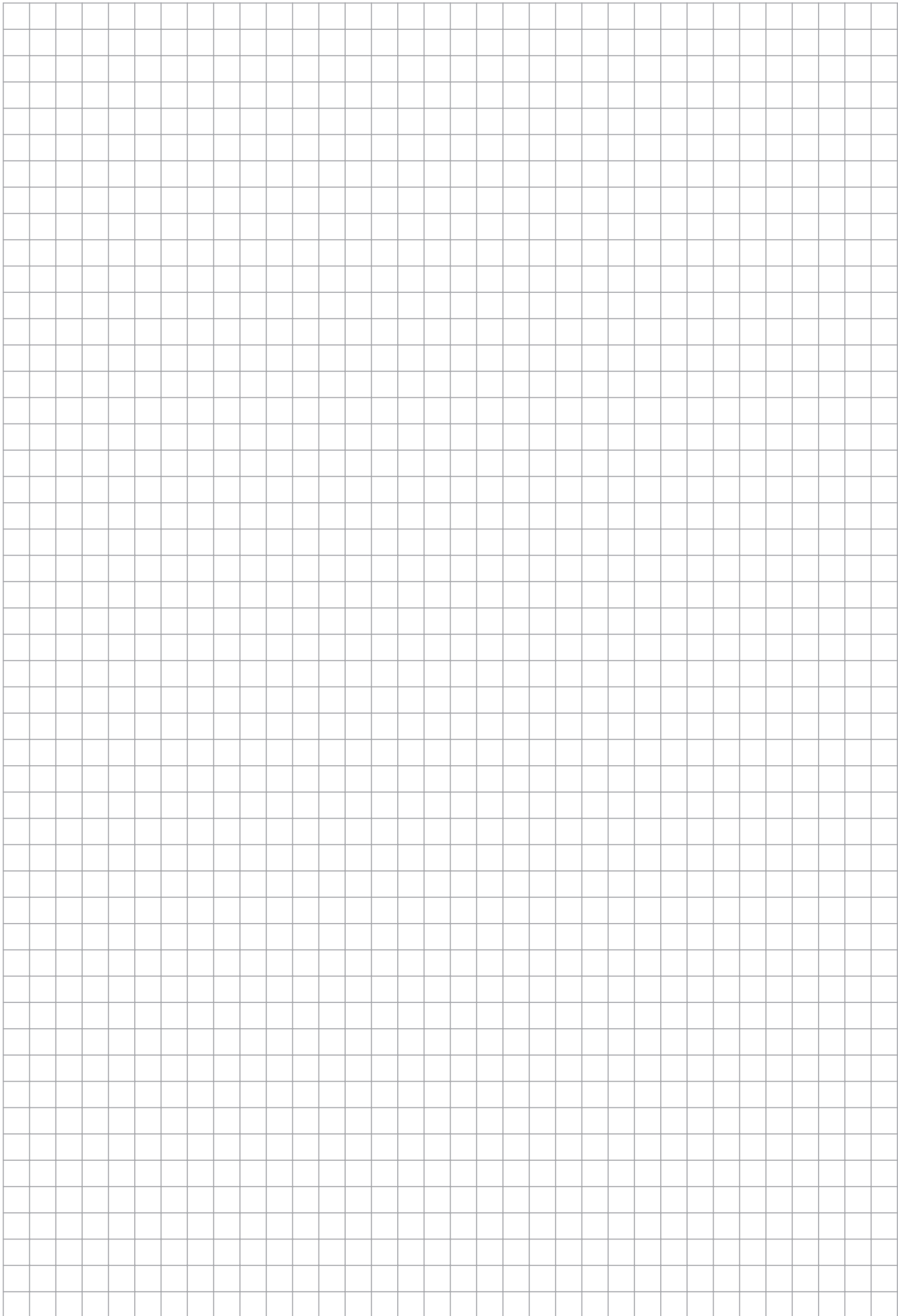
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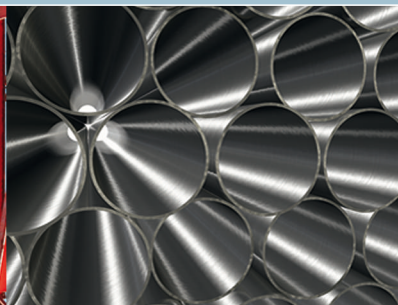
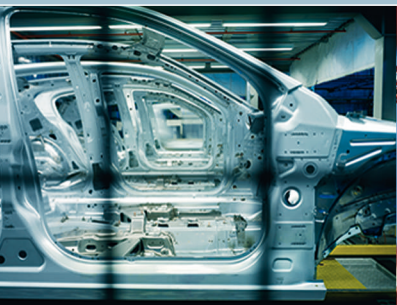
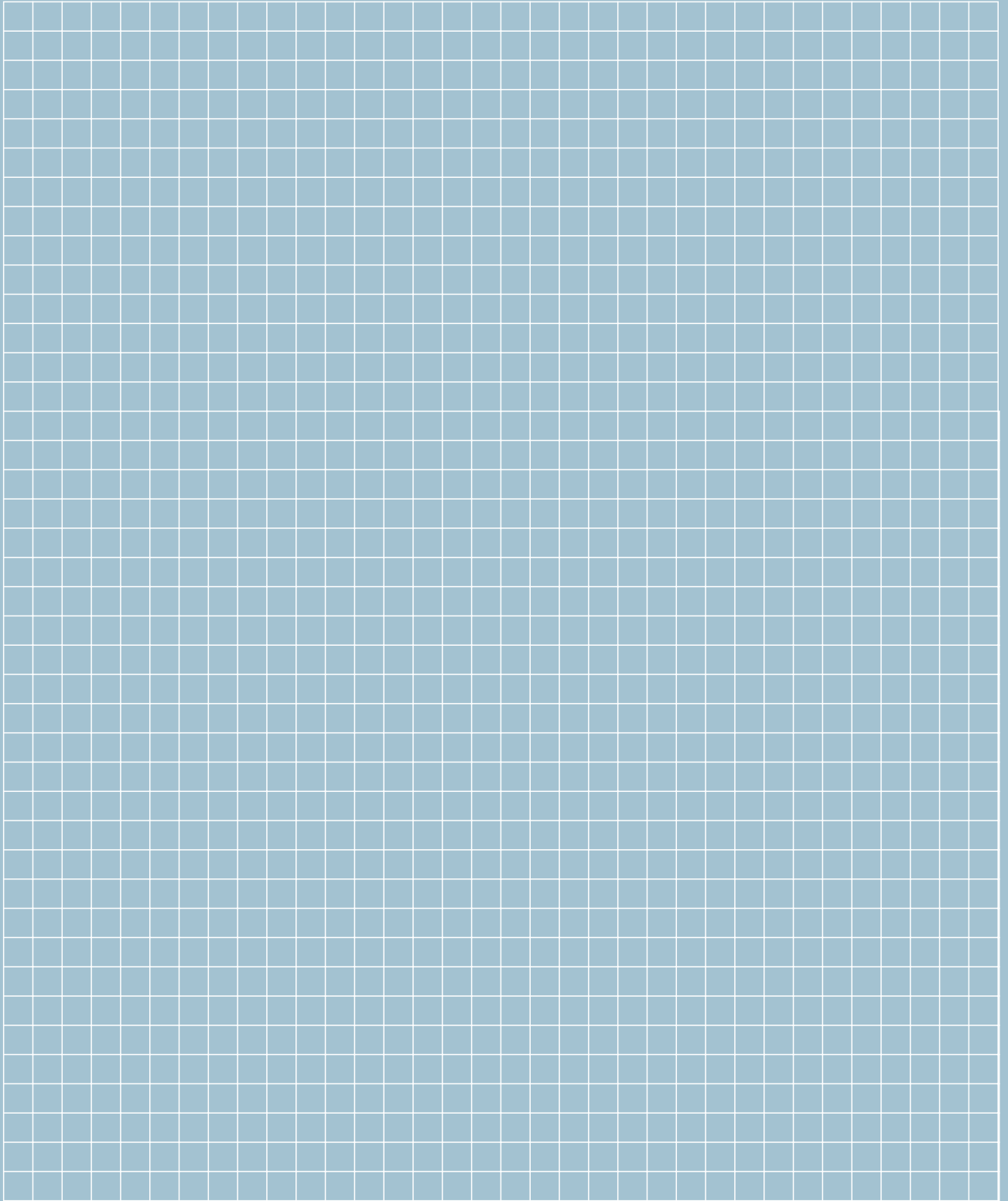
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