

Mains choke 810CTxxx.000-1

- Improved protection against overvoltages in the mains supply and reduction of the distortion factor in the power produced by the power inverter.
- Limitation of the mains current.
- Mains chokes are recommended under the following conditions:
 - Connection of several parallel transducers at short intervals.
 - Mains supply with interference from other devices (interference, overvoltages).
 - Mains supply with voltage asymmetries between >1.8% phases of the nominal voltage.
 - Inverter supplied by a very low impedance cable (10 times higher power transformers than the inverter's rated value).
 - Connection of a large number of inverters on one cable.
 - Reduction of overload on the capacitors for cosine correction if the system includes a device for power factor correction.

1 Order data

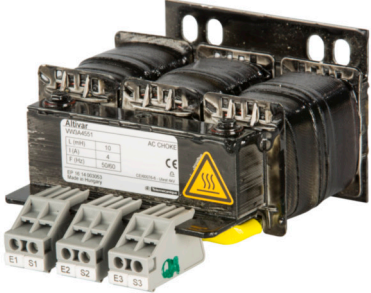
| Model number | Short description | Figure |
|----------------|--|--|
| | ACOPOSinverter P74/P84 - Mains chokes |  |
| 810CT004.000-1 | Mains choke 3-phase 4 A, for ACOPOSinverter P74 3x 380 to 500 V, 0.37 to 1.5 kW, for ACOPOSinverter P84 3x 200 to 240 V, 0.37 to 0.75 kW and 3x 380 to 480 V, 0.75 to 1.5 kW | |
| 810CT010.000-1 | Mains choke 3-phase 10 A, for ACOPOSinverter P74 3x 380 to 500 V, 2.2 to 4 kW, for ACOPOSinverter P84 3x 200 to 240 V, 1.5 to 2.2 kW and 3x 380 to 480 V, 2.2 to 4 kW | |
| 810CT016.000-1 | Mains choke, 3-phase 17 A, for ACOPOSinverter P74 3x 380 to 500 V, 5.5 to 7.5 kW, for ACOPOSinverter P84 3x 200 to 240 V, 3 kW and 3x 380 to 480 V, 5.5 to 7.5 kW | |
| 810CT030.000-1 | Mains choke 3-phase 30 A, for ACOPOSinverter P74 3x 380 to 500 V, 11 to 15 kW, for ACOPOSinverter P84 3x 200 to 240 V, 4 to 5.5 kW and 3x 380 to 480 V, 11 to 15 kW | |
| 810CT060.000-1 | Mains choke 3-phase 60 A, for ACOPOSinverter P84 3x 200 to 240 V, 7.5 to 11 kW and 3x 380 to 480 V, 18.5 to 22 kW | |
| 810CT100.000-1 | Mains choke 3-phase 100 A, for ACOPOSinverter P84 3x 200 to 240 V, 15 kW and 3x 380 to 480 V, 30 to 55 kW | |
| 810CT184.000-1 | Mains choke 3-phase 184 A, for ACOPOSinverter P84 3x 380 to 480 V, 75 to 90 kW | |

Table 1: 810CT004.000-1, 810CT010.000-1, 810CT016.000-1, 810CT030.000-1, 810CT060.000-1, 810CT100.000-1, 810CT184.000-1 - Order data

2 Technical data

8IOCT004.000-1, 8IOCT010.000-1, 8IOCT016.000-1, 8IOCT030.000-1

| Model number | 8IOCT004.000-1 | 8IOCT010.000-1 | 8IOCT016.000-1 | 8IOCT030.000-1 |
|--|---|--------------------|--------------------|--------------------|
| General information | | | | |
| Certification | | | | |
| CE | Yes | | | |
| KC | Yes | | | |
| Mains connection | | | | |
| Power loss | 45 W | 65 W | 75 W | 90 W |
| Inductance | 10 mH | 4 mH | 2 mH | 1 mH |
| Nominal current | 4 A ¹⁾ | 10 A ¹⁾ | 17 A ¹⁾ | 30 A ¹⁾ |
| Voltage drop | From 3 to 5% of the rated supply voltage. Higher values result in torque loss. | | | |
| Saturation current | - | | | |
| Operating conditions | | | | |
| Installation at elevations above sea level | 0 to 1000 m | | | |
| Protection | | | | |
| Choke | IP00 | | | |
| Terminals | IP20 | | IP10 | |
| Max. relative humidity | 95%, non-condensing No dripping water | | | |
| Ambient temperature | 0 to 45°C | | | |
| Max. ambient temperature | Up to 55°C ²⁾ | | | |
| Maximum installation elevation | 3000 m ³⁾ | | | |
| Environmental conditions | | | | |
| Temperature | | | | |
| Storage | -25 to 70°C | | | |
| Mechanical characteristics | | | | |
| Weight | 1.5 kg | 3.0 kg | 3.5 kg | 6.0 kg |
| General information | | | | |
| Conformity to standard | IEC 61800-5-1 (protection level 1 regarding overvoltages in the mains supply according to VDE 0160) | | | |

Table 2: 8IOCT004.000-1, 8IOCT010.000-1, 8IOCT016.000-1, 8IOCT030.000-1 - Technical data

- 1) Max. current = 1.65 x rated current for 60 seconds.
- 2) With current reduction of 2% per °C above 45°C.
- 3) From 1000 to 3000 m, current reduced by 1% per 100 m

8IOCT060.000-1, 8IOCT100.000-1, 8IOCT184.000-1

| Model number | 8IOCT060.000-1 | 8IOCT100.000-1 | 8IOCT184.000-1 |
|--|---|---------------------|---------------------|
| General information | | | |
| Certification | | | |
| CE | Yes | | |
| KC | Yes | | |
| Mains connection | | | |
| Power dissipation | 94 W | 260 W | 220 W |
| Inductance | 0.5 mH | 0.3 mH | 0.155 mH |
| Nominal current | 60 A ¹⁾ | 100 A ¹⁾ | 184 A ¹⁾ |
| Voltage drop | From 3 to 5% of the rated supply voltage. Higher values result in torque loss. | | |
| Saturation current | - | | 370 A |
| Operating conditions | | | |
| Installation at elevations above sea level | 0 to 1000 m | | |
| Protection | | | |
| Choke | IP00 | | |
| Terminals | IP10 | IP00 | |
| Max. relative humidity | 95%, non-condensing No dripping water | | |
| Ambient temperature | 0 to 45°C | | |
| Max. ambient temperature | Up to 55°C ²⁾ | | |
| Maximum installation elevation | 3000 m ³⁾ | | |
| Environmental conditions | | | |
| Temperature | | | |
| Storage | -25 to 70°C | | |
| Mechanical characteristics | | | |
| Weight | 11.0 kg | 16.0 kg | 31.0 kg |
| General information | | | |
| Conformity to standard | IEC 61800-5-1 (protection level 1 regarding overvoltages in the mains supply according to VDE 0160) | | |

Table 3: 8IOCT060.000-1, 8IOCT100.000-1, 8IOCT184.000-1 - Technical data

- 1) Max. current = 1.65 x rated current for 60 seconds.
- 2) With current reduction of 2% per °C above 45°C.
- 3) From 1000 to 3000 m, current reduced by 1% per 100 m

3 Properties

Danger!

HAZARD OF ELECTRICAL SHOCK, EXPLOSION OR ARC FLASH

- Read this data sheet and the ACOPOSinverter user's manual (MAACPIP74) carefully before performing work on and with these mains chokes.
- Installation must be carried out by appropriately trained personnel.
- The user is responsible for complying with all relevant international and national electrical engineering requirements regarding the protective grounding of the equipment.
- Numerous components of the frequency inverter, including the circuit board, are supplied via the mains voltage. **DO NOT TOUCH!** Use only electrically insulated tools.
- **DO NOT TOUCH** any open components or live terminal strip fittings.
- **DO NOT** short circuit terminals PA/+ and PC/- or the DC bus capacitors.
- Before servicing the inverter:
 - Disconnect the entire power supply, including any external control voltage.
 - Place a "DO NOT TURN ON" label on all power disconnection switches.
 - Lock all power disconnection switches in the open position.
 - Wait 15 minutes to allow the DC bus capacitors to discharge.
 - Measure the voltage on the DC bus between terminals PA/+ and PC/- and ensure that the voltage is less than 42 V.
 - If the DC bus capacitors do not discharge properly, contact your local Bernecker + Rainer representative. In this case, **DO NOT** repair or start up the inverter.
- Install and close all covers before applying power or starting or stopping the inverter.

Failure to follow these instructions can result in death or injury.

Electrical devices are only permitted to be installed, commissioned, maintained and serviced by qualified personnel. No responsibility is assumed by B&R for any consequences arising out of the use of this device.

4 Dimensions

810CT004.000-1 to 810CT060.000-1

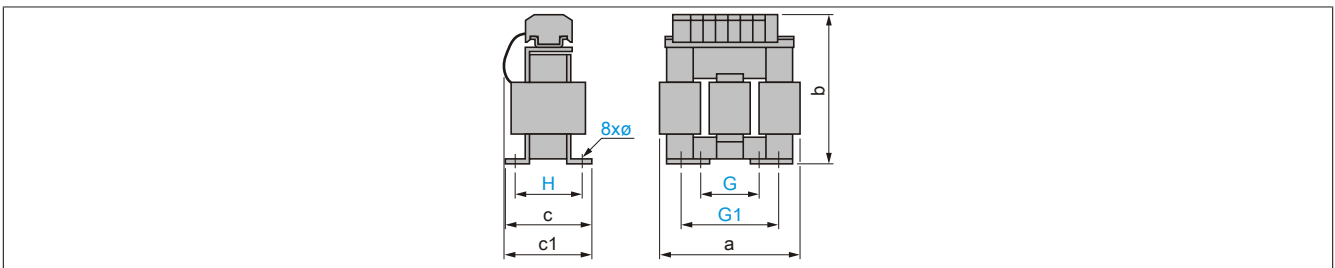


Figure 1: 810CT004.000-1 to 810CT060.000-1 - Dimensions

| | a | b | c | c1 | G | G1 | H | Diameter |
|----------------|-----|-----|-----|-----|----|------|-----|----------|
| 810CT004.000-1 | 100 | 135 | 55 | 60 | 40 | 60 | 42 | 6x9 |
| 810CT010.000-1 | 130 | 155 | 85 | 90 | 60 | 80.5 | 62 | 6x12 |
| 810CT016.000-1 | 130 | 155 | 85 | 90 | 60 | 80.5 | 62 | 6x12 |
| 810CT030.000-1 | 155 | 170 | 115 | 135 | 75 | 107 | 90 | 6x12 |
| 810CT060.000-1 | 180 | 210 | 125 | 165 | 85 | 122 | 105 | 6x12 |

Table 4: 810CT004.000-1 to 810CT060.000-1 - Dimensions

8IOCT100.000-1

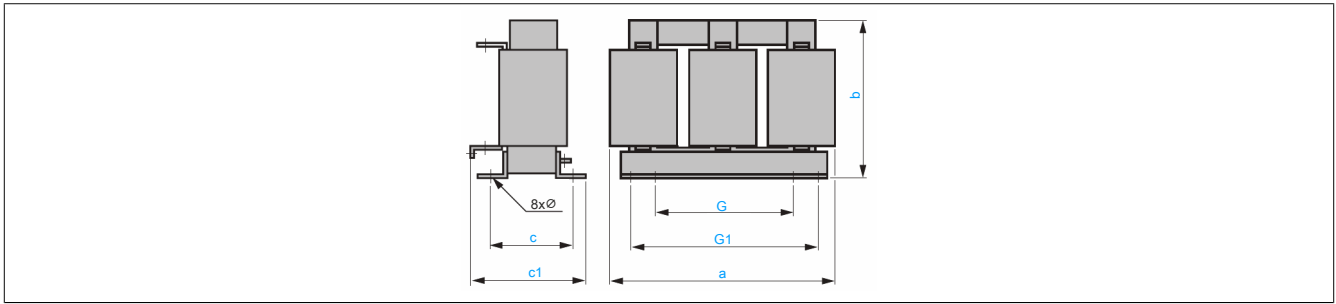


Figure 2: 8IOCT060.000-1 - Dimensions

| | a | b | c | c1 | G | G1 | Diameter |
|----------------|-----|-----|-----|-----|-----|-----|----------|
| 8IOCT100.000-1 | 270 | 210 | 100 | 180 | 105 | 181 | 11 x 22 |

8IOCT184.000-1

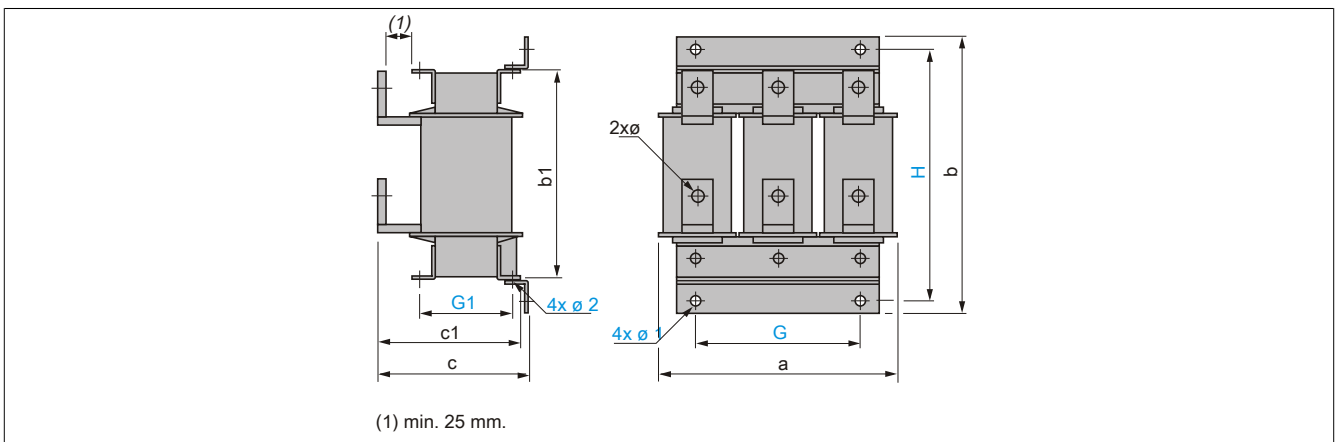


Figure 3: 8IOCT060.000-1 - Dimensions

| | a | b | b1 | c | c1 | G | G1 | H | Diameter | Diameter 1 | Diameter 2 |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|----------|------------|------------|
| 8IOCT184.000-1 | 280 | 305 | 240 | 210 | 200 | 200 | 125 | 275 | 9 | 9 | 9 |

5 Wiring

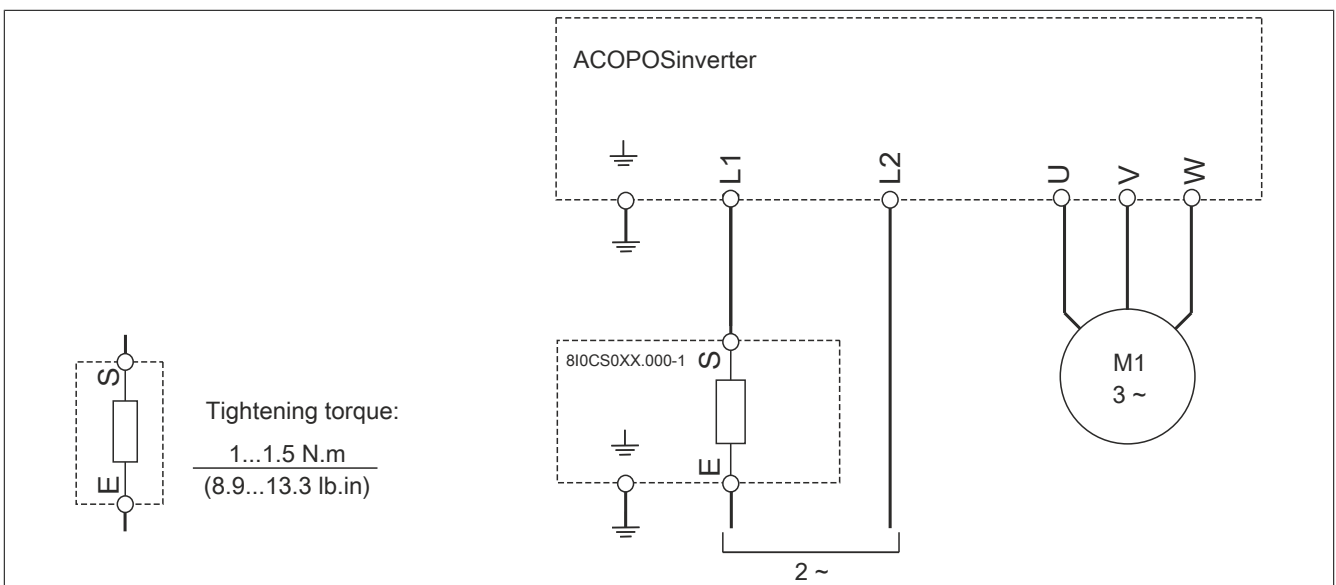


Figure 4: Wiring