

Qty. Description

1 TPE 40-270/2 S-A-F-A-BQQE-HDB



Note! Product picture may differ from actual product

Product No.: [99133662](#)

Single-stage, close-coupled, volute pump with in-line suction and discharge ports of identical diameter.

The pump is of the top-pull-out design, i.e. the power head (motor, pump head and impeller) can be removed for maintenance or service while the pump housing remains in the pipework.

The pump is fitted with an unbalanced rubber bellows seal.

The shaft seal is according to EN 12756. Pipework connection is via PN 16 DIN flanges (EN 1092-2 and ISO 7005-2).

The pump is fitted with a fan-cooled, permanent-magnet synchronous motor. The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement.

The pump is fitted with a differential pressure sensor.

The pump is suitable for applications requiring pressure control. The pump is fitted with a differential-pressure transmitter registering the differential pressure across the pump and enabling constant pressure or proportional-pressure control of the pump.

The product's minimum efficiency index (MEI) is greater or equal to 0.70. This is by the Commission Regulation (EU) considered as an indicative benchmark for best-performing water pump available on the market as from 1 January 2013.

The operating panel on the motor terminal box features a four-inch TFT display, push-buttons and the Grundfos Eye indicator.

The display gives an intuitive and user-friendly interface to all functions.

The push-buttons are used to navigate through the menu structure to access pump and performance data on site and enable setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop".

The Grundfos Eye indicator on the operating panel provides visual indication of pump status:

- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
- "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
- "Alarm": Motor has stopped (flashing red indicator lights).

Communication with the pump is also possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

A control panel enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop".

The control panel has indicator lights for "Operation" and "Fault".

Communication with the pump is possible by means of the Grundfos GO Remote (accessory).

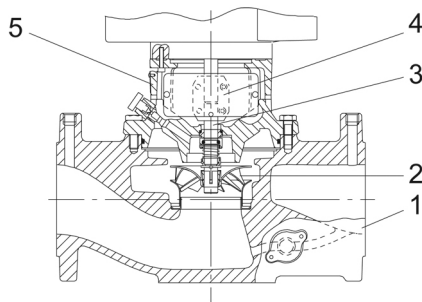
The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

Cast-iron parts have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.

Pump

Qty. Description

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- 1: Pump housing
- 2: Impeller
- 3: Shaft
- 4: Coupling
- 5: Pump head

The pump housing is provided with a replaceable stainless steel/PTFE neck ring to reduce the amount of liquid running from the discharge side of the impeller to the suction side.

The impeller is secured with a split cone with nut.

The pump is fitted with an unbalanced rubber bellows seal with torque transmission across the spring and around the bellows. Due to the bellows, the seal does not wear the shaft, and the axial movement is not prevented by deposits on the shaft.

Seal faces:

- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)

This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.

A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal.

The flanges have tappings for mounting of pressure gauges.

The motor stool forms connection between the pump housing and the motor, and is equipped with a manual air vent screw for venting of the pump housing and the shaft seal chamber. The sealing between motor stool and pump housing is an O-ring.

The central part of the motor stool is provided with guards for protection against the shaft and coupling. Motor and pump shaft are connected via a shell coupling.

Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.

The motor is flange-mounted with tapped-hole flange (FT).

Motor-mounting designation in accordance with IEC 60034-7: IM B 14, IM V 18 (Code I) / IM 3601, IM 3611 (Code II).

The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

The terminal box holds terminals for these connections:

- one dedicated digital input
- two analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 - 3.5 V; the factory-fitted pressure sensor is connected to one of these inputs
- 5 V voltage supply to potentiometer and sensor
- one configurable digital input or open-collector output
- Grundfos Digital Sensor input and output
- 24 V voltage supply for sensors
- two signal relay outputs (potential-free contacts)
- GENIbus connection
- interface for Grundfos CIM fieldbus module.

Further product details

Qty. Description

1 Cast-iron parts have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.

Technical data

Controls:

Frequency converter: Built-in

Liquid:

Pumped liquid: Water
 Liquid temperature range: -25 .. 120 °C
 Selected liquid temperature: 20 °C
 Density: 998.2 kg/m³

Technical:

Pump speed on which pump data are based: 2880 rpm
 Rated flow: 12.5 m³/h
 Rated head: 19.9 m
 Actual impeller diameter: 145 mm
 Code for shaft seal: BQQE
 Curve tolerance: ISO9906:2012 3B2

Materials:

Pump housing: Cast iron
 EN-GJL-250
 ASTM class 35
 Impeller: Stainless steel
 EN 1.4301
 AISI 304

Installation:

Range of ambient temperature: -20 .. 50 °C
 Maximum operating pressure: 16 bar
 Max pressure at stated temp: 16 bar / 120 °C
 Type of connection: DIN
 Size of connection: DN 40
 Pressure rating for connection: PN 16
 Port-to-port length: 320 mm
 Flange size for motor: FT115

Electrical data:

Motor type: 90SC
 IE Efficiency class: IE5
 Rated power - P2: 1.5 kW
 Mains frequency: 50 Hz
 Rated voltage: 3 x 380-500 V
 Rated current: 2.90-2.40 A
 Cos phi - power factor: 0.92-0.85
 Rated speed: 360-4000 rpm
 Efficiency: 88.9%
 Motor efficiency at full load: 88.9 %
 Number of poles: 2
 Enclosure class (IEC 34-5): IP55
 Insulation class (IEC 85): F
 Motor No: 98362280

Others:



Company name:

Created by:

Phone:

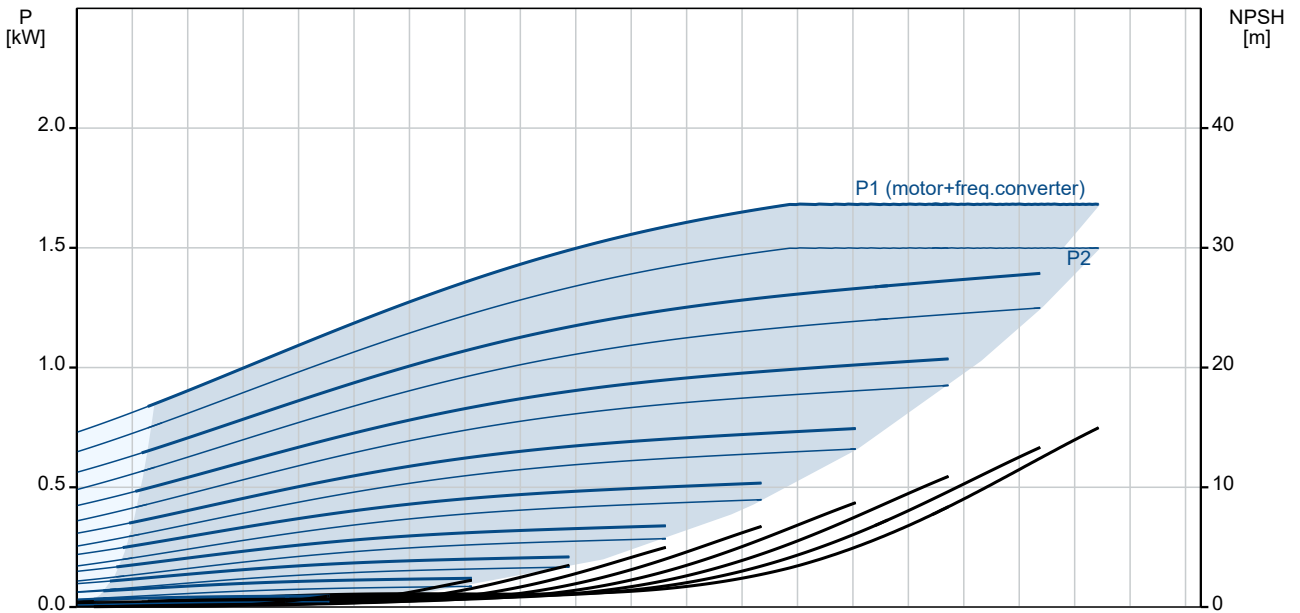
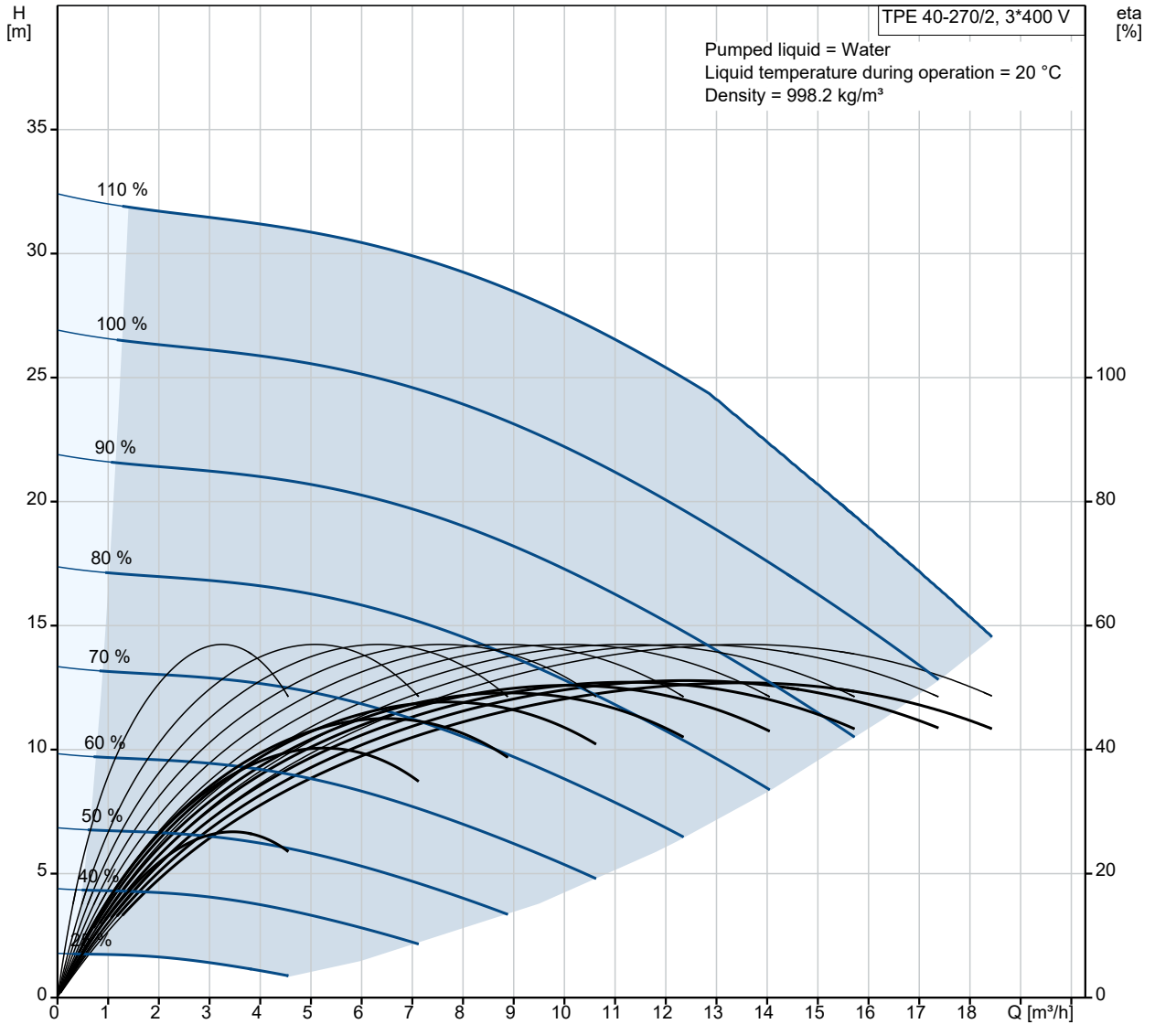
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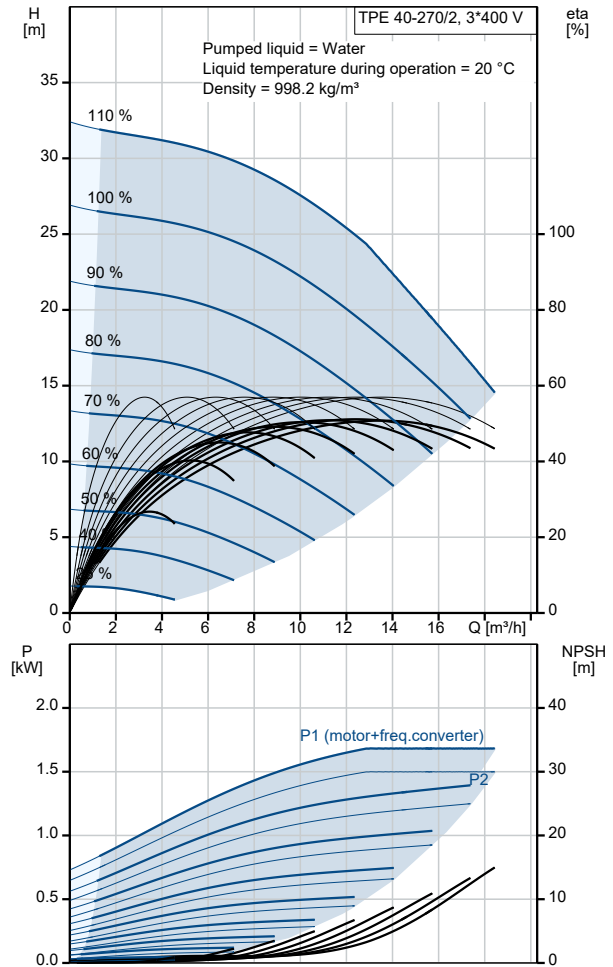
Qty.	Description
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1	Minimum efficiency index, MEI \geq : 0.70 Net weight: 34.1 kg Gross weight: 45.8 kg Shipping volume: 0.162 m ³ Country of origin: HU Custom tariff no.: 84137051
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99133662 TPE 40-270/2 S-A-F-A-BQQE-HDB 50 Hz



Description	Value
General information:	
Product name:	TPE 40-270/2 S-A-F-A-BQQE-HDB
Product No:	99133662
EAN number:	5712607367787
Technical:	
Pump speed on which pump data are based:	2880 rpm
Rated flow:	12.5 m ³ /h
Rated head:	19.9 m
Maximum head:	270 dm
Actual impeller diameter:	145 mm
Code for shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B2
Pump version:	A
Materials:	
Pump housing:	Cast iron
Pump housing:	EN-GJL-250
Pump housing:	ASTM class 35
Impeller:	Stainless steel
Impeller:	EN 1.4301
Impeller:	AISI 304
Material code:	A
Installation:	
Range of ambient temperature:	-20 .. 50 °C
Maximum operating pressure:	16 bar
Max pressure at stated temp:	16 bar / 120 °C
Type of connection:	DIN
Size of connection:	DN 40
Pressure rating for connection:	PN 16
Port-to-port length:	320 mm
Flange size for motor:	FT115
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m ³
Electrical data:	
Motor type:	90SC
IE Efficiency class:	IE5
Rated power - P2:	1.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-500 V
Rated current:	2.90-2.40 A
Cos phi - power factor:	0.92-0.85
Rated speed:	360-4000 rpm
Efficiency:	88.9%
Motor efficiency at full load:	88.9 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	ELEC
Motor No:	98362280
Controls:	
Control panel:	HMI300 - Graphical
Function Module:	FM300 - Advanced
Frequency converter:	Built-in
Others:	





Company name:

Created by:

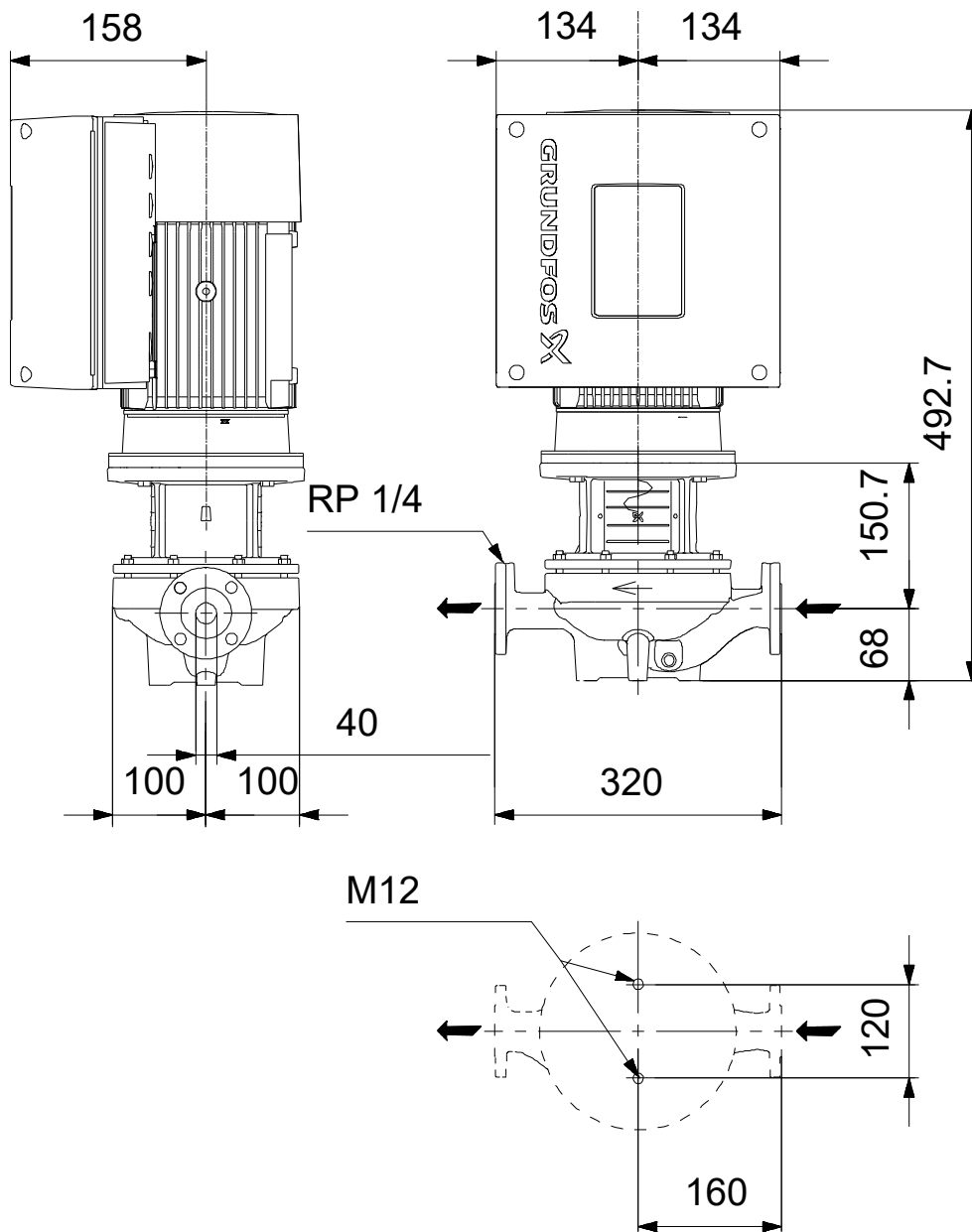
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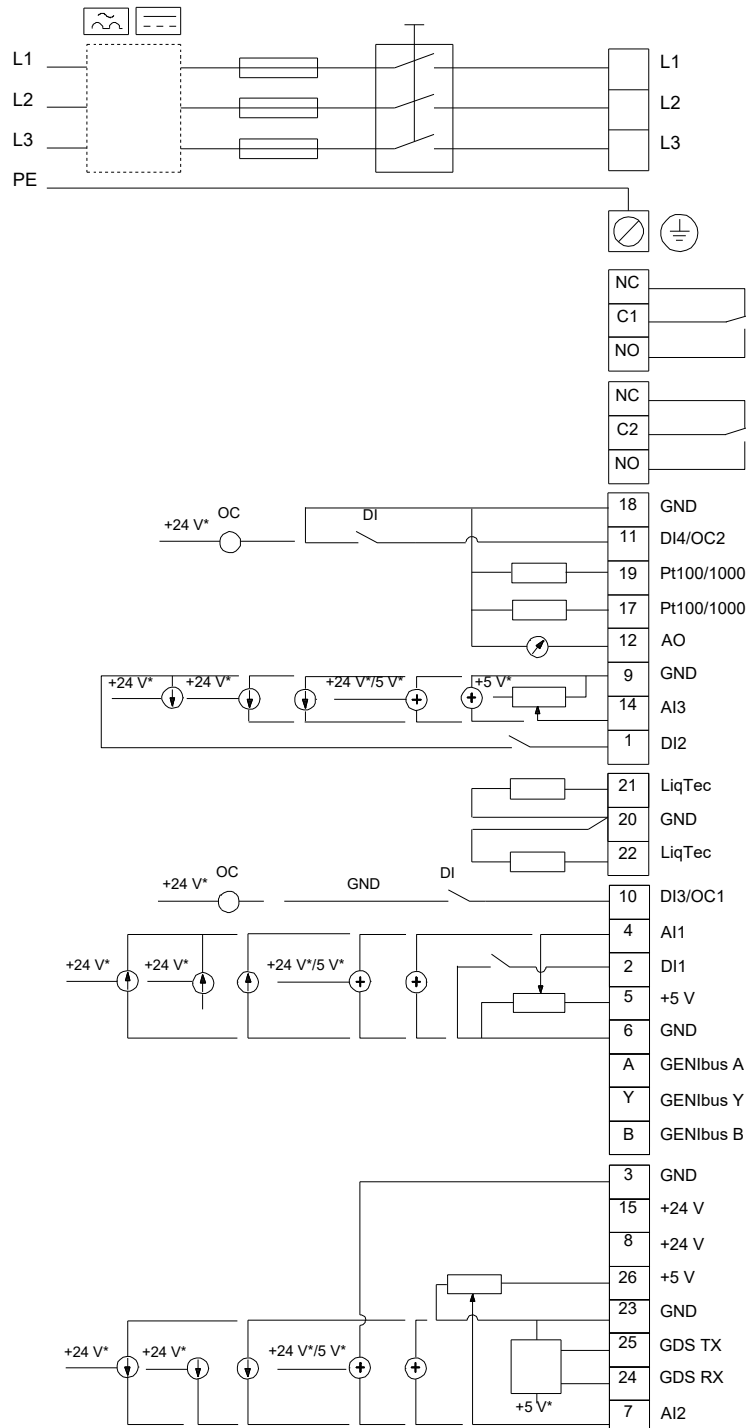
Description	Value
Minimum efficiency index, MEI ≥:	0.70
Net weight:	34.1 kg
Gross weight:	45.8 kg
Shipping volume:	0.162 m ³
Config. file no:	99140387
Country of origin:	HU
Custom tariff no.:	84137051

99133662 TPE 40-270/2 S-A-F-A-BQQE-HDB 50 Hz



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

99133662 TPE 40-270/2 S-A-F-A-BQQE-HDB 50 Hz



Note! All units are in [mm] unless others are stated.