Qty.	Description
1	**NBE 80-200/171 AAF2AESBQQEQW1**

Note! Product picture may differ from actual product

Product No.: 98975790

Non-self-priming, single-stage, centrifugal volute pump designed according to ISO 5199 with dimensions and rated performance according to EN 733 (10 bar).

Flanges are PN 16 with dimensions according to EN 1092-2. The pump has an axial suction port, radial discharge port, horizontal shaft and a back pull-out design enabling removal of the motor, motor stool, cover and impeller without disturbing the pump housing or pipework.

The unbalanced rubber bellows seal is according to DIN EN 12756.

The pump is close-coupled to a fan-cooled asynchronous motor.

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.

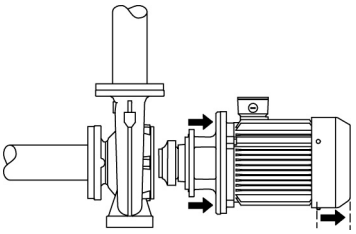
The product's minimum efficiency index (MEI) is greater or equal to 0.70. This is by the Commission Regulation (EU) considered as an indicative benchmark for best-performing water pump available on the market as from 1 January 2013.

An external sensor can be connected if controlled pump operation is required for flow, differential pressure or temperature control.

An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The operating panel has indicator lights for "Operation" and "Fault".

Communication with the pump is 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".

The back pull-out design means that the pump can be serviced by a single person without disturbing the pump housing or pipes.



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

Motor stool and pump cover are made of cast iron (EN-GJL-250). Coupling guards are fitted to the motor stool.

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.

The pump housing has feet.

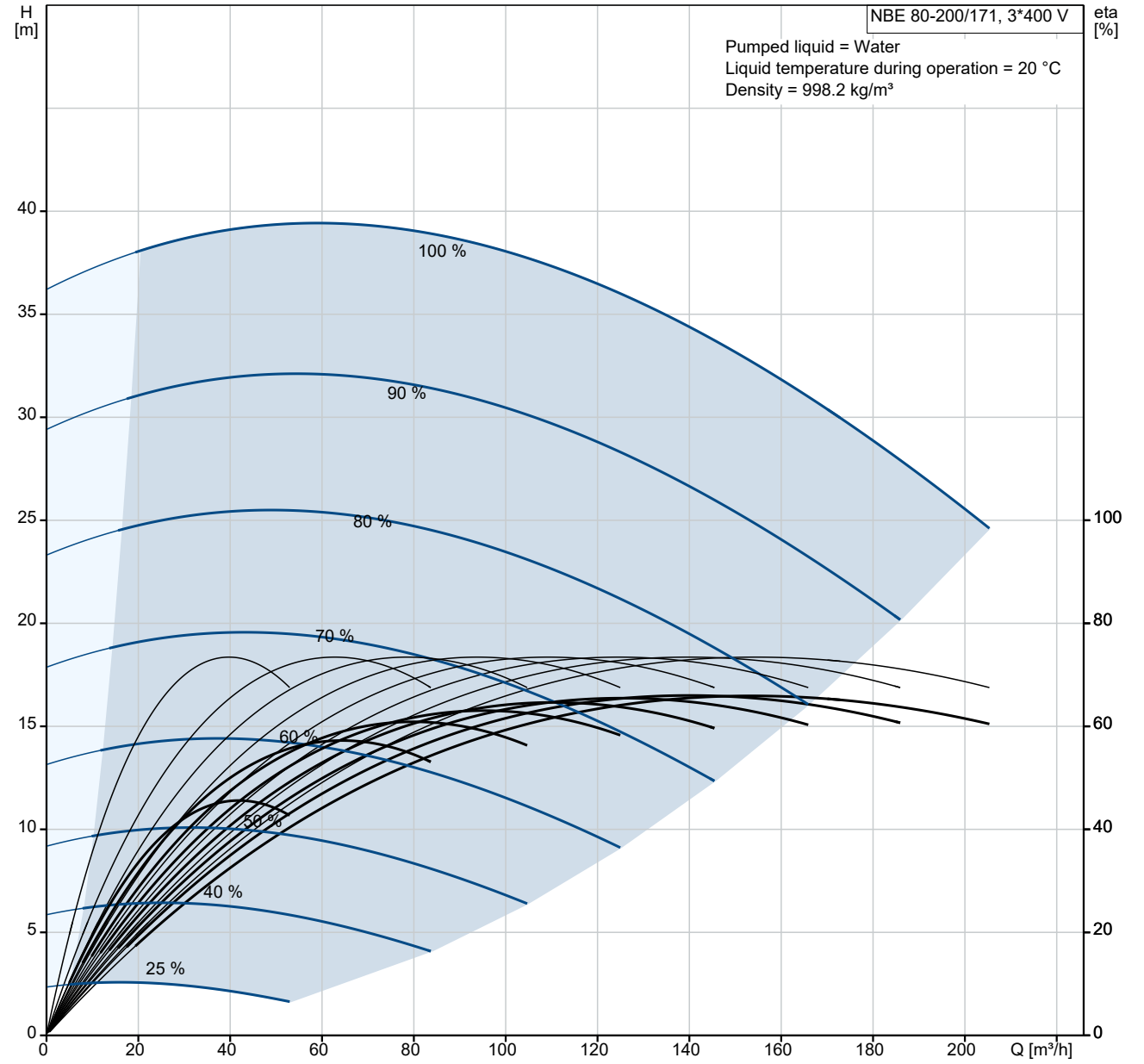
Motor

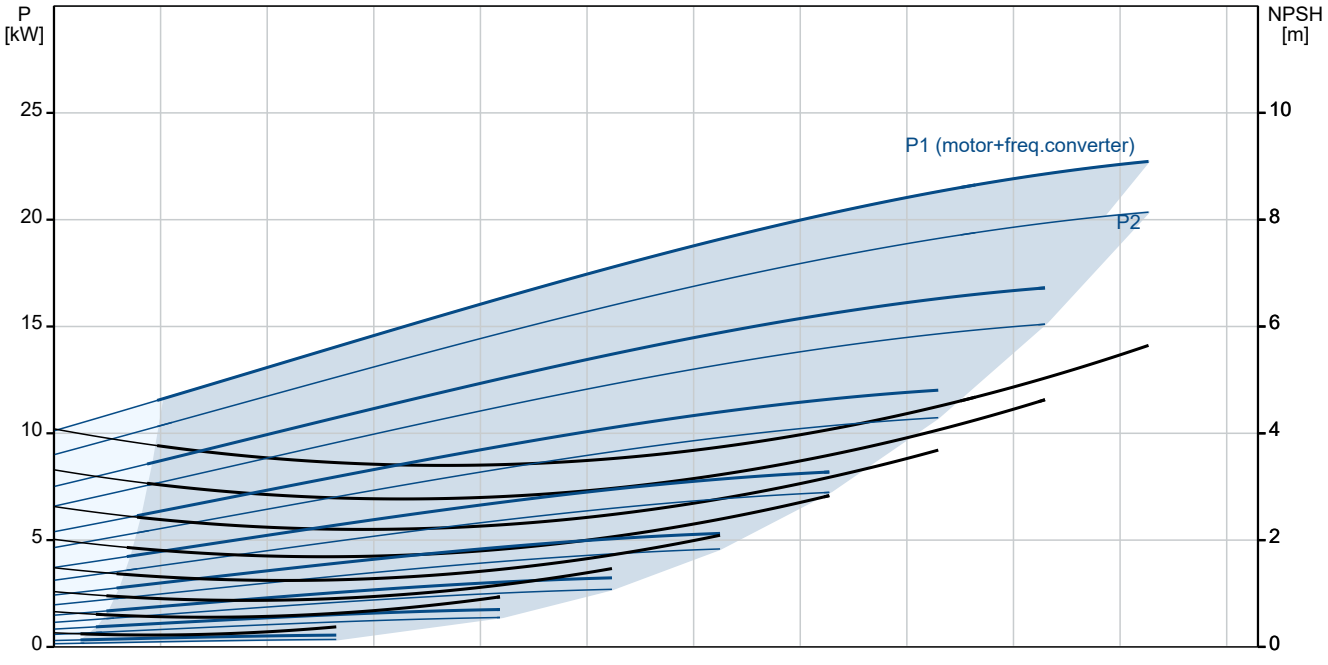
The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.

Qty.	Description
1	The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1. 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: - pump start/stop input (potential-free contact) - remote setpoint setting via analog signal, 0-10 V, 0(4)-20 mA - 10 V voltage supply for setpoint potentiometer, Imax = 5 mA - one analog sensor input, 0-10 V, 0(4)-20 mA - 24 V voltage supply for sensor, Imax = 40 mA - one digital input - two potential-free fault signal relays with changeover contact, reporting "Fault", "Operation" or "Ready" - RS-485 GENIbus connection - interface for Grundfos CIM fieldbus module. **Further product details** 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 Pressure sensor: N 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: 2940 rpm Rated flow: 160 m³/h Rated head: 31.76 m Actual impeller diameter: 171 mm Nominal impeller diameter: 200 Shaft seal arrangement: Single Code for shaft seal: BQQE Curve tolerance: ISO9906:2012 3B Bearing design: Standard Materials: Pump housing: Cast iron EN-GJL-250 ASTM class 35 Wear ring: Brass Impeller: Cast iron EN-GJL-200 ASTM class 30 Internal pump house coating: CED Shaft: Stainless steel EN 1.4301 AISI 304 Installation: Range of ambient temperature: -20 .. 40 °C Maximum operating pressure: 16 bar Pipe connection standard: EN 1092-2 Size of inlet connection: DN 100 Size of outlet connection: DN 80 Pressure rating for connection: PN 16 Bearing lubrication: Grease

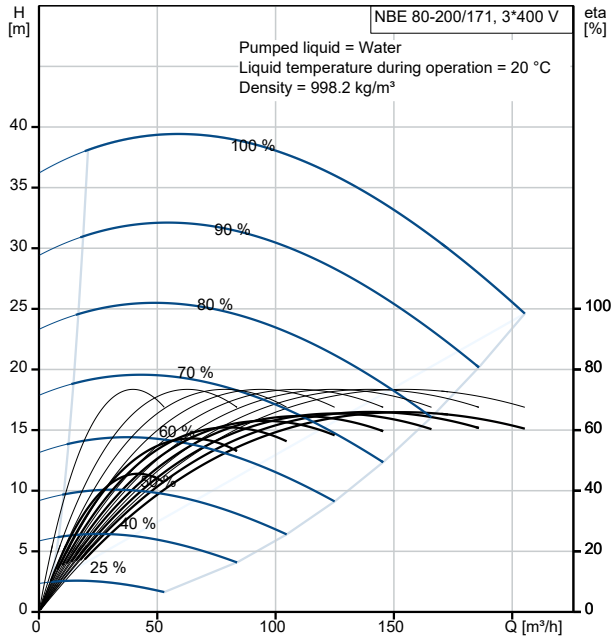
Qty.	Description	
1	Pump housing with feet:	Yes
	Support block (Yes/No):	N
	Electrical data:	
	IE Efficiency class:	IE3
	Rated power - P2:	22 kW
	Mains frequency:	50 Hz
	Rated voltage:	3 x 380-480 V
	Rated current:	43.5-35.0 A
	Cos phi - power factor:	0.91-0.90
	Rated speed:	480-3540 rpm
	Efficiency:	IE3 92,7%
	Motor efficiency at full load:	92.7 %
	Number of poles:	2
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	85901267
	Others:	
	Minimum efficiency index, MEI ≥:	0.70
	Net weight:	236 kg
	Gross weight:	261 kg
	Shipping volume:	0.707 m³
	Danish VVS No.:	386104202
	Country of origin:	HU
	Custom tariff no.:	84139100

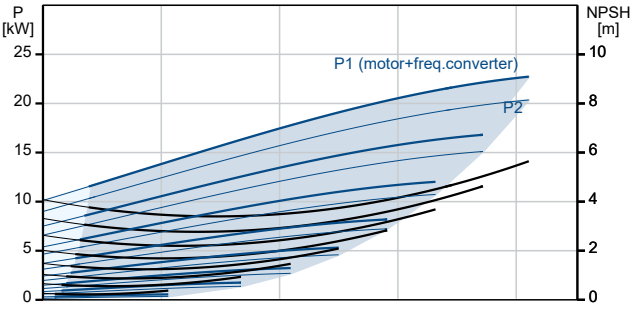
98975790 NBE 80-200/171 AAF2AESBQQEQW1 50 Hz

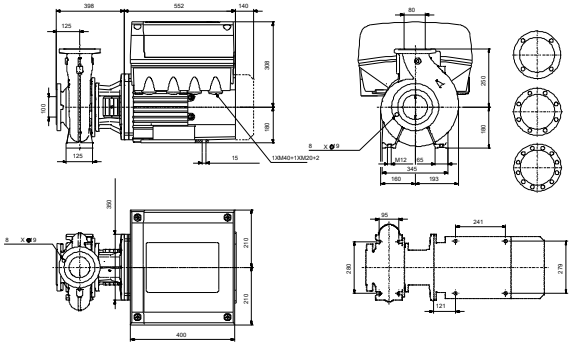


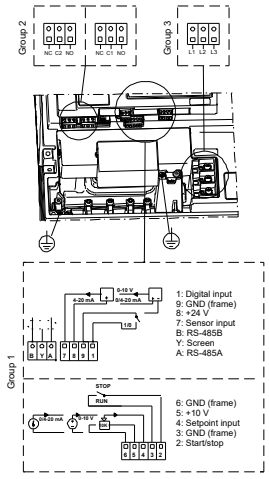


Description	Value
General information:	
Product name:	NBE 80-200/171 AAF2AESBQQEQW1
Product No:	98975790
EAN number:	5712604549445
Technical:	
Pump speed on which pump data are based:	2940 rpm
Rated flow:	160 m³/h
Rated head:	31.76 m
Actual impeller diameter:	171 mm
Nominal impeller diameter:	200
Shaft seal arrangement:	Single
Shaft diameter:	32 mm
Code for shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B
Pump version:	A
Bearing design:	Standard
Materials:	
Pump housing:	Cast iron
Pump housing:	EN-GJL-250
Pump housing:	ASTM class 35
Wear ring:	Brass
Impeller:	Cast iron
Impeller:	EN-GJL-200
Impeller:	ASTM class 30
Internal pump house coating:	CED
Material code:	A
Code for rubber:	E
Shaft:	Stainless steel
Shaft:	EN 1.4301
Shaft:	AISI 304
Installation:	
Range of ambient temperature:	-20 .. 40 °C
Maximum operating pressure:	16 bar
Pipe connection standard:	EN 1092-2
Size of inlet connection:	DN 100
Size of outlet connection:	DN 80
Pressure rating for connection:	PN 16
Bearing lubrication:	Grease
Pump housing with feet:	Yes
Support block (Yes/No):	N
Connect code:	F2
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Electrical data:	
IE Efficiency class:	IE3
Rated power - P2:	22 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-480 V
Rated current:	43.5-35.0 A
Cos phi - power factor:	0.91-0.90
Rated speed:	480-3540 rpm
Efficiency:	IE3 92,7%
Motor efficiency at full load:	92.7 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	YES
Motor No:	85901267
Mount. design. acc. IEC 34-7:	IM B35









Description	Value
Controls:	
Control panel:	Standard
Function Module:	PUMP I/O
Frequency converter:	Built-in
Pressure sensor:	N
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	236 kg
Gross weight:	261 kg
Shipping volume:	0.707 m³
Danish VVS No.:	386104202
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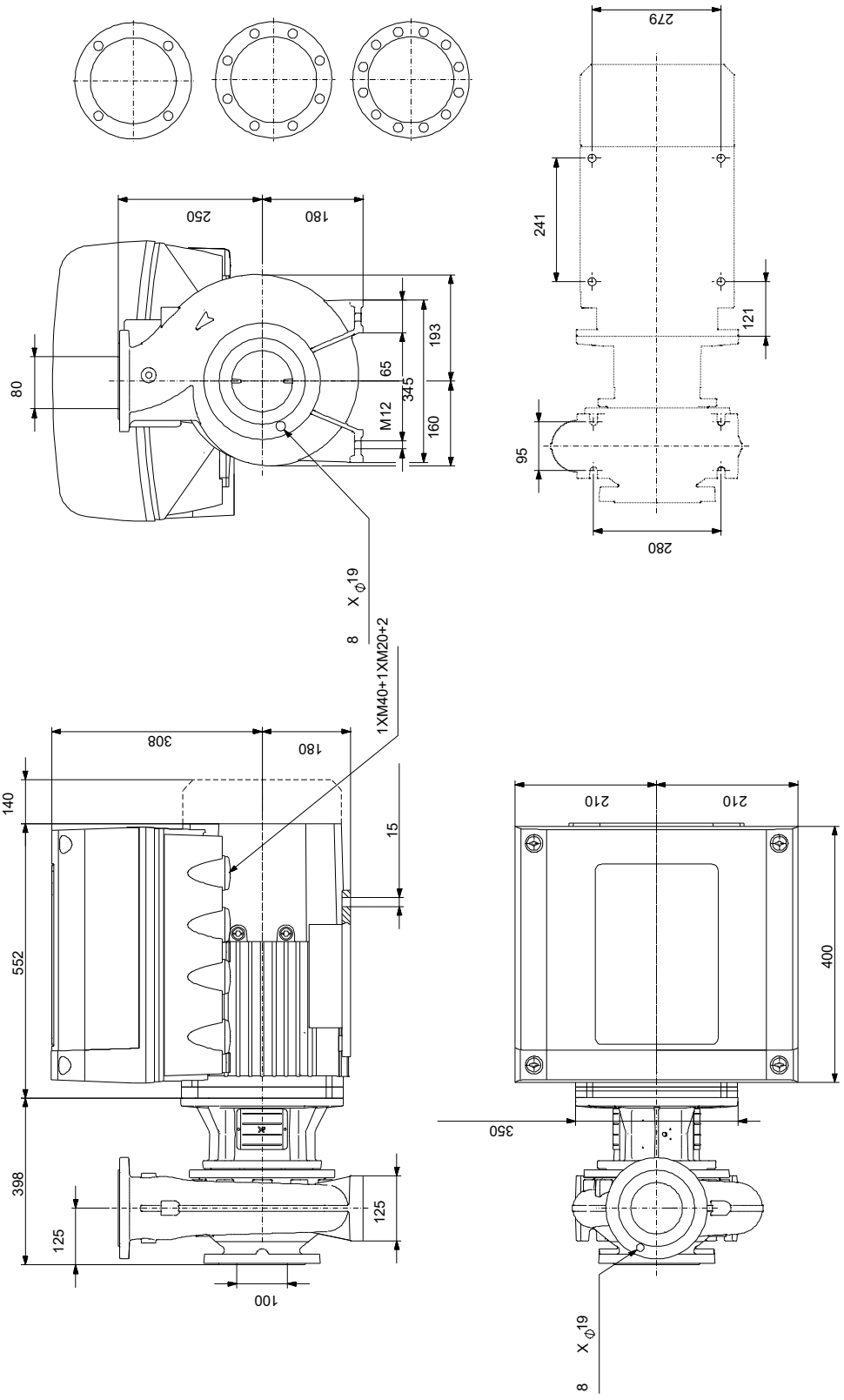
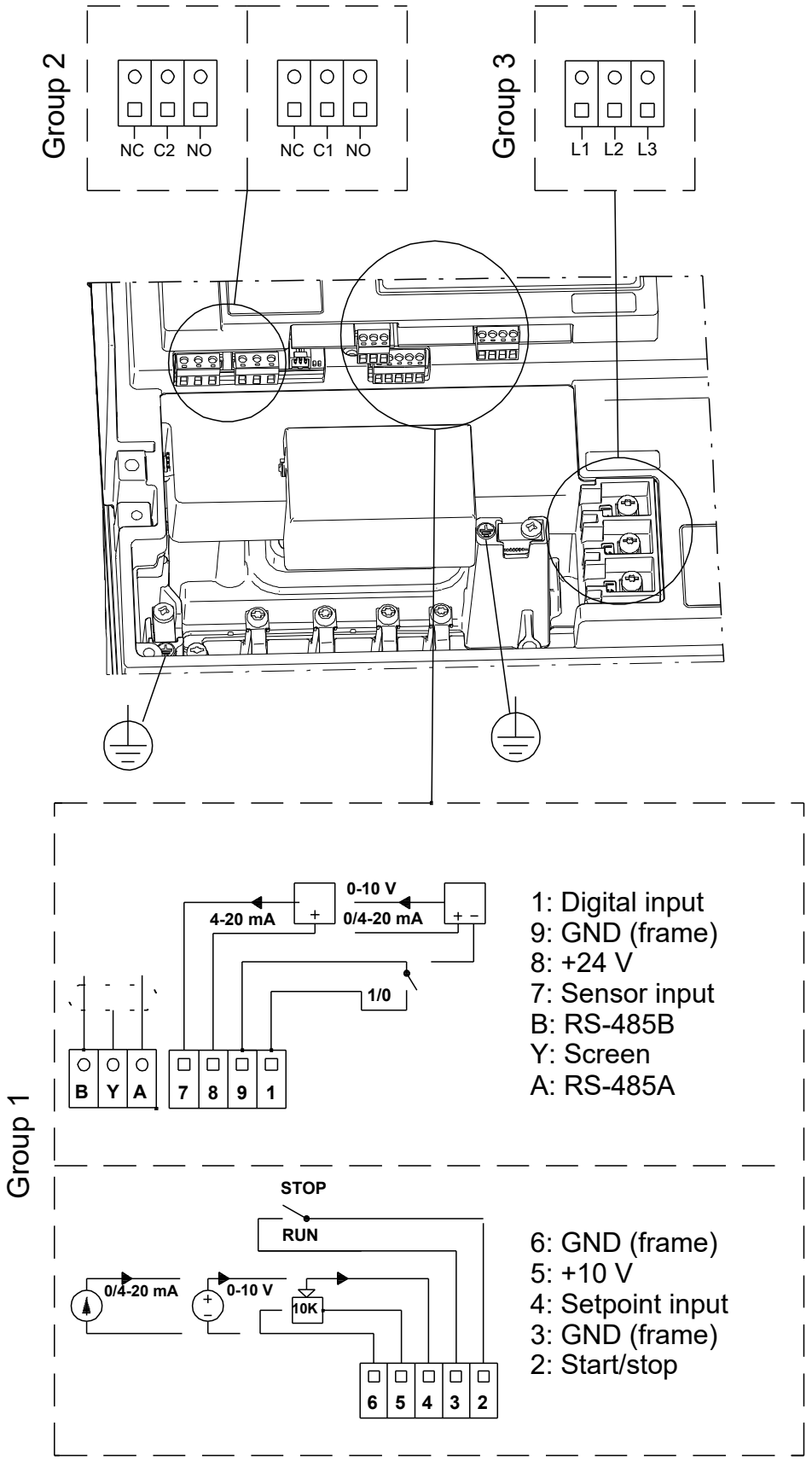
98975790 NBE 80-200/171 AAF2AESBQQEQW1 50 Hz



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

98975790 NBE 80-200/171 AAF2AESBQQEQW1 50 Hz



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

Order Data:

Position	Your pos.	Product name	Amount	Product No	Total
		NBE 80-200/171	1	98975790	Price on request