

Qty. Description

1 NB 50-250/222 AASF2AESBQQEPW1



Note! Product picture may differ from actual product

Product No.: [98979916](#)

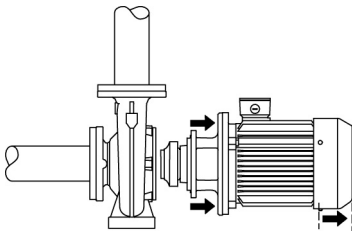
Non-self-priming, single-stage, centrifugal volute pump designed according to ISO 5199 with dimensions and rated performance according to EN 733 (10 bar).

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 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

The pump housing has both a priming and a drain hole closed by plugs. The impeller is a closed impeller with double-curved blades with smooth surfaces. The impeller is statically balanced according to ISO 1940-1 class G6.3 and hydraulically balanced to compensate for axial thrust.

Wear rings used in pump housing and for impeller are made of bronze/brass.

Motor stool and pump cover are made of cast iron (EN-GJL-250). Coupling guards are fitted to the motor stool. The pump cover is provided with a manual air vent screw for venting of the pump housing and the shaft seal chamber.

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 no feet.

The pump is to be secured to the foundation with bolts through the pump housing feet and motor feet. The pump is delivered with steel support blocks. The support blocks provide horizontal alignment of the pump and ensure clearance between the motor stool/motor flange and the foundation.

Qty.	Description																																														
1	<p data-bbox="201 338 268 371"><b>Motor</b></p> <p data-bbox="201 376 1476 427">The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.</p> <p data-bbox="201 432 1018 465">The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.</p> <p data-bbox="201 468 1476 519">The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.</p> <p data-bbox="201 521 1476 600">Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.</p> <p data-bbox="201 604 1476 656">The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.</p> <p data-bbox="201 723 512 757"><b>Further product details</b></p> <p data-bbox="201 761 1476 840">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.</p> <p data-bbox="201 907 400 940"><b>Technical data</b></p> <p data-bbox="201 969 300 1003"><b>Controls:</b></p> <table data-bbox="201 1003 638 1059"> <tr> <td>Frequency converter:</td> <td>NONE</td> </tr> <tr> <td>Pressure sensor:</td> <td>N</td> </tr> </table> <p data-bbox="201 1088 276 1122"><b>Liquid:</b></p> <table data-bbox="201 1122 702 1238"> <tr> <td>Pumped liquid:</td> <td>Water</td> </tr> <tr> <td>Liquid temperature range:</td> <td>-25 .. 120 °C</td> </tr> <tr> <td>Selected liquid temperature:</td> <td>20 °C</td> </tr> <tr> <td>Density:</td> <td>998.2 kg/m<sup>3</sup></td> </tr> </table> <p data-bbox="201 1267 316 1301"><b>Technical:</b></p> <table data-bbox="201 1301 821 1563"> <tr> <td>Pump speed on which pump data are based:</td> <td>2945 rpm</td> </tr> <tr> <td>Rated flow:</td> <td>73.22 m<sup>3</sup>/h</td> </tr> <tr> <td>Rated head:</td> <td>57.75 m</td> </tr> <tr> <td>Actual impeller diameter:</td> <td>222 mm</td> </tr> <tr> <td>Nominal impeller diameter:</td> <td>250</td> </tr> <tr> <td>Shaft seal arrangement:</td> <td>Single</td> </tr> <tr> <td>Code for shaft seal:</td> <td>BQQE</td> </tr> <tr> <td>Curve tolerance:</td> <td>ISO9906:2012 3B</td> </tr> <tr> <td>Bearing design:</td> <td>Standard</td> </tr> </table> <p data-bbox="201 1592 309 1626"><b>Materials:</b></p> <table data-bbox="201 1626 734 1951"> <tr> <td>Pump housing:</td> <td>Cast iron EN-GJL-250 ASTM class 35</td> </tr> <tr> <td>Wear ring:</td> <td>Brass</td> </tr> <tr> <td>Impeller:</td> <td>Cast iron EN-GJL-200 ASTM class 30</td> </tr> <tr> <td>Internal pump house coating:</td> <td>CED</td> </tr> <tr> <td>Shaft:</td> <td>Stainless steel EN 1.4301 AISI 304</td> </tr> </table> <p data-bbox="201 1980 325 2013"><b>Installation:</b></p> <table data-bbox="201 2013 686 2116"> <tr> <td>t max amb:</td> <td>60 °C</td> </tr> <tr> <td>Maximum operating pressure:</td> <td>16 bar</td> </tr> <tr> <td>Pipe connection standard:</td> <td>EN 1092-2</td> </tr> </table>	Frequency converter:	NONE	Pressure sensor:	N	Pumped liquid:	Water	Liquid temperature range:	-25 .. 120 °C	Selected liquid temperature:	20 °C	Density:	998.2 kg/m <sup>3</sup>	Pump speed on which pump data are based:	2945 rpm	Rated flow:	73.22 m <sup>3</sup> /h	Rated head:	57.75 m	Actual impeller diameter:	222 mm	Nominal impeller diameter:	250	Shaft seal arrangement:	Single	Code for shaft seal:	BQQE	Curve tolerance:	ISO9906:2012 3B	Bearing design:	Standard	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	t max amb:	60 °C	Maximum operating pressure:	16 bar	Pipe connection standard:	EN 1092-2
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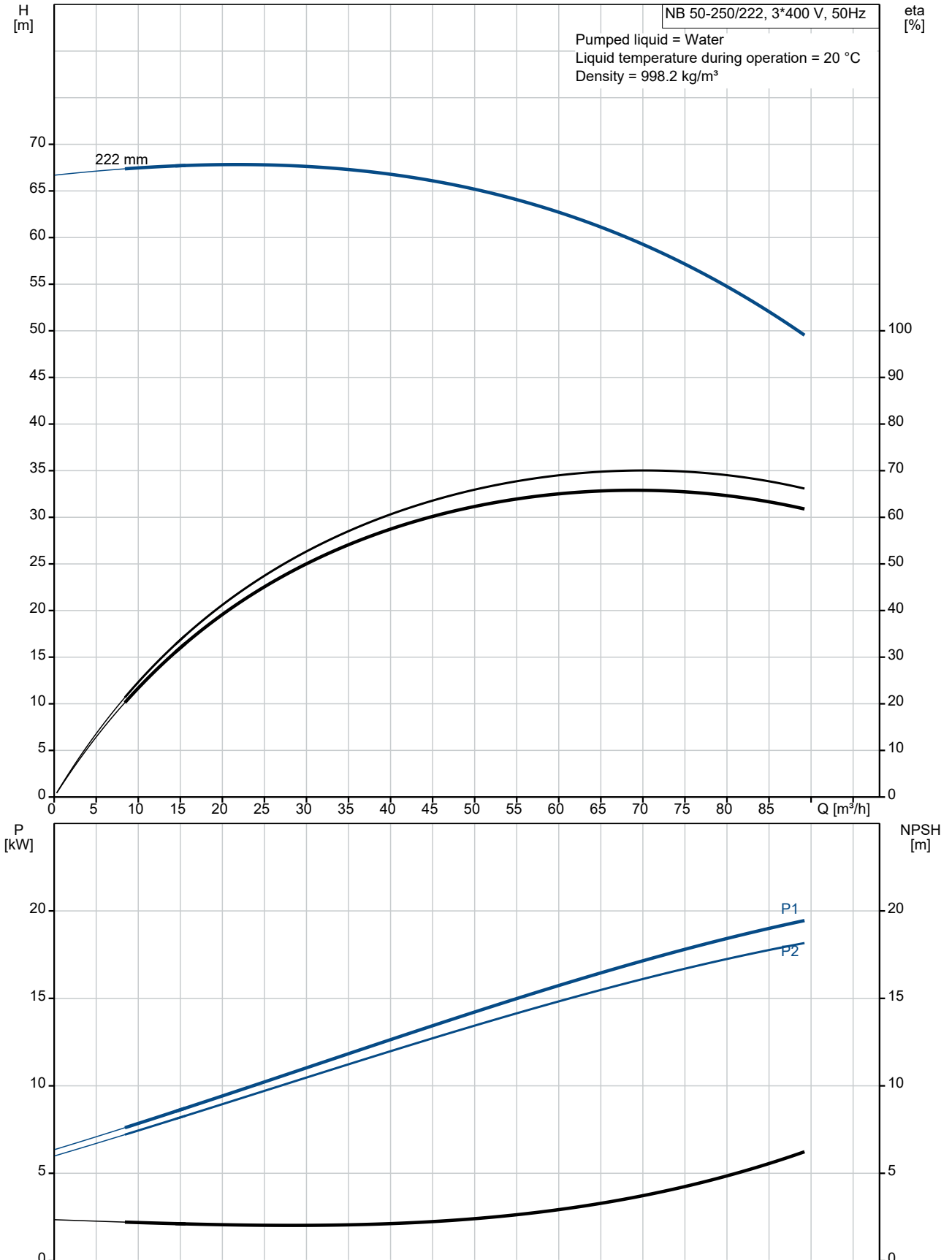
Qty.	Description
1	<p>Size of inlet connection: DN 65            Size of outlet connection: DN 50            Pressure rating for connection: PN 16            Bearing lubrication: Grease            Pump housing with feet: No            Support block (Yes/No): Y</p> <p>Electrical data:            Motor type: 160LB            IE Efficiency class: IE3            Rated power - P2: 18.5 kW            Mains frequency: 50 Hz            Rated voltage: 3 x 380-415D/660-690Y V            Rated current: 34,5-32,5/20,0-18,8 A            Starting current: 830-980 %            Cos phi - power factor: 0.89-0.85            Rated speed: 2940-2950 rpm            Efficiency: IE3 92,4%            Motor efficiency at full load: 92.4 %            Motor efficiency at 3/4 load: 93.2 %            Motor efficiency at 1/2 load: 93.2 %            Number of poles: 2            Enclosure class (IEC 34-5): 55 Dust/Jetting            Insulation class (IEC 85): F            Motor No: 87420030            Bearing insulation type N-end: STEEL BEARING</p> <p>Others:            Minimum efficiency index, MEI ≥: 0.67            Net weight: 178 kg            Gross weight: 203 kg            Shipping volume: 0.707 m<sup>3</sup>            Danish VVS No.: 386062253            Country of origin: HU            Custom tariff no.: 84137051</p>



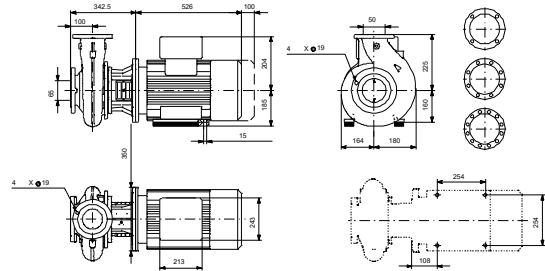
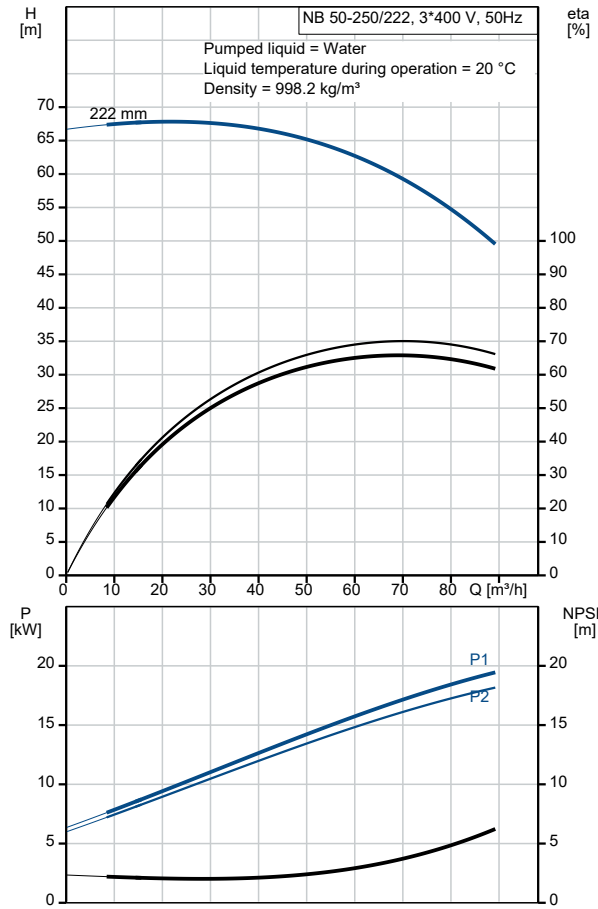
Company name: Pump Sales Direct  
Created by:  
Phone:

Date: 15/08/2022

### 98979916 NB 50-250/222 AASF2AESBQQEPW1 50 Hz



Description	Value
<b>General information:</b>	
Product name:	NB 50-250/222 AASF2AESBQQEPW1
Product No:	98979916
EAN number:	5712604621165
<b>Technical:</b>	
Pump speed on which pump data are based:	2945 rpm
Rated flow:	73.22 m <sup>3</sup> /h
Rated head:	57.75 m
Actual impeller diameter:	222 mm
Nominal impeller diameter:	250
Shaft seal arrangement:	Single
Shaft diameter:	24 mm
Code for shaft seal:	BQQE
Curve tolerance:	ISO9906:2012 3B
Pump version:	AS
Bearing design:	Standard
<b>Materials:</b>	
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
<b>Installation:</b>	
t max amb:	60 °C
Maximum operating pressure:	16 bar
Pipe connection standard:	EN 1092-2
Size of inlet connection:	DN 65
Size of outlet connection:	DN 50
Pressure rating for connection:	PN 16
Bearing lubrication:	Grease
Pump housing with feet:	No
Support block (Yes/No):	Y
Connect code:	F2
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m <sup>3</sup>
<b>Electrical data:</b>	
Motor type:	160LB
IE Efficiency class:	IE3
Rated power - P2:	18.5 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 380-415D/660-690Y V
Rated current:	34,5-32,5/20,0-18,8 A
Starting current:	830-980 %
Cos phi - power factor:	0.89-0.85
Rated speed:	2940-2950 rpm
Efficiency:	IE3 92,4%





Company name: Pump Sales Direct

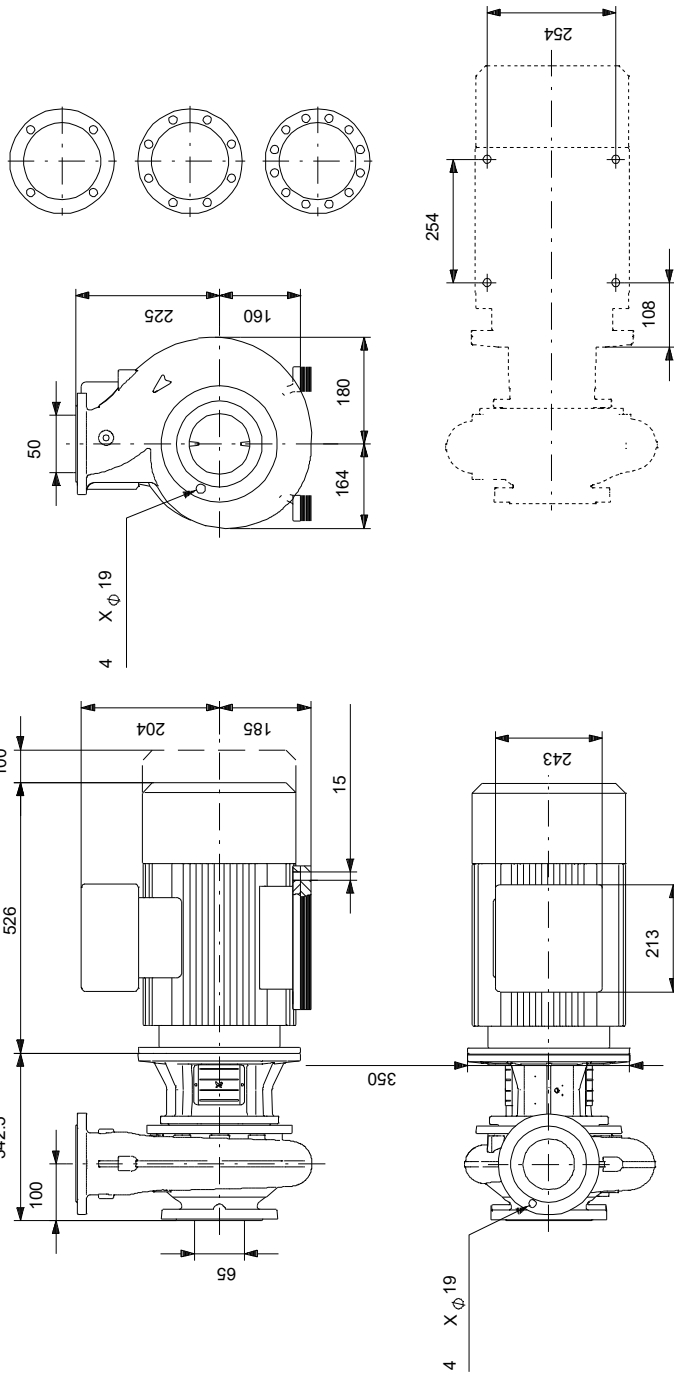
Created by:

Phone:

Date: 15/08/2022

Description	Value
Motor efficiency at full load:	92.4 %
Motor efficiency at 3/4 load:	93.2 %
Motor efficiency at 1/2 load:	93.2 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	87420030
Mount. design. acc. IEC 34-7:	IM B35
Bearing insulation type N-end:	STEEL BEARING
<b>Controls:</b>	
Frequency converter:	NONE
Pressure sensor:	N
<b>Others:</b>	
Minimum efficiency index, MEI $\geq$ :	0.67
Net weight:	178 kg
Gross weight:	203 kg
Shipping volume:	0.707 m <sup>3</sup>
Danish VVS No.:	386062253
Country of origin:	HU
Custom tariff no.:	84137051

## 98979916 NB 50-250/222 AASF2AESBQQEPW1 50 Hz



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

## 98979916 NB 50-250/222 AASF2AESBQQEPW1 50 Hz



IEC TP211 THERMALLY PROTECTED WHEN THE THERMISTORS ARE  
 CONNECTED TO AMPLIFIER RELAY FOR CONTROL OF MAIN SUPPLY  
 THERMISTORS PTC ACCORDING TO DIN 44082

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



