GRUNDFOS

Company name:
Created by:
Phone:

Date: 11/07/2025

Qty.	Description
1	**NK 50-250/233 AA1F2AESBAQEPW1**

Note! Product picture may differ from actual product

Product No.: On request

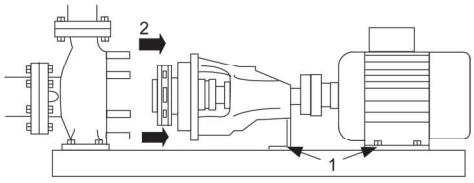
Non-self-priming, single-stage, centrifugal pump designed according to ISO 5199 with dimensions and rated performance according to EN 733. Flanges are PN 16 with dimensions according to EN 1092-2. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the motor, coupling, bearing bracket and impeller without disturbing the pump housing or pipework.

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

The pump is fitted with a foot-mounted, fan-cooled asynchronous motor. Pump and motor are mounted on a common base frame.

Pump and motor are mounted on a common steel base frame in accordance with ISO 3661. The back pull-out design makes it possible to service the pump when the pump housing is still connected to the inlet and discharge pipes.

1) Remove the bolts in the bearing bracket support foot and motor foot.
2) Remove the bearing bracket and the motor from the pump housing.



Pump

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: carbon graphite, metal-impregnated
- Stationary seat material: silicon carbide (SiC)

Due to the favourable lubricating properties of carbon graphite, the seal is suitable for use even under poor lubricating conditions, such as hot water.

However, under such conditions, wear on the carbon graphite face can be expected, and seal life will be reduced .

The material pairing is not recommended for liquids containing particles as this will result in wear on the SiC face.

Secondary seal material: EPDM (ethylene-propylene rubber)

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

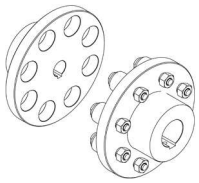
The shaft is made of stainless steel and has a diameter of 24 mm where the coupling is mounted.

The pump uses a standard coupling between the pump and motor shaft.

GRUNDFOS

Company name:
Created by:
Phone:

Date: 11/07/2025

Qty.	Description
1	

The language on the pump nameplate is English.

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 efficiency is classified as IE3 in accordance with IEC 60034-30-1.

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.

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.

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:	None
Pressure sensor:	N
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	0 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Kinematic viscosity:	1 mm2/s
Technical:	
Pump speed on which pump data are based:	2955 rpm
Actual calculated flow:	60.27 m³/h
Pump with motor (Yes/No):	Y
Resulting head of the pump:	70 m
Actual impeller diameter:	233 mm
Nominal impeller diameter:	250
Primary shaft seal:	BAQE
Code for shaft seal:	BAQE
Mechanical seal type:	Single
Curve tolerance:	ISO9906:2012 3B
Bearing design:	Standard
Materials:	
Pump housing:	Cast iron EN-GJL-250 ASTM class 35
Wear ring:	Brass CuZn34Mn3Al2Fe1-C

GRUNDFOS

Company name:
Created by:
Phone:

Date: 11/07/2025

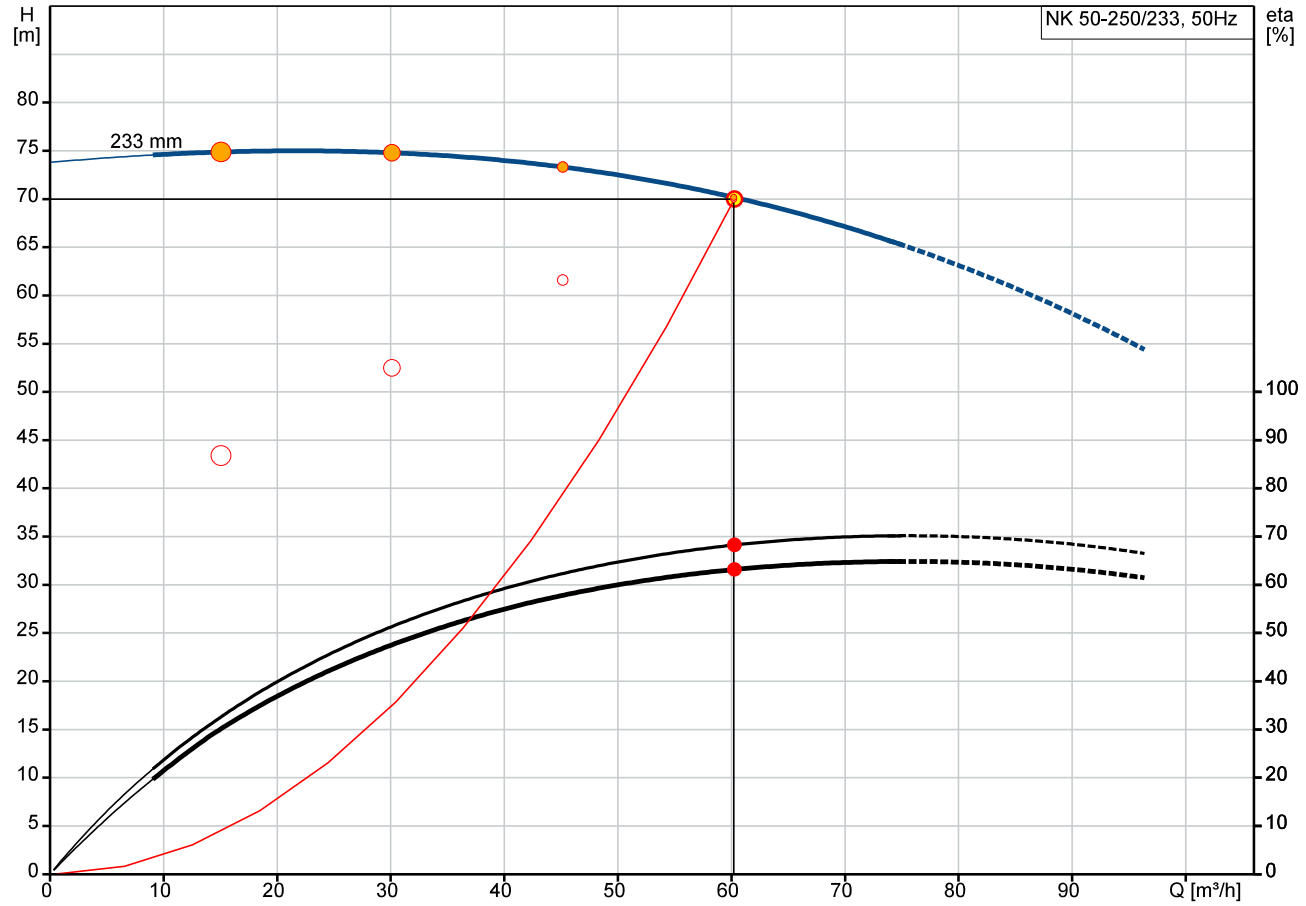
Qty.	Description	
1	Impeller:	Cast iron EN-GJL-200 ASTM class 30
	Internal pump house coating:	CED
	Shaft:	Stainless steel EN 1.4301 AISI 304
	Installation:	
	Maximum ambient temperature:	55 °C
	Maximum operating pressure:	16 bar
	Pipe connection standard:	EN 1092-2
	Type of inlet connection:	DIN
	Type of outlet connection:	DIN
	Size of inlet connection:	DN 65
	Size of outlet connection:	DN 50
	Pressure rating for connection:	PN 16
	Coupling type:	Flexible w/o spacer
	Base frame design:	EN/ISO
	Code for base frame:	6 ST
	Grouting (Yes/No):	N
	Electrical data:	
	Motor type:	INNOMOTICS
	Rated power - P2:	18.5 kW
	Mains frequency:	50 Hz
	Rated voltage:	3 x 380-420D/660-725Y V
	Rated current:	32/18.6 A
	Starting current:	900 %
	Cos phi - power factor:	0.90
	Rated speed:	2955 rpm
	IE efficiency:	IE3 92,4%
	IE Efficiency class:	IE3
	Motor efficiency at full load:	92.4 %
	Motor efficiency at 3/4 load:	92.8 %
	Motor efficiency at 1/2 load:	92.4 %
	Number of poles:	2
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	98943355
	Bearing insulation type N-end:	Steel Bearing
	Others:	
	Minimum efficiency index, MEI ≥:	0.61
	Net weight:	236 kg
	Gross weight:	251 kg
	Shipping volume:	0.504 m³
	Language on pump nameplate:	GB

GRUNDFOS

Company name:
Created by:
Phone:

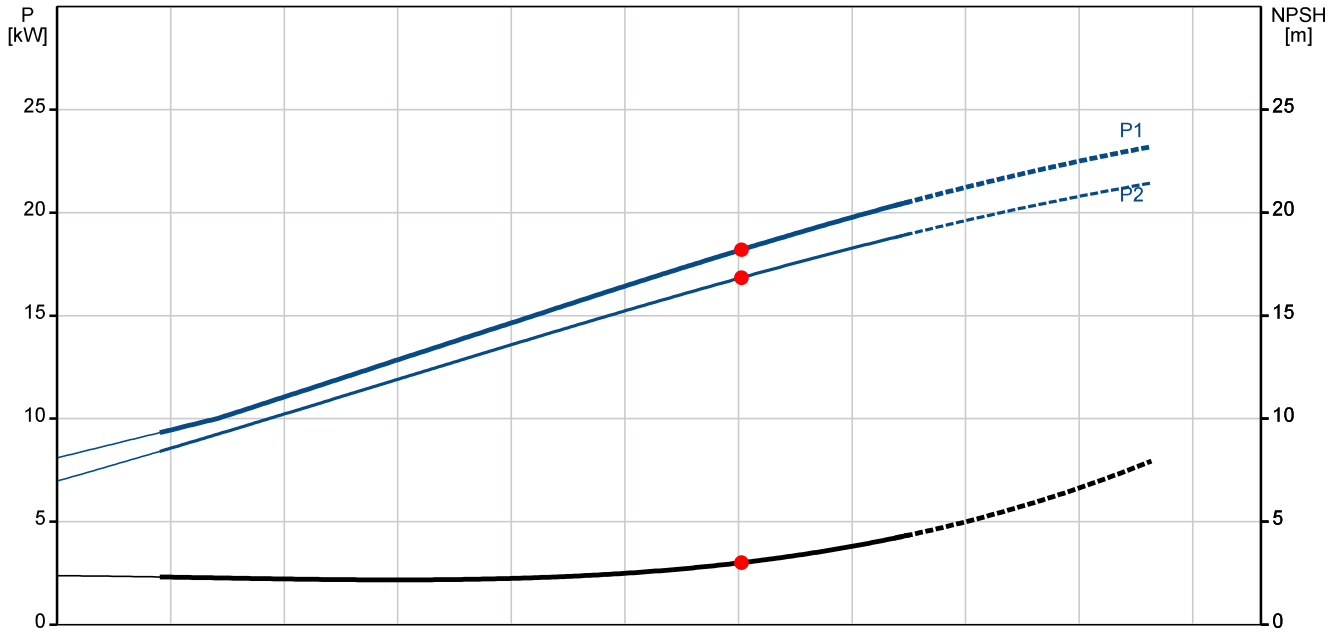
Date: 11/07/2025

On request NK 50-250/233 AA1F2AESBAQEPW1 50 Hz



Q = 60.27 m³/h
Pumped liquid = Water
Density = 998.2 kg/m³
Eta pump+motor = 63.2 %

H = 70 m
Liquid temperature during operation = 20 °C
Eta pump = 68.3 %

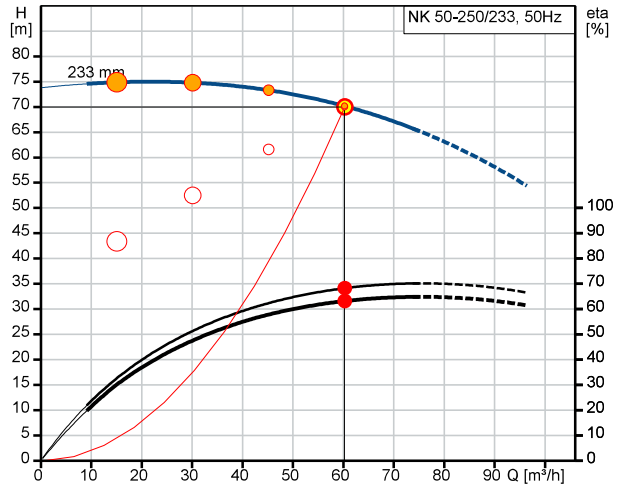


P1 = 18.2 kW
P2 = 16.84 kW
NPSH = 3.01 m

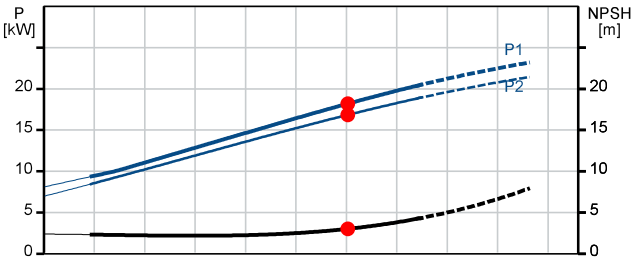
Company name:
Created by:
Phone:

Date: 11/07/2025

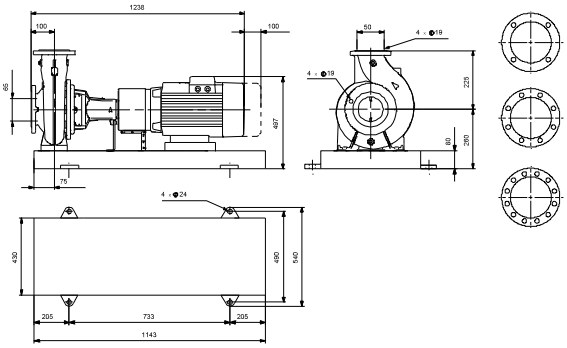
Description	Value
General information:	
Product name:	NK 50-250/233 AA1F2AESBAQEPW1
Product No:	On request
EAN number:	On request
Technical:	
Pump speed on which pump data are based:	2955 rpm
Actual calculated flow:	60.27 m³/h
Pump with motor (Yes/No):	Y
Resulting head of the pump:	70 m
Actual impeller diameter:	233 mm
Nominal impeller diameter:	250
Primary shaft seal:	BAQE
Shaft diameter:	24 mm
Code for shaft seal:	BAQE
Mechanical seal type:	Single
Curve tolerance:	ISO9906:2012 3B
Pump version:	A1
Bearing design:	Standard
Materials:	
Pump housing:	Cast iron
	EN-GJL-250
	ASTM class 35
Wear ring:	Brass
	CuZn34Mn3Al2Fe1-C
Impeller:	Cast iron
	EN-GJL-200
	ASTM class 30
Internal pump house coating:	CED
Material code:	A
Code for rubber:	E
Shaft:	Stainless steel
	EN 1.4301
	AISI 304
Installation:	
Maximum ambient temperature:	55 °C
Maximum operating pressure:	16 bar
Pipe connection standard:	EN 1092-2
Type of inlet connection:	DIN
Type of outlet connection:	DIN
Size of inlet connection:	DN 65
Size of outlet connection:	DN 50
Pressure rating for connection:	PN 16
Coupling type:	Flexible w/o spacer
Base frame design:	EN/ISO
Code for base frame:	6 ST
Grouting (Yes/No):	N
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	0 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Kinematic viscosity:	1 mm2/s
Electrical data:	
Motor type:	INNOMOTICS
Rated power - P2:	18.5 kW

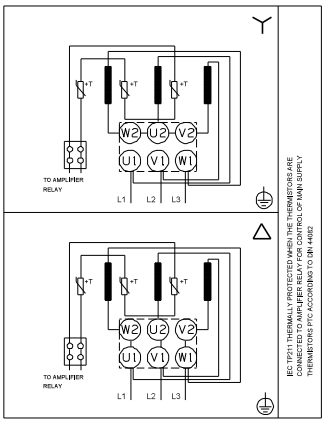


Q = 60.27 m³/h
H = 70 m
Pumped liquid = Water
Density = 998.2 kg/m³
Eta pump = 68.3 %
Eta pump+motor = 63.2 %
Liquid temperature during operation = 20 °C



P1 = 18.2 kW
P2 = 16.84 kW
NPSH = 3.01 m





GRUNDFOS

Company name:
Created by:
Phone:

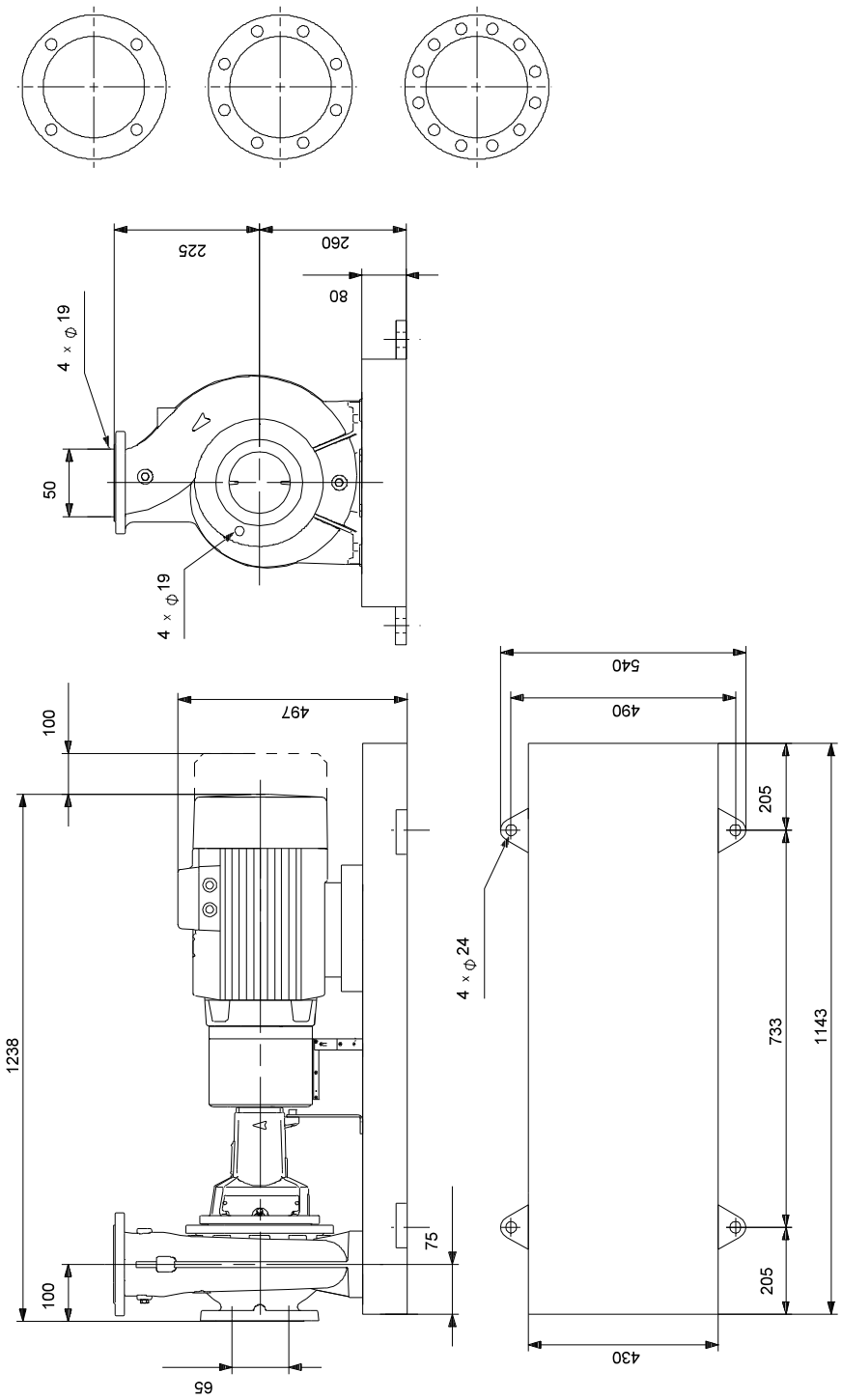
Date: 11/07/2025

Description	Value
Mains frequency:	50 Hz
Rated voltage:	3 x 380-420D/660-725Y V
Rated current:	32/18.6 A
Starting current:	900 %
Cos phi - power factor:	0.90
Rated speed:	2955 rpm
IE efficiency:	IE3 92,4%
IE Efficiency class:	IE3
Motor efficiency at full load:	92.4 %
Motor efficiency at 3/4 load:	92.8 %
Motor efficiency at 1/2 load:	92.4 %
Number of poles:	2
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	98943355
Bearing insulation type N-end:	Steel Bearing
Controls:	
Frequency converter:	None
Pressure sensor:	N
Others:	
Minimum efficiency index, MEI ≥:	0.61
Net weight:	236 kg
Gross weight:	251 kg
Shipping volume:	0.504 m³
Language on pump nameplate:	GB

Company name:
Created by:
Phone:

Date: 11/07/2025

On request NK 50-250/233 AA1F2AESBAQEPW1 50 Hz

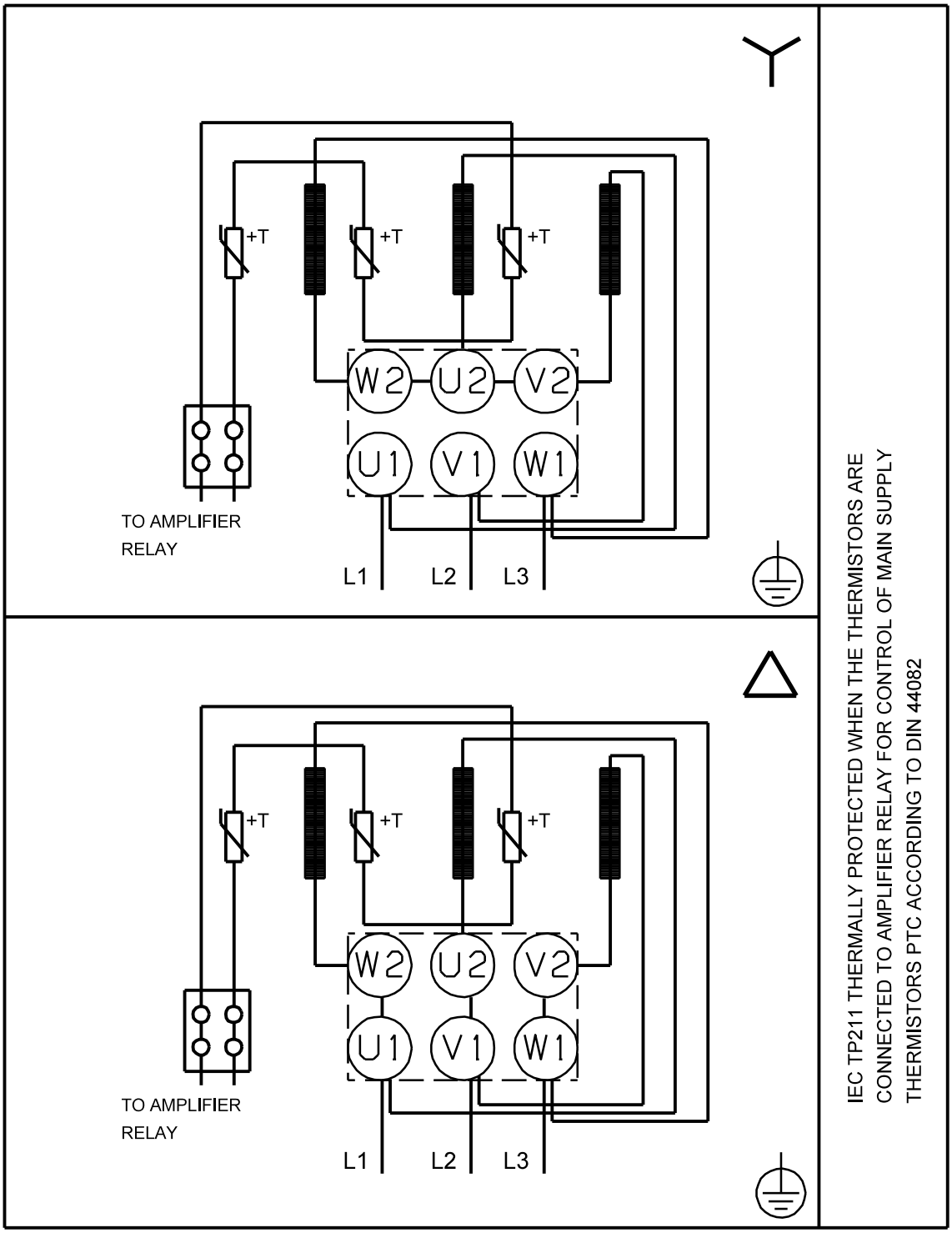


Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Company name:
Created by:
Phone:

Date: 11/07/2025

On request NK 50-250/233 AA1F2AESBAQEPW1 50 Hz



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