GRUNDFOS

Company name:	Al Mawared Engineering & Trading S.A.E (MET)
Created by:	Mostafa Mohamed
Phone:	02 26421242 - 01223033998
Email:	info@met-eg.com - Almawared@link.net
Date:	08/10/2023

Qty.	Description
1	**NK 80-400/401 AA1F2BESBAQEUX4**

Note! Product picture may differ from actual product

Product No.: On request

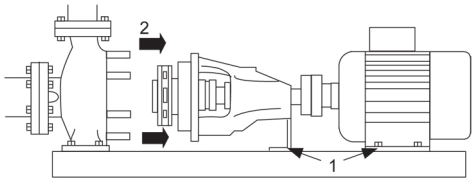
Non-self-priming, single-stage, centrifugal pump designed according to ISO 5199 with dimensions and rated performance according to EN 733. Flanges are PN 16 with dimensions according to EN 1092-2. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out 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 .

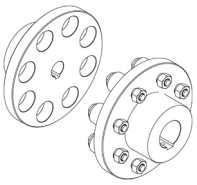
The material pairing is not recommended for liquids containing particles as this will result in wear on the SiC face.

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 42 mm where the coupling is mounted.

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

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 premium efficiency in accordance with EISA2007.

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.

A variable speed drive makes adjustment of pump performance to any duty point possible. If the motor is to be connected to a variable speed drive, the pump must be ordered with an electrically insulated motor bearing.

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

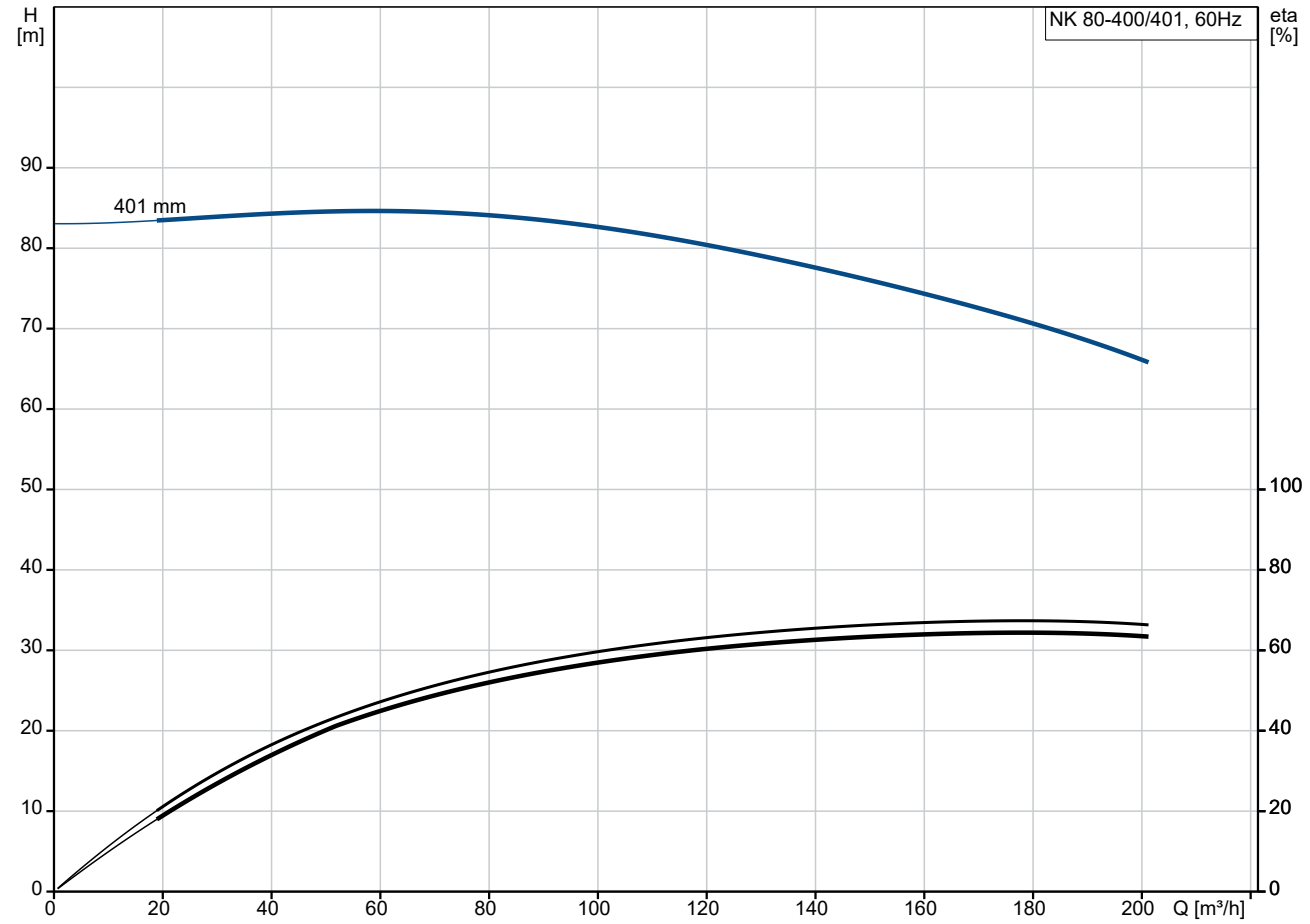
Controls:	
Frequency converter:	NONE
Pressure sensor:	N
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	0 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Technical:	
Pump speed on which pump data are based:	1786 rpm
Rated flow:	184.7 m³/h
Pump with motor (Yes/No):	Y
Rated head:	69.47 m
Actual impeller diameter:	401 mm
Nominal impeller diameter:	400
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
Impeller:	Bronze CuSn10-C

Company name: Al Mawared Engineering & Trading S.A.E (MET)
Created by: Mostafa Mohamed
Phone: 02 26421242 - 01223033998
Email: info@met-eg.com - Almawared@link.net
Date: 08/10/2023

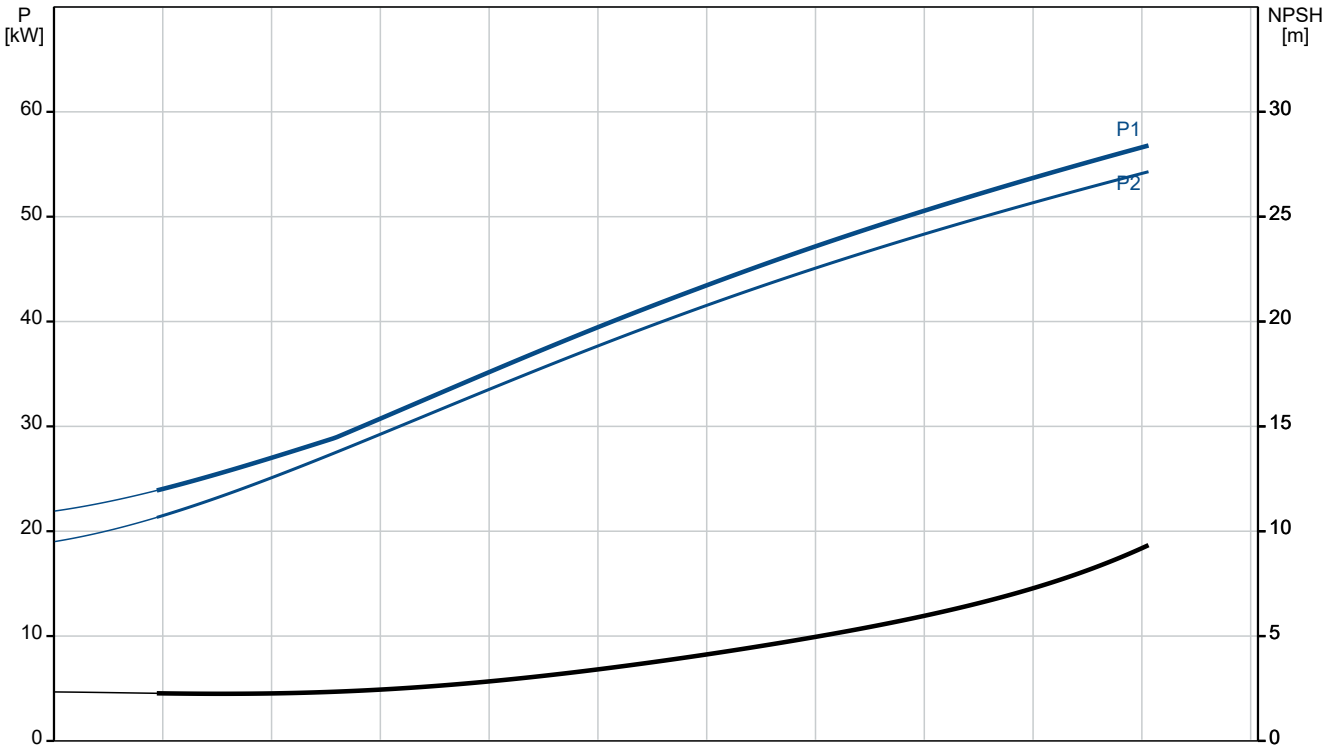
Qty.	Description	
1	Internal pump house coating:	CED
	Shaft:	Stainless steel EN 1.4301 AISI 304
	Installation:	
	Maximum ambient temperature:	55 °C
	Maximum operating pressure:	16 bar
	Pipe connection standard:	EN 1092-2
	Type of inlet connection:	DIN
	Type of outlet connection:	DIN
	Size of inlet connection:	DN 100
	Size of outlet connection:	DN 80
	Pressure rating for connection:	PN 16
	Coupling type:	Flexible w/o spacer
	Base frame design:	EN/ISO
	Code for base frame:	9B ST
	Grouting (Yes/No):	N
	Electrical data:	
	Motor type:	SIEMENS
	Rated power - P2:	55 kW
	Mains frequency:	60 Hz
	Rated voltage:	3 x 440-480D V
	Rated current:	84 A
	Starting current:	760-760 %
	Cos phi - power factor:	0.86
	Rated speed:	1786 rpm
	IE efficiency:	IE3 95,6%
	IE Efficiency class:	IE3 / NEMA Premium
	Motor efficiency at full load:	95.6-95.6 %
	Motor efficiency at 3/4 load:	95.6-95.6 %
	Motor efficiency at 1/2 load:	95.1-95.1 %
	Number of poles:	4
	Enclosure class (IEC 34-5):	IP55
	Insulation class (IEC 85):	F
	Motor No:	98957823
	Bearing insulation type N-end:	STEEL BEARING
	Others:	
	Minimum efficiency index, MEI ≥:	0.41
	DOE Pump Energy Index CL:	0.93
	DOE Pump Energy Index VL:	0.00
	Net weight:	830 kg
	Gross weight:	921 kg
	Shipping volume:	1.92 m³
	Language on pump nameplate:	GB

Company name: Al Mawared Engineering & Trading S.A.E (MET)
Created by: Mostafa Mohamed
Phone: 02 26421242 - 01223033998
Email: info@met-eg.com - Almawared@link.net
Date: 08/10/2023

On request NK 80-400/401 AA1F2BESBAQEUX4 60 Hz



Pumped liquid = Water
Liquid temperature during operation = 20 °C
Density = 998.2 kg/m³

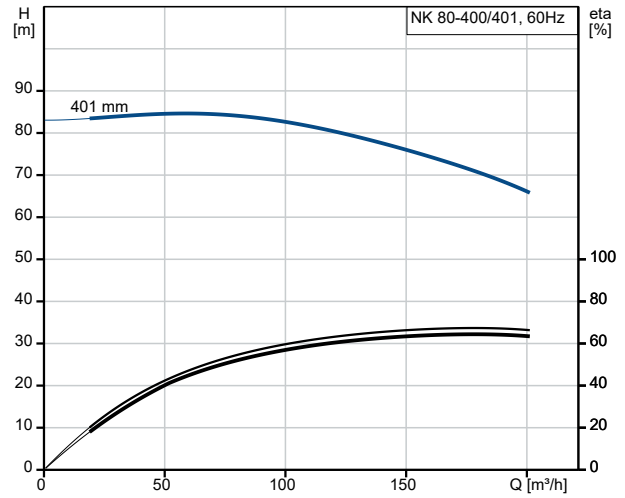


GRUNDFOS

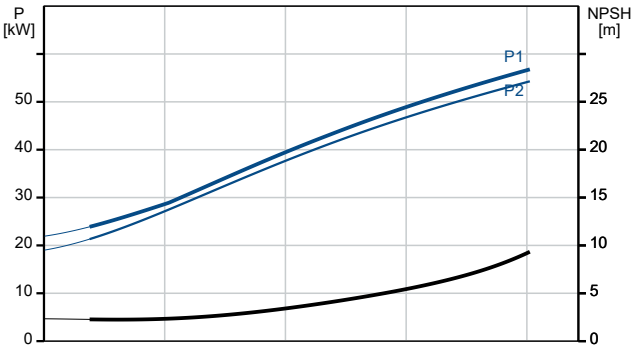
Company name: Al Mawared Engineering & Trading S.A.E (MET)
Created by: Mostafa Mohamed
Phone: 02 26421242 - 01223033998
Email: info@met-eg.com - Almawared@link.net

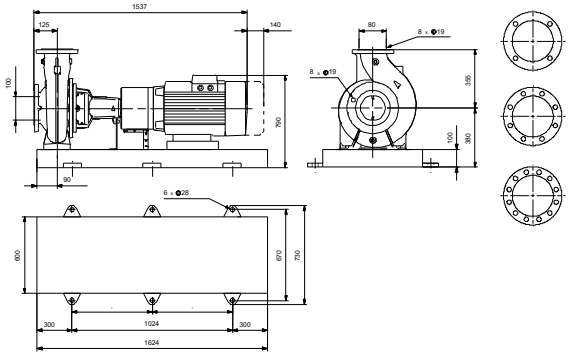
Date: 08/10/2023

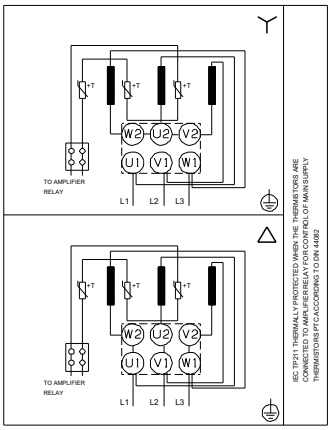
Description	Value
General information:	
Product name:	NK 80-400/401 AA1F2BESBAQEUX4
Product No:	On request
EAN number:	On request
Technical:	
Pump speed on which pump data are based:	1786 rpm
Rated flow:	184.7 m³/h
Pump with motor (Yes/No):	Y
Rated head:	69.47 m
Actual impeller diameter:	401 mm
Nominal impeller diameter:	400
Shaft diameter:	42 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
Pump housing:	EN-GJL-250
Pump housing:	ASTM class 35
Wear ring:	Brass
Impeller:	Bronze
Impeller:	CuSn10-C
Internal pump house coating:	CED
Material code:	B
Code for rubber:	E
Shaft:	Stainless steel
Shaft:	EN 1.4301
Shaft:	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 100
Size of outlet connection:	DN 80
Pressure rating for connection:	PN 16
Coupling type:	Flexible w/o spacer
Base frame design:	EN/ISO
Code for base frame:	9B 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
Electrical data:	
Motor type:	SIEMENS
Rated power - P2:	55 kW
Mains frequency:	60 Hz
Rated voltage:	3 x 440-480D V
Rated current:	84 A
Starting current:	760-760 %
Cos phi - power factor:	0.86
Rated speed:	1786 rpm



Pumped liquid = Water
Liquid temperature during operation = 20 °C
Density = 998.2 kg/m³





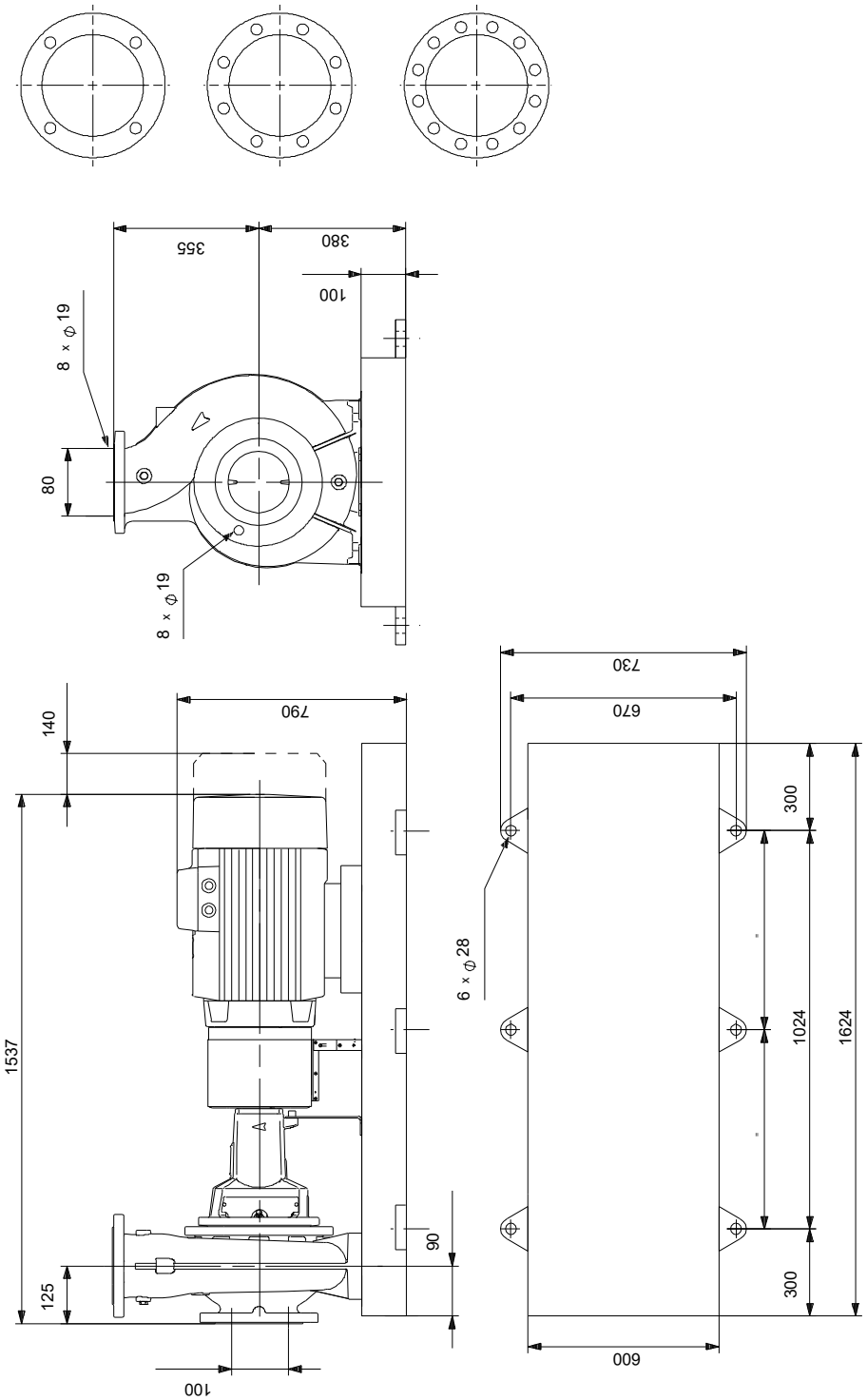


Company name: Al Mawared Engineering & Trading S.A.E (MET)
Created by: Mostafa Mohamed
Phone: 02 26421242 - 01223033998
Email: info@met-eg.com - Almawared@link.net
Date: 08/10/2023

Description	Value
IE efficiency:	IE3 95,6%
IE Efficiency class:	IE3 / NEMA Premium
Motor efficiency at full load:	95.6-95.6 %
Motor efficiency at 3/4 load:	95.6-95.6 %
Motor efficiency at 1/2 load:	95.1-95.1 %
Number of poles:	4
Enclosure class (IEC 34-5):	IP55
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	98957823
Bearing insulation type N-end:	STEEL BEARING
Controls:	
Frequency converter:	NONE
Pressure sensor:	N
Others:	
Minimum efficiency index, MEI ≥:	0.41
DOE Pump Energy Index CL:	0.93
DOE Pump Energy Index VL:	0.00
Net weight:	830 kg
Gross weight:	921 kg
Shipping volume:	1.92 m³
Language on pump nameplate:	GB

Company name: Al Mawared Engineering & Trading S.A.E (MET)
Created by: Mostafa Mohamed
Phone: 02 26421242 - 01223033998
Email: info@met-eg.com - Almawared@link.net
Date: 08/10/2023

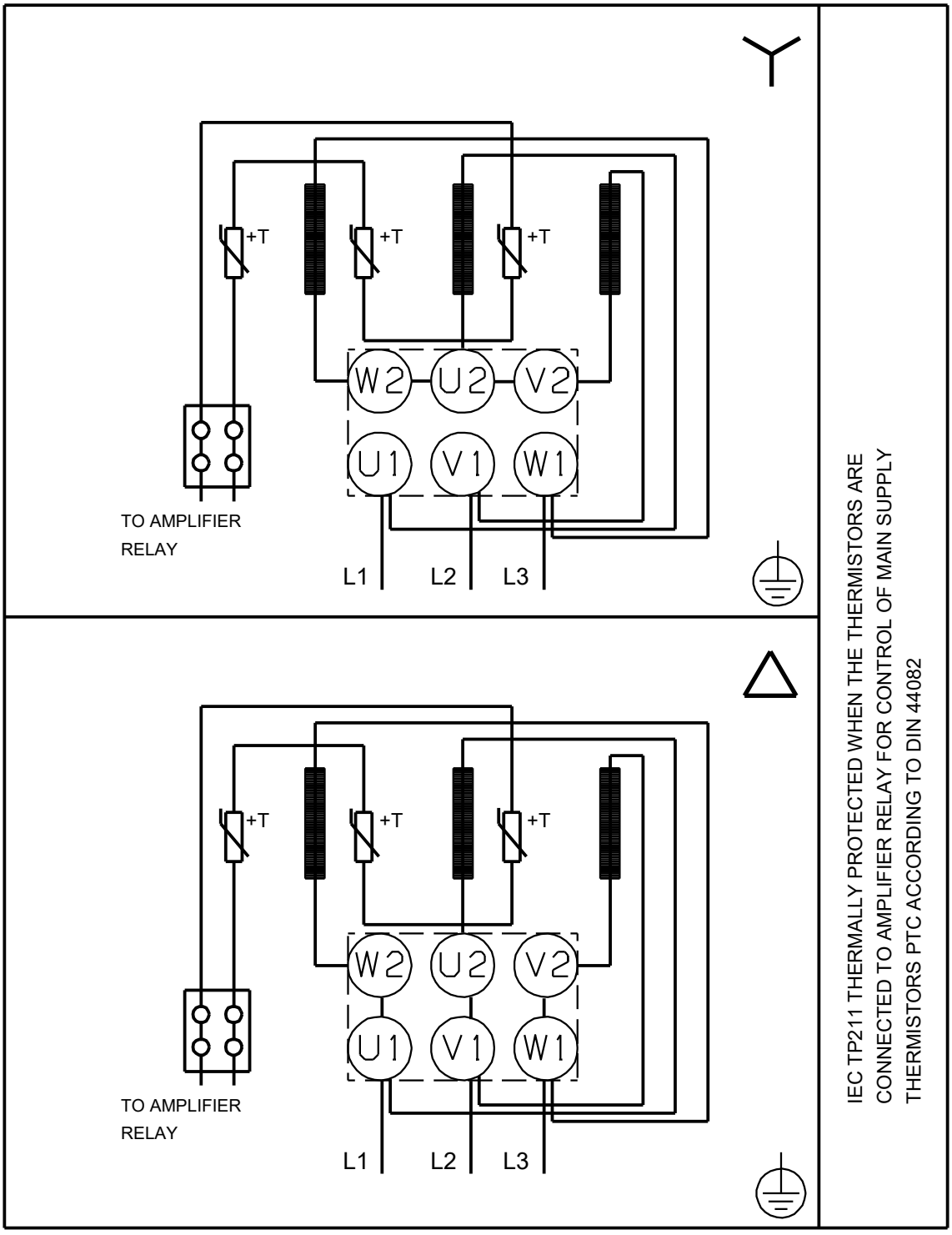
On request NK 80-400/401 AA1F2BESBAQEUX4 60 Hz



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

Company name: Al Mawared Engineering & Trading S.A.E (MET)
Created by: Mostafa Mohamed
Phone: 02 26421242 - 01223033998
Email: info@met-eg.com - Almawared@link.net
Date: 08/10/2023

On request NK 80-400/401 AA1F2BESBAQEUX4 60 Hz



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

GRUNDFOS

Company name: Al Mawared Engineering & Trading S.A.E (MET)
Created by: Mostafa Mohamed
Phone: 02 26421242 - 01223033998
Email: info@met-eg.com - Almawared@link.net
Date: 08/10/2023

Order Data:

Position	Your pos.	Product name	Amount	Product No	Total
		NK 80-400/401	1	On request	Price on request