GRUNDFOS

Company name:
Created by:
Phone:

Date: 30/11/2022

Qty.	Description
1	**CRN 20-16 S-P-A-E-HQQE**

Product No.: 96512261

Vertical, non-self-priming, high-pressure multistage centrifugal pump with suction and discharge ports on the same level (in-line) enabling installation in a horizontal one-pipe system. The chamber stack is turned upside-down to ensure that the shaft seal is not affected by the high pump discharge pressure. Pump materials in contact with the liquid are in high-grade stainless steel. A cartridge shaft seal ensures high reliability, safe handling and easy service and access. Power transmission is via a split coupling. Pipe connection is via PJE (Victaulic®) couplings.

Further product details

Steel, cast iron and aluminium components 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.

An integral part of the process is a pretreatment.

The entire process consists of these elements:

1) alkaline-based cleaning.
2) zinc phosphating.
3) cathodic electro-deposition.
4) curing to a dry film thickness 18-22 my m.

The colour code for the finished product is NCS 9000/RAL 9005.

Pump

The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system.

This seal type is assembled in a cartridge unit which makes replacement safe and easy.

Due to the balancing, this seal type is suitable for high-pressure applications.

The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.

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 chambers and impellers are made of stainless steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency.

Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with free-hole flange (FF).

Motor-mounting designation in accordance with IEC 60034-7: IM B 5 (Code I) / IM 3001 (Code II).

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.

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1	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. 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.

Technical data

Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-30 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Technical:	
Pump speed on which pump data are based:	2934 rpm
Rated flow:	21 m³/h
Rated head:	191.4 m
Code for shaft seal:	HQQE
Approvals:	CE,EAC,UKCA,SEPRO
Approvals for drinking water:	ACS
Curve tolerance:	ISO9906:2012 3B
Materials:	
Pump housing:	Stainless steel DIN W.-Nr. 1.4408 ASTM A 351 CF 8M
Impeller:	Stainless steel DIN W.-Nr. 1.4401 AISI 316
Installation:	
t max amb:	60 °C
Max pressure at stated temp:	50 bar / 120 °C 50 bar / -30 °C
Type of connection:	PJE
Size of connection:	2 inch
Flange size for motor:	FF300
Electrical data:	
Motor type:	160LB
IE Efficiency class:	IE3
Rated power - P2:	18.5 kW
Power (P2) required by pump:	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:	92.4-92.4 %
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:	85905163

GRUNDFOS

Company name:
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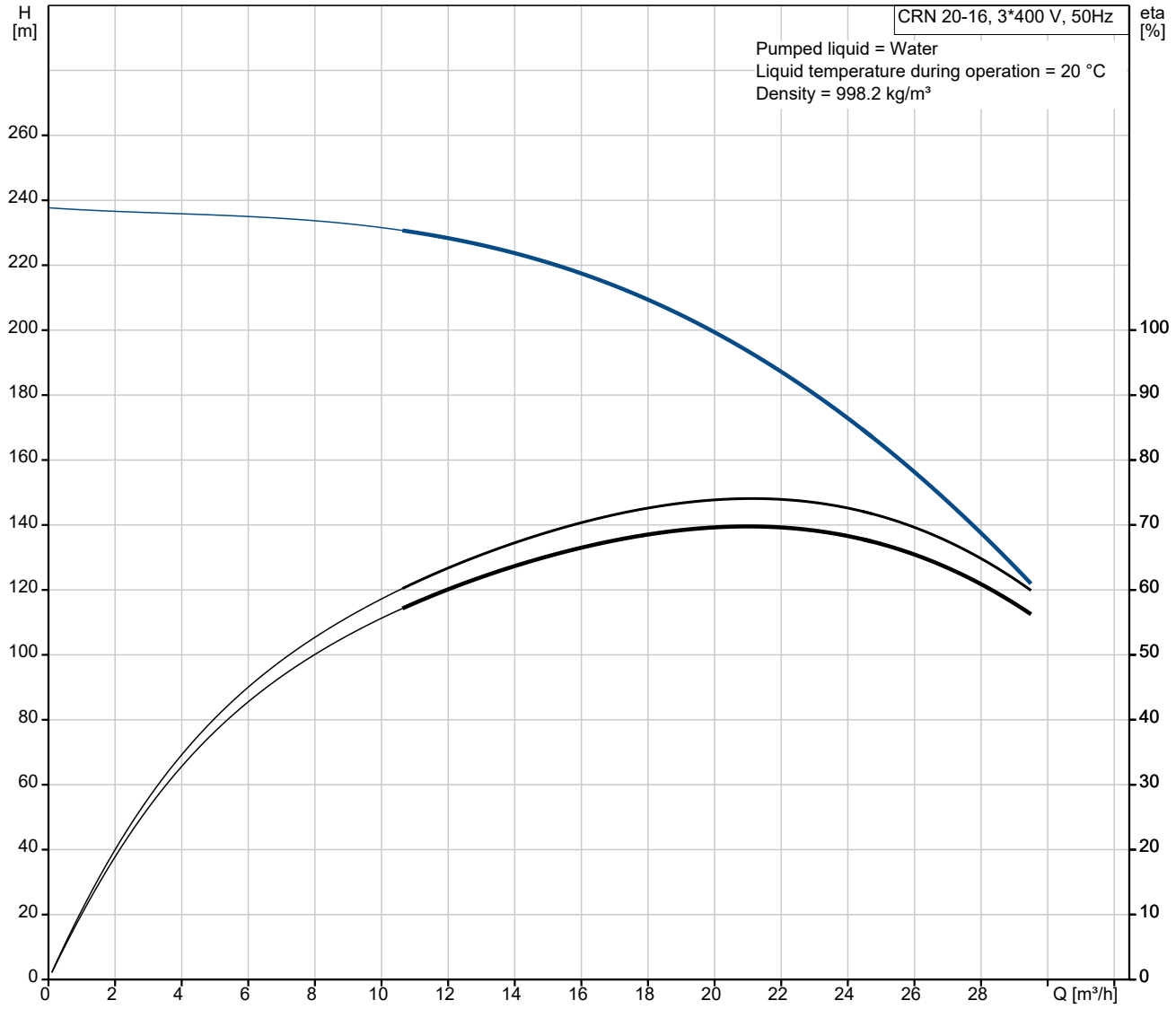
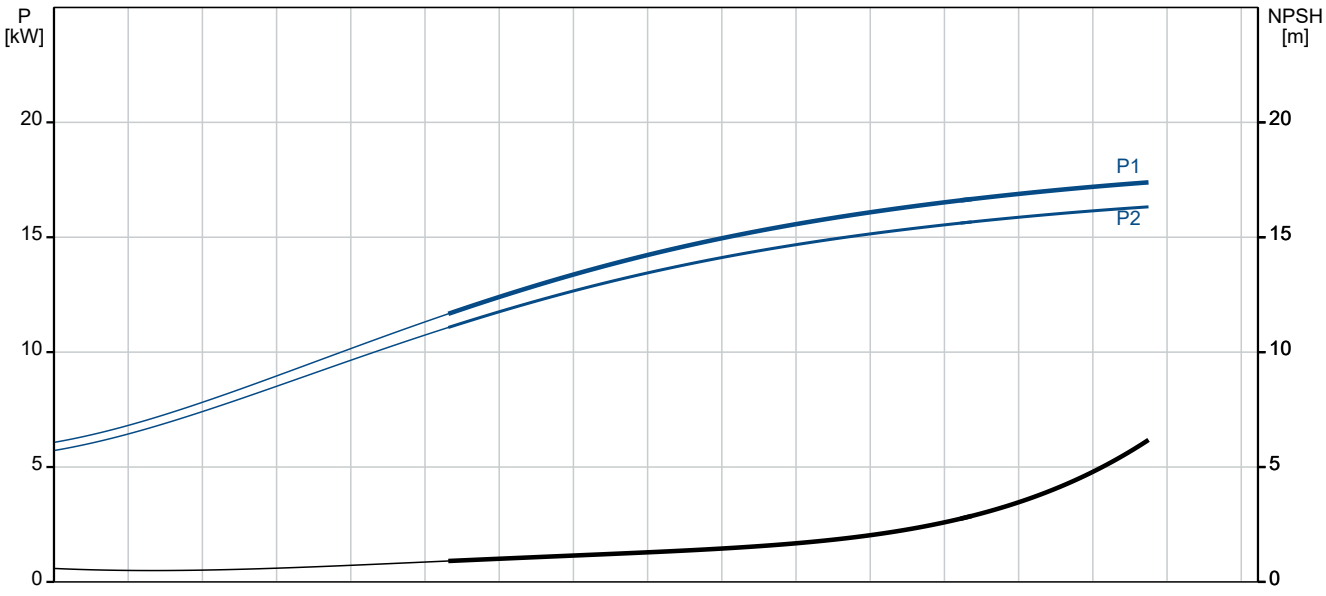
Qty.	Description
1	Others: Minimum efficiency index, MEI ≥: 0.70 Net weight: 178 kg Gross weight: 218 kg

Company name:
Created by:
Phone:

Date: 30/11/2022

96512261 CRN 20-16 S-P-A-E-HQQE 50 Hz





Company name:
Created by:
Phone:

Date: 30/11/2022

Description	Value
General information:	
Product name:	CRN 20-16 S-P-A-E-HQQE
Product No:	96512261
EAN number:	5700396600451
Technical:	
Pump speed on which pump data are based:	2934 rpm
Rated flow:	21 m³/h
Rated head:	191.4 m
Stages:	16
Impellers:	16
Code for shaft seal:	HQQE
Approvals:	CE,EAC,UKCA,SEPRO
Approvals for drinking water:	ACS
Curve tolerance:	ISO9906:2012 3B
Pump version:	S
Model:	A
Materials:	
Pump housing:	Stainless steel
Pump housing:	DIN W.-Nr. 1.4408
Pump housing:	ASTM A 351 CF 8M
Impeller:	Stainless steel
Impeller:	DIN W.-Nr. 1.4401
Impeller:	AISI 316
Material code:	A
Code for rubber:	E
Installation:	
t max amb:	60 °C
Max pressure at stated temp:	50 bar / 120 °C
Max pressure at stated temp:	50 bar / -30 °C
Type of connection:	PJE
Size of connection:	2 inch
Flange size for motor:	FF300
Connect code:	P
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-30 .. 120 °C
Selected liquid temperature:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor type:	160LB
IE Efficiency class:	IE3
Rated power - P2:	18.5 kW
Power (P2) required by pump:	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
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Cos phi - power factor:	0.89-0.85
Rated speed:	2940-2950 rpm
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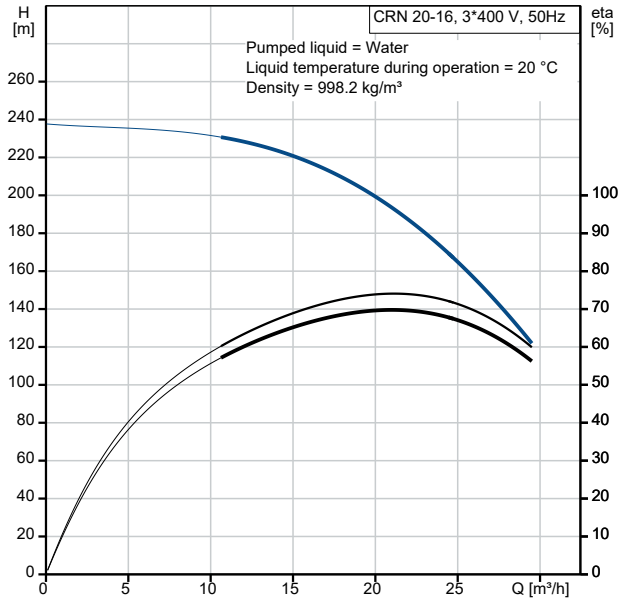
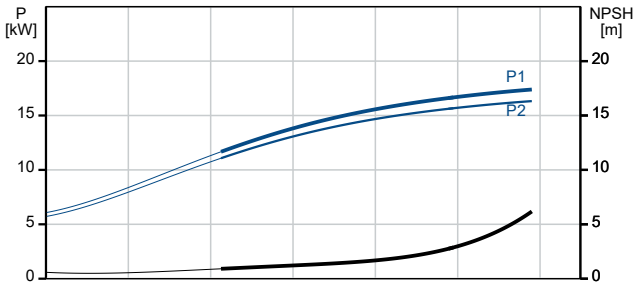
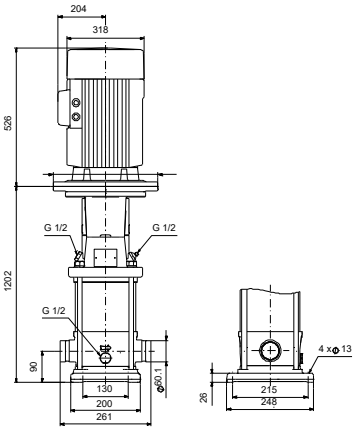
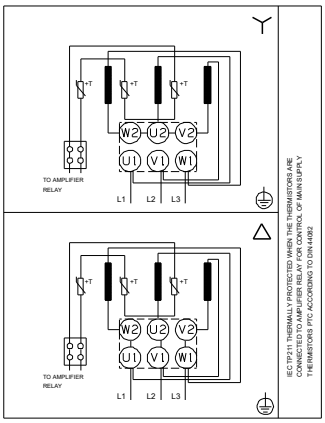
Motor efficiency at full load:	92.4-92.4 %
Motor efficiency at 3/4 load:	93.2 %
Motor efficiency at 1/2 load:	93.2 %
Number of poles:	2
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F









GRUNDFOS

Company name:
Created by:
Phone:

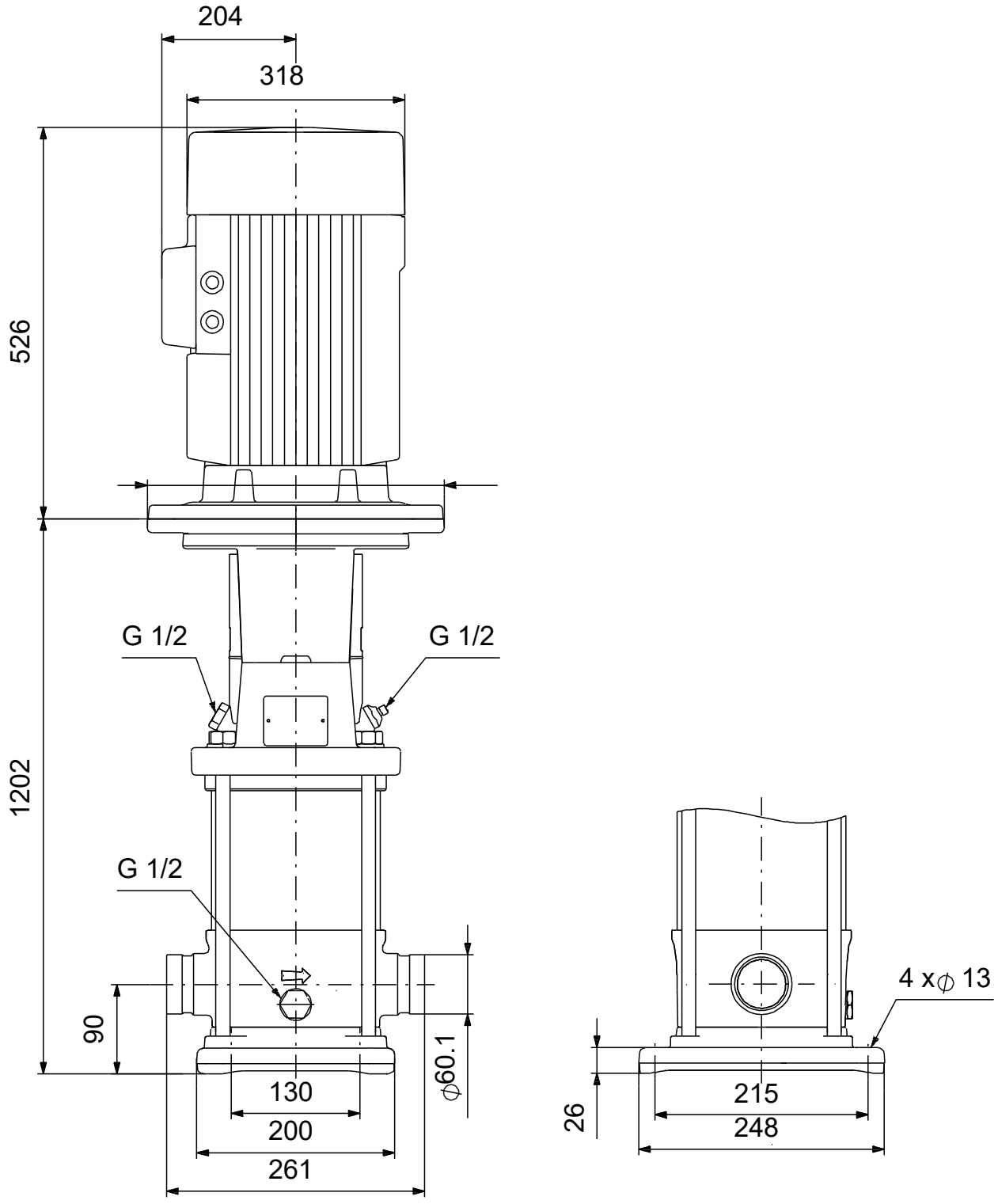
Date: 30/11/2022

Description	Value
Built-in motor protection:	PTC
Motor No:	85905163
Others:	
Minimum efficiency index, MEI ≥:	0.70
Net weight:	178 kg
Gross weight:	218 kg

Company name:
Created by:
Phone:

Date: 30/11/2022

96512261 CRN 20-16 S-P-A-E-HQQE 50 Hz



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

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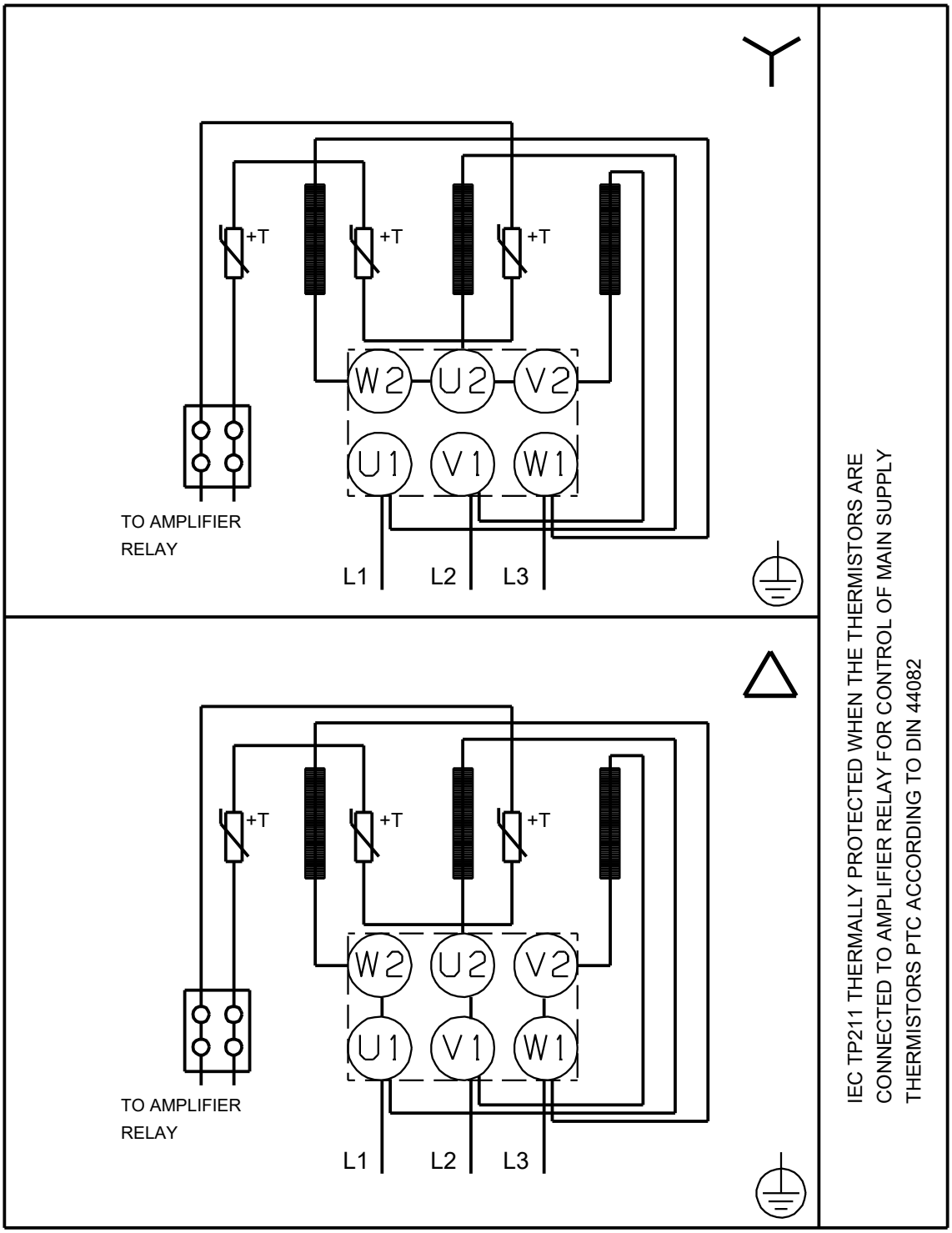
Date: 30/11/2022

96512261 CRN 20-16 S-P-A-E-HQQE 50 Hz



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

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Company name:
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Phone:

Date: 30/11/2022

Order Data:

Position	Your pos.	Product name	Amount	Product No	Total
		CRN 20-16	1	96512261	Price on request