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AUTRIAL



Customer: BOMBAS IDEAL, S.A.



End Customer:



Reference: R230710JF_PROYECTO GEORGIA



Order No: PC23/004975



Document No: **23070217-004**



Project

ELECTRICAL PANEL FOR PUMP 200KW



Manufacture Year: 2023



Installation Site:



Revision **02**



ENVIRONMENTAL



- ✓ Maximum outside temperature: 30°C
- ✓ Maximum humidity: 70%
- ✓ Maximum altitude (s.n.m.): 1000m
- ✓ Heat dissipation | Airflow needed: 5350W | 2100m³/h

CONSTRUCTIVE



- ✓ Execution: Form 2B
- ✓ Electromagnetic compatibility: Setting A
- ✓ Location: Indoor
- ✓ Cable entries: Under
- ✓ Dimensions (He x Wi x De): 2400x1000x500mm
- ✓ Degree of protection: IP54 / IP20 (open doors)
- ✓ Color: RAL7035
- ✓ Material: Steel
- ✓ Weight: 300Kg

ELECTRICAL



- ✓ Insulation voltage: 690Vac
- ✓ Rated voltage: 400Vac
- ✓ Control voltage: 230Vac
- ✓ Nominal impulse voltage: 6kV
- ✓ Nominal frequency: 50Hz
- ✓ Rated current: 400A
- ✓ Conditional short-circuit intensity: 10kA
- ✓ Power supply system: 3/PE
- ✓ Neutral regime: TT

WIRING



- ✓ In alternating current (Vac)
 - Phase R (L1/L): Black
 - Phase S (L2): Brown
 - Phase T (L3): Grey
 - Neutral (N): Blue
 - Control (phase): Red
 - Secondary transformers: Black
- ✓ In direct current (Vdc)
 - Positive (+): Brown
 - Negative (-): Green
- ✓ Independent control of the disconnectors: Orange
- ✓ Earth/ground: Green/yellow

ATTENTION !



- Power supply line must be protected for: short-circuit, overcurrent, direct and indirect contacts.
- In machinery room where IF-07 from RSIF may be applicable, emergency circuit breaker should be installed to allow disconnection of the power supply line.
- The electrical panel is recommended to be located in a closed and covered room



SUMMARY OF SYMBOLS



Black box 	Busbar connection point 	Cable definition line 	Interruption point (rectangle) 	Shield 	Electromechanical operating device, general / relay coil, general 	Float switch, NC contact 	Light-emitting diode (LED), general 	Limit switch, NC contact 	Changeover switch 	Current transformer
Electronic control 	Emergency button, NO contact 	Fluorescent lamp 	Fuse, 3P 	Generic output, 2 pins 	Generic output, 3 pins 	Ground connection 	Ground connection, silent 	Housing frame 	Light-emitting diode (LED), Yellow 	MCB / MCCB 2P
MCB / MCCB 3P 	NO auxiliary contact 	NO contact 	Overvoltage release 	PT100 probe, 3 wires 	Power supply, 3P 	Pressure probe, 2 wires 	RCCB, 2P 	Single-phase motor 	Switch, NO contact 	Temperature changeover switch, NO contact
Terminal 	Three-phase motor 	Transformer 5P / 4P 	VFD 							



STRUCTURE IDENTIFICATION



AUTRIAL

23070217-004

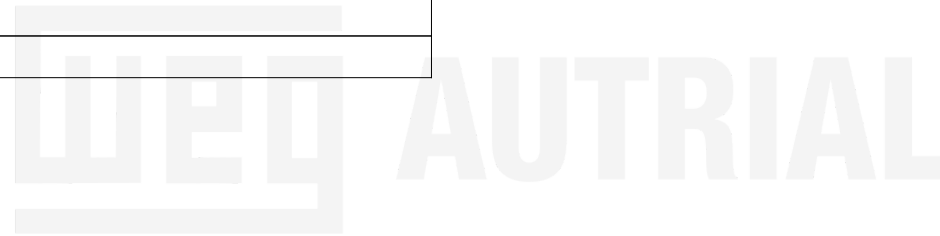


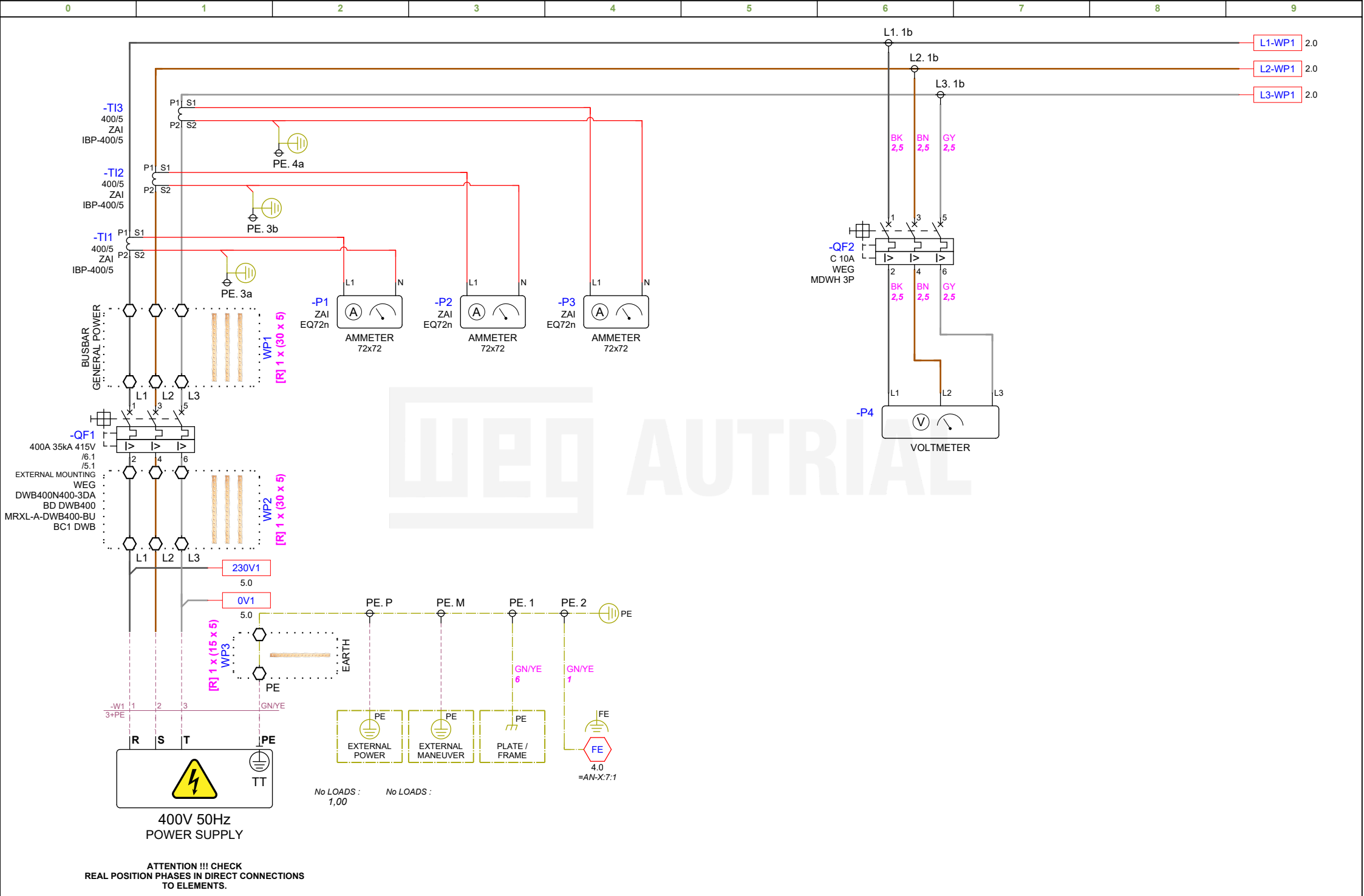
Designation

Description of Structure

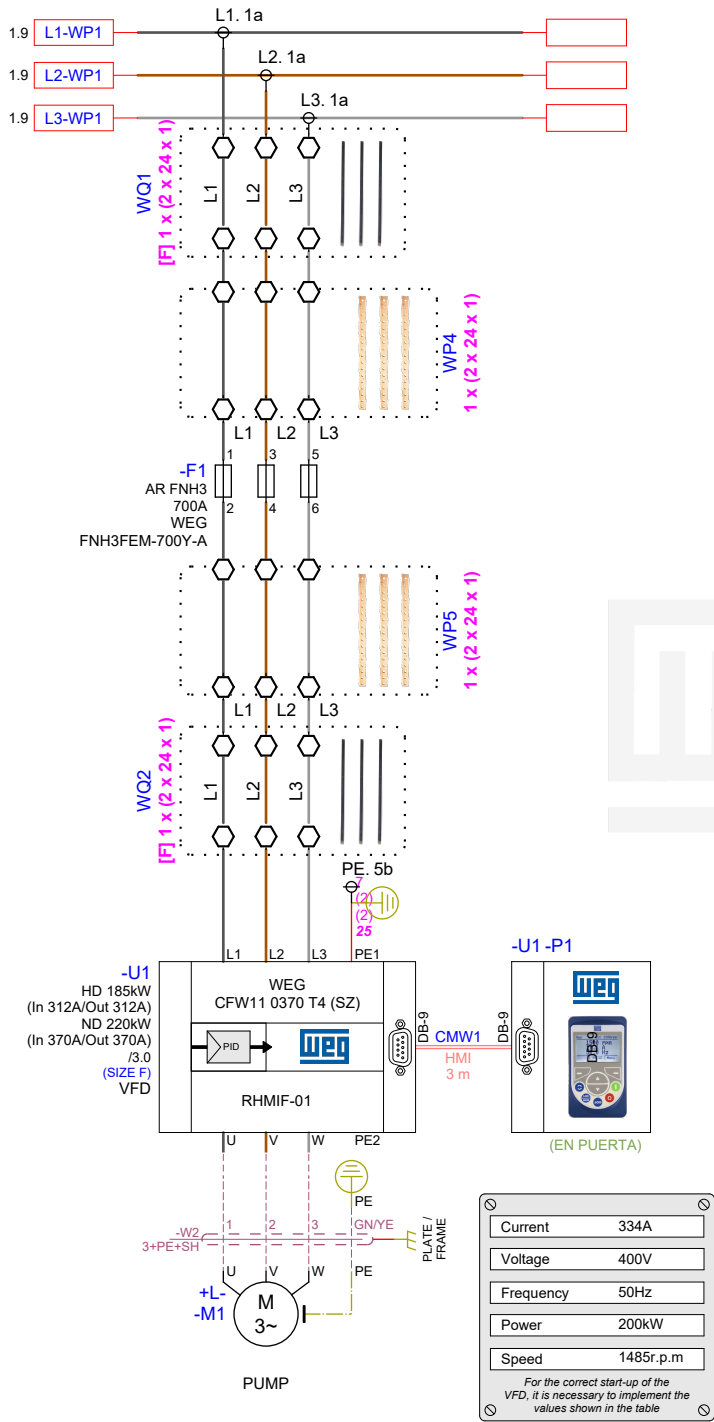
Place of assembly	
+A1	ELECTRICAL CABINET
+L	EXTERNAL

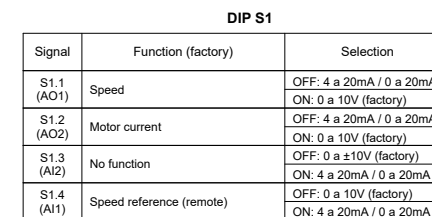
Installation	
=DOC	DOCUMENTATION
=-	GENERALITIES
=AN	ANALOGIES
=BOR	TERMINALS
=MAT	MATERIALS
=ANX	ANNEXES





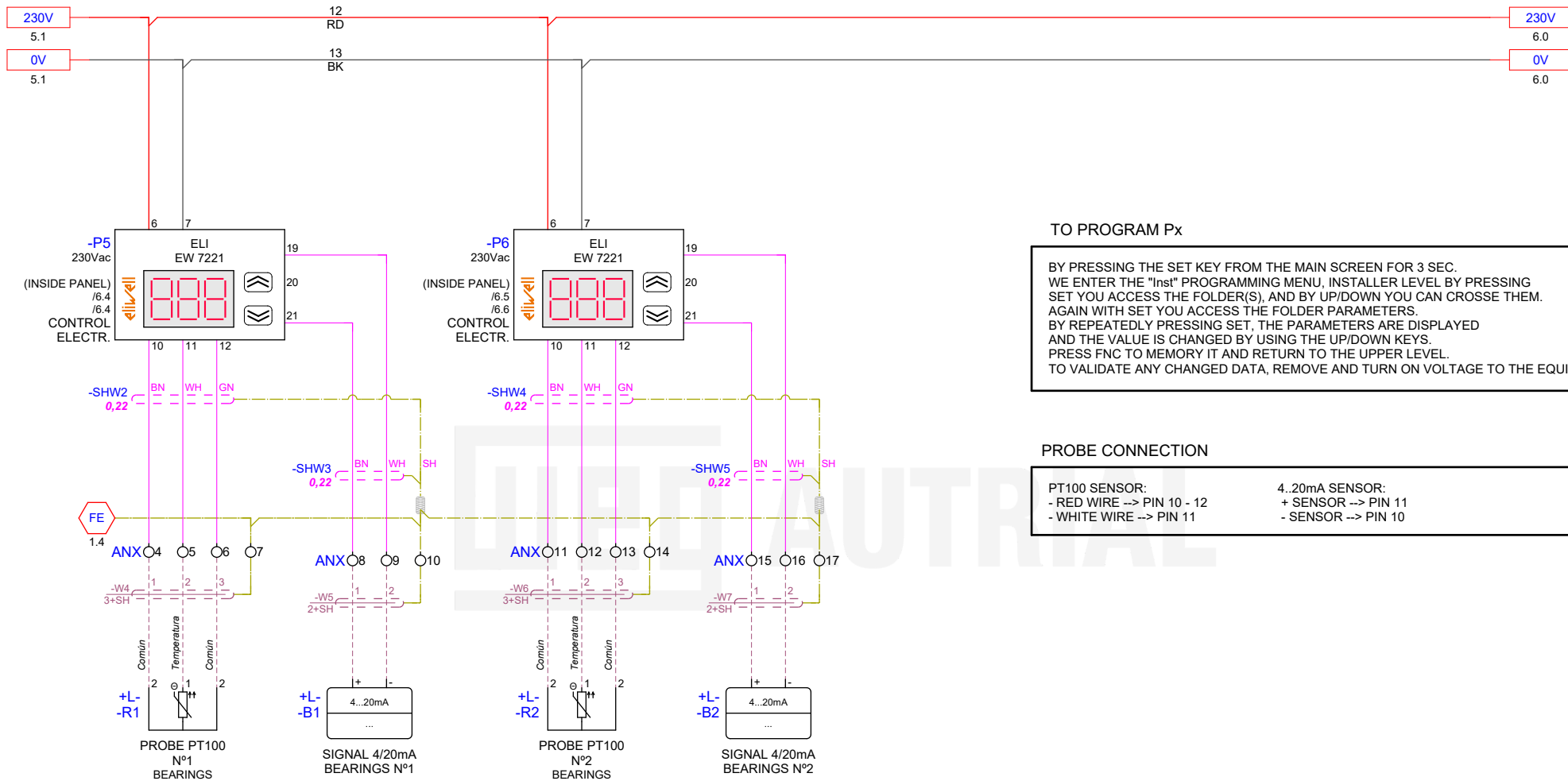
Drawing	L.Escart	Revision - Date	02 - 15/12/2023	Concept: POWER SUPPLY GENERALITIES	Document No: 23070217-004	=-	+A1
Revised	P.Peñarrubia		-		Customer: BOMBAS IDEAL, S.A.	◀0	2▶
Approved	P.García		-		Reference: R230710JF PROYECTO GEORGIA	1	
PARTIAL OR TOTAL REPRODUCTION IS FORBIDDEN WITHOUT AUTHORIZATION, DOCUMENT PROPERTY B-46157285				Project: ELECTRICAL PANEL FOR PUMP 200KW			





PAR..	VALUE	PAR..	VALUE
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Modified parameters



PARÁM.	VALOR	PARÁM.	VALOR
AOL	420	H00	Pt1
AOF	ro	HS1	+50 (1)
LAO	-50 (1)	LS1	-50 (1)
HAO	+50 (1)	.	.
dro	0	.	.

Parámetros Modificados

Drawing	L.Escartí	11/11/2023	Revision - Date
Revised	P.Peñarrubia	02 - 15/12/2023	-
Approved	P.García	02 - 15/12/2023	-
PARTIAL OR TOTAL REPRODUCTION IS FORBIDDEN WITHOUT AUTHORIZATION, DOCUMENT PROPERTY B-46157285			



Concept: POWER GENERALITIES

Project: ELECTRICAL PANEL FOR PUMP 200KW

Document No: **23070217-004**

Customer: BOMBAS IDEAL, S.A.

Reference: R230710JF PROYECTO GEORGIA

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+A1

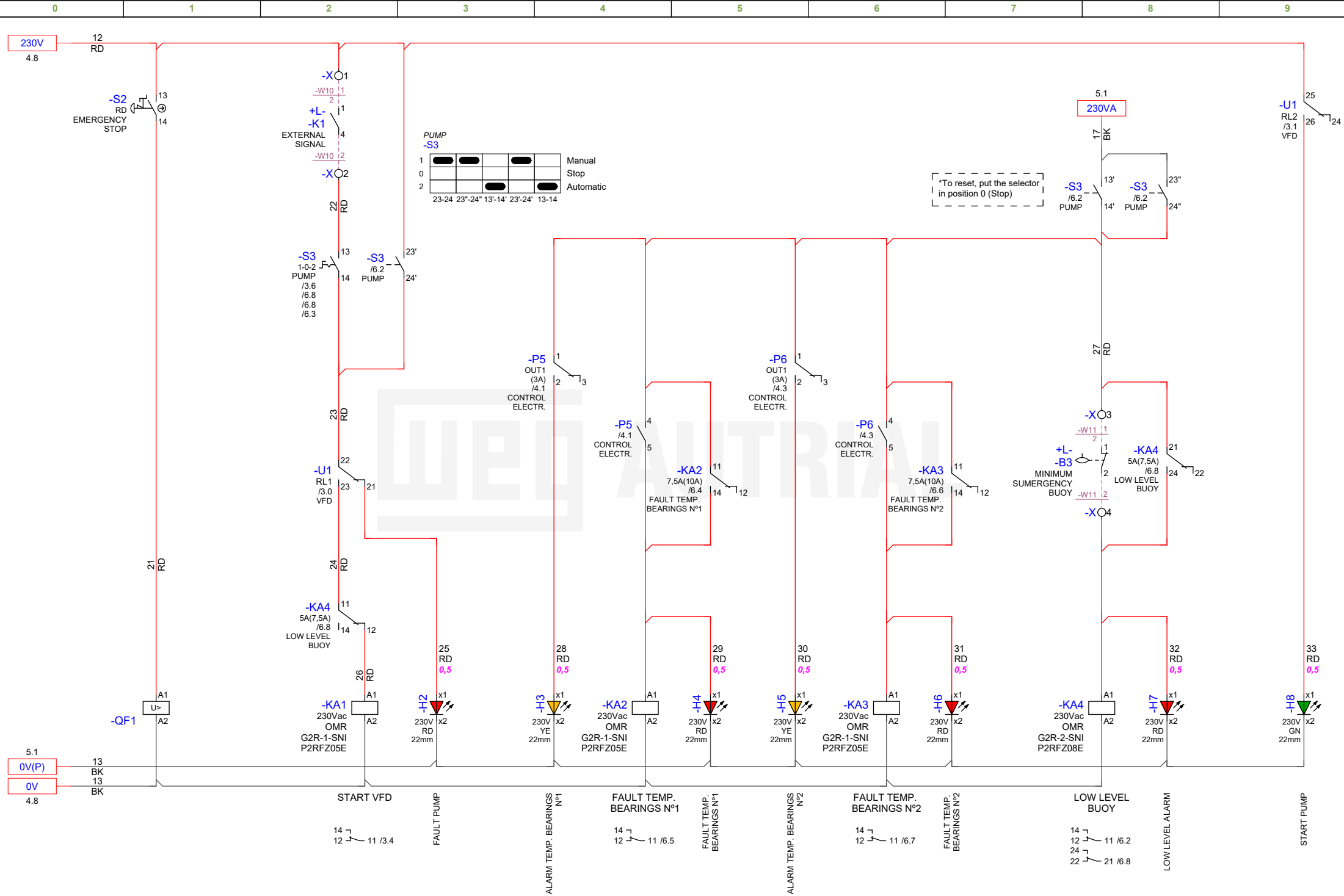
◀ 3

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Concept: MANEUVER GENERALITIES
Project: ELECTRICAL PANEL FOR PUMP 200KW

	==	+A1
◀4	6▶	
5		



Terminals Name	Mounting Location	Installation	Description	Terminals No			Terminal Page
				First	Last	Total	
-Q1	+A1	GENERALITIES	(DIRECT CONNECTION ON) SWITCH	2	6	3	=BOR/2
-U1	+A1	GENERALITIES	(DIRECT CONNECTION ON) SOFT STARTER	U/T1	W/T3	3	=BOR/2
-X	+A1	GENERALITIES		1	4	4	=BOR/2
-XI	+A1	GENERALITIES	INTERNAL TERMINAL	1	7	7	
ANX	+A1	ANALOGIES		1	17	17	=BOR/2

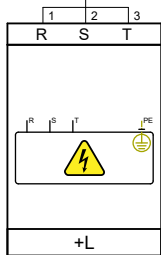


GENERALITIES

(DIRECT CONNECTION ON) SWITCH

Position	Bridge	Kind
Wire (Number Color)		
Terminal Section (mm²)		
-Q1 +A1	2	1.0 (1) M10
	4	1.1 (1) M10
	6	1.1 (1) M10

-W1
3 wires+PE



400V 50Hz
POWER SUPPLY

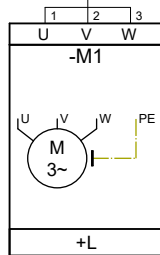
ATTENTION !!! CHECK REAL POSITION
PHASES IN DIRECT CONNECTIONS TO
ELEMENTS.

GENERALITIES

(DIRECT CONNECTION ON) SOFT
STARTER

Position	Bridge	Kind
Wire (Number Color)		
Terminal Section (mm²)		
-U1 +A1	U/T1	2.1 PUMP
	V/T2	2.1
	W/T3	2.1

-W2
3 wires+PE+SH



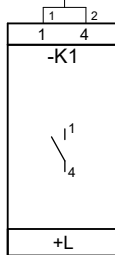
334A 400V 50Hz
200kW 1485r.p.m

GENERALITIES

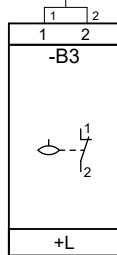
EXTERNAL SIGNAL

Position	Bridge	Kind
Wire (Number Color)		
Terminal Section (mm²)		
-X +A1	1	2.5 22 RD
	2	2.5

-W10
2 wires



-W11
2 wires

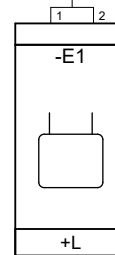


MINIMUM SUMERGENCY BUOY

ANALOGIES

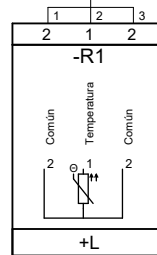
Position	Bridge	Kind
Wire (Number Color)		
Terminal Section (mm²)		
ANX +A1	1	2.5 BN
	2	2.5 WH
	3	2.5 GN/YE
	4	2.5 BN
	5	2.5 WH
	6	2.5 GN
	7	2.5 GN/YE
	8	2.5 BN
	9	2.5 WH
	10	2.5 GN/YE
	11	2.5 BN
	12	2.5 WH
	13	2.5 GN
	14	2.5 GN/YE
	15	2.5 BN
	16	2.5 WH
	17	2.5 GN/YE

-W3
2 wires+SH



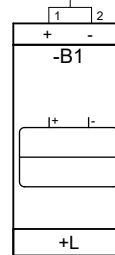
SETPOINT VFD

-W4
3 wires+SH



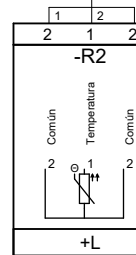
PROBE PT100 N°1

-W5
2 wires+SH



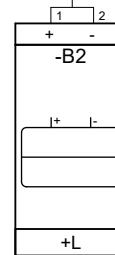
SIGNAL 4/20mA BEARINGS N°1

-W6
3 wires+SH



PROBE PT100 N°2

-W7
2 wires+SH



SIGNAL 4/20mA BEARINGS N°2

BEARINGS

BEARINGS

ON SOME TERMINALS WITH INTERNAL JUMPERS, THE "WIRE (COLOUR NUMBER)" WILL NOT BE DISPLAYED.

Drawing	L.Escart	11/11/2023	Revision - Date
Revised	P.Peñarrubia	02 - 15/12/2023	-
Approved	P.García	01 - 15/11/2023	-
PARTIAL OR TOTAL REPRODUCTION IS FORBIDDEN WITHOUT AUTHORIZATION, DOCUMENT PROPERTY B-46157285			



Concept: TERMINALS CONNECTION
TERMINALS

Project: ELECTRICAL PANEL FOR PUMP 200KW

Document No: 23070217-004

Customer: BOMBAS IDEAL, S.A.

Reference: R230710JF PROYECTO GEORGIA

=BOR

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=MAT/0 ▶

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Id.	Position	Manufact.	Reference	Model	Description	Characteristics	Cust.	Loca.	Quan.
()									
WP1	1.0	ERICO	TCB30X5-2M	549020	BUSBAR DRIL 30x5, M6				1
WQ1	2.0	ERICO	534016	534016	FLEX. BUSBAR 2x24x1 380A 2MLH				1
WQ2	2.0	ERICO	534016	534016	FLEX. BUSBAR 2x24x1 380A 2MLH				1

(-) GENERALITIES									
	1.0	SCHNEIDER	NSYDPA44	NSYDPA44	PLASTIC DOCUMENT POCKET A4			A1	1
	1.0	SCHNEIDER	NSYSF201050P	NSYSF201050P	METALLIC CABINET 2000 x 1000 x 500 MM IP55 RAL7035 W/MOUNTIG PLATE 1 DOOR/S			A1	1
	1.0	SCHNEIDER	NSY2SP205	NSY2SP205	SIDE PANEL	2000 x 500 (2UD)		A1	1
	1.0	RIBAFORJA	Z-1000x500x200	Z-1000X500X200	PLINTH 1 MÓDULO 1000 x 500 x 200mm W/COVERS			A1	1
	1.0	ABB	KIT XT3 4P	1SDA066898R1	EXTENSION TERMINALS	4P		A1	1
B1	5.7	STEGO	KTS 011	01141.0-00	THERMOSTAT	0°C...60°C VENTILATION		A1	1
F1	2.1	WEG	FNH3FEM-700Y-A	12660657	FUSE	AR FNH3 700A		A1	3
H1	5.6	STEGO	02540.3-13	02540.3-13	LED LIGHTING 400lm			A1	1
H2	6.3	WEG	CSW-BIDLF-1D66	12640054	LIGHTING BLOCK	RD - 220-240Vac 22mm		A1	1
H2	6.3	WEG	AF3FX10	12918902	FLANGE 3 CONTACT BLOCKS			A1	1
H2	6.3	WEG	CSW-SD1 WH	12882466	[PENDIENTE]	RD - 22mm		A1	1
H3	6.4	WEG	CSW-BIDLF-3D66	12640056	LIGHTING BLOCK	YE - 220-240Vac 22mm		A1	1
H4	6.5	WEG	CSW-BIDLF-1D66	12640054	LIGHTING BLOCK	RD - 220-240Vac 22mm		A1	1
H4	6.5	WEG	AF3FX10	12918902	FLANGE 3 CONTACT BLOCKS			A1	1
H4	6.5	WEG	CSW-SD1 WH	12882466	[PENDIENTE]	RD - 22mm		A1	1
H5	6.5	WEG	CSW-BIDLF-3D66	12640056	LIGHTING BLOCK	YE - 220-240Vac 22mm		A1	1
H6	6.7	WEG	CSW-BIDLF-1D66	12640054	LIGHTING BLOCK	RD - 220-240Vac 22mm		A1	1
H6	6.7	WEG	AF3FX10	12918902	FLANGE 3 CONTACT BLOCKS			A1	1
H6	6.7	WEG	CSW-SD1 WH	12882466	[PENDIENTE]	RD - 22mm		A1	1
H7	6.8	WEG	CSW-BIDLF-1D66	12640054	LIGHTING BLOCK	RD - 220-240Vac 22mm		A1	1
H7	6.8	WEG	AF3FX10	12918902	FLANGE 3 CONTACT BLOCKS			A1	1
H7	6.8	WEG	CSW-SD1 WH	12882466	[PENDIENTE]	RD - 22mm		A1	1
H8	6.9	WEG	CSW-BIDLF-2D66	12640055	LIGHTING BLOCK	GN - 220-240Vac 22mm		A1	1
H8	6.9	WEG	AF3FX10	12918902	FLANGE 3 CONTACT BLOCKS			A1	1
H8	6.9	WEG	CSW-SD2 WH	12882467	[PENDIENTE]	GN - 22mm		A1	1
KA1	6.2	OMRON	G2R-1-SNI	G2R1SNI230ACSNEW	AUXILIARY RELAY - 1 C/A 230Vac 10A			A1	1
KA1	6.2	OMRON	P2RFZ05E	P2RFZ05EBYOMZ	MOUNTING SOCKET RELAY - 1 POLE/S			A1	1
KA2	6.4	OMRON	G2R-1-SNI	G2R1SNI230ACSNEW	AUXILIARY RELAY - 1 C/A 230Vac 10A			A1	1
KA2	6.4	OMRON	P2RFZ05E	P2RFZ05EBYOMZ	MOUNTING SOCKET RELAY - 1 POLE/S			A1	1
KA3	6.6	OMRON	G2R-1-SNI	G2R1SNI230ACSNEW	AUXILIARY RELAY - 1 C/A 230Vac 10A			A1	1
KA3	6.6	OMRON	P2RFZ05E	P2RFZ05EBYOMZ	MOUNTING SOCKET RELAY - 1 POLE/S			A1	1
KA4	6.8	OMRON	G2R-2-SNI	G2R2SNI230ACSNEW	AUXILIARY RELAY - 2 C/A 230Vac 5A			A1	1

Id.	Position	Manufact.	Reference	Model	Description	Characteristics	Cust.	Loca.	Quan.
(-) GENERALITIES									
KA4	6.8	OMRON	P2RFZ08E	P2RFZ08EBYOMZ	MOUNTING SOCKET RELAY - 2 POLE/S			A1	1
M1	5.7	WEG	RH31V	13991186	ROOF FAN 2100 m³/h 230Vac			A1	1
M1	5.7	WEG	IP54-RH31V	13901802	IP54 ACCESSORY FAN			A1	1
P1	1.2	ZAIGER	EQ72n	EQ72n xx /5	AMMETER 72 X 72 MM/5A			A1	1
P1	1.2	ZAIGER	EQ72n	Esferas EQ72n 400/5 A	SPHERE 72X72 400/5			A1	1
P2	1.3	ZAIGER	EQ72n	EQ72n xx /5	AMMETER 72 X 72 MM/5A			A1	1
P2	1.3	ZAIGER	EQ72n	Esferas EQ72n 400/5 A	SPHERE 72X72 400/5			A1	1
P3	1.4	ZAIGER	EQ72n	EQ72n xx /5	AMMETER 72 X 72 MM/5A			A1	1
P3	1.4	ZAIGER	EQ72n	Esferas EQ72n 400/5 A	SPHERE 72X72 400/5			A1	1
P5	4.1	ELIWELL	EW 7221	E7213PAXBH700	[PENDIENTE]			A1	1
P6	4.3	ELIWELL	EW 7221	E7213PAXBH700	[PENDIENTE]			A1	1
Q1	5.6	WEG	RDWS 2P	14764135	RCCB - 2P 40A 30mA (AC)			A1	1
QF1	1.0	WEG	DWB400N400-3DA	12534127	MCCB	3P - 400A 40kA 240V - 35kA 415V		A1	1
QF1	1.0	WEG	BD DWB400	12687483	SHUNT TRIP	220-250Vac/Vcc		A1	1
QF1	1.0	WEG	MRXL-A-DWB400-BU	13624613	ROTARY CONTROL ON DOOR	450mm , BU		A1	1
QF1	1.0	WEG	BC1 DWB	10848664	CONTACT BLOCK			A1	1
QF2	1.6	WEG	MDWH 3P	11422688	MCB	3P C 10A 10kA		A1	1
QF3	5.1	WEG	MDWH 2P	11422663	MCB	2P C 6A 10kA 230/400vac		A1	1
QF4	5.1	WEG	MPW18-3-D016	12429368	MPCB	1...1,6A		A1	1
QF5	5.6	WEG	MDWH 2P	11422667	MCB	2P C 10A 10kA 230/400Vac		A1	1
S1	5.6	SCHNEIDER	NSYDCM20	NSYDCM20	LIMIT SWITCH	(MICRO DOOR)		A1	1
S2	6.1	WEG	CSW-BESGS	12882462	ROTATE/RELEASE EMERGENCY PUSH-BUTTON HEAD 42mm			A1	1
S2	6.1	WEG	AF3FX10	12918902	FLANGE 3 CONTACT BLOCKS			A1	1
S2	6.1	WEG	BC10F-CSWX10	12174912	NO PUSH CONTACT BLOCK			A1	1
S3	6.2	WEG	CSW-CK3F45W WH	12882311	SWITCH HEAD	3 POSICIONES FIJO 45°		A1	1
S3	6.2	WEG	AF3FX10	12918902	FLANGE 3 CONTACT BLOCKS			A1	1
S3	6.2	WEG	BC10F-CSWX10	12174912	NO PUSH CONTACT BLOCK			A1	2
T1	5.1	POLYLUX	PD315	PD315	TRANSFORMER P230-400-460V / S115-230V - 315VA			A1	1
T11	1.0	ZAIGER	IBP-400/5	IBP-400/5	CURRENT TRANSFORMER 400/5			A1	1
T12	1.1	ZAIGER	IBP-400/5	IBP-400/5	CURRENT TRANSFORMER 400/5			A1	1
T13	1.1	ZAIGER	IBP-400/5	IBP-400/5	CURRENT TRANSFORMER 400/5			A1	1
U1	2.1	WEG	CFW11 0370 T4 (SZ)	11374921	VFD	HD 185kW (In 312A / Out 312A) - ND 220kW (In 370A / Out 370A) - SIZE F		A1	1
U1-P1	2.2	RIBAFORJA	RHMIF-01	MARCO PARA MOLDURA RHMIF-01	FRAME FOR MOLDING RHMIF-01			A1	1
U1-P1	2.2	WEG	RHMIF-01 CFW11	11010521	REMOTE HMI MOLDING	CFW11 IP56		A1	1
U1-P1	2.2	WEG	CAB HMI-RS-3M	10951223	WIRE FOR REMOTE HMI	3m CFW11/11M/700/701		A1	1