

System Documentation

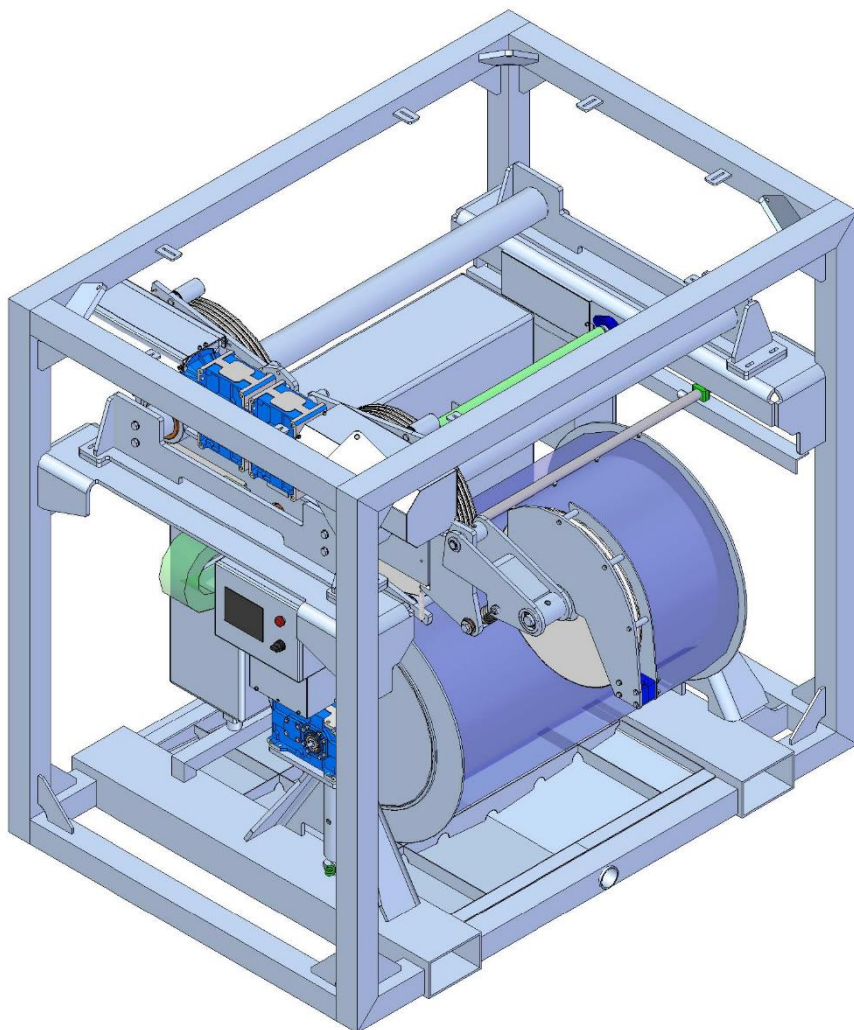
Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003

MANUFACTURER: SH Group

CUSTOMER: MODUS

SERIEAL No:SHG-000973 -1

NUMBER IN SERIES: 1



Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003 - Serial No SHG-000973-1

2.1	Introduction to the manual.....	3
2.1.1	Limited liability statement	3
2.1.2	Copyright	4
2.2	Mechanical system	5
2.2.1	Drawing and part list	6
2.2.1.1	10020171 Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003	6
2.2.1.2	10020346 Bearing House-With bronze bearing Ø140	8
2.2.1.3	10020388 Traction sheave assembly	10
2.2.1.4	10020446 Front suspension spring unit	12
2.2.1.5	10020453 LW Traction unit 2kN	14
2.2.1.6	10020496 Cable engine Sub Assembly-LW traction system 2kN.....	17
2.2.1.7	10020519 Drum support gear side	19
2.2.1.8	10020520 Drum support cylinder	21
2.2.1.9	10020595 Sheave roller assembly	23
2.2.1.10	10020598 Sheave roller assembly	25
2.2.1.11	10020619 Front sheave guide-	27
2.3	Electrical components.....	29
2.3.1	Electrical Part list	30
2.3.2	Electrical Diagram.....	39
2.3.3	Termination Diagram.....	151
2.3.4	Block Diagram.....	169

2.1 Introduction to the manual

The final documentation delivered with this machine is ordered in three binders, the User Manual, the Systems Documentation and the Manufacturing Record Book. Most questions to the daily work can be answered from the User Manual, like maintenance and installation procedures also are found here. In case something needs to be repaired, the guidelines will be found in the User Manual while the system-diagrams and other documentation of the structure of the machine can be found in Systems Documentation. The Manufacturing Record Book mainly serves to prove the quality of the welded structure of the machine. The results from the Factory Acceptance Test are also to be found here. Furthermore the three binders can be found at the USB stick delivered with the binders.

In each binder a table of content can be found, and the sections in the binders follow hereafter in numerical order. The name of the binder can be seen in the header on most of the pages.

The purpose of this book is to document the quality and over all specifications of the tensioners and to assist in the general understanding of how the systems are constructed.

2.1.1 Limited liability statement

Extreme care should be exercised when operating or servicing this equipment. It should be operated or serviced only by qualified personnel with knowledge and training in the handling and maintenance of mechanical, hydraulic and electrical equipment.

SH Group disclaims all product liability risks arising from the use or servicing of the system. SH Group has no way of controlling the use of this equipment or of choosing the personnel to operate it. Therefore, SH Group cannot take steps to comply with laws pertaining product liability, including laws which impose a duty to warn the user of any dangers involved in operating this equipment. Acceptance of the system by the customer shall be conclusively deemed to include a covenant by the customer to defend, indemnify, and hold SH Group harmless from all product liability claims arising from the use or servicing of this system.

2.1.2 Copyright

Information in this document is subject to change without notice and does not represent a commitment on the part of SH Group. No part of this document are allowed to be reproduced, transmitted, transcribed, stored in any retrieval system or translated into any language without the prior and express written permission of SH Group.

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2.2 Mechanical system

The Winch produced on SH-reference number SHG-000973 consists of several different mechanical components. The parts of the structure that has been welded are named and described in the Manufacturing Record Book, while the rest of the mechanical components are described in this section. If the same type of component appears more than once, the overview "Tracking Numbers" will be useful in locating the specific component.

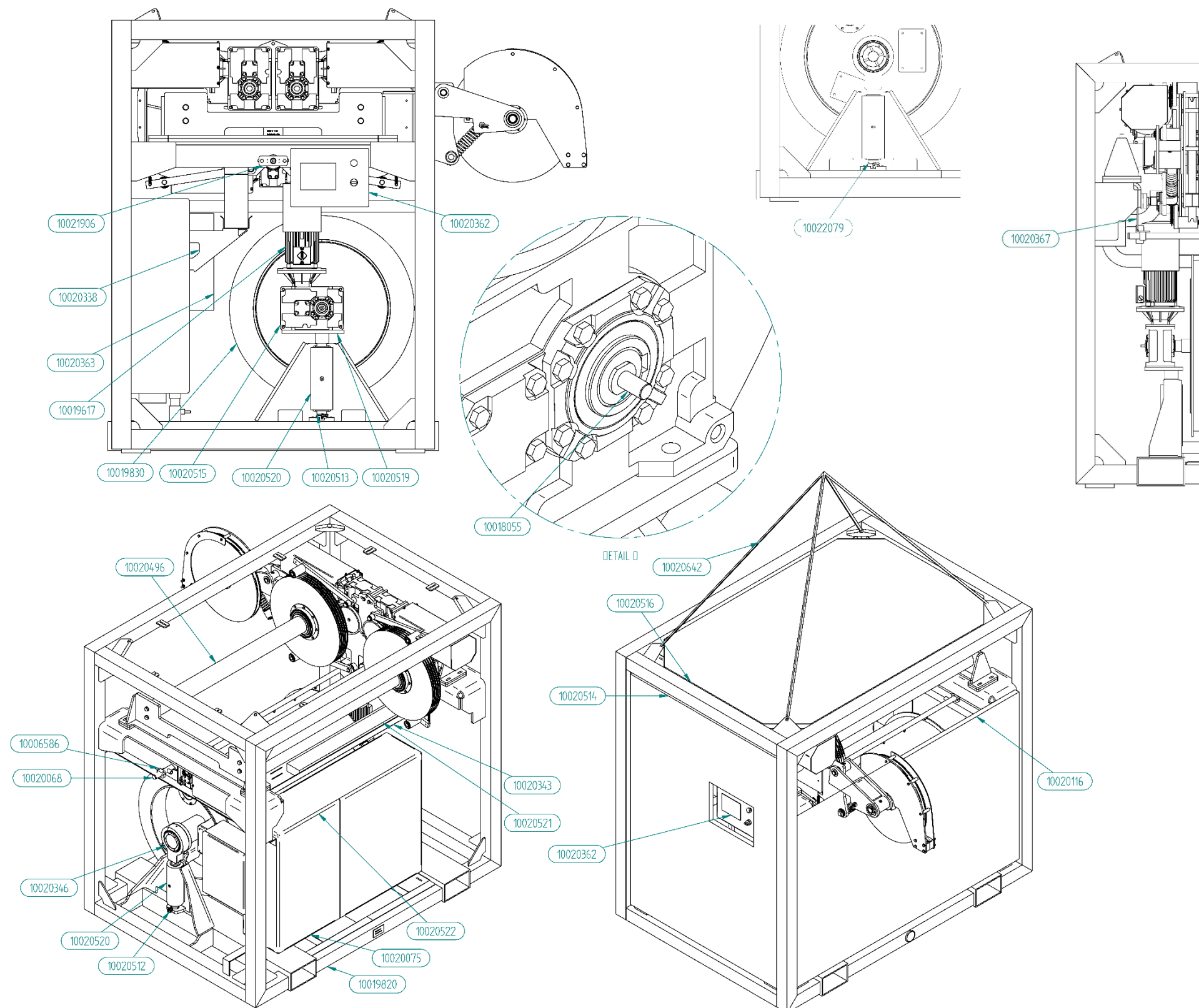
In order to keep the machine fully functional, the parts must be replaced with genuine equipment. In this section you will also find a list of recommended mechanical spare parts. The main reason to keep these specific parts in stock is the basic lead time. In case this documentation does not meet your requirements, please contact SH Group for further information. You will find the contact information in the "User Manual".

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003 - Serial No SHG-000973

2.2.1 Drawing and part list

2.2.1.1 10020171 Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003



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System documentation

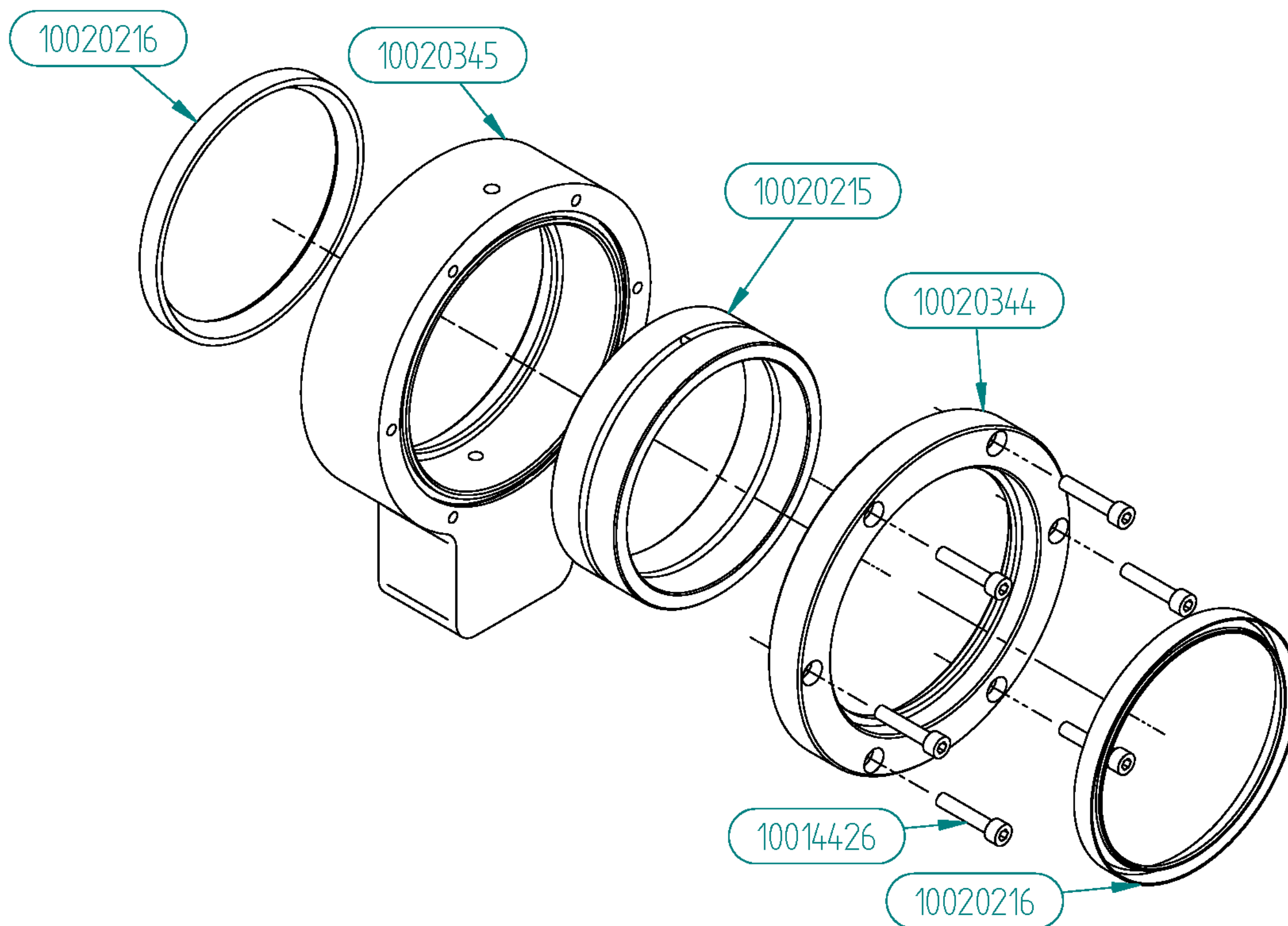
Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020171			Winch OE-2000-A3-4-7-2-FS-NZ-003
10006586		10006586	2	Hydraulic Pipe clamp-430 PPG
10018055	1	10018055	1	Encoder shaft 2-
10019617	1	10019617	1	Electric motor-K21R 100 L4 400V @ 60Hz 2,2 kW
10019820		10019820	1	Winch frame-OW-3000-ILO 152
10019830		10019830	1	Drum-OW-2000--
10020068		10020068	1	Ext cooling pipe 7Nozzle L1962-Aisi 316
10020075		10020075	1	Drip tray-1672mm-1079mm
10020116		10020116	2	Safety guard-Fibre floor Grating-R-2840-1075
10020338		10020338	2	Cable tray bracket-
10020343		10020343	1	Tray for energy chain-
10020346		10020346	1	Bearing House-With bronze bearing Ø140
10020362		10020362	1	Local control
10020363		10020363	1	Stationary JB
10020496		10020496	1	Cable engine Sub Assembly-LW traction system 2kN
10020512	1	10020512	1	Load cell-COMP0.5T
10020515	1	10020515	1	Bevel gear-TC-112-B-31.5-100-B5-V-VA-H45
10020516		10020516	1	Safety guard-Fibre floor Grating-R-2840-1075
10020519		10020519	1	Drum support gear side
10020520		10020520	2	Drum support cylinder
10020521	1	10020521	1	Energy chain-E.300
10020522		10020522	1	Cabinet weld
10020642		10020642	1	Wire sling-For 10020171
10021906		10021906	1	Plate for 607 Encoder
10022079		10022079	1	10mm shims for drum axle

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.2.1.2 10020346 Bearing House-With bronze bearing Ø140



System documentation

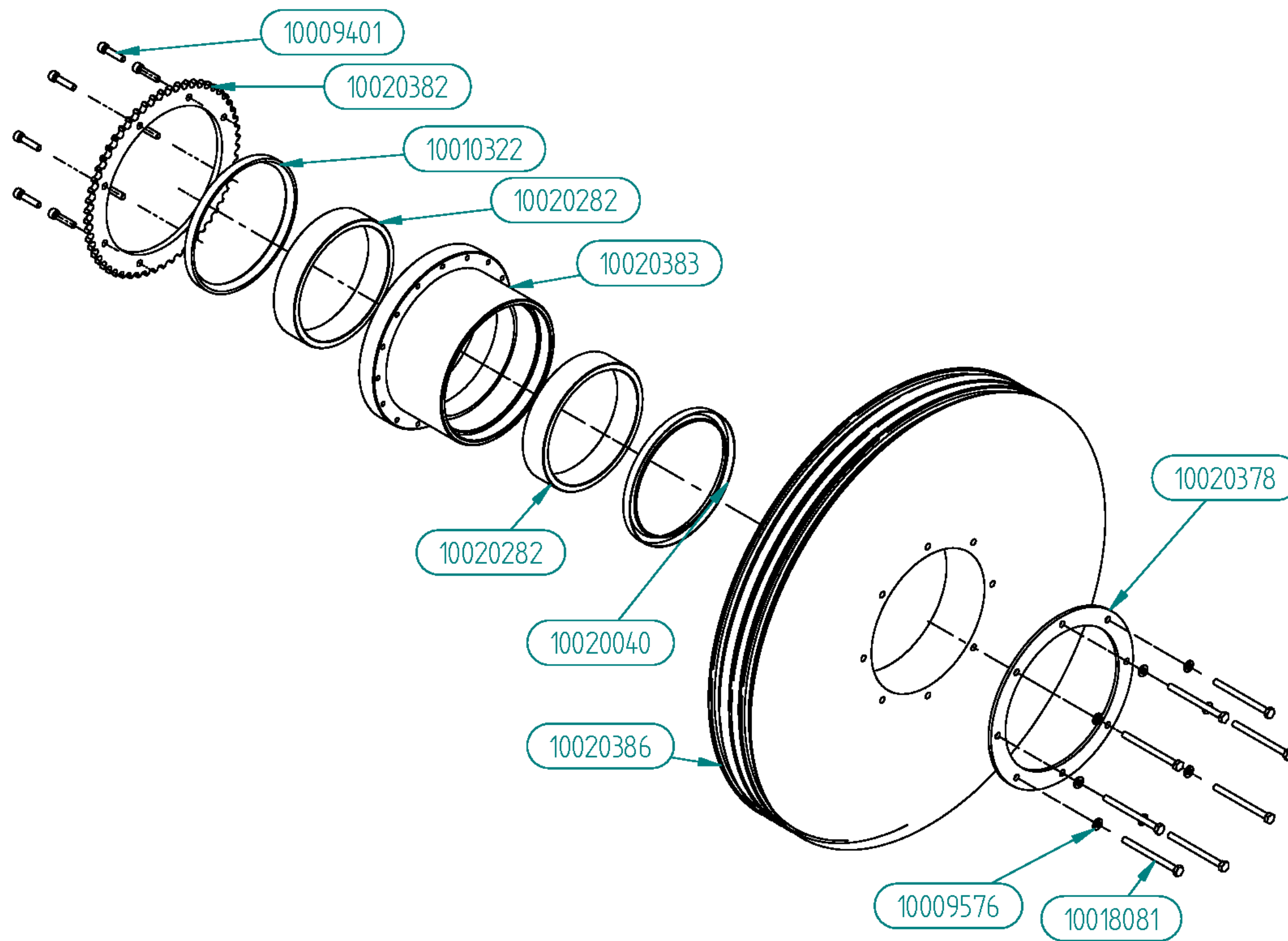
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Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020346			Bearing House-With bronze bearing Ø140
10014426		10014426	6	Bolt-M8-40-ISO 4762-None-A4-70-
10020215	1	10020215	1	Sliding Bearing-140-160-50-
10020216	2	10020216	2	Simmering-CBRFF 140X160X13-NBR-70
10020344		10020344	1	Bearing House-Cap for Bearing housing
10020345		10020345	1	Bearing House-For axle mount Ø160
10020513		10020513	1	Drum support rod

System documentation

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2.2.1.3 10020388 Traction sheave assembly



System documentation

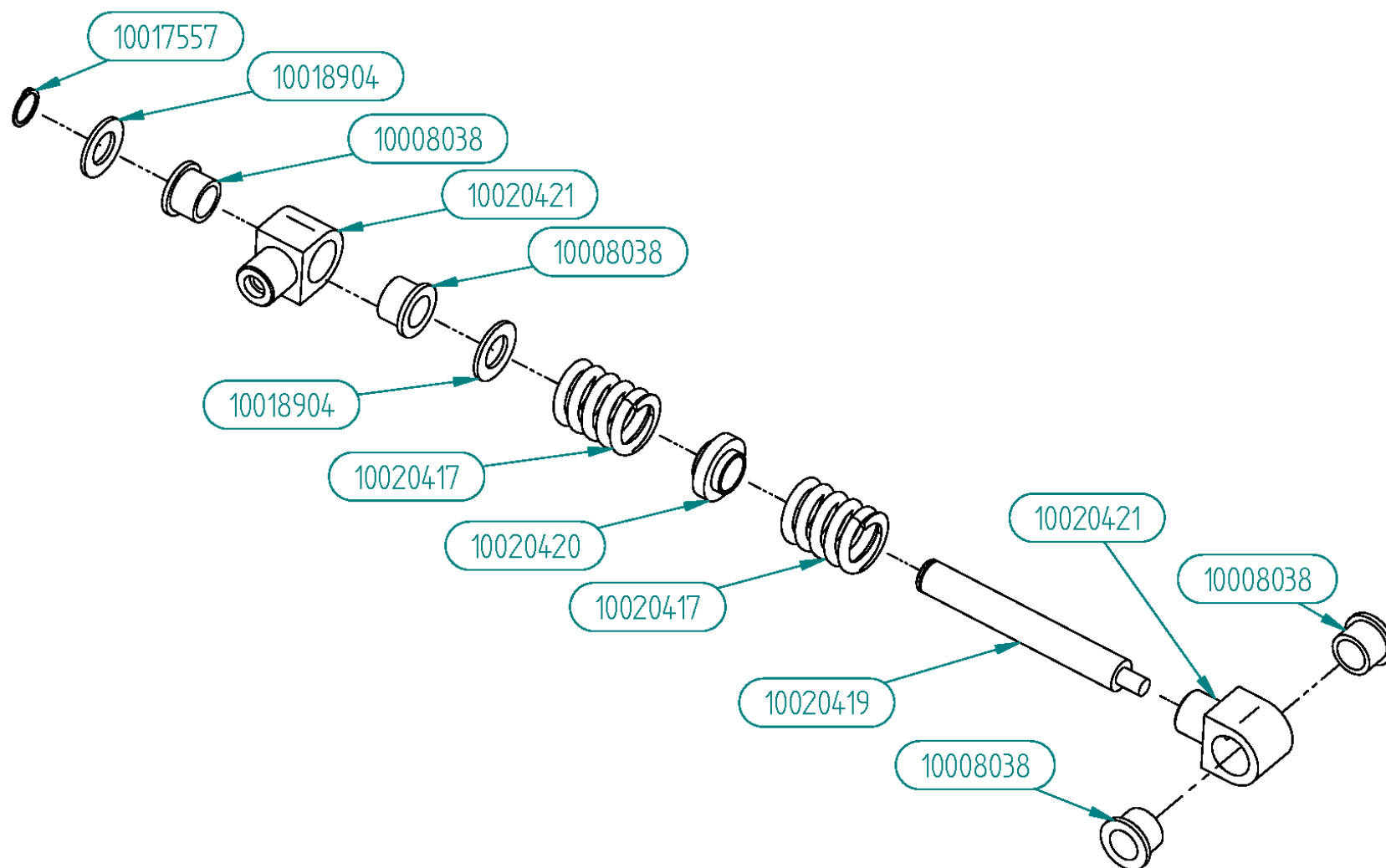
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Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020388			Traction sheave assembly
10009401		10009401	8	Bolt-M8-35-ISO 4762-None-A4-70-
10009576		10009576	8	Washer-M8-ISO 7089-A4-
10010322	1	10010322	1	Simmering-CBRFF 180X200X13-NBR-70
10018081		10018081	8	Bolt-M8-100-ISO 4014-_-A4-80-_-
10020040	1	10020040	1	Simmering-CBRFF 170X200X12-NBR-70
10020282	2	10020282	2	Sliding Bearing-170-190-40-
10020378		10020378	1	Plate for traction sheave
10020382		10020382	1	Sprocket-Plate-Machined-10B1-56-25--Stainless steel
10020383		10020383	1	Bearing Hub - Traction sheave
10020386		10020386	1	Traction sheave for Ø12 tether

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.2.1.410020446 Front suspension spring unit



System documentation

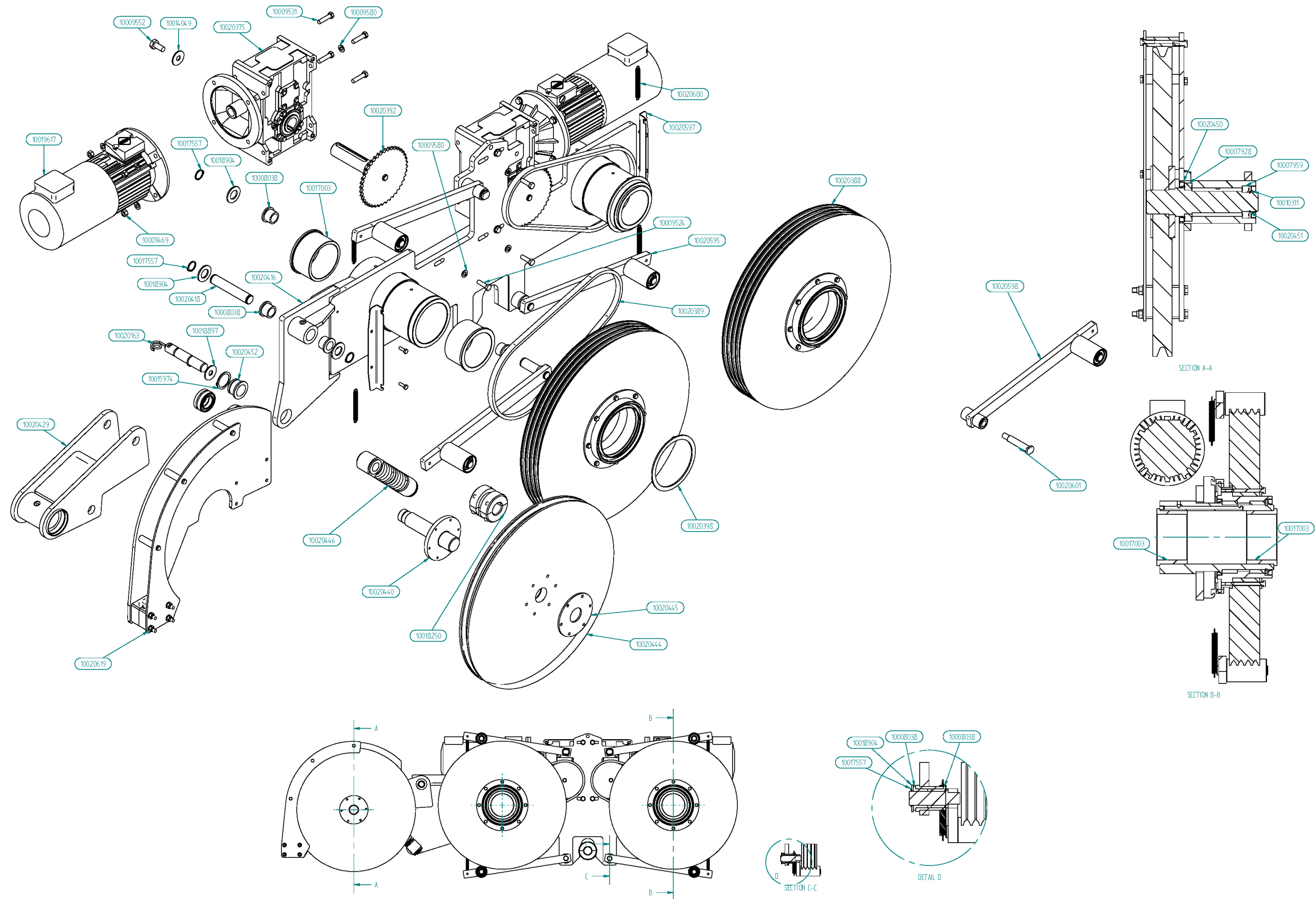
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Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020446			Front suspension spring unit
10008038	4	10008038	4	Sliding Bearing-30/40X30-50X5
10017557		10017557	1	Circlip-1400-30-Stainless steel
10018904		10018904	2	Washer-M30-ISO 7089-A4-__
10020417		10020417	2	Compression spring-24680
10020419		10020419	1	Shaft for front sheave
10020420		10020420	1	Distance piece for springs
10020421		10020421	2	Joint for front suspension

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003 - Serial No SHG-000973

2.2.1.5 10020453 LW Traction unit 2kN



System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020453			LW Traction unit 2kN
10007928	1	10007928	1	Roller Bearing-6010 DD-Steel
10007959	1	10007959	1	Roller Bearing-6008 DD-Steel
10008038	6	10008038	6	Sliding Bearing-30/40X30-50X5
10009469		10009469	8	Nut-M12-ISO 4032-None-A4-
10009524		10009524	6	Bolt-M12-40-ISO 4017-None-A4-70-__
10009531		10009531	8	Bolt-M12-50-ISO 4014-None-A4-70-
10009552		10009552	3	Bolt-M16-35-ISO 4017-None-A4-70-
10009580		10009580	22	Washer-M12-ISO 7089-A4-
10010311	1	10010311	1	Simmering-CBRFF 40X68X10-NBR-70
10014049		10014049	2	Washer-M16-ISO 7093-A4-__
10014260		10014260	4	Bolt-M8-25-ISO 4017-None-A4-70-__
10015974		10015974	1	Circlip-1400-50-Stainless steel
10017003	2	10017003	4	Sliding Bearing-JF120x140x80/150x8
10017557		10017557	4	Circlip-1400-30-Stainless steel
10018250	1	10018250	1	2-part level wind nut TR 48x8
10018897		10018897	1	Washer-M16-ISO 7093-FZV-__
10018904		10018904	4	Washer-M30-ISO 7089-A4-__
10019617	Electric parts	10019617	2	Electric motor-K21R 100 L4 400V @ 60Hz 2,2 kW
10020163	1	10020163	1	Load cell-15kN
10020375	1	10020375	2	Bevel gear-TC 112 B 25 112 B5 V VA H42
10020388		10020388	2	Traction sheave assembly
10020389	2	10020389	2	Roller Chain-10B1 L=1475 Stainless-Stainless steel
10020392		10020392	2	Sprocket drive
10020398		10020398	2	Circlip-1400-170-Steel
10020416		10020416	1	Frame for LW traction system
10020418		10020418	1	Top shaft for front sheave
10020429		10020429	1	Front suspension frame
10020440		10020440	1	Axle for front sheave
10020444		10020444	1	Sheave-610-12-0,2-PA6G
10020445		10020445	1	Plate for front sheave
10020446		10020446	1	Front suspension spring unit
10020450		10020450	1	Simmering-CBRFF 60X85X10-NBR-70
10020451		10020451	1	Circlip-1400-50-steel
10020452	1	10020452	1	Sliding Bearing-40/50X34-60X5
10020595		10020595	2	Sheave roller assembly-

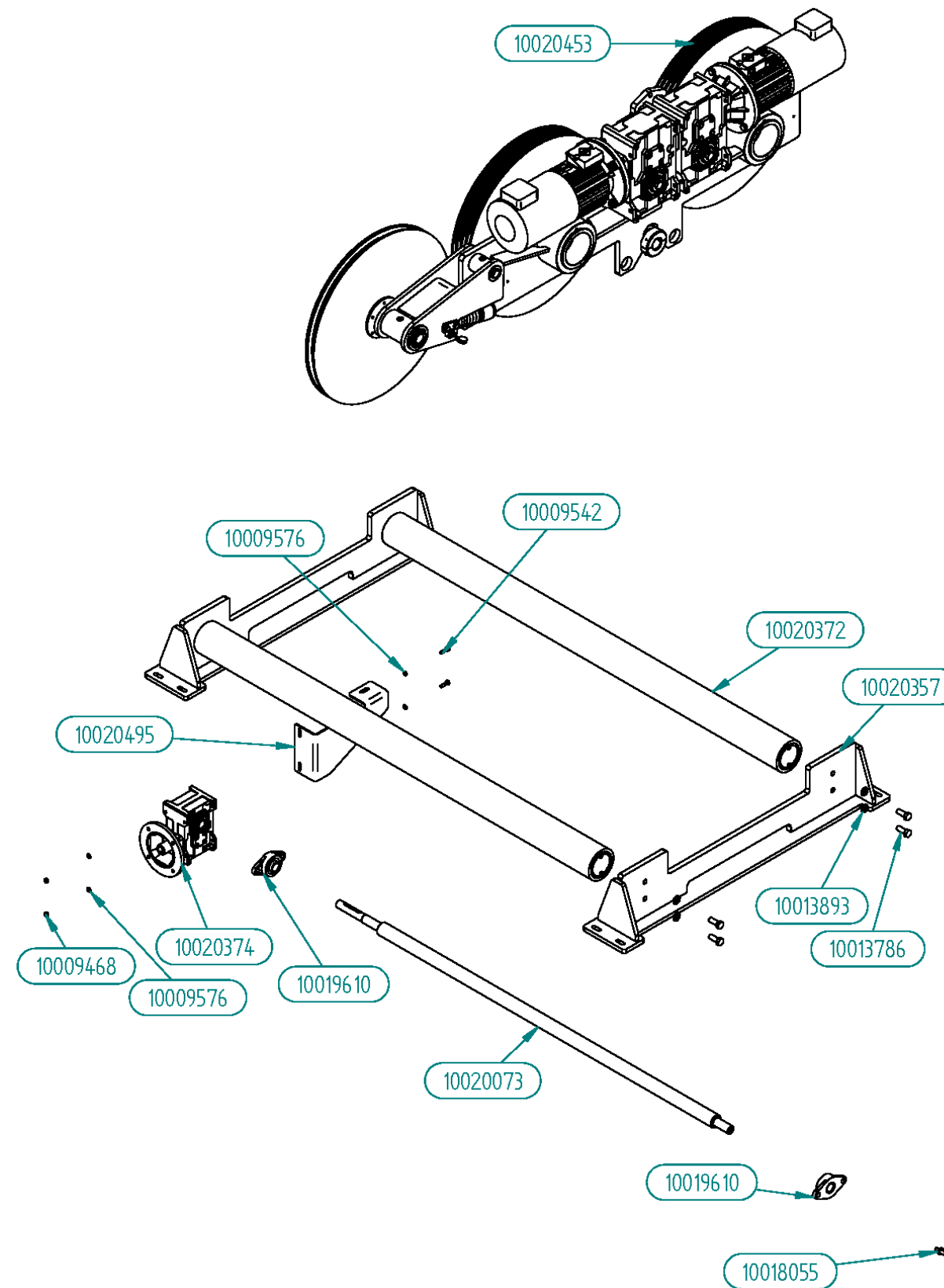
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Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
10020597		10020597	2	Bracket for springs-
10020598		10020598	2	Sheave roller assembly-
10020600		10020600	4	Tension spring-509 RF-Stainless steel
10020601		10020601	2	Axle for gear
10020619		10020619	1	Front sheave guide-

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.2.1.6 10020496 Cable engine Sub Assembly-LW traction system 2kN



System documentation

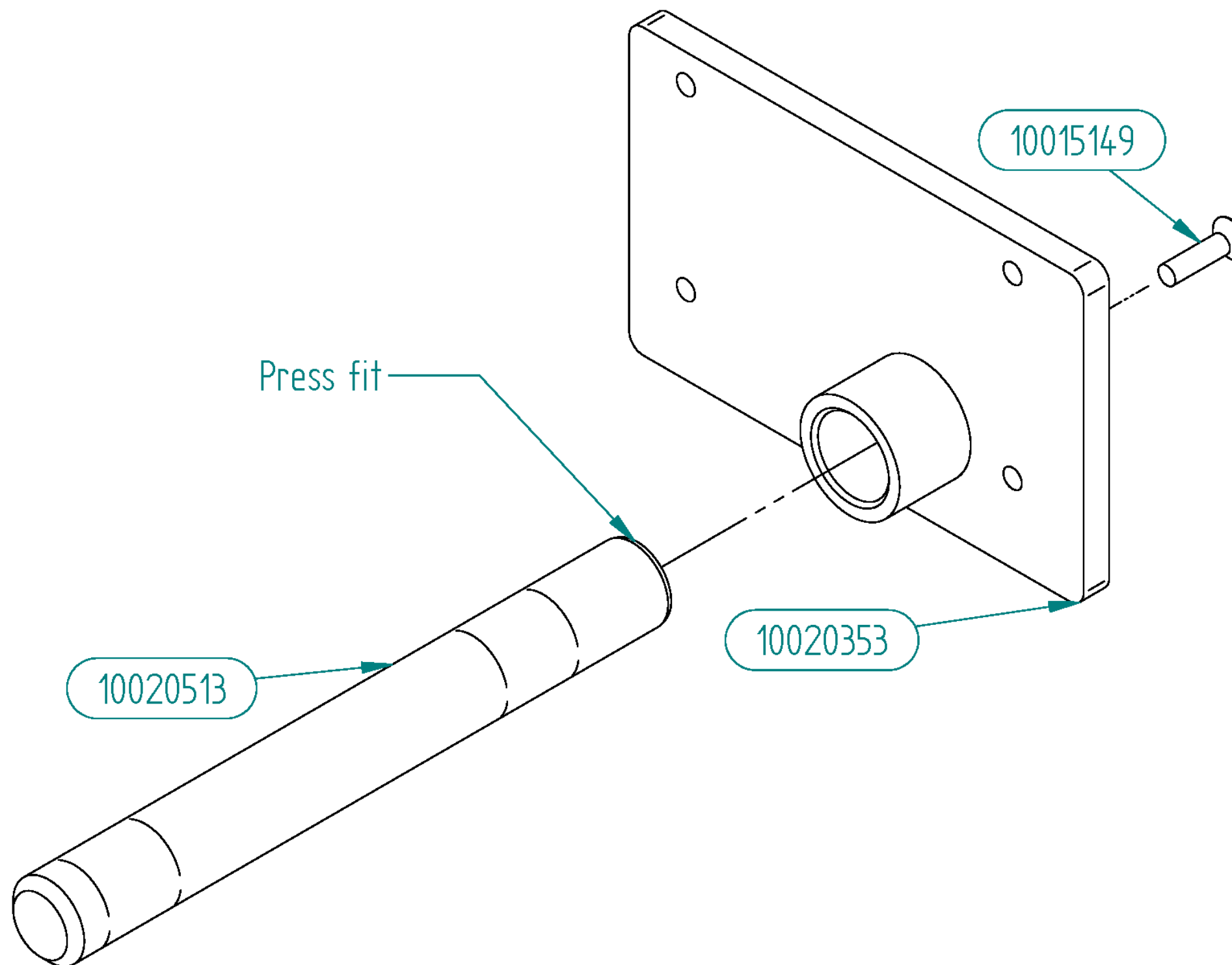
Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020496			Cable engine Sub Assembly-LW traction system 2kN
10009468		10009468	2	Nut-M8-ISO 4032-None-A4-
10009542		10009542	2	Bolt-M8-30-ISO 4017-None-A4-70-
10009576		10009576	4	Washer-M8-ISO 7089-A4-
10013786		10013786	8	Bolt-M16-40-ISO 4017-FZV-8.8-
10013893		10013893	8	Washer-M16-ISO 7089-FZV-200 HV
10018055	1	10018055	1	Encoder shaft 2-
10019610	1	10019610	2	Bearing House-UCF 206 L2
10020073	1	10020073	1	Trapezoidal screw
10020357		10020357	2	LW console
10020372		10020372	2	Guidance tube Ø120 L1900
10020374	1	10020374	1	Bevel gear-TC 71 B 31,5 90 B5 V VB H28
10020453		10020453	1	LW Traction unit 2kN
10020495		10020495	1	Bracket for gear
10021202		10021202	1	Motorcover for K25R 80 G4
10021207		10021207	1	Motorcover 2 for K21R 100 L4
10021212		10021212	1	Motorcover for K21R 100 L4

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.2.1.7 10020519 Drum support gear side



System documentation

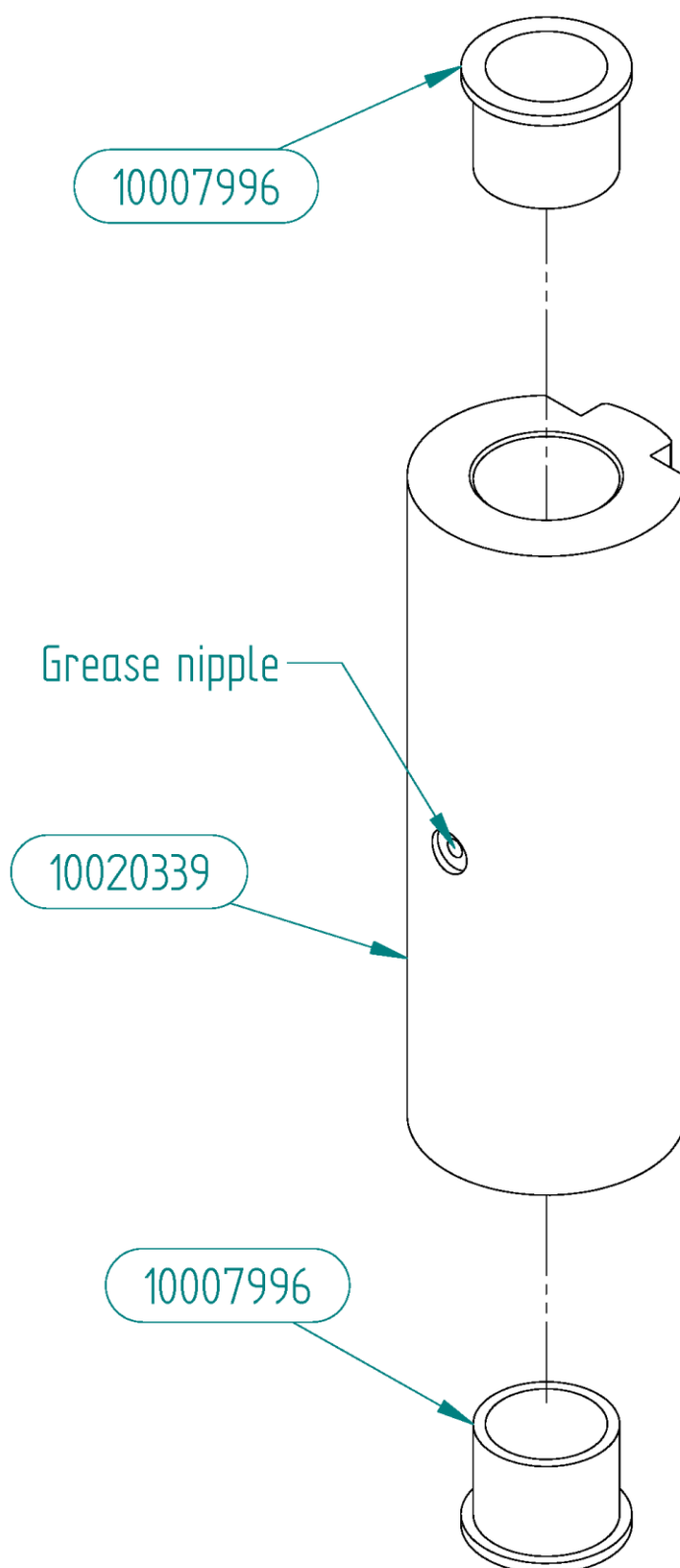
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Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020519			Drum support gear side
10015149		10015149	1	Bolt-M12-45-ISO 10642-_-A4-70-_-
10020353		10020353	1	Bracket for gearbox
10020513		10020513	1	Drum support rod

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.2.1.8 10020520 Drum support cylinder



System documentation

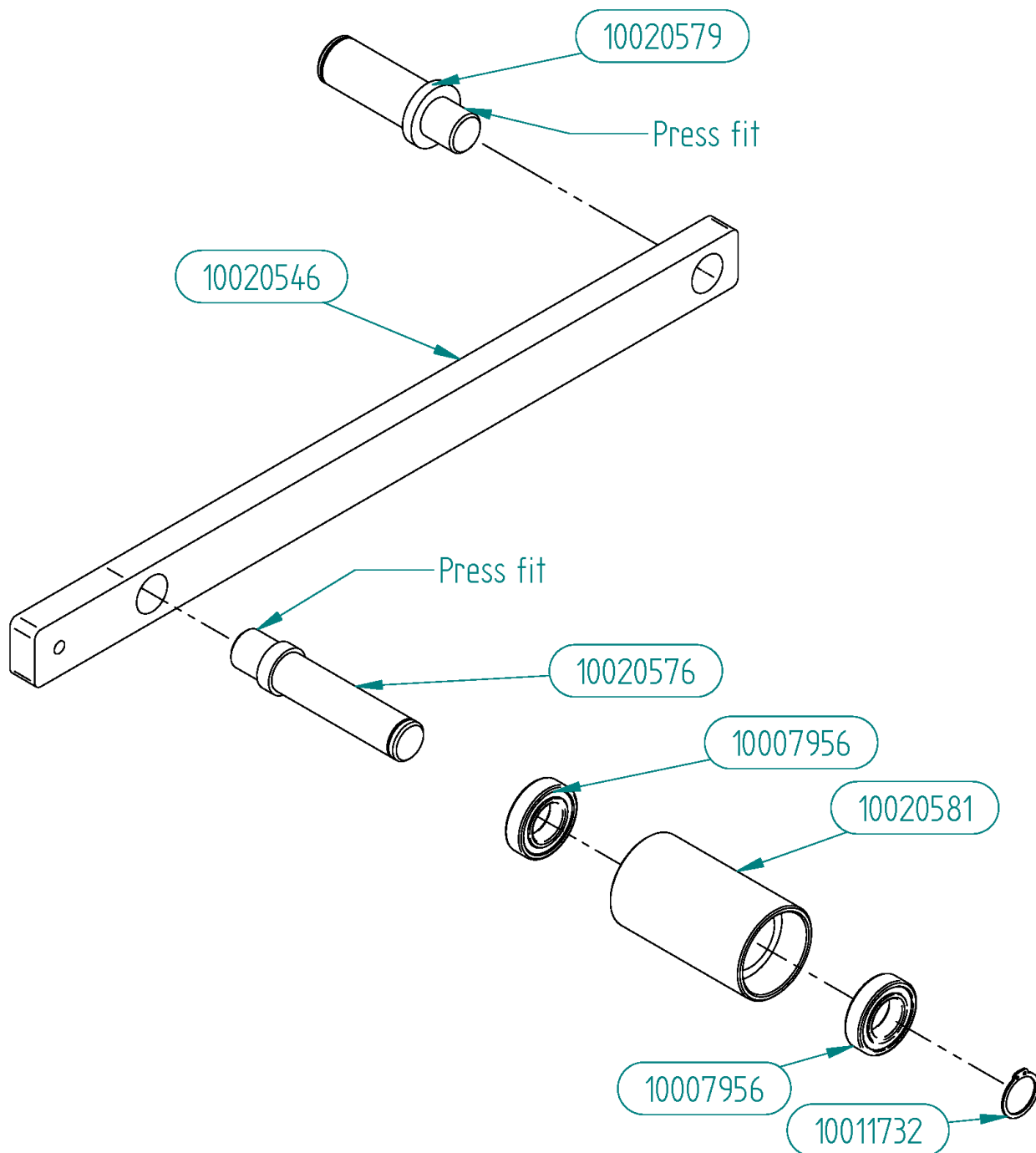
Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020520			Drum support cylinder
10007996	2	10007996	2	Sliding Bearing-50/60X50-70X5
10020339		10020339	1	Drum support pipe

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.2.1.910020595 Sheave roller assembly



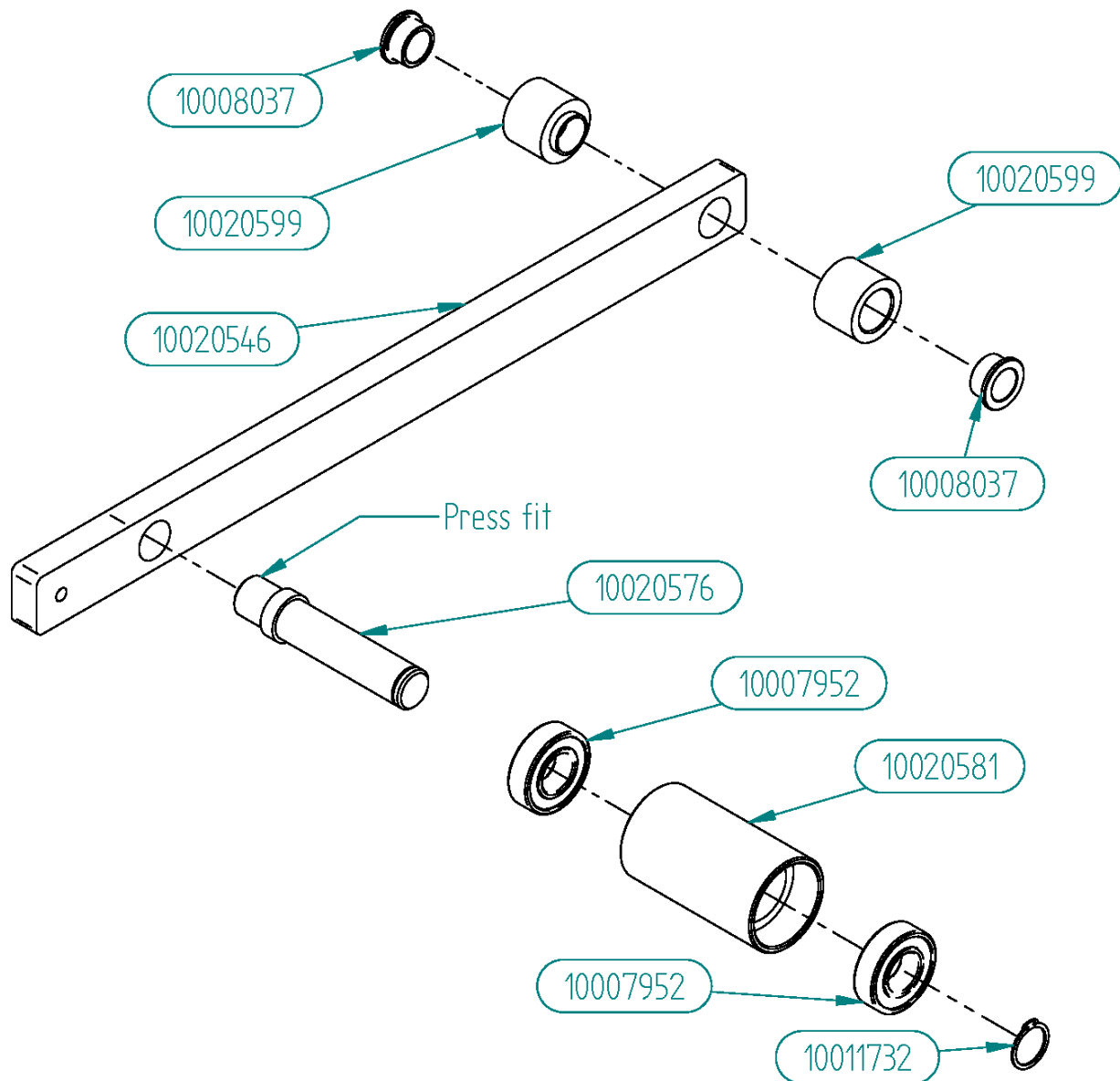
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Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020595			Sheave roller assembly-
10007956	2	10007956	2	Roller Bearing-6005 DD-SS
10011732		10011732	1	Circlip-1400-25-Stainless steel
10020546		10020546	1	Arm for roller part 1-
10020576		10020576	1	Axle for sheave roller-
10020579		10020579	1	Axle for sheave roller 2-
10020581		10020581	1	sheave roller-

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.2.1.10 10020598 Sheave roller assembly

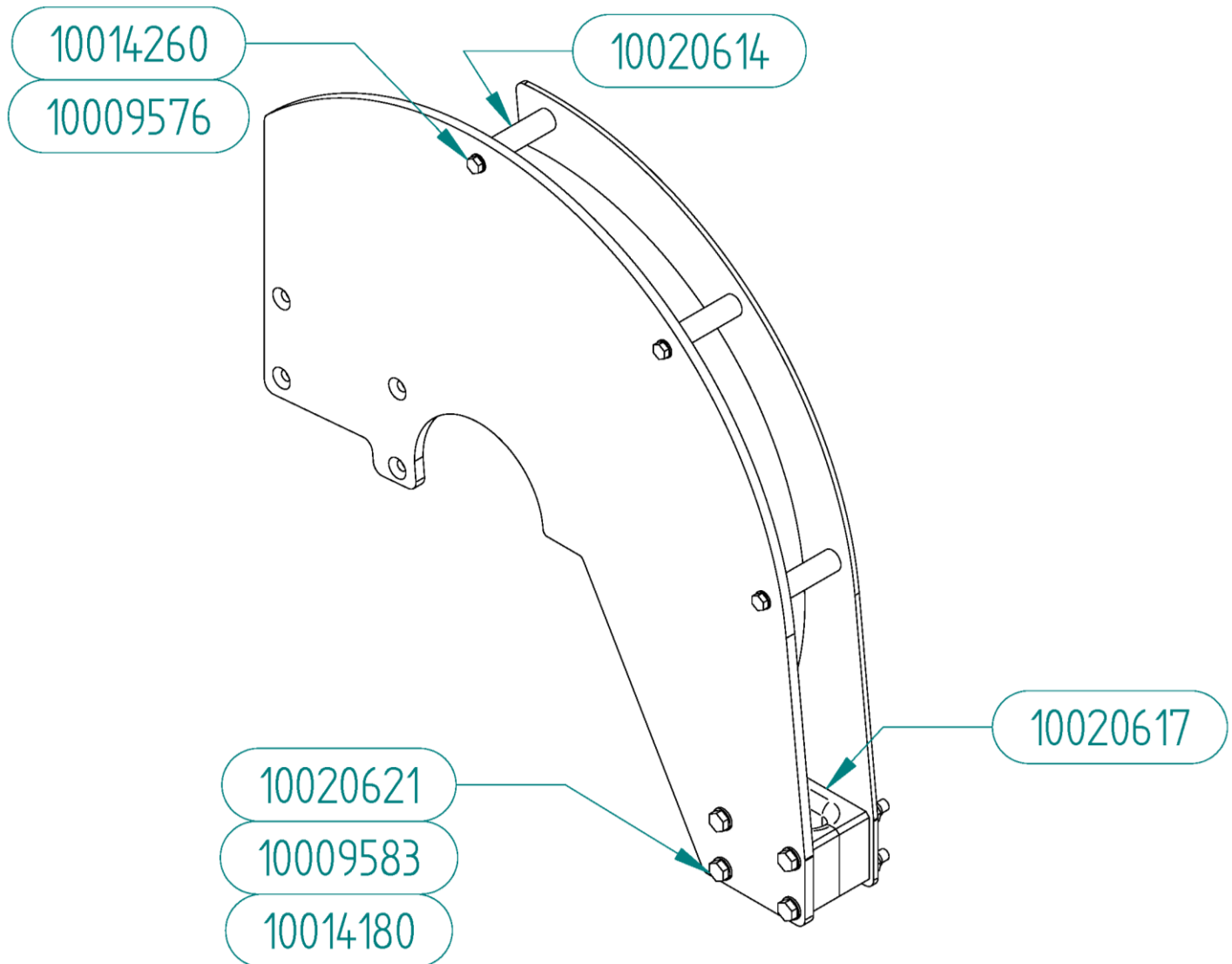


Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020598			Sheave roller assembly-
10007952	2	10007952	2	Roller Bearing-6205 DD-SS-Stainless steel
10008037	2	10008037	2	Sliding Bearing-20/26X15-32X3
10011732		10011732	1	Circlip-1400-25-Stainless steel
10020546		10020546	1	Arm for roller part 1-
10020576		10020576	1	Axle for sheave roller-
10020581		10020581	1	sheave roller-
10020599		10020599	2	Bushing 2

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.2.1.11 10020619 Front sheave guide-



Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Total amount on system	Part description SD
ITEM	10020619			Front sheave guide-
10009576		10009576	6	Washer-M8-ISO 7089-A4-
10009583		10009583	8	Washer-M10-ISO 7089-A4-__
10014180		10014180	4	Nut-M10-ISO 7040-A4--
10014260		10014260	6	Bolt-M8-25-ISO 4017-None-A4-70-__
10020614		10020614	3	Distance piece L=70 Ø20-
10020615		10020615	1	Sheave guide plate 1-
10020616		10020616	1	Sheave guide plate 2-
10020617	1	10020617	2	Cable guide
10020621		10020621	4	Bolt-M10-110-ISO 4014-None-A4-70-__

2.3 Electrical components

The Winch produced on SH-reference number SHG-000973 consists of several different electrical components. In this section you will find information about all the electrical parts.

In order to keep the machine fully functional, the parts must be replaced with genuine equipment. In this section you will also find a list of recommended electrical spare parts. The main reason to keep these specific parts in stock is the basic lead time. Prices are list prices exclusive VAT and Ex Works. Furthermore the prices are based on a purchase of the total parts amount used for the machine. Prices may vary on smaller orders. In a case where this documentation does not meet your requirements, please contact SH Group for further information. You will find the contact information in the "User Manual".

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.3.1 Electrical Part list

Pos.No.	Recommended spares amount	SH part no.	Type no.	Total amount on system	Part description SD
+A1-B1	1	7512405329	NSYCCOTHC	3	Thermostat 0-60° for heating
+A1-B2		7512405329	NSYCCOTHC	3	Thermostat 0-60° for heating
+A1-B3		805981-02	RHI 504	2	TTL RHI 504 Encoder
+A1-B4		805981-02	RHI 504	2	TTL RHI 504 Encoder
+A1-B5			200-A11	3	3xPTC Thermistor in Winding 130°C
+A1-B6			200-A11	3	3xPTC Thermistor in Winding 130°C
+A1-B7			200-A11	3	3xPTC Thermistor in Winding 130°C
+A1-B8			180-Q11	1	3xPTC Thermistor in Winding 130°C
+A1-B9	1		XCKD2145P16	2	End switch short NO+NC M16
+A1-B10			XCKD2145P16	2	End switch short NO+NC M16
+A1-B11	1	1181700-01	IHA 638	2	Absolute rotary encoder
+A1-B12		1181700-01	IHA 638	2	Absolute rotary encoder
+A1-B13	1		E29P6105	2	PT-100 Sensor ø6x100 Stainless AISI 316
+A1-B14			E29P6105	2	PT-100 Sensor ø6x100 Stainless AISI 316
+A1-B15			280-A62	4	1xPT100 in Winding
+A1-B16			280-A62	4	1xPT100 in Winding
+A1-B17			280-A62	4	1xPT100 in Winding
+A1-B18			280-A62	4	1xPT100 in Winding
+A1-E1	1	7678507022	04007.0-00	3	Stago heat element 100W with silicone cable
+A1-E1.0A			Part Of Motor	4	Part Of Motor
+A1-E2		7678507022	04007.0-00	3	Stago heat element 100W with silicone cable
+A1-E2.0A			Part Of Motor	4	Part Of Motor
+A1-E2.1A			Part Of Motor	4	Part Of Motor
+A1-E4			Part Of Motor	4	Part Of Motor
+A1-F1	1		GV2ME06	1	Motor circuit breaker Ir 1-1,6A
+A1-F2	1		A9F05216	1	Automatsikring IC60N 2P 16A D
+A1-F3	1		GVAE11	7	Auxiliary contact 1NO+1NC, frontmounted
+A1-F3	1		GV2ME16	1	Motor circuit breaker Ir 9-14A
+A1-F4	1	3322060848	A9F04204	1	Circuit breaker IC60N 2P 4A C
+A1-F5	1	3322060822	A9F04202	2	Circuit breaker IC60N 2P 2A C
+A1-F6	1	3322060864	A9F04210	4	Circuit breaker IC60N 2P 10A C
+A1-F7	1		GV2LE08	4	Magnetic motor circuit breaker In 4,0A

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Type no.	Total amount on system	Part description SD
+A1-F7			GVAE11	7	Auxiliary contact 1NO+1NC, frontmounted
+A1-F8			GV2LE08	4	Magnetic motor circuit breaker In 4,0A
+A1-F8			GVAE11	7	Auxiliary contact 1NO+1NC, frontmounted
+A1-F9			GV2LE08	4	Magnetic motor circuit breaker In 4,0A
+A1-F9			GVAE11	7	Auxiliary contact 1NO+1NC, frontmounted
+A1-F10			GVAE11	7	Auxiliary contact 1NO+1NC, frontmounted
+A1-F10			GV2LE08	4	Magnetic motor circuit breaker In 4,0A
+A1-F11		3322060822	A9F04202	2	Circuit breaker IC60N 2P 2A C
+A1-F12		3322060819	A9F04201	1	Circuit breaker IC60N 2P 1A C
+A1-F13	1	3322060851	A9F04206	1	Circuit breaker IC60N 2P 6A C
+A1-F14		3322060864	A9F04210	4	Circuit breaker IC60N 2P 10A C
+A1-F15		3322060864	A9F04210	4	Circuit breaker IC60N 2P 10A C
+A1-F16		3322060864	A9F04210	4	Circuit breaker IC60N 2P 10A C
+A1-F18	1		50 118 06.16	2	16A Fuse-Link for Low Inductance App.
+A1-F18	1		51 058 05.1DC	2	URZ-U-Fuse-Bracket 1pole 1000V
+A1-F19			51 058 05.1DC	2	URZ-U-Fuse-Bracket 1pole 1000V
+A1-F19			50 118 06.16	2	16A Fuse-Link for Low Inductance App.
+A1-GND				0	
+A1-K1	1		RM22TG20	1	Phase Control Relay 3x208/480V
+A1-K2	1		RXG22P7	3	Relay 230VAC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators
+A1-K2	1		RGZE1S48M	9	Socket, DIN rail/surface mounting, 8-pin
+A1-K3			RGZE1S48M	9	Socket, DIN rail/surface mounting, 8-pin
+A1-K3			RXG22P7	3	Relay 230VAC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators
+A1-K4			RXG22P7	3	Relay 230VAC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators
+A1-K4			RGZE1S48M	9	Socket, DIN rail/surface mounting, 8-pin
+A1-K5	1		2/025.000.6	3	Brake Inverter
+A1-K6			2/025.000.6	3	Brake Inverter
+A1-K7			2/025.000.6	3	Brake Inverter
+A1-K8	1		XPSAF5130	1	Safety module, cat.4, 3NO(s), 24VAC/DC
+A1-K9	1	7524682664	XPSAV11113	1	Safety module CAT.3 24VDC
+A1-K10			RGZE1S48M	9	Socket, DIN rail/surface mounting, 8-pin
+A1-K10	1		RXG22BD	6	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Type no.	Total amount on system	Part description SD
+A1-K11	1		RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K11	1		RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K11	1		RXZE2S114M	10	Socket for RXM4... relay
+A1-K12			RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K12			RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K12			RXZE2S114M	10	Socket for RXM4... relay
+A1-K13			RXZE2S114M	10	Socket for RXM4... relay
+A1-K13			RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K13			RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K14			RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K14			RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K14			RXZE2S114M	10	Socket for RXM4... relay
+A1-K15			RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K15			RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K15			RXZE2S114M	10	Socket for RXM4... relay
+A1-K16			RXZE2S114M	10	Socket for RXM4... relay
+A1-K16			RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K16			RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K17			RXZE2S114M	10	Socket for RXM4... relay
+A1-K17			RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K17			RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K18			RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K18			RXZE2S114M	10	Socket for RXM4... relay
+A1-K18			RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K19			RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K19			RXZE2S114M	10	Socket for RXM4... relay
+A1-K19			RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K20			RXG22BD	6	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators
+A1-K20			RGZE1S48M	9	Socket, DIN rail/surface mounting, 8-pin
+A1-K21			RGZE1S48M	9	Socket, DIN rail/surface mounting, 8-pin
+A1-K21			RXG22BD	6	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators
+A1-K22	1	7886305472	6GK5008-0BA00-1AB2	1	SCALANCE SWITCH XB008
+A1-K22	1	0486367273	6XV1850-2HH20	1	Ethernet TP XP cord RJ45/RJ45 2M

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Type no.	Total amount on system	Part description SD
+A1-K22	1	6GK1901-1BB10-2AA0	6GK1901-1BB10-2AA0	3	Simatic net IE FC PLUG 180
+A1-K23	1		6GK7243-5DX30-0XE0	1	Communication Module S7-1200 TO Profibus
+A1-K24	1		M212212	1	PROFIBUS/AB6200 MODUL
+A1-K24	1		M769780	1	Charger (6W) 5VDC/1,2A
+A1-K24	1		TG-R9-6	1	Radio Reciever
+A1-K24	1	6ES7972-0BA61-0XA0	6ES7972-0BA61-0XA0	1	PROFIBUS FC STIK 35°
+A1-K24	1		433-½	1	ANTENNA 1/2 - 35CM.BNC
+A1-K25	1		6ES7214-1AG40-0XB0	1	S7-1200 CPU 1214C DC/DC/DC
+A1-K25		6GK1901-1BB10-2AA0	6GK1901-1BB10-2AA0	3	Simatic net IE FC PLUG 180
+A1-K25	1		6ES7954-8LC02-0AA0	1	S7-1x00 Memory Card 4MB
+A1-K26	1		6ES7221-1BH32-0XB0	1	S7-1200, DIGITAL INPUT SM 1221, 16DI, 24VDC
+A1-K27	1		6ES7231-5PF32-0XB0	1	S7-1200, ANALOG INPUT SM1231 8AI RTD
+A1-K28	1		6ES7231-4HF32-0XB0	1	S7-1200, ANALOG INPUT SM1231 8AI
+A1-K29			RGZE1S48M	9	Socket, DIN rail/surface mounting, 8-pin
+A1-K29			RXG22BD	6	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators
+A1-K30			RXZR335	10	Plastic clamp for RXZ.. socket
+A1-K30			RXE2S114M	10	Socket for RXM4... relay
+A1-K30			RXM4AB2BD	10	Plug-in relay w/LED 6A 4C/O Uc 24VDC
+A1-K31			RXG22BD	6	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators
+A1-K31			RGZE1S48M	9	Socket, DIN rail/surface mounting, 8-pin
+A1-K32			RXG22BD	6	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators
+A1-K32			RGZE1S48M	9	Socket, DIN rail/surface mounting, 8-pin
+A1-M1.0	1	K21R 100 L4 S9	K21R 100 L4 S9	3	Motor 2,2 kW 230/400V 60 Hz
+A1-M1.0A			K21R100/DM90	3	Cooling fan 169m3/h for motor size 90 housing

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Type no.	Total amount on system	Part description SD
+A1-M2.0		K21R 100 L4 S9	K21R 100 L4 S9	3	Motor 2,2 kW 230/400V 60 Hz
+A1-M2.0A			K21R100/DM90	3	Cooling fan 169m3/h for motor size 90 housing
+A1-M2.1		K21R 100 L4 S9	K21R 100 L4 S9	3	Motor 2,2 kW 230/400V 60 Hz
+A1-M2.1A			K21R100/DM90	3	Cooling fan 169m3/h for motor size 90 housing
+A1-M4.0	1		K25R 80G4 S9	1	Motor 1,5 kW 230/400V 60 Hz
+A1-M4A			K21R90/DM80	1	Cooling fan 88m3/h for motor size 80 housing
+A1-P2	1	3SB36446BA60	3SB3644-6BA60	2	COMPLETE UNIT ROUND INDICATOR LIGHT METAL WITH CON
+A1-P3		3SB36446BA60	3SB3644-6BA60	2	COMPLETE UNIT ROUND INDICATOR LIGHT METAL WITH CON
+A1-Q2	1		GV3L40	1	Magnetic motor circuit breaker In 40A
+A1-Q2			GVAE11	7	Auxiliary contact 1NO+1NC, frontmounted
+A1-Q3	1		LV429006	1	MCCB NSX100N w/o trip unit 3P
+A1-Q3	1		LV429515	1	Terminal shield short 3P for NSX100-250
+A1-Q3	1		LV429033	1	Trip unit TM50D 3P3T for NSX100-250
+A1-Q4	1		GV2LE14	1	Magnetic motor circuit breaker In 10,0A
+A1-Q4			GVAE11	7	Auxiliary contact 1NO+1NC, frontmounted
+A1-Q5	1		GV2LE22	1	Magnetic motor circuit breaker In 25,0A
+A1-Q6	1		LC1D09P7	2	Contactor 9A 3P+1NO+1NC, Uc 230V AC
+A1-Q6	1		LAD9V2	1	Mechanical latch block for reversing contactor
+A1-Q7	1		LADN22	1	Auxiliary contact block 2NO+2NC
+A1-Q7			LC1D09P7	2	Contactor 9A 3P+1NO+1NC, Uc 230V AC
+A1-Q8	1		LC1D09BL	5	Contactor 9A 3P+1NO+1NC, Uc 24V DC
+A1-Q9			LC1D09BL	5	Contactor 9A 3P+1NO+1NC, Uc 24V DC
+A1-Q10			LC1D09BL	5	Contactor 9A 3P+1NO+1NC, Uc 24V DC
+A1-Q11			LC1D09BL	5	Contactor 9A 3P+1NO+1NC, Uc 24V DC
+A1-Q12			LC1D09BL	5	Contactor 9A 3P+1NO+1NC, Uc 24V DC
+A1-Q13	1	1SCA104816 R1001	OT16F3C	1	CHANGE-OVER SWITCH 1-0-2, 3-pole 16A, Plan or DIN-Rail,

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Type no.	Total amount on system	Part description SD
+A1-QM1			32/891.230.1	4	Motor Brake 32Nm - 180VDC - 0,25Amp
+A1-QM1.0			32/891.230.1	4	Motor Brake 32Nm - 180VDC - 0,25Amp
+A1-QM2.0			32/891.230.1	4	Motor Brake 32Nm - 180VDC - 0,25Amp
+A1-QM2.1			32/891.230.1	4	Motor Brake 32Nm - 180VDC - 0,25Amp
+A1-S1	1		3SB3645-0AA51	1	Illum. pushbutton blue 24V AC/DC, 1NO
+A1-S2	1	3SB39210AB	3SB3921-0AB	2	ACCESSORY FOR 3SB3 YELLOW BACKING PLATE, ROUND SEL
+A1-S2	1	3SB34000C	3SB3400-0C pos1	2	CONTACT BLOCK WITH 1 CONTACT ELEMENT SCREW TERMINAL, 1NC
+A1-S2		3SB34000C	3SB3400-0C pos2	2	CONTACT BLOCK WITH 1 CONTACT ELEMENT SCREW TERMINAL, 1NC
+A1-S2		3SB34000C	3SB3400-0C pos3	2	CONTACT BLOCK WITH 1 CONTACT ELEMENT SCREW TERMINAL, 1NC
+A1-S2	1		3SB3901-0AB	1	ACCESSORIES FOR 3SB3 Bracket FOR SNAPPING ON THREE
+A1-S2	1	3SB35001H A20	3SB3500-1HA20	2	ACTUATOR MUSHROOM-SHAPED PUSHBUTTON MAINTAINED-CON
+A1-S3	1		XB4BD21	3	Selector switch 2 pos., short handle, 1NO
+A1-S3	1		ZBE101 (pos3)	1	Contact block, 1NO
+A1-S3	1	3317000114	A9A15151	6	Bracket for DIN-rail
+A1-S3	1		ZBE101 (pos2)	4	Contact block, 1NO
+A1-S4			ZBE101 (pos2)	4	Contact block, 1NO
+A1-S4	1		ZBE102 (pos3)	2	Contact block, 1NC
+A1-S4			XB4BD21	3	Selector switch 2 pos., short handle, 1NO
+A1-S4		3317000114	A9A15151	6	Bracket for DIN-rail
+A1-S5			ZBE101 (pos2)	4	Contact block, 1NO
+A1-S5			XB4BD21	3	Selector switch 2 pos., short handle, 1NO
+A1-S5			ZBE102 (pos3)	2	Contact block, 1NC
+A1-S5		3317000114	A9A15151	6	Bracket for DIN-rail
+A1-S7			ZBE101 (pos2)	4	Contact block, 1NO
+A1-S7		3317000114	A9A15151	6	Bracket for DIN-rail
+A1-S7	1		XB4BG41	1	Key switch 2 pos., stay put, 1NO
+A1-S8		3317000114	A9A15151	6	Bracket for DIN-rail

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Type no.	Total amount on system	Part description SD
+A1-S8	1		XB4BD53	2	Selector switch 3 pos., short handle, 2NO, Spring return
+A1-S9		3317000114	A9A15151	6	Bracket for DIN-rail
+A1-S9			XB4BD53	2	Selector switch 3 pos., short handle, 2NO, Spring return
+A1-T1	1		135N1471	1	Danfoss VLT FC 302 3 kW 380-500 VAC Without Supply
+A1-T1	1	0486367286	6XV1850-2HH60	3	Ethernet TP XP cord RJ45/RJ45 6M
+A1-T1		120B1235	MCA-120	3	DANFOSS MCA 120 PROFINET
+A1-T1		130B1203	MCB-102	2	VLT Encoder Input MCB 102
+A1-T2		130B1203	MCB-102	2	VLT Encoder Input MCB 102
+A1-T2		120B1235	MCA-120	3	DANFOSS MCA 120 PROFINET
+A1-T2		0486367286	6XV1850-2HH60	3	Ethernet TP XP cord RJ45/RJ45 6M
+A1-T2	1		135N1472	1	FC 302 11kW 3-Phase 380-500VAC
+A1-T4		120B1235	MCA-120	3	DANFOSS MCA 120 PROFINET
+A1-T4		0486367286	6XV1850-2HH60	3	Ethernet TP XP cord RJ45/RJ45 6M
+A1-T4	1		135N0458	1	FC 302 1,1kW 3-Phase 380-500 VAC
+A1-T5	1		SUL192E-460230	1	Trafo P:400-460V S:2x115V 2500VA
+A1-T6	1		ABL8RPS24100	1	Power Supply 200...500Vac/24Vdc 240W 10A
+A1-T7	1		103007846-6591	1	Eaton 9130M UPS 1000VA / 900W Marine Online
+A1-T7	1		1029424	1	9130-1kVA Marine Filter
+A1-T7	1		1029426	1	9130-1kVA Installation Kit
+A1-X1	1	3417504293	GW96522	1	Socket 2p 16A DK
+A1-X4	2	3209536	PT 2,5-PE	7	Push-In Terminals
+A1-X4	3	3209510	PT 2,5	19	Push-In Terminals
+A1-X11		3209510	PT 2,5	19	Push-In Terminals
+A1-X11		3209536	PT 2,5-PE	7	Push-In Terminals
+A1-X12		3209510	PT 2,5	19	Push-In Terminals
+A1-X15		3209536	PT 2,5-PE	7	Push-In Terminals
+A1-X15		3209510	PT 2,5	19	Push-In Terminals
+A1-X19		3209510	PT 2,5	19	Push-In Terminals
+A1-X19		3209536	PT 2,5-PE	7	Push-In Terminals

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Type no.	Total amount on system	Part description SD
+A1-X22		3209510	PT 2,5	19	Push-In Terminals
+A1-X25		3209510	PT 2,5	19	Push-In Terminals
+A1-X31		3209510	PT 2,5	19	Push-In Terminals
+A1-X103		3209510	PT 2,5	19	Push-In Terminals
+A1-X104		3209510	PT 2,5	19	Push-In Terminals
+A1-X106		3209510	PT 2,5	19	Push-In Terminals
+A1-X130		3209510	PT 2,5	19	Push-In Terminals
+A1-X201		1004348	KLM-A	1	Terminal strip markers for Clipfix 35
+A1-X201	1	3030514	D-ST 2,5-QUATTRO	1	End cover for modular terminal blocks
+A1-X201	1	3209578	PT 2,5-QUATTRO	1	Push-In Terminals
+A1-X201		3022218	CLIPFIX 35	1	End bracket
+A1-X210		3209510	PT 2,5	19	Push-In Terminals
+A1-X220		3209536	PT 2,5-PE	7	Push-In Terminals
+A1-X220		3209510	PT 2,5	19	Push-In Terminals
+A1-X221		3209536	PT 2,5-PE	7	Push-In Terminals
+A1-X221		3209510	PT 2,5	19	Push-In Terminals
+A4-A100	1	2394243961	SDHC 8GB	1	Verbatim 8 GB Secure Digital Card
+A4-A100	1		6AV2144-8JC10-0AA0	1	SIMATIC HMI TP900 COMFORT INOX STAINLESS STEEL IP66
+A4-A100		6GK1901-1BB10-2AA0	6GK1901-1BB10-2AA0	3	Simatic net IE FC PLUG 180
+A4-B1		7512405329	NSYCCOTH C	3	Thermostat 0-60° for heating
+A4-E1		7678507022	04007.0-00	3	Stago heat element 100W with silicone cable
+A4-S1	1	3SB34000C	3SB3400-0C pos3	2	CONTACT BLOCK WITH 1 CONTACT ELEMENT SCREW TERMINAL, 1NC

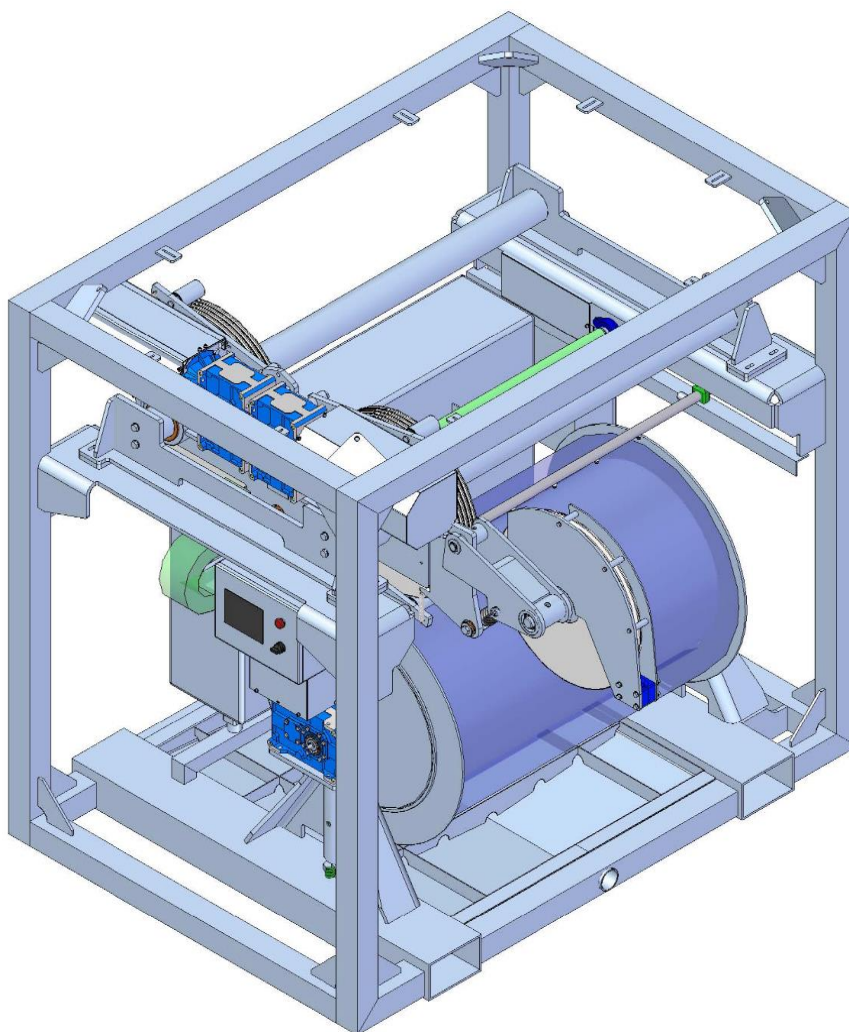
Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

Pos.No.	Recommended spares amount	SH part no.	Type no.	Total amount on system	Part description SD
+A4-S1		3SB34000C	3SB3400-0C pos2	2	CONTACT BLOCK WITH 1 CONTACT ELEMENT SCREW TERMINAL, 1NC
+A4-S1		3SB35001H A20	3SB3500-1HA20	2	ACTUATOR MUSHROOM-SHAPED PUSHBUTTON MAINTAINED-CON
+A4-S1		3SB39210AB	3SB3921-0AB	2	ACCESSORY FOR 3SB3 YELLOW BACKING PLATE, ROUND SEL
+A4-S1		3SB34000C	3SB3400-0C pos1	2	CONTACT BLOCK WITH 1 CONTACT ELEMENT SCREW TERMINAL, 1NC
+A4-S2	1	3SB36020A A11	3SB3602-0AA11	1	COMPLETE UNIT, ROUND PUSHBUTTON WITH FLAT PUSHBUTT
+A4-S3	1		J3A1AA1A	2	Single AXIS Joystick 4-20mA
+A4-S4			J3A1AA1A	2	Single AXIS Joystick 4-20mA
+A4-W2				1	
+A4-X11		3209510	PT 2,5	19	Push-In Terminals
+A4-X15		3209536	PT 2,5-PE	7	Push-In Terminals
+A4-X15		3209510	PT 2,5	19	Push-In Terminals
+A4-X101		3209510	PT 2,5	19	Push-In Terminals
+A10-B1	1		E29P6505	1	PT-100 Sensor ø6x200 Stainless AISI 316
+A10-R1	2	242588001	242588001	6	Heat element 100 ohm 7. bend
+A10-R2		242588001	242588001	6	Heat element 100 ohm 7. bend
+A10-R3		242588001	242588001	6	Heat element 100 ohm 7. bend
+A10-R4		242588001	242588001	6	Heat element 100 ohm 7. bend
+A10-R5		242588001	242588001	6	Heat element 100 ohm 7. bend
+A10-R6		242588001	242588001	6	Heat element 100 ohm 7. bend
+A10-X1	1	3044212	UT 16-PE	1	Feed-through modular terminal block
+A10-X1	1	3044199	UT 16	1	Feed-through modular terminal block
+A10-X101	1	3209510	PT 2,5	19	Push-In Terminals
+JB10.1-B19		Loadpin-16051	Loadpin-16051	1	Loadpin 15KN 161mm x 30mm 4-20mA
+JB10.2-B20		COMP0,5T	COMP0,5T	2	Loadcell 0,5T Højde 21mm DIA 59mm
+JB10.3-B21		COMP0,5T	COMP0,5T	2	Loadcell 0,5T Højde 21mm DIA 59mm

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.3.2 Electrical Diagram



Modus Winch

Project no.: SHG-000973
Draw no.: SHG-000973-E-XX-0001-Ax
ID no.: SHG-00973-0001-A1
Rev. no.: AB

Voltage 3x440V
Frekvens 60Hz
Earthing system IT
Full load 24A
Largest load 11,7A
Ik min -
Ik max 37kA
Maximum fuse 100A gL
IP class IP 66/67
Ambient temperature -20°C - +45°C


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Modus

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List of Documents

	Modus Winch Modus		Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EAB		Rev. date:	Sheet: 1
			Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built		Total sheets: 5	Next sheet: 2

List of Documents

Function (=)	Location (+)	Sheet	Kind of Document	Description	Revision date					
		1	Project cover sheet	Front page						
		1	Document list		21-11-2016					
		2	Document list		21-11-2016					
		3	Document list		21-11-2016					
		4	Document list		21-11-2016					
		5	Document list		21-11-2016					
		1 i	Info Pages	Color codes IEC						
		1	Aspect Locations list		21-11-2016					
	+A1	1	Cabinets	Layout frontMain Cabinet						
	+A1	2	Cabinets	LayoutMounting plate						
	+A4	4	Cabinets	LayoutHCP Local Control						
	+A4	5	Cabinets	LayoutHCP Local Control						
	+A1	1	Circuit Diagram IEC	Main Power Supply						
	+A1	2	Circuit Diagram IEC	Main Power VFDMotor 1						
	+A1	3	Circuit Diagram IEC	Main Power VFDMotor 2						
	+A1	4	Circuit Diagram IEC	Main Power VFDMotor 3						
	+A1	5	Circuit Diagram IEC	Main Power480V/230V/24VDC						
	+A1	6	Circuit Diagram IEC	Main Power480V/230V/24VDC						
	+A1	7	Circuit Diagram IEC	Main PowerLocal/Shore Connection						
	+A1	8	Circuit Diagram IEC	Main PowerMotor Cooling Fans						
	+A1	9	Circuit Diagram IEC	Main PowerMotor Cooling Fans						
	+A1	10	Circuit Diagram IEC	Main PowerMotor Heating						
	+A1	11	Circuit Diagram IEC	Main PowerMotor Heating						
	+A1	12	Circuit Diagram IEC	Main PowerMotor & Junction box Heating						
	+A1	13	Circuit Diagram IEC	Main PowerCabinet Heating						
	+A1	14	Circuit Diagram IEC	Main PowerMotor brakes						
	+A1	15	Circuit Diagram IEC	Control CircuitMotor encoder						
	+A1	16	Circuit Diagram IEC	Control CircuitMotor Thermistor Motor 1						
	+A1	17	Circuit Diagram IEC	Control CircuitEmergency Stop						
	+A1	18	Circuit Diagram IEC	Control CircuitEmergency Stop						
<div>SHGROUP</div> <div>Modus Winch Modus</div>				Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EAB	Page Function:	Rev. date:	Sheet: 2
				Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location:	Total sheets: 5	Next sheet: 3


List of Documents












Function (=)	Location (+)	Sheet	Kind of Document	Description							Revision date						
	+A1	19	Circuit Diagram IEC	Control Circuit			Emg.Stop & Power OK										
	+A1	20	Circuit Diagram IEC	Control Circuit			VFD Motor 1										
	+A1	21	Circuit Diagram IEC	Control Circuit			VFD Motor 2										
	+A1	22	Circuit Diagram IEC	Control Circuit			VFD Motor 4 Level Wind										
	+A1	23	Circuit Diagram IEC	Control Circuit			Brakes										
	+A1	24	Circuit Diagram IEC	Control Circuit			Emergency Steering										
	+A1	25	Circuit Diagram IEC	Control Circuit			Emergency Steering										
	+A1	26	Circuit Diagram IEC	Control Circuit			ProfiNet Switch 1										
	+A1	27	Circuit Diagram IEC	Control Circuit			ProfiBus										
	+A1	28	Circuit Diagram IEC	Control Circuit			PLC CPU Layout										
	+A1	29	Circuit Diagram IEC	Control Circuit			PLC I/O Layout										
	+A1	30	Circuit Diagram IEC	Control Circuit			PLC I/O Layout										
	+A1	31	Circuit Diagram IEC	Control Circuit			PLC I/O Layout										
	+A1	32	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	33	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	34	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	35	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	36	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	37	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	38	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	39	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	40	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	41	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	42	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	43	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	44	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	45	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A1	46	Circuit Diagram IEC	Control Circuit			PLC I/O										
	+A4	53	Circuit Diagram IEC	Frontpage +A4													
	+A4	54	Circuit Diagram IEC	Control Circuit													
<div>SHGROUP</div> <div>Modus Winch Modus</div>				Design/App.: MAN / JLE		Project no.: SHG-000973		Drawing no.: SHG-000973-E-XX-0001-Ax		DCC: &EAB		Page Function:		Rev. date:		Sheet: 3	
				Rev. no.: AB		Date: 04-07-2016		ID no.: SHG-00973-0001-A1		Status: As Built		Page Location:		Total sheets: 5		Next sheet: 4	

List of Documents

Function (=)	Location (+)	Sheet	Kind of Document	Description							Revision date	
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	+A4	56	Circuit Diagram IEC	Control Circuit PLC I/O								
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	+A1	2	Component list								21-11-2016	
	+A1	3	Component list								21-11-2016	
	+A1	4	Component list								21-11-2016	
	+A1	5	Component list								21-11-2016	
	+A1	6	Component list								21-11-2016	
	+A1	7	Component list								21-11-2016	
	+A1	8	Component list								21-11-2016	
	+A1	9	Component list								21-11-2016	
	+A4	10	Component list								21-11-2016	
	+A10	11	Component list								21-11-2016	
	+JB10.1	12	Component list								21-11-2016	
	+JB10.2	13	Component list								21-11-2016	
	+JB10.3	14	Component list								21-11-2016	
		1	Cable plan								21-11-2016	
	+A1	2	Cable plan								21-11-2016	
	+A1	3	Cable plan								21-11-2016	
	+A1	4	Cable plan								21-11-2016	
	+A1	5	Cable plan								21-11-2016	
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	+A1	11	Cable plan								21-11-2016	
	+A1	12	Cable plan								21-11-2016	
	+A4	13	Cable plan								21-11-2016	
		1	Terminal list								21-11-2016	
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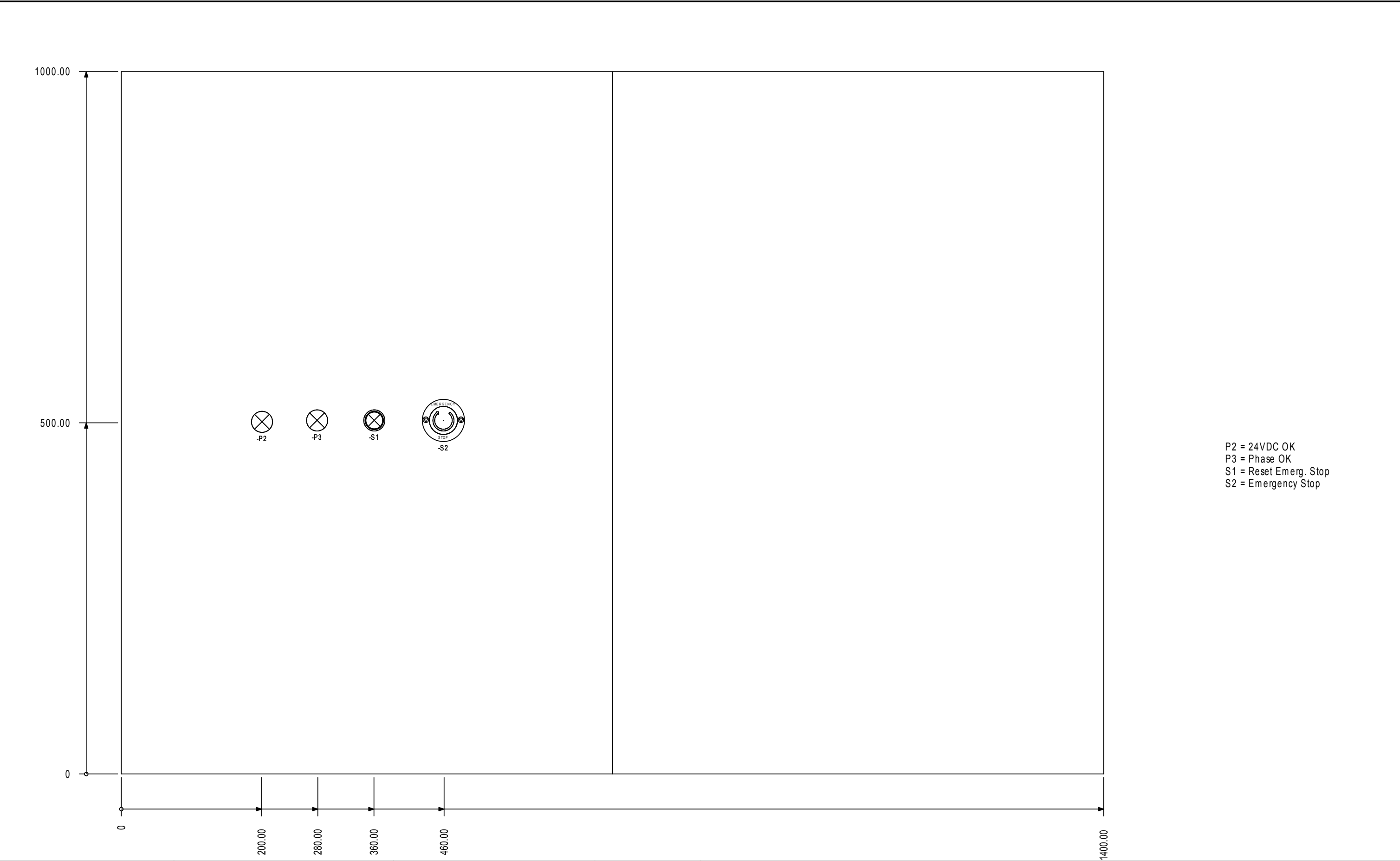
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	+A1	3	Terminal list	-X11							21-11-2016	
	+A1	4	Terminal list	-X12							21-11-2016	
	+A1	5	Terminal list	-X15							21-11-2016	
	+A1	6	Terminal list	-X19							21-11-2016	
	+A1	7	Terminal list	-X22							21-11-2016	
	+A1	8	Terminal list	-X25							21-11-2016	
	+A1	9	Terminal list	-X31							21-11-2016	
	+A1	10	Terminal list	-X103							21-11-2016	
	+A1	11	Terminal list	-X104							21-11-2016	
	+A1	12	Terminal list	-X106							21-11-2016	
	+A1	13	Terminal list	-X130							21-11-2016	
	+A1	14	Terminal list	-X201							21-11-2016	
	+A1	15	Terminal list	-X210							21-11-2016	
	+A1	16	Terminal list	-X220							21-11-2016	
	+A1	17	Terminal list	-X221							21-11-2016	
	+A4	18	Terminal list	-X11							21-11-2016	
	+A4	19	Terminal list	-X15							21-11-2016	
	+A4	20	Terminal list	-X101							21-11-2016	
	+A10	21	Terminal list	-X1							21-11-2016	
	+A10	22	Terminal list	-X101							21-11-2016	
		Modus Winch Modus				Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EAB	Page Function:	Rev. date:	Sheet: 5
						Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location:	Total sheets: 5	Next sheet:

	0	1	2	3	4	5	6	7	8	9			
A	<div>Color Codes</div> <div>IEC Standard</div>										A		
B	Main Power				Control voltage						B		
	Description		Color		Description		Color						
	L1 Power	230-690V	Black		AC+	24-230V	Red						
	L2 Power	230-690V	Black		AC-	24-230V	Red						
	L3 Power	230-690V	Black		DC+	12-24V	Dark Blue						
	N Power	230-690V	Light Blue		DC-	12-24V	Dark Blue						
C	PE		Green/Yellow		External control voltage		Orange						
	PEN		Green/Yellow	 *	Analog signals		Violet				C		
	PEN		Light Blue	 *									
	L1-L3 Power	110-230V	Black										
	N Power	110-230V	Light Blue										
D											D		
E	<div>*) PEN wire:</div> <div>Green/yellow wire:</div> <div>Green/yellow wire over the intire length and in addition, light blue marking at the ends</div> <div>Light blue wire:</div> <div>Light Blue wire over the intire length and in addition, Green/yellow marking at the ends</div>										E		
F											F		
			Modus Winch Modus		Color codes IEC		Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax		Page Function:	Rev. date:	Sheet: 1 i
							Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location:	Total sheets: 1	Next sheet:

List of Aspect Locations

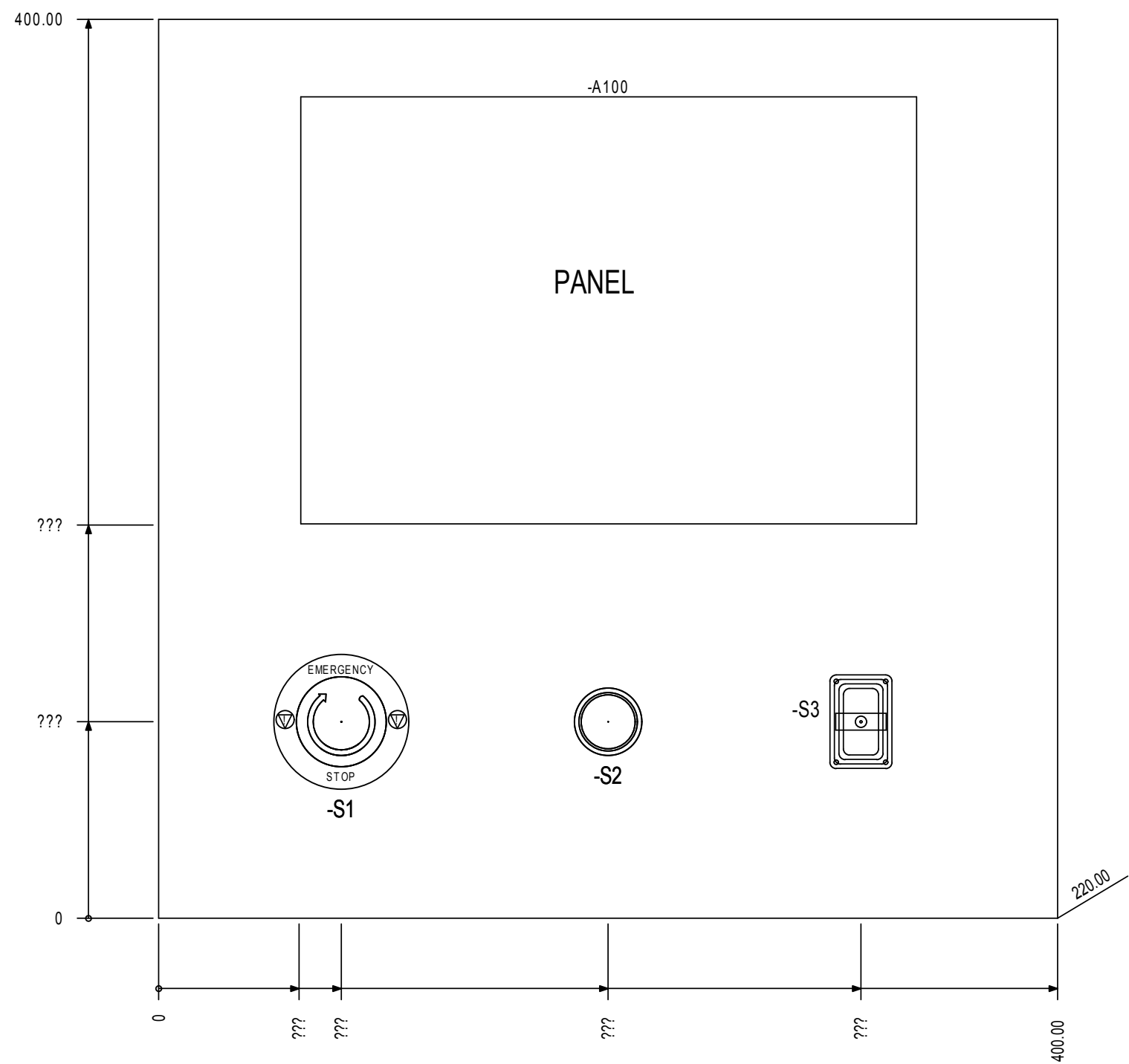
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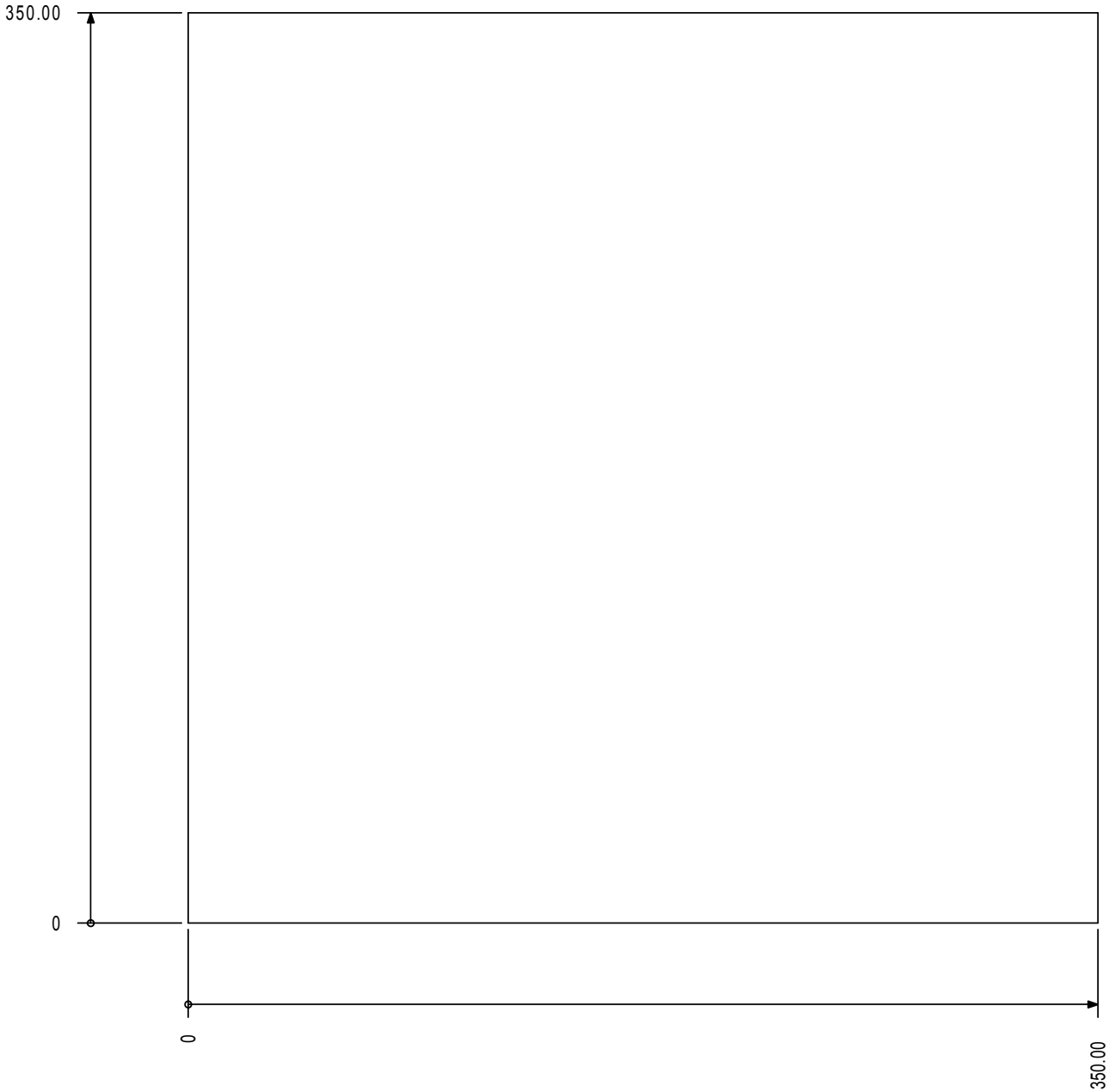
P2 = 24VDC OK
P3 = Phase OK
S1 = Reset Emerg. Stop
S2 = Emergency Stop

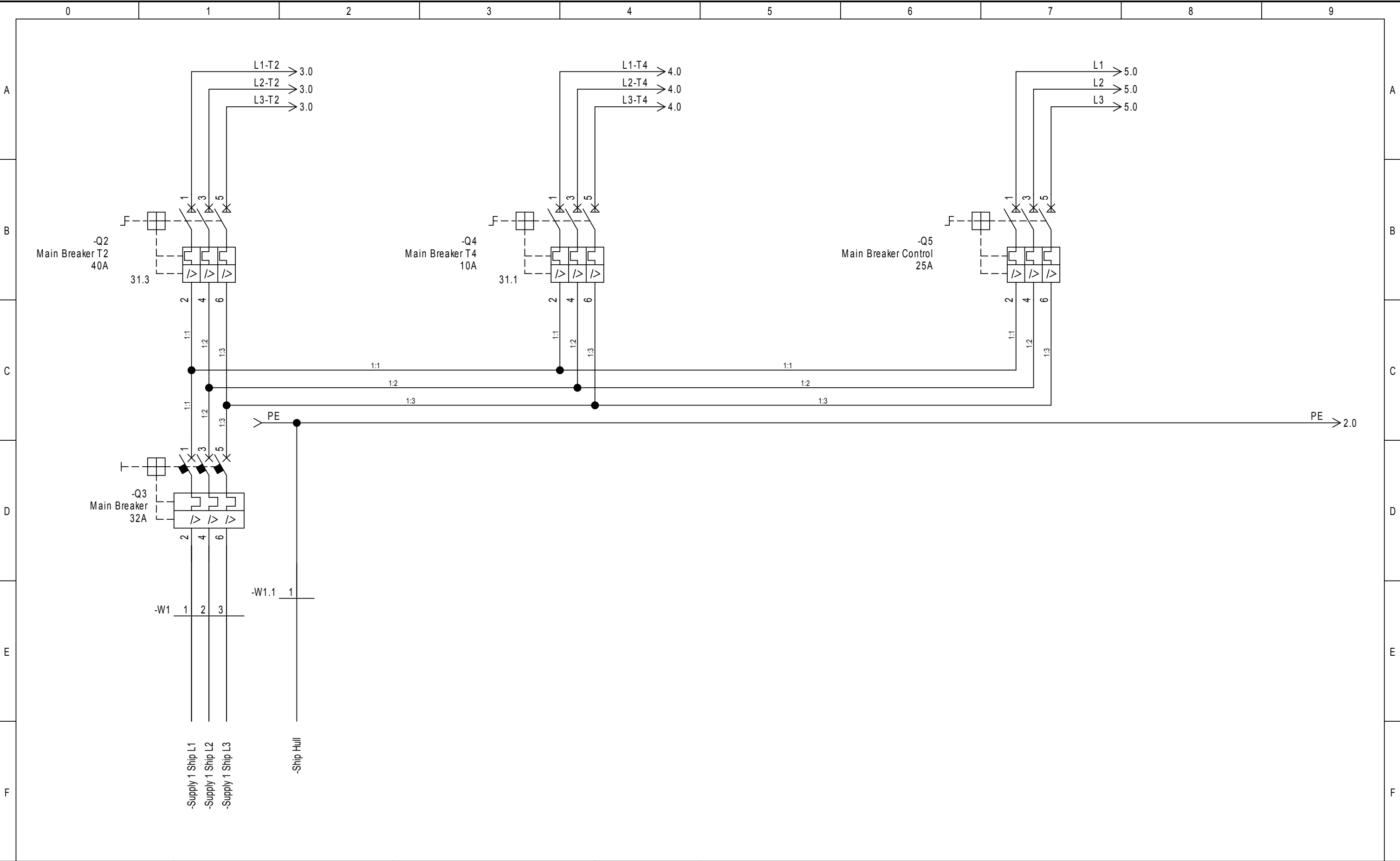


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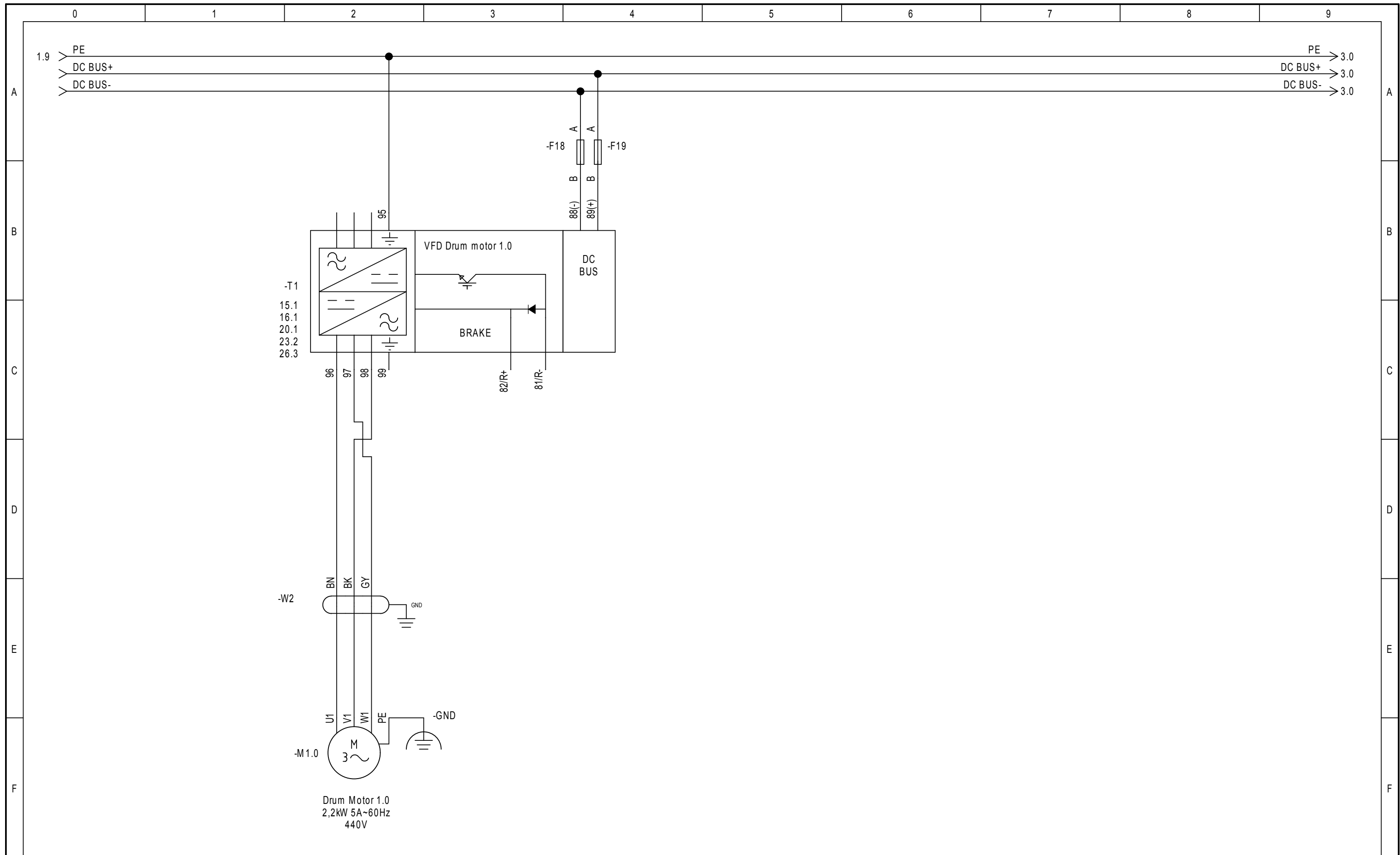



S1 = Reset Emerg. Stop
S2 = Emergency Stop
S3 = Joystik

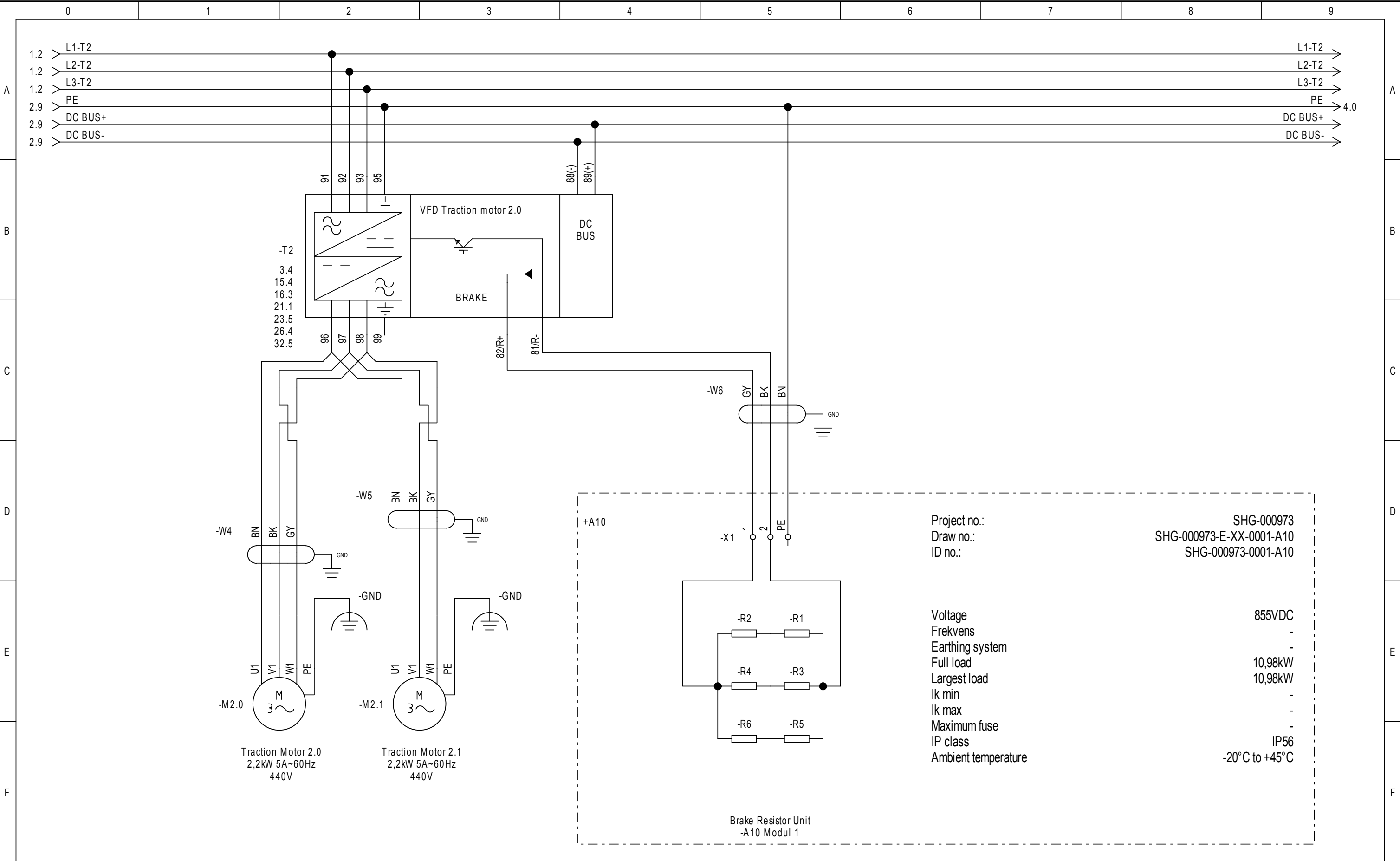




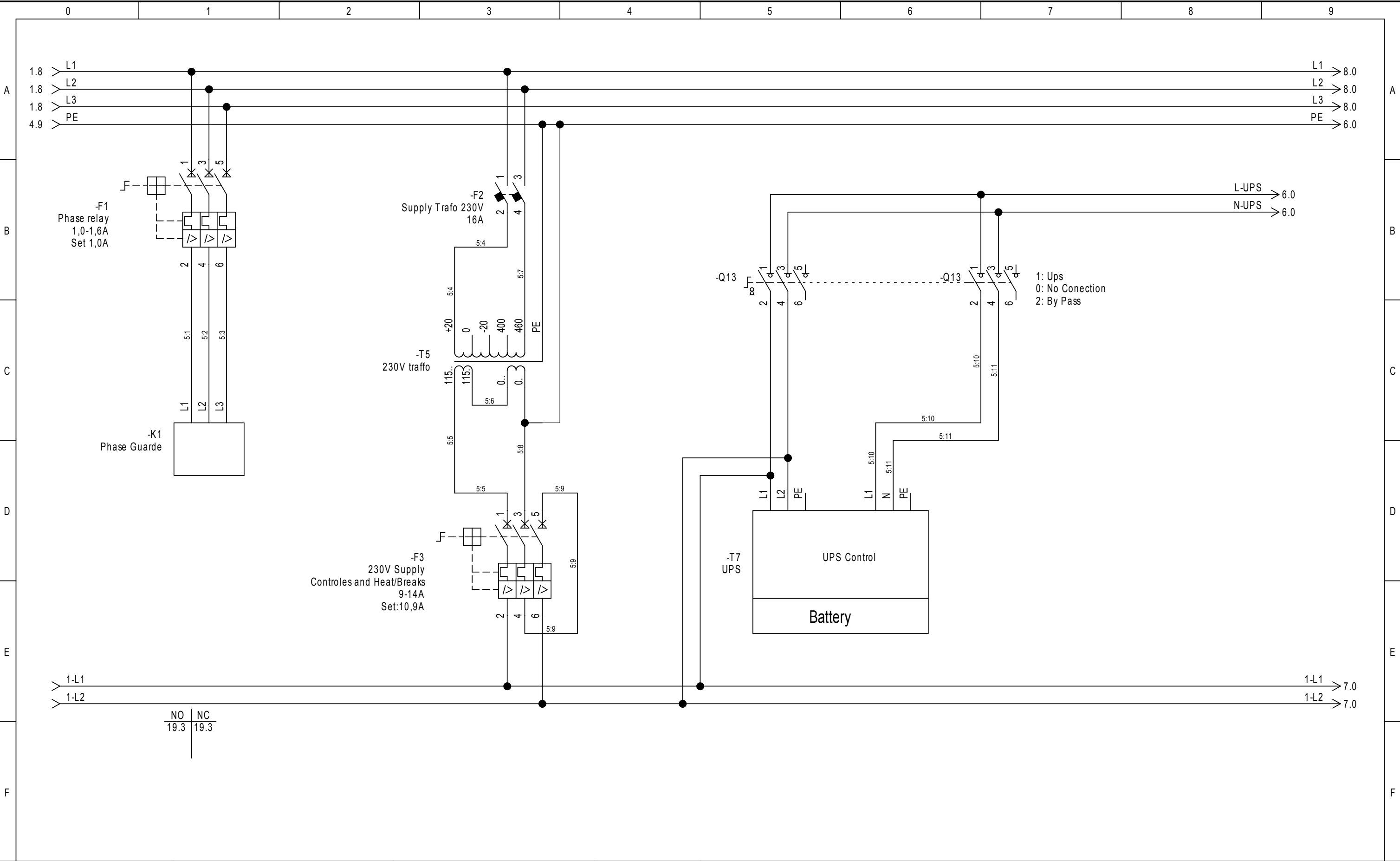
Modus Winch Modus	Main Power Supply	Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:	Sheet: 1
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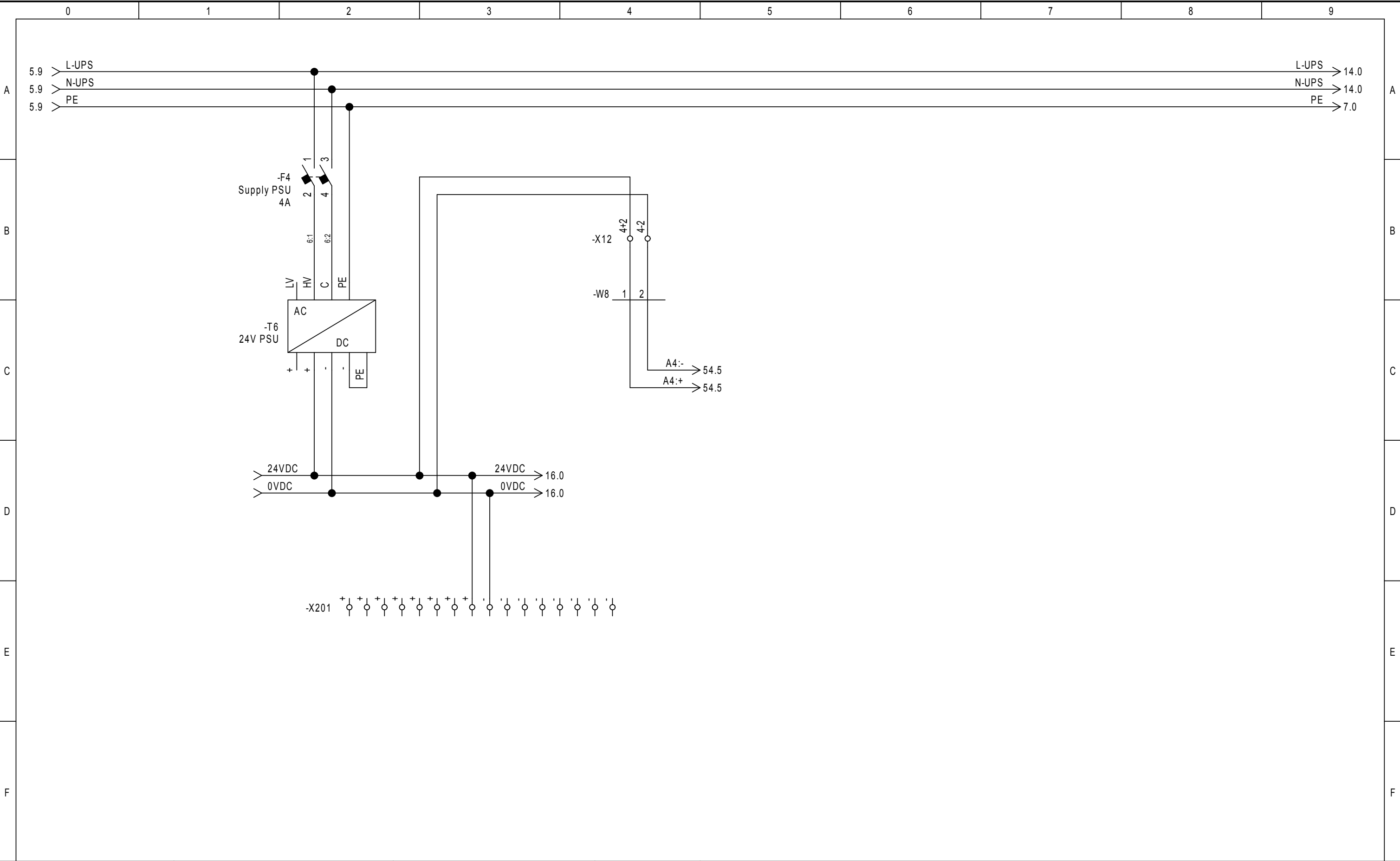


	Modus Winch Modus	Main Power VFD Motor 1	Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:	Sheet: 2
			Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 50	Next sheet: 3



Modus Winch Modus	Main Power VFD Motor 2	Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:	Sheet: 3
		Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 50	Next sheet: 4





Modus
Winch
Modus

Main Power
480V/230V/24VDC

Design/App.:
MAN / JLE
Rev. no.:
AB

Project no.:
SHG-000973
Date:
04-07-2016

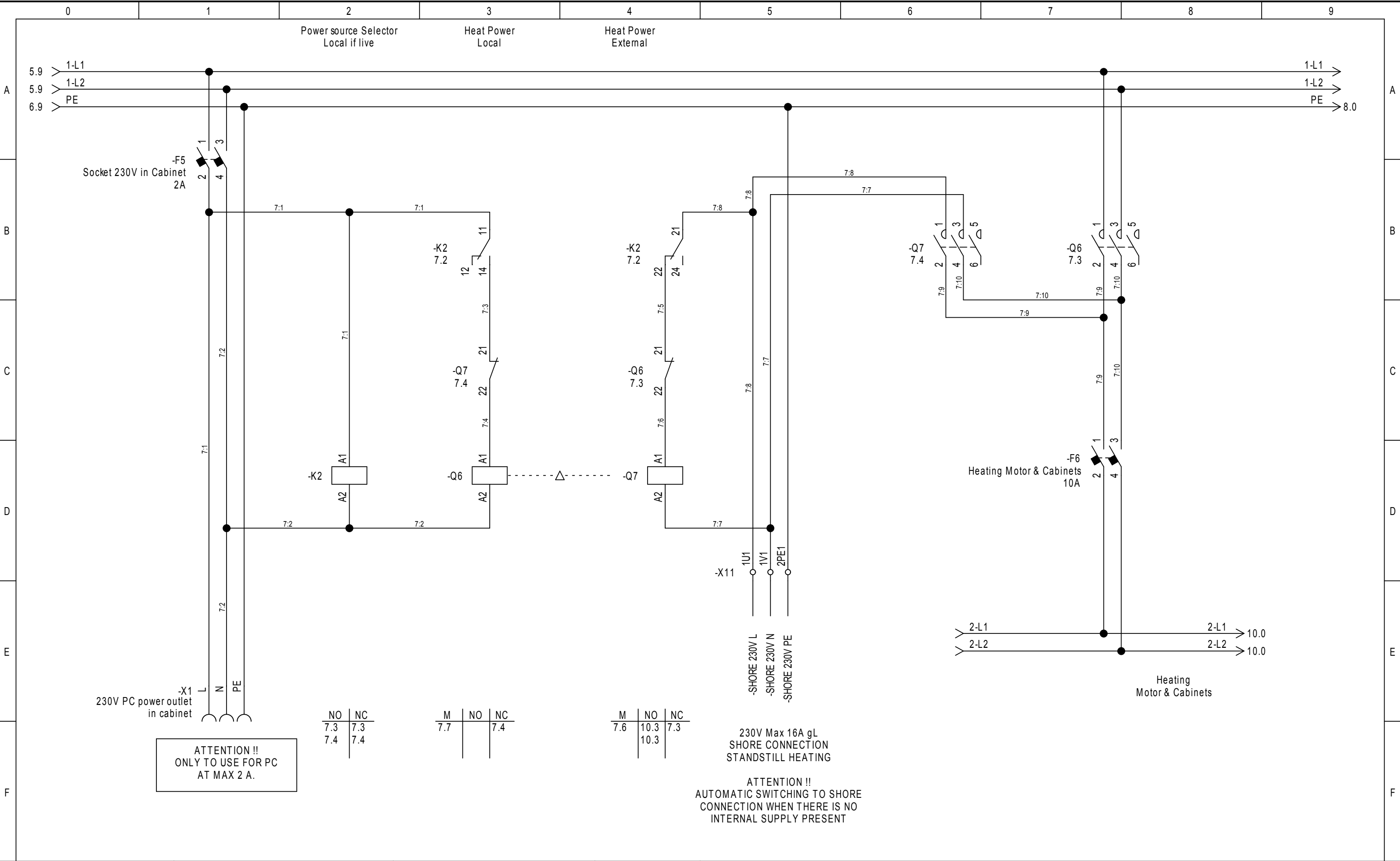
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SHG-00973-0001-A1

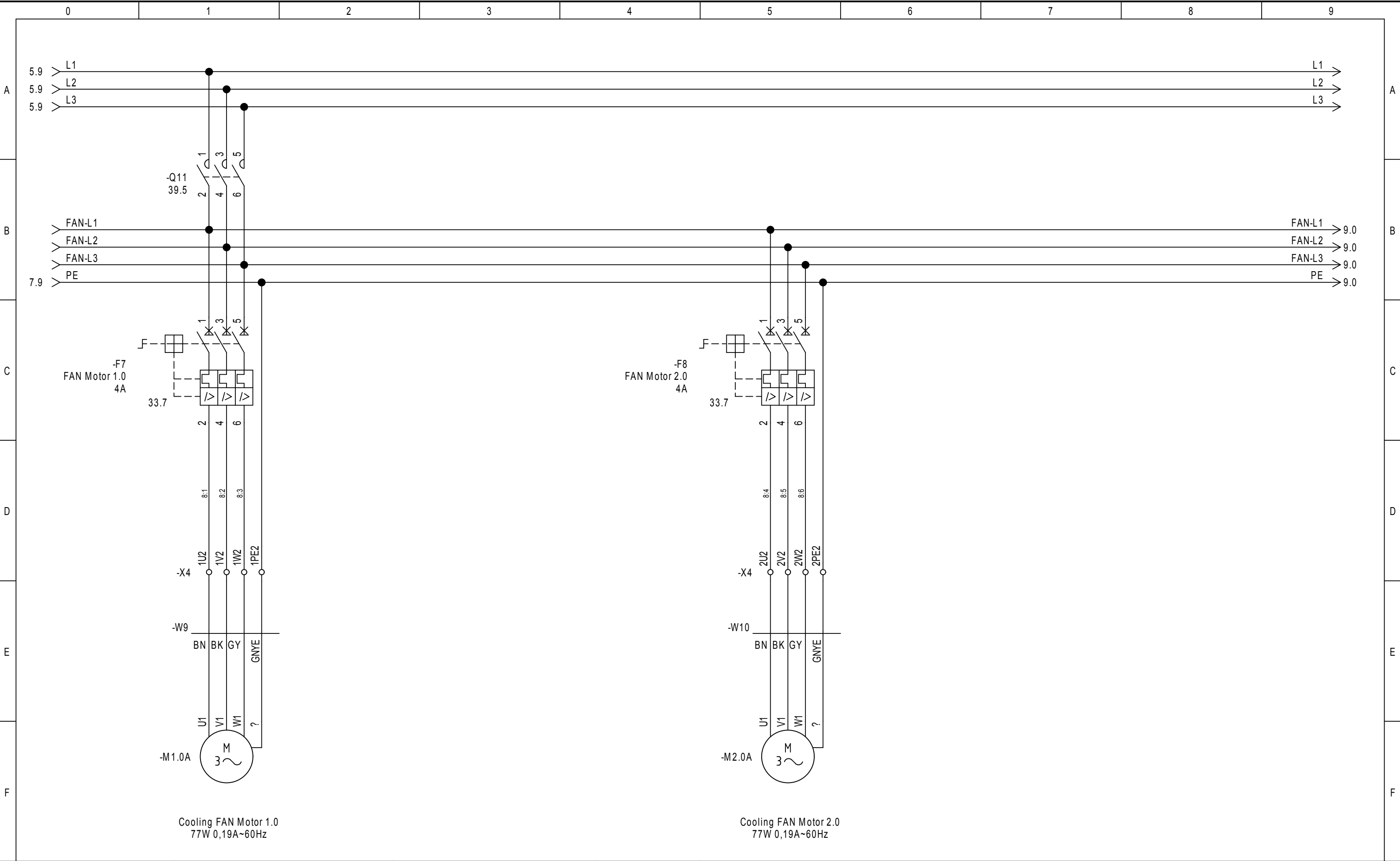
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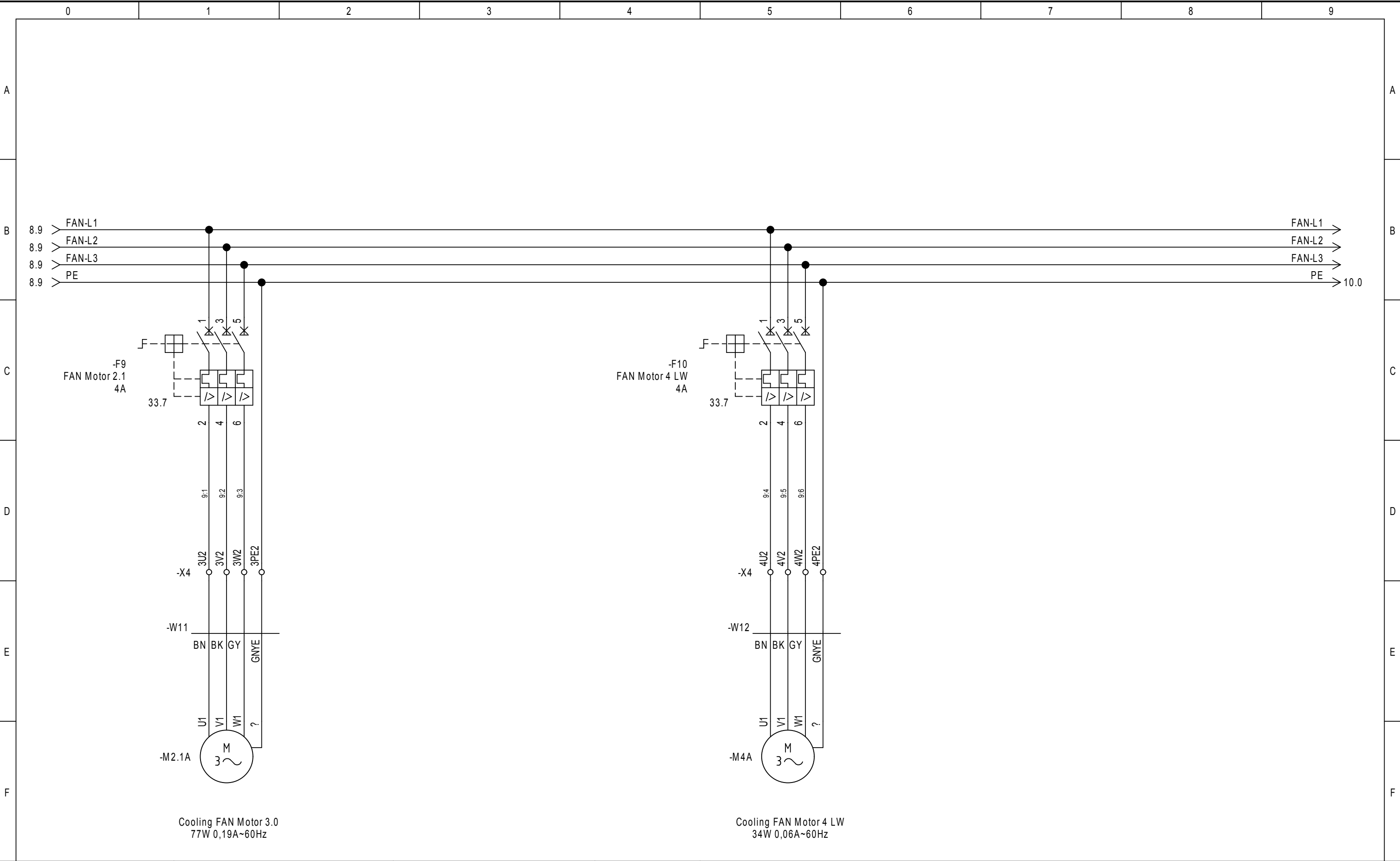
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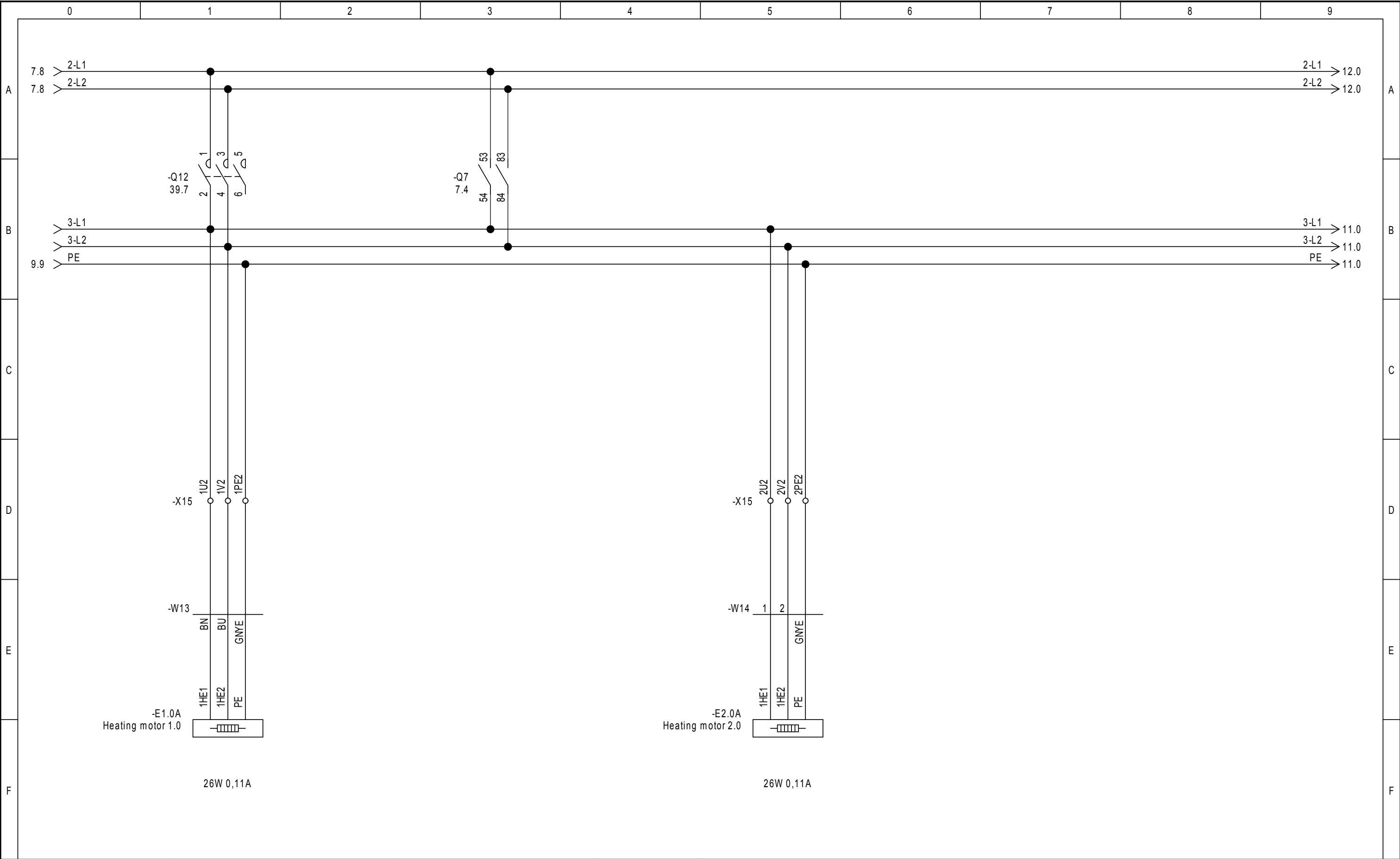
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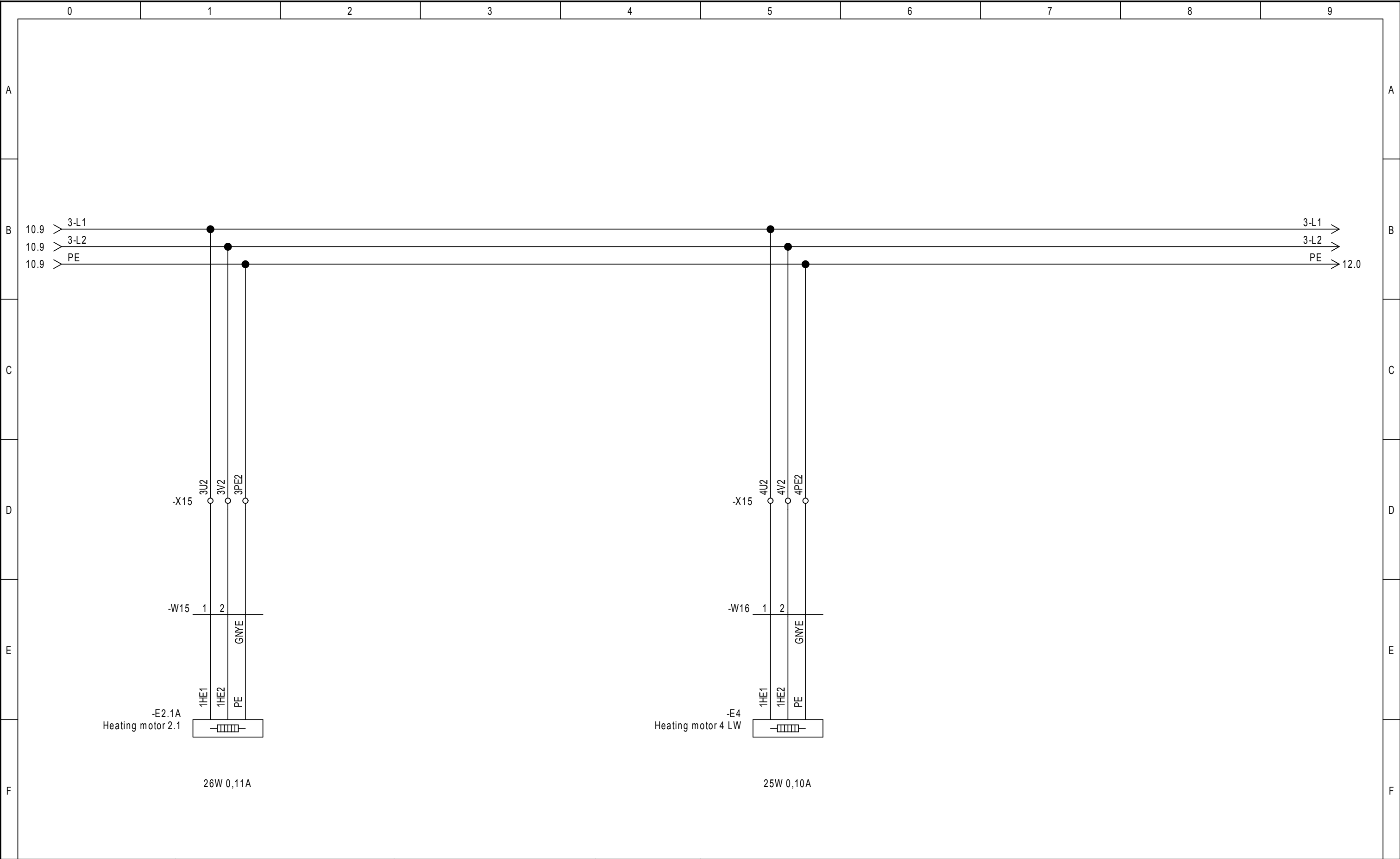
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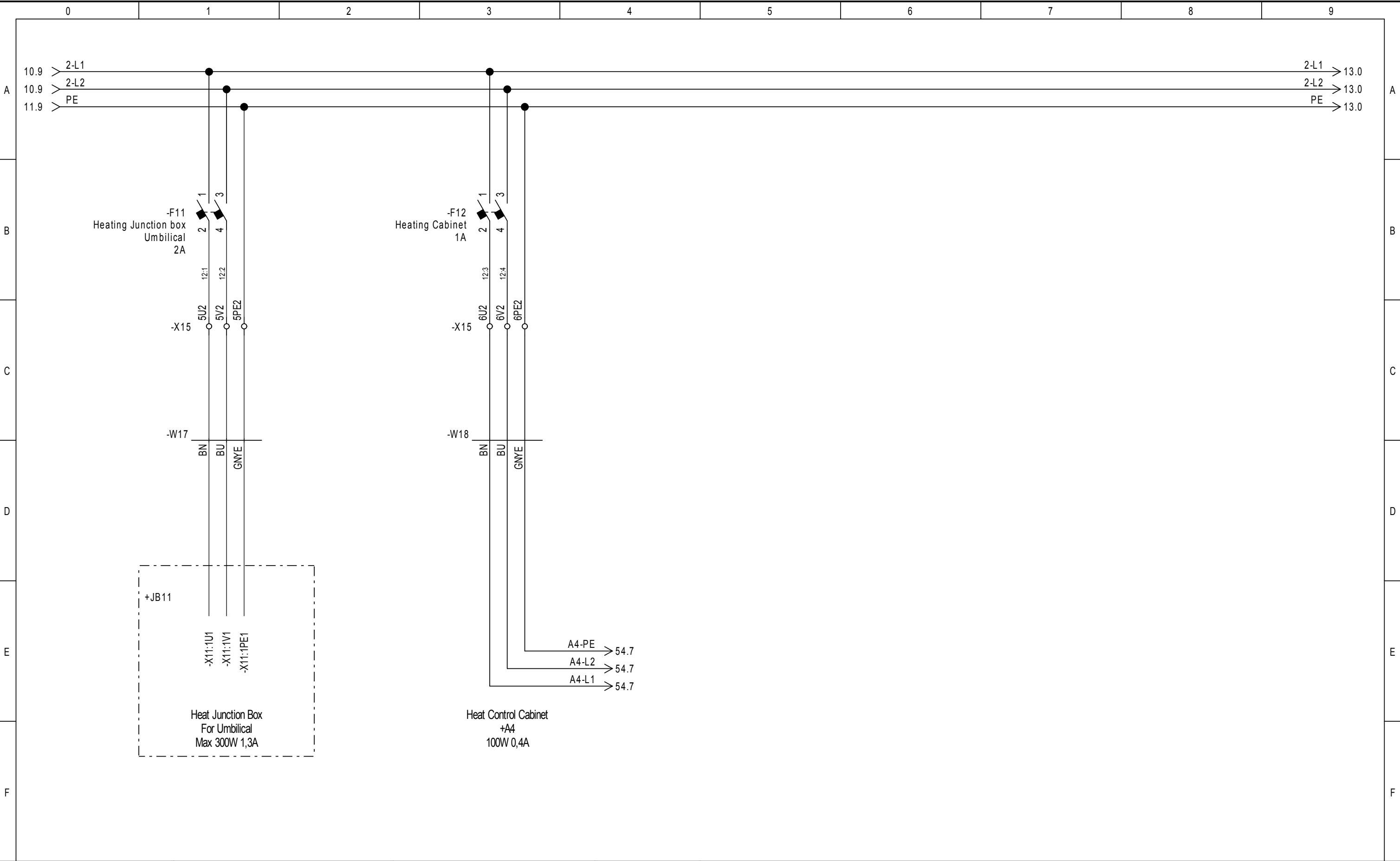


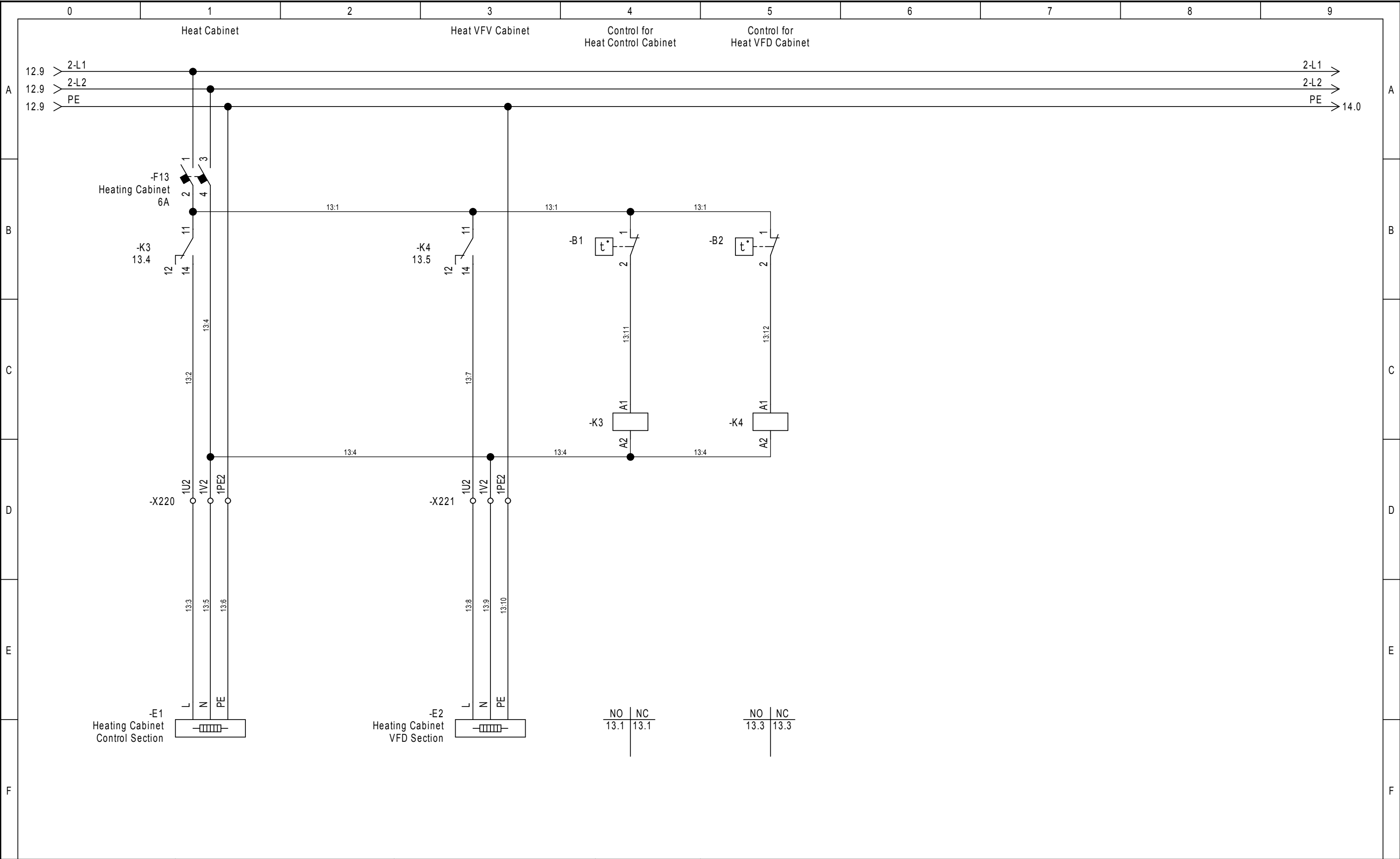




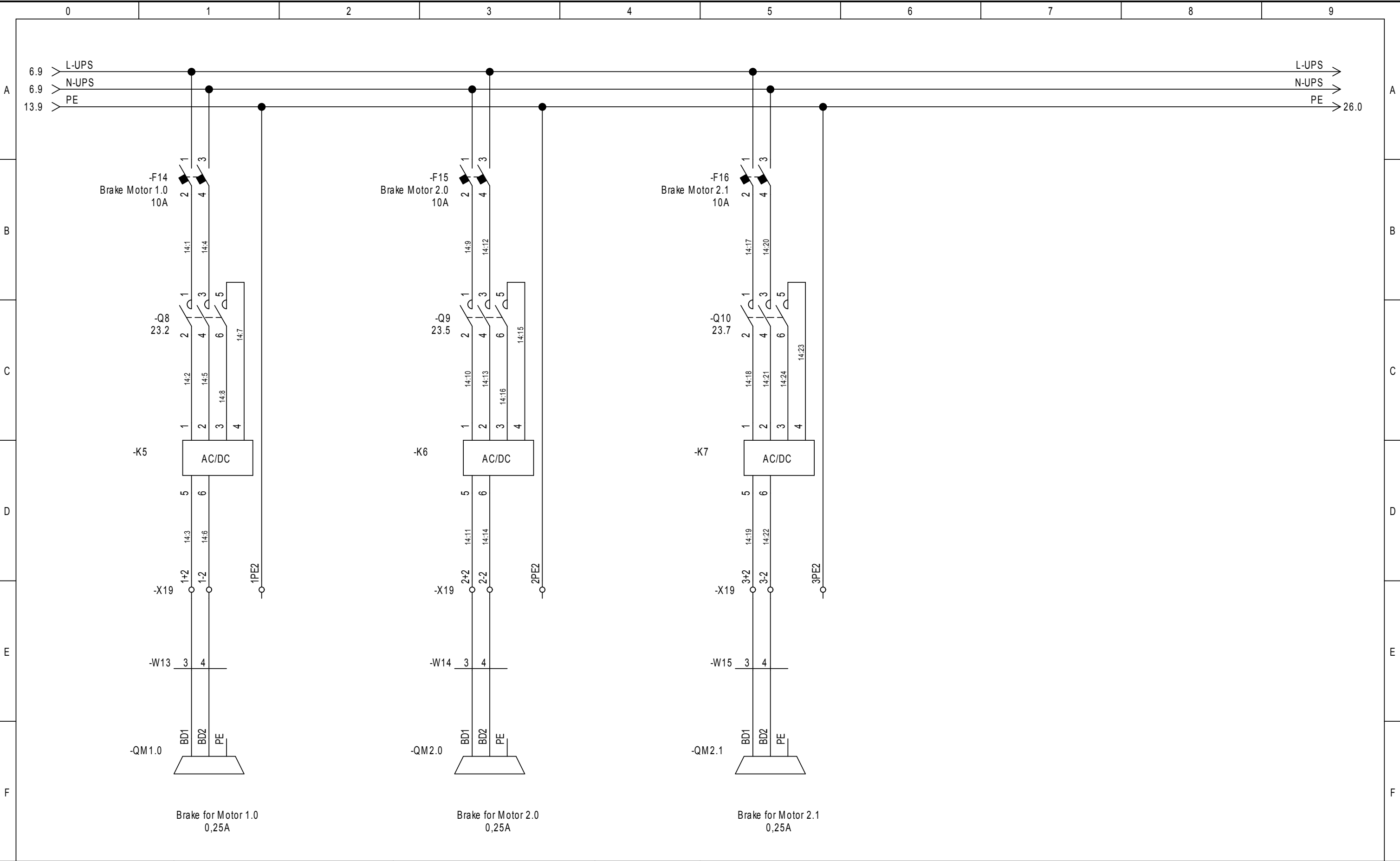




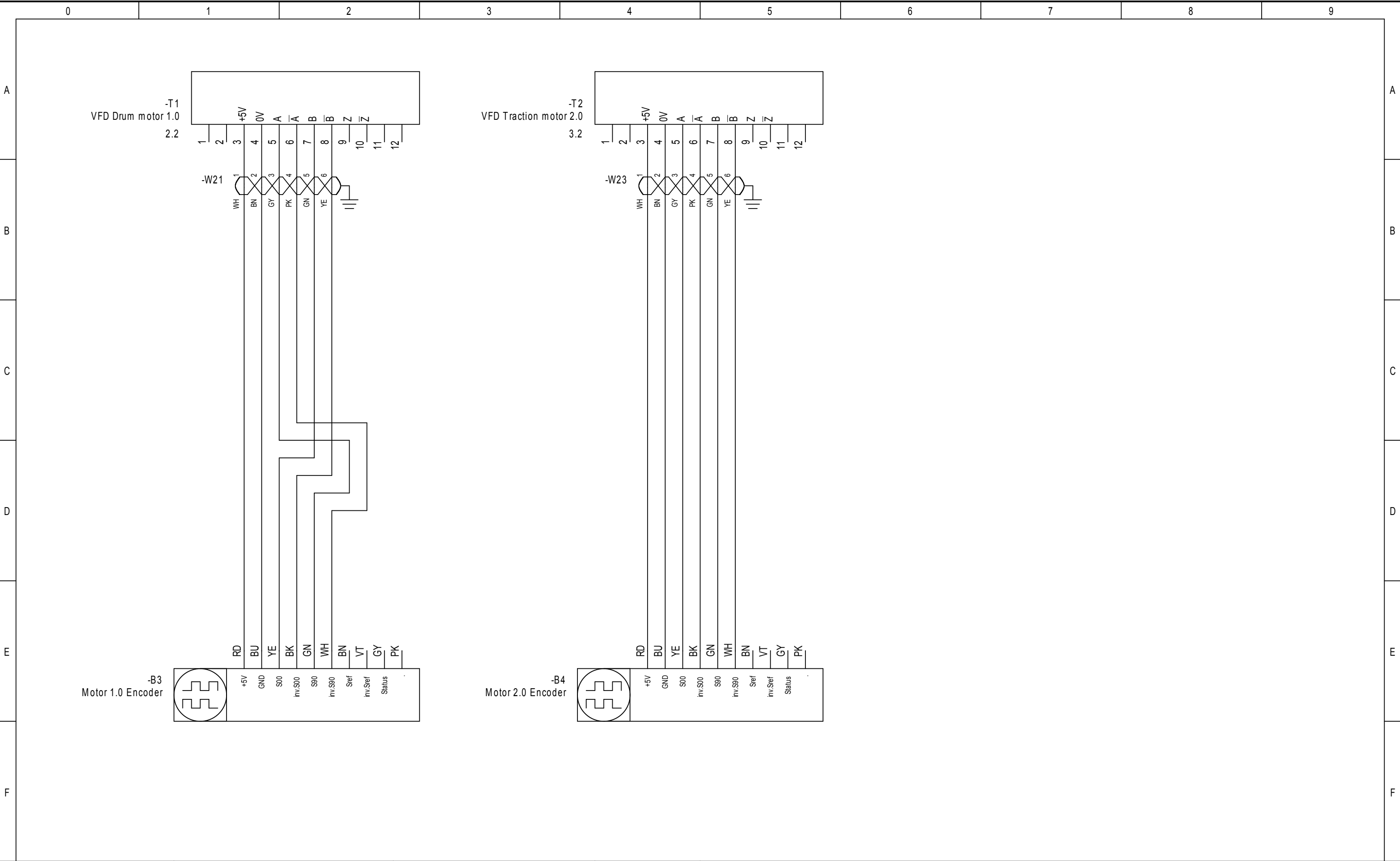


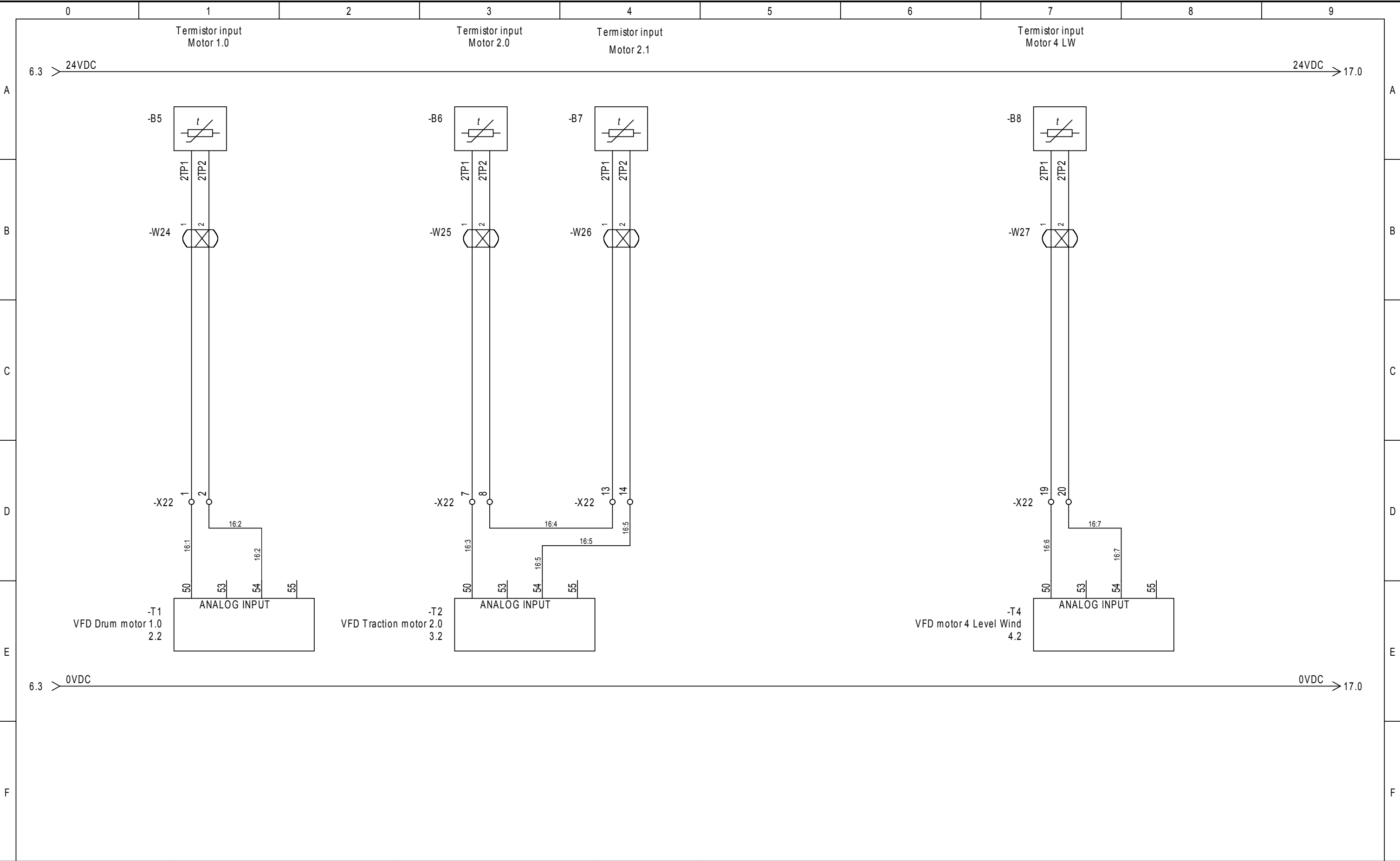


Modus Winch Modus	Main Power Cabinet Heating	Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:	Sheet: 13
		Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 50	Next sheet: 14



Modus Winch Modus	Main Power Motor brakes	Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:	Sheet: 14
		Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 50	Next sheet: 15





Modus Winch Modus	Control Circuit Motor Thermistor Motor 1	Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:	Sheet: 16
		Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 50	Next sheet: 17



Control Circuit
Emergency Stop

AB

ate:
04-07-2016

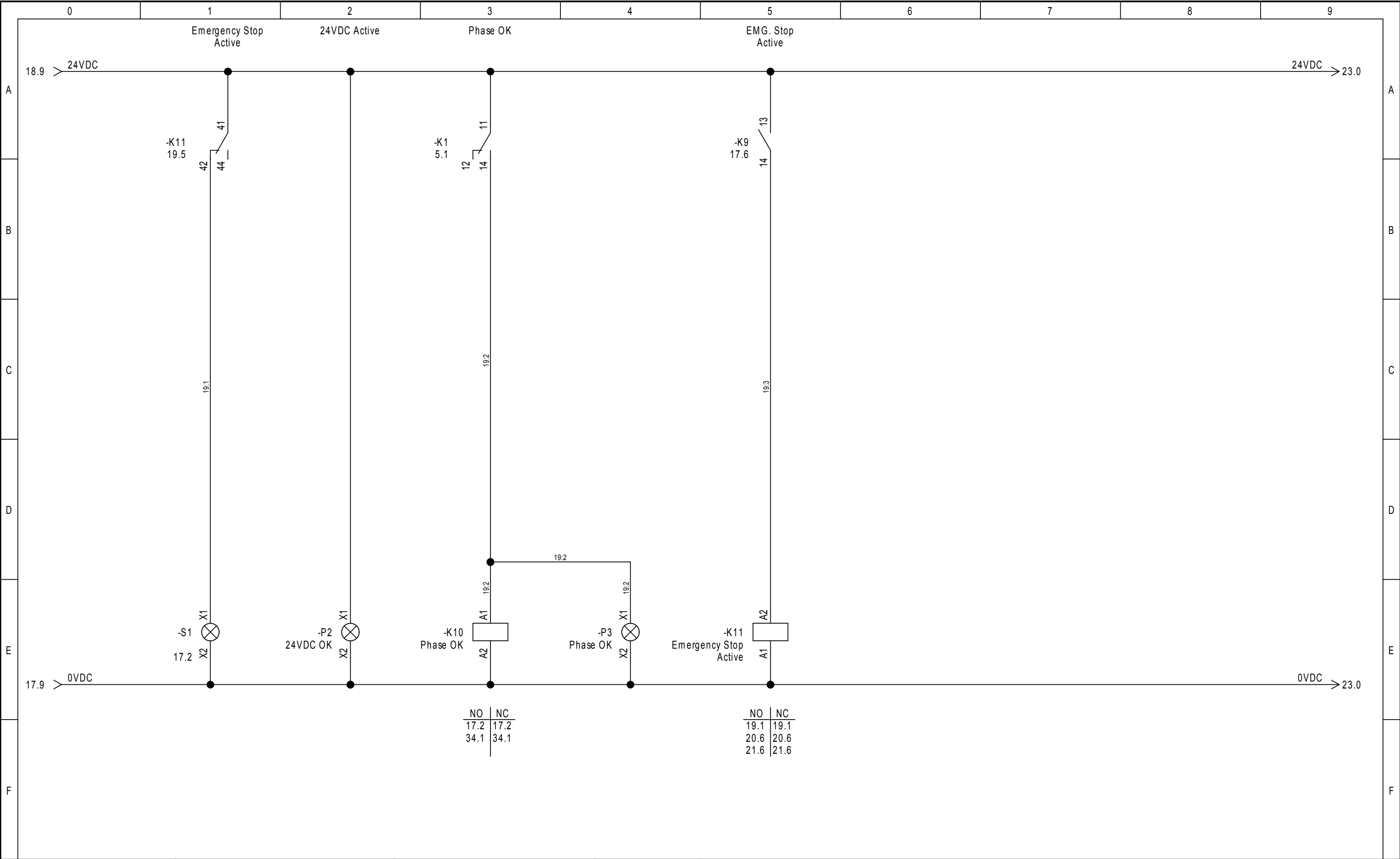
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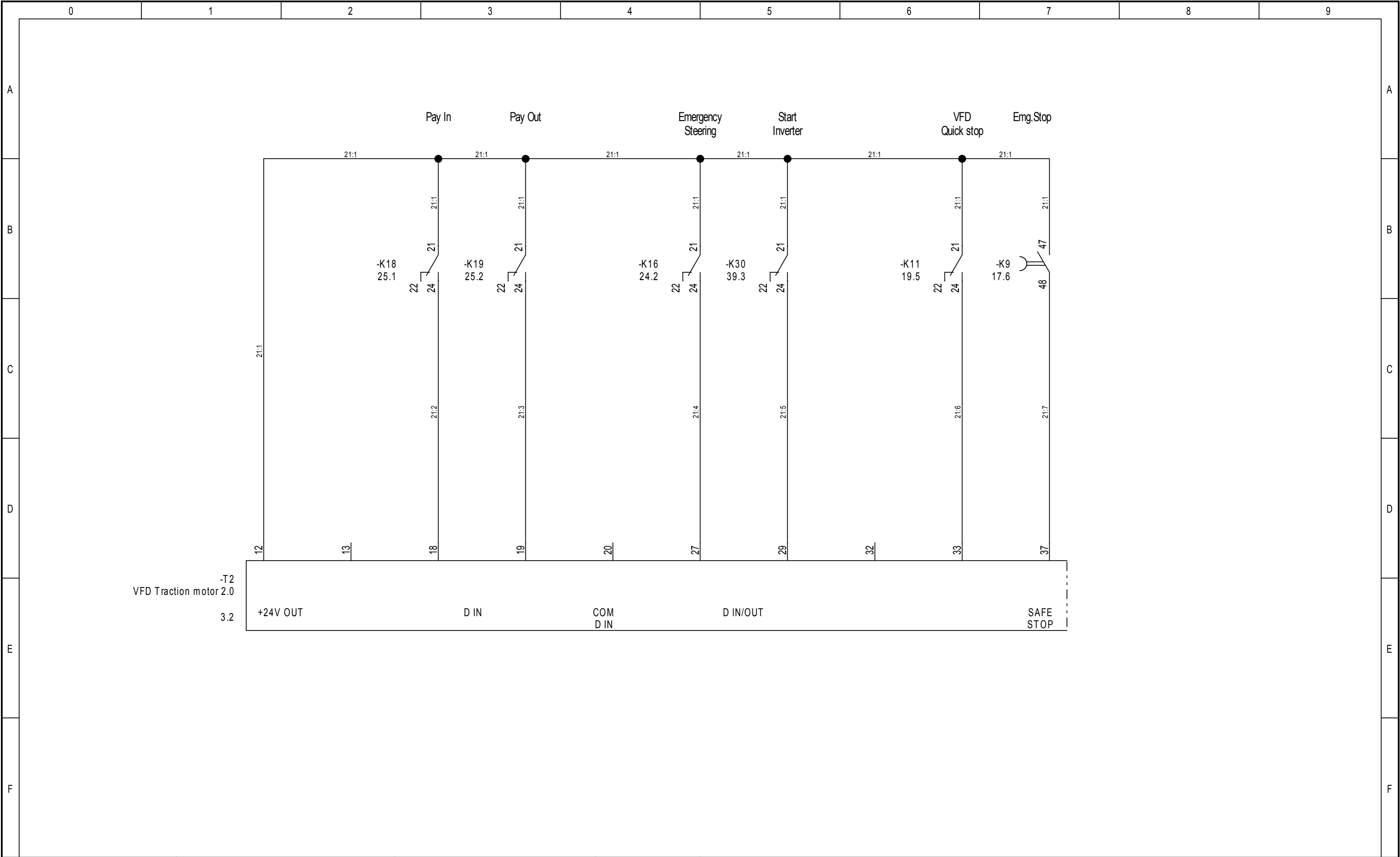
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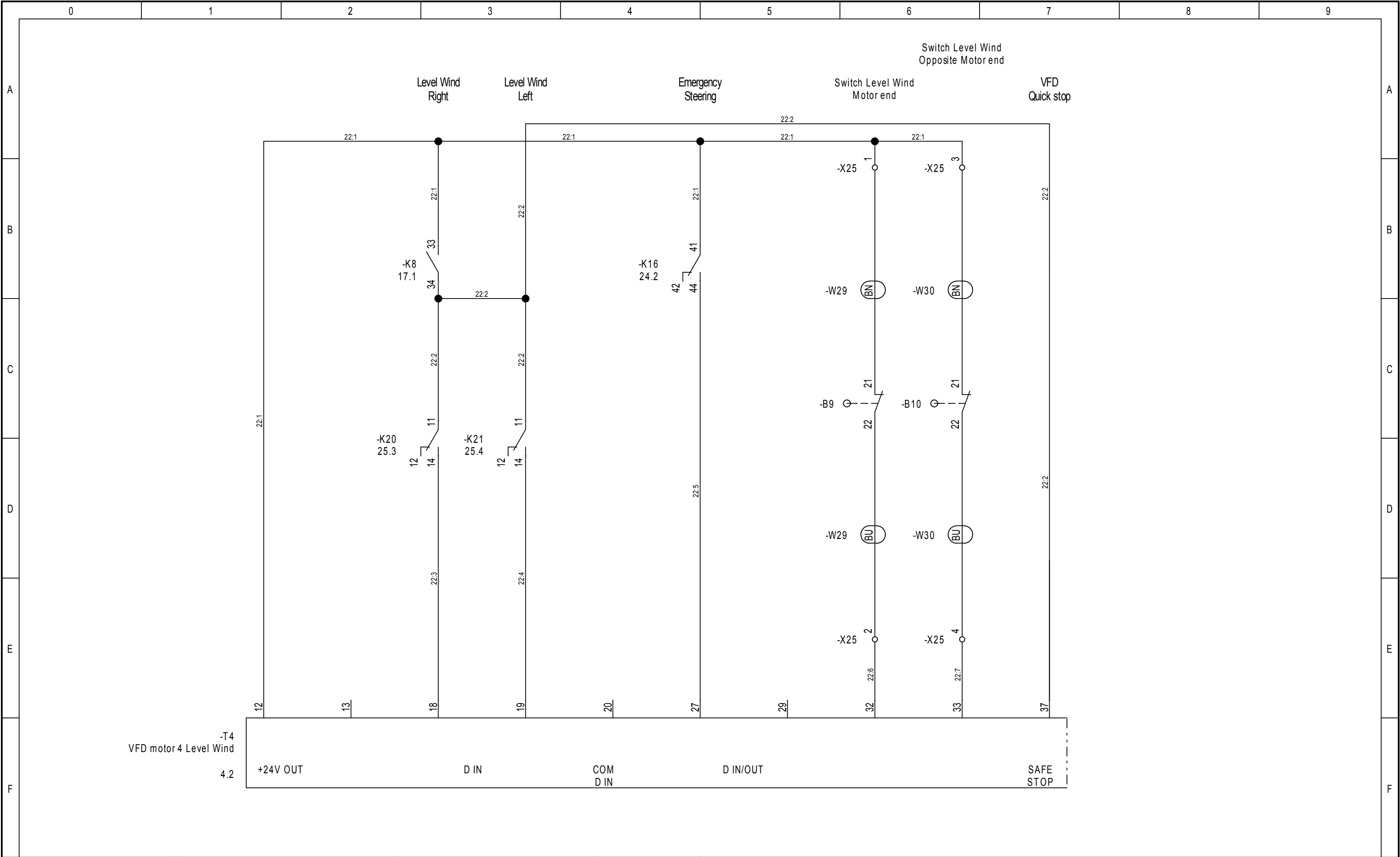
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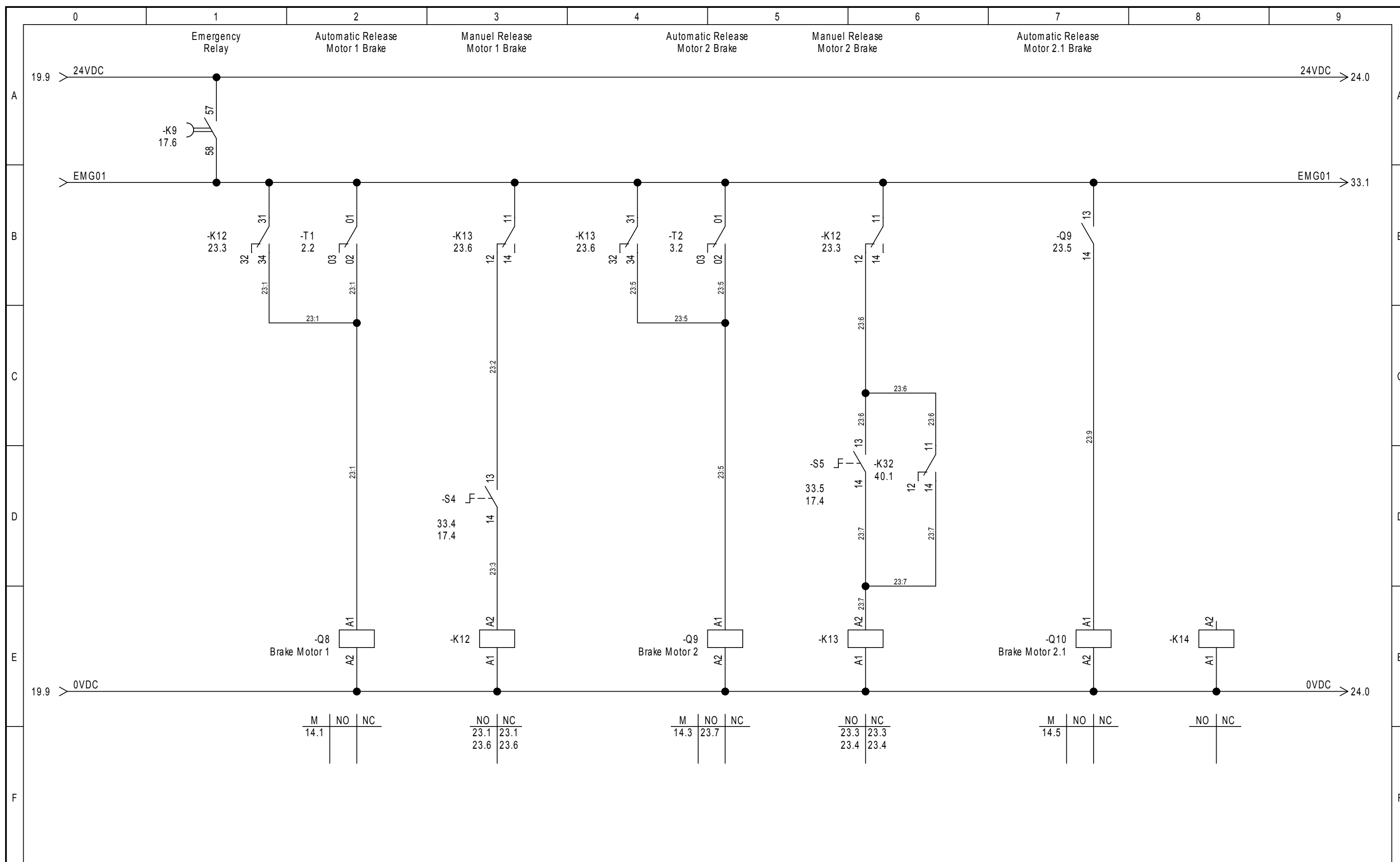
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18









Modus
Winch
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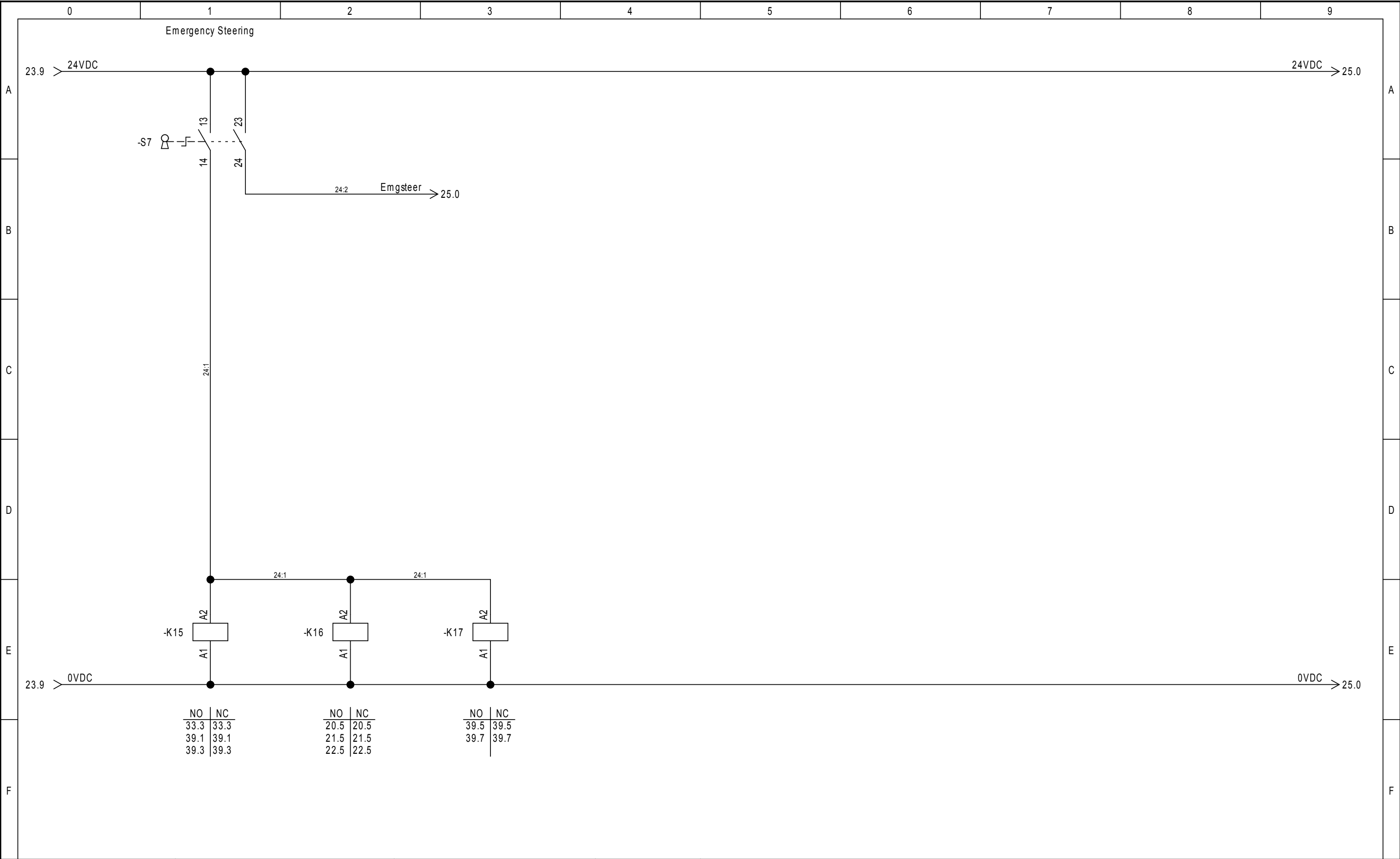
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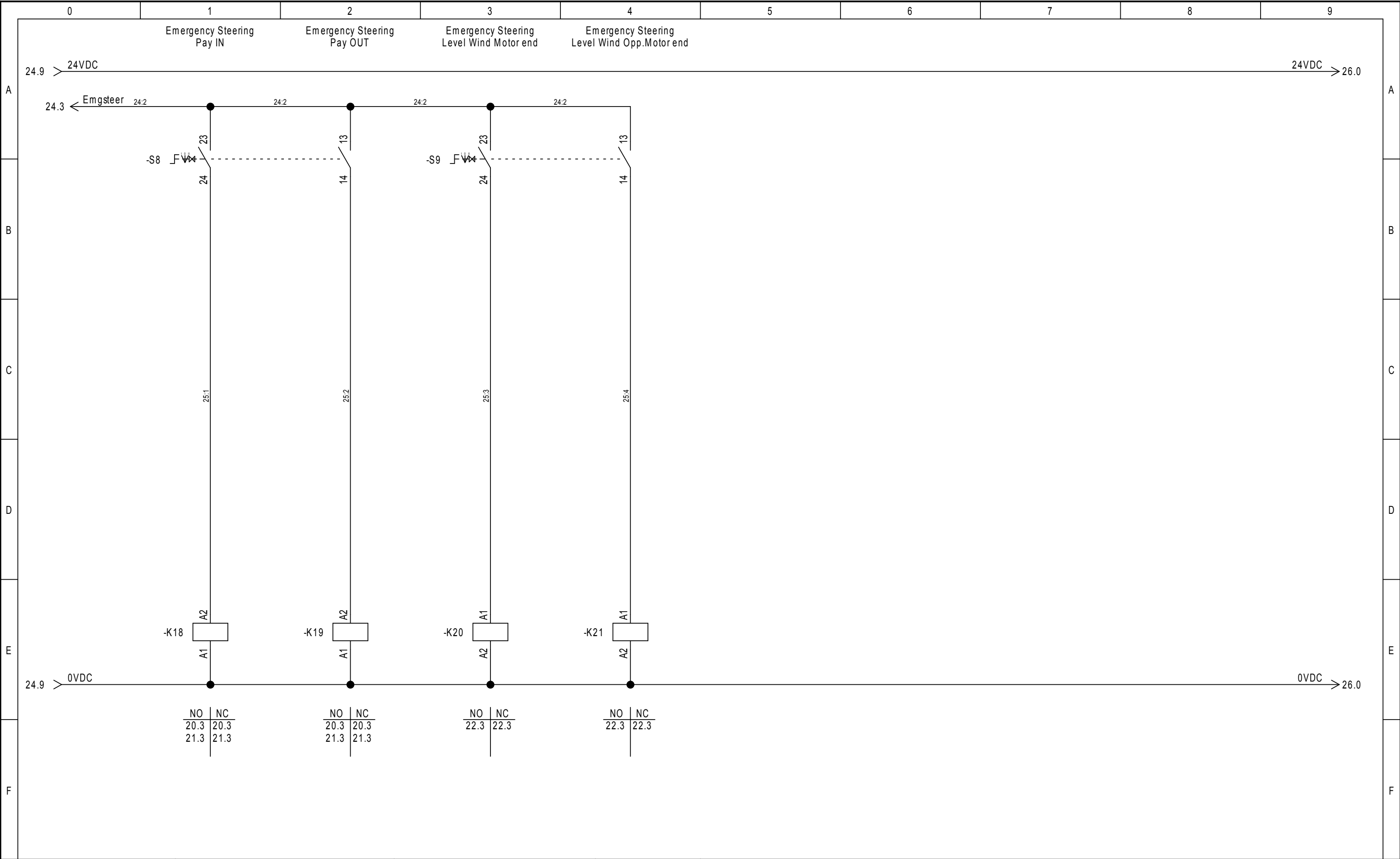
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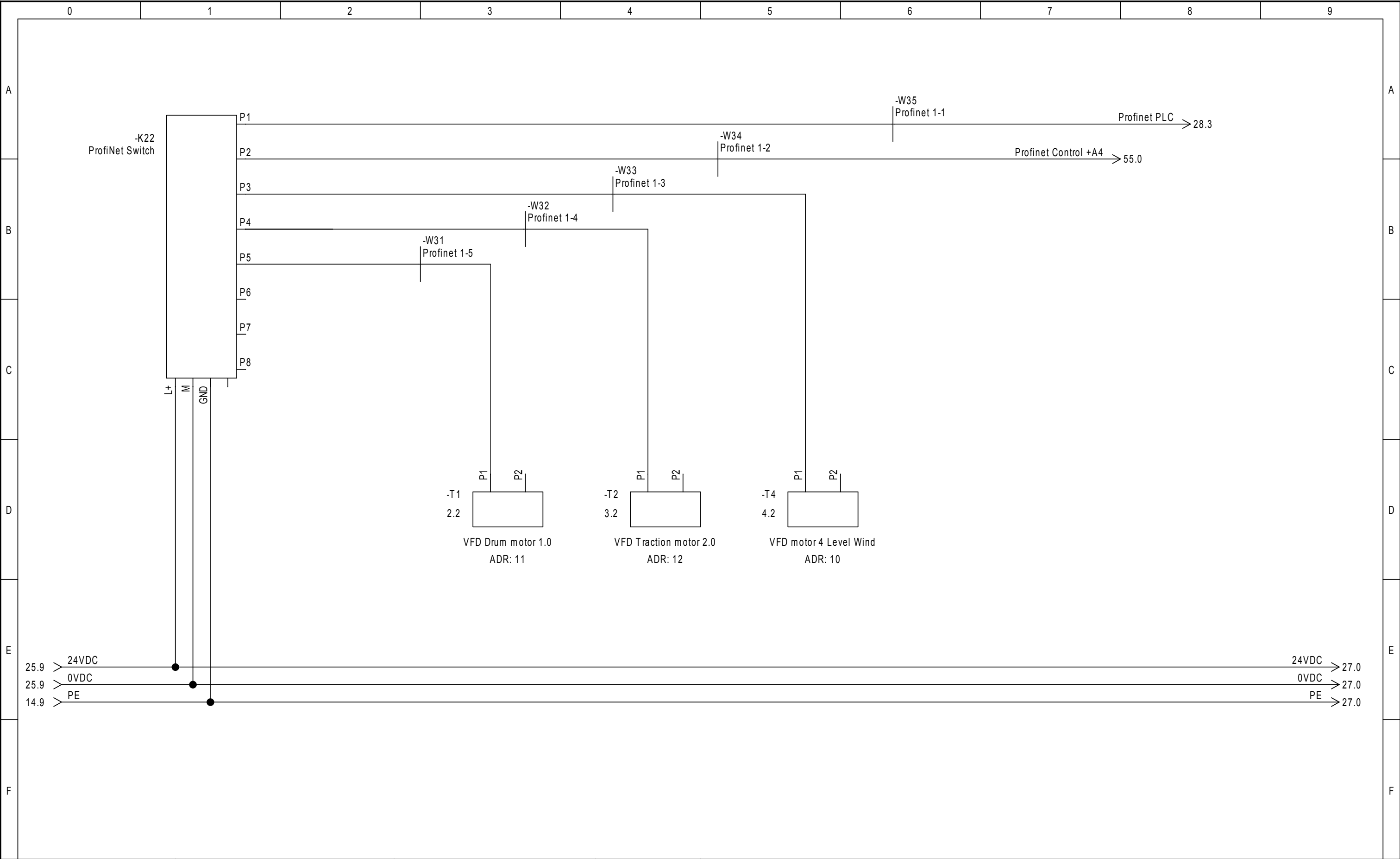
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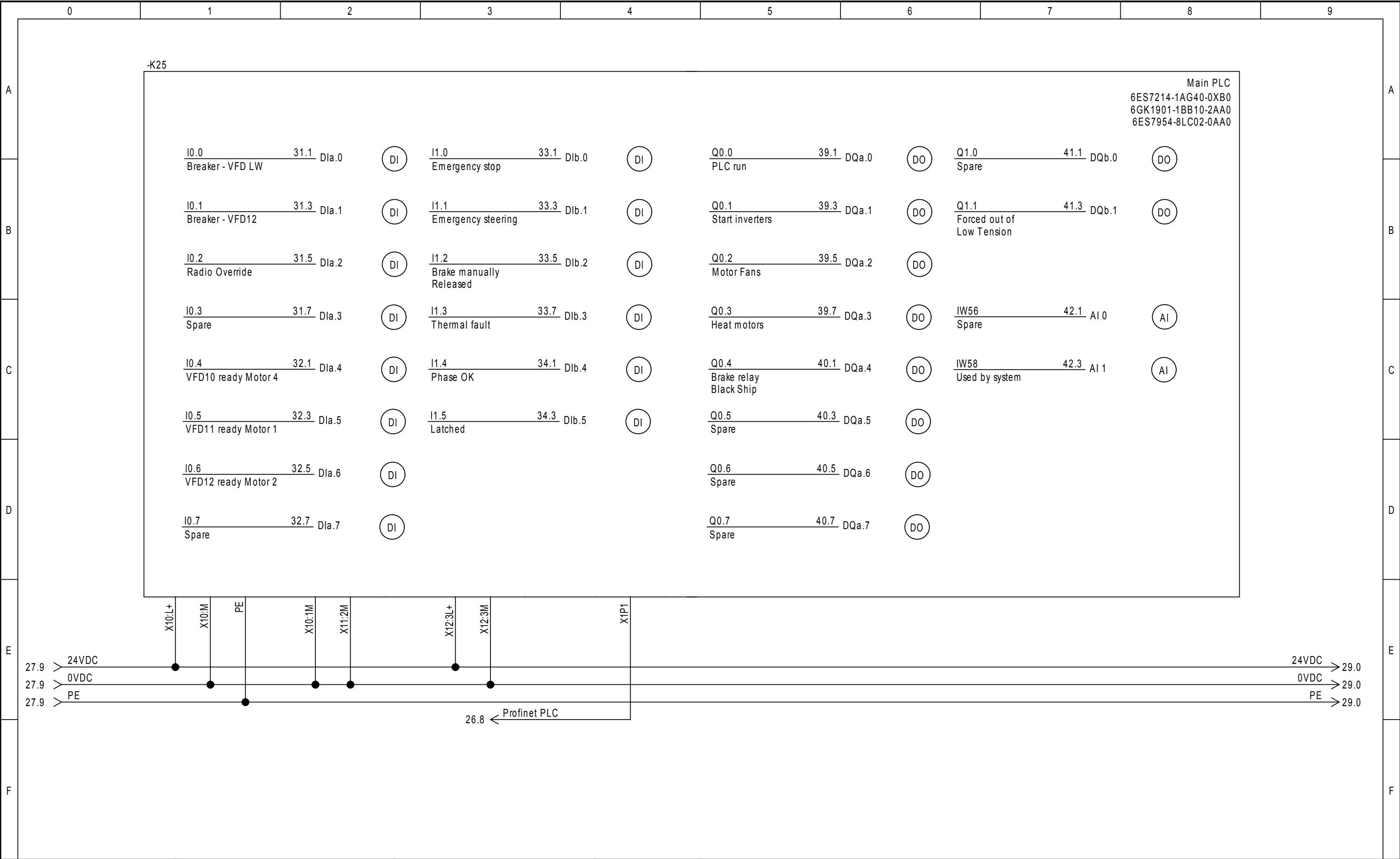
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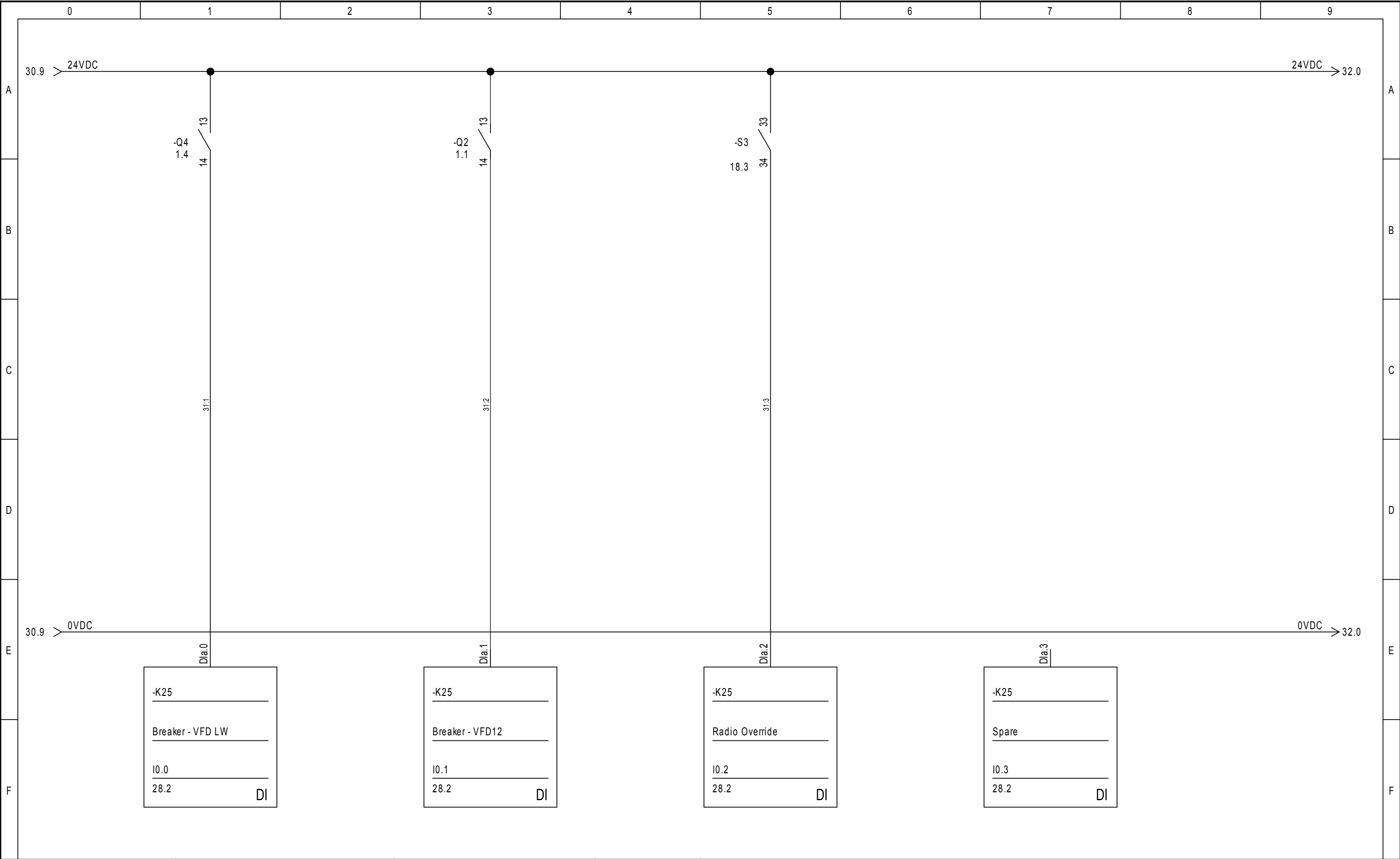
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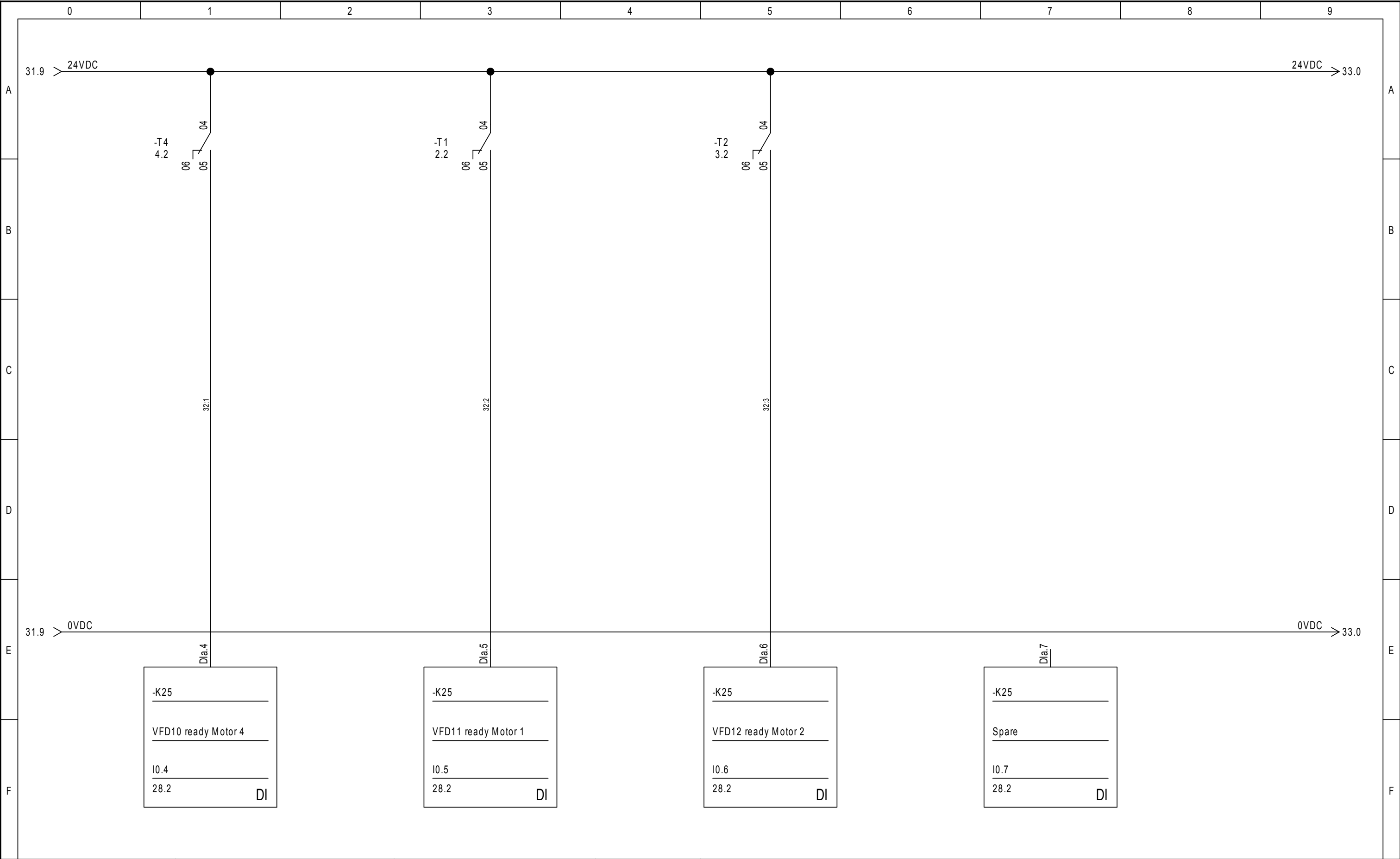


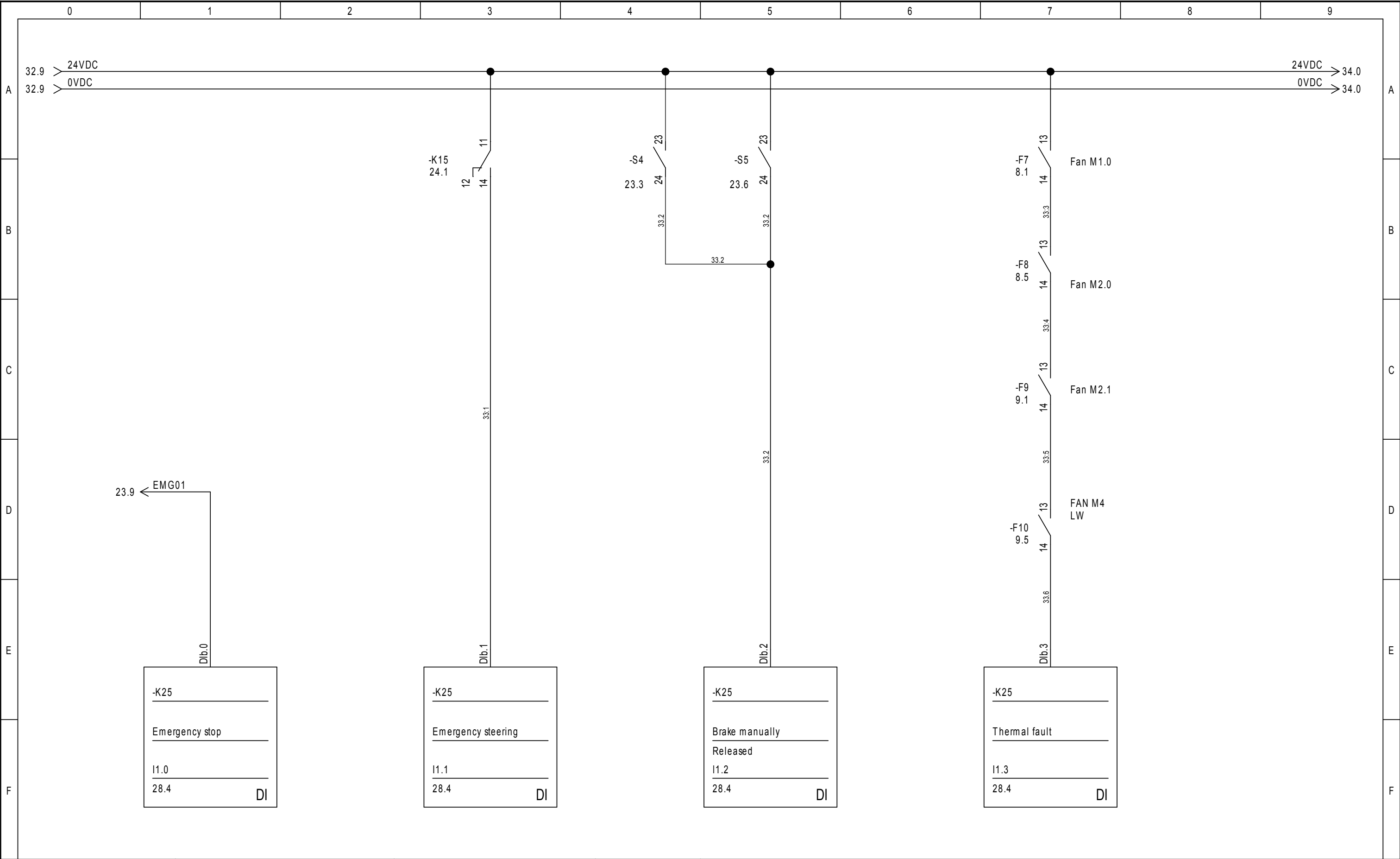


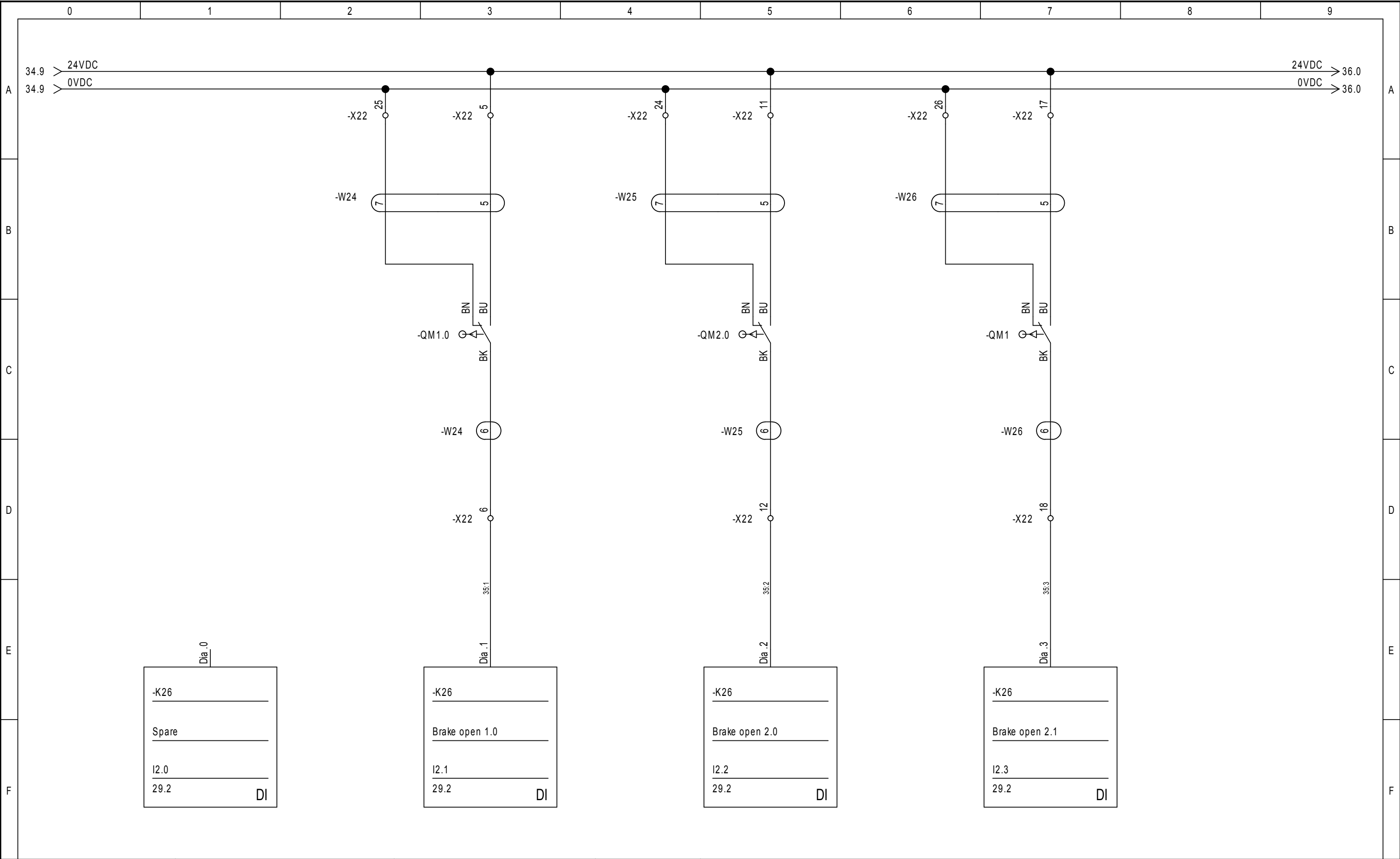


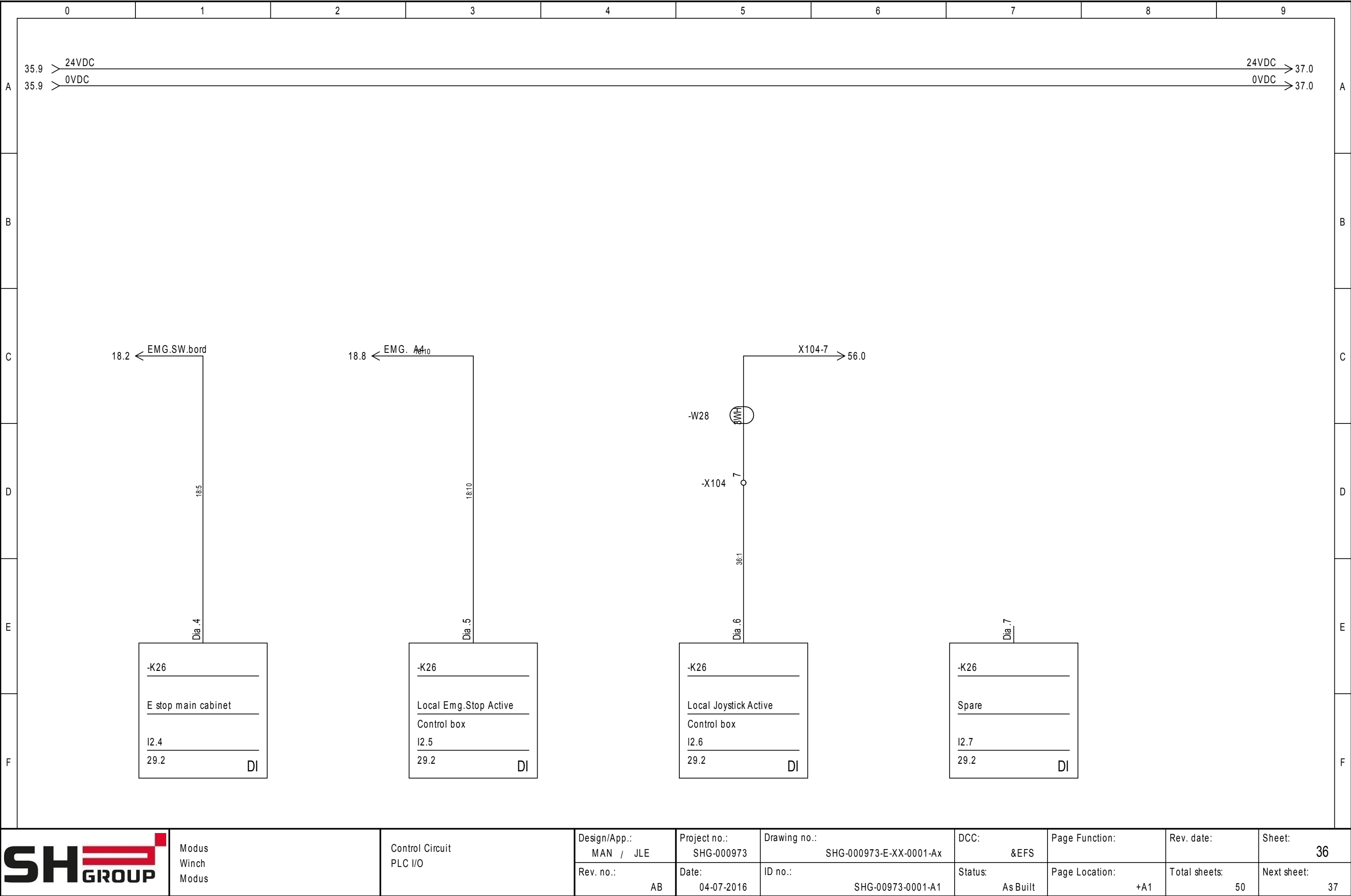


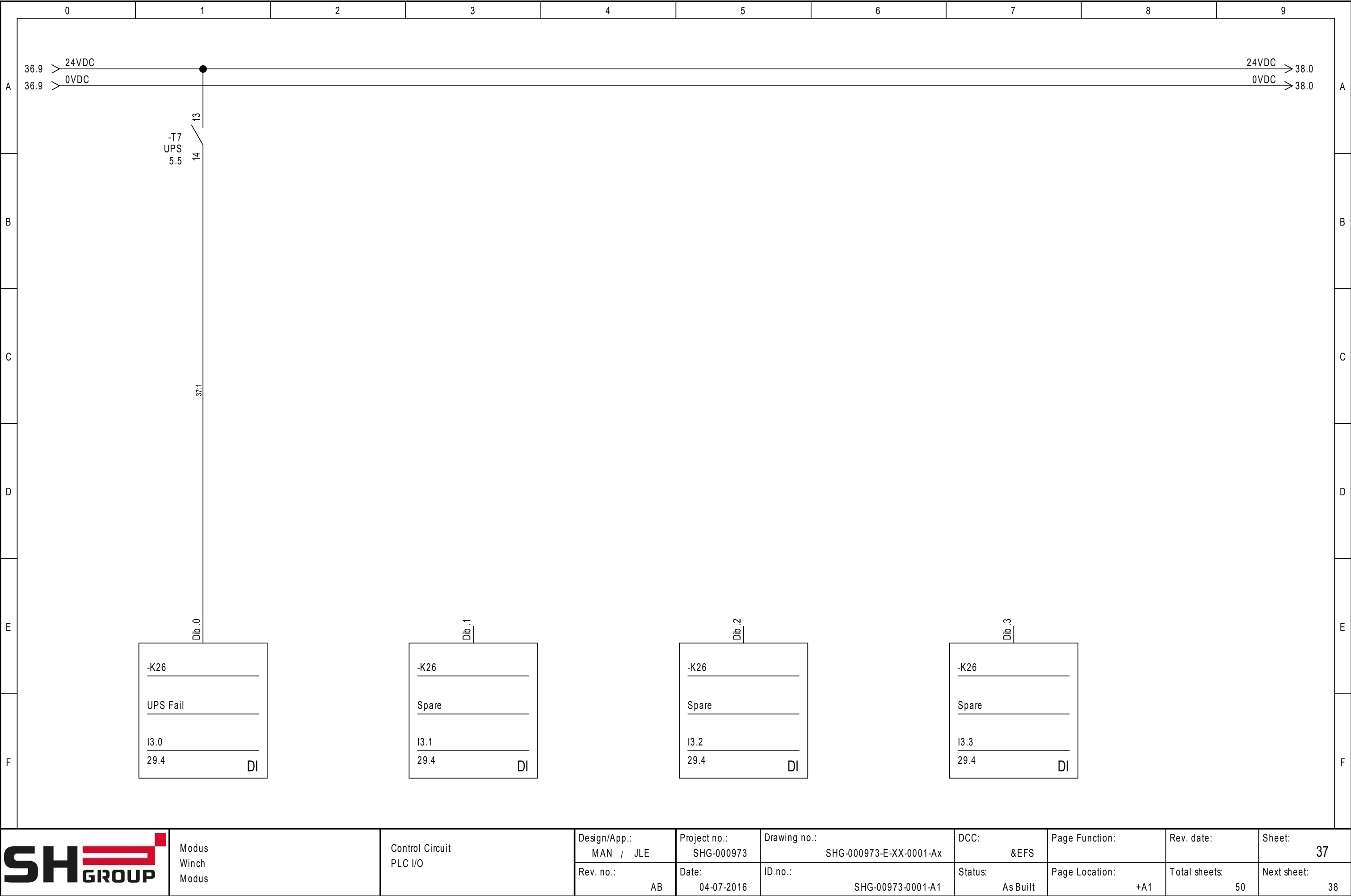


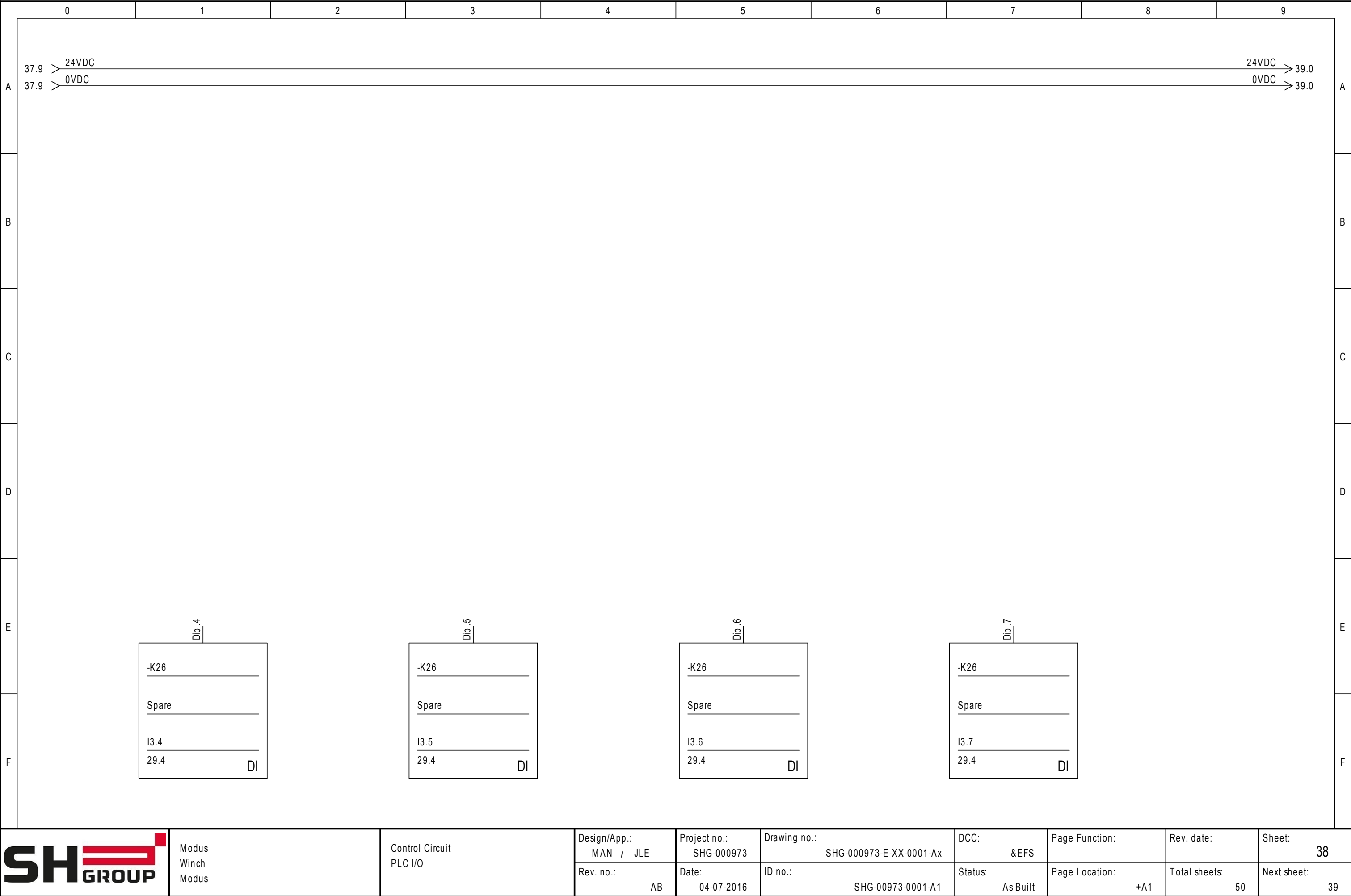


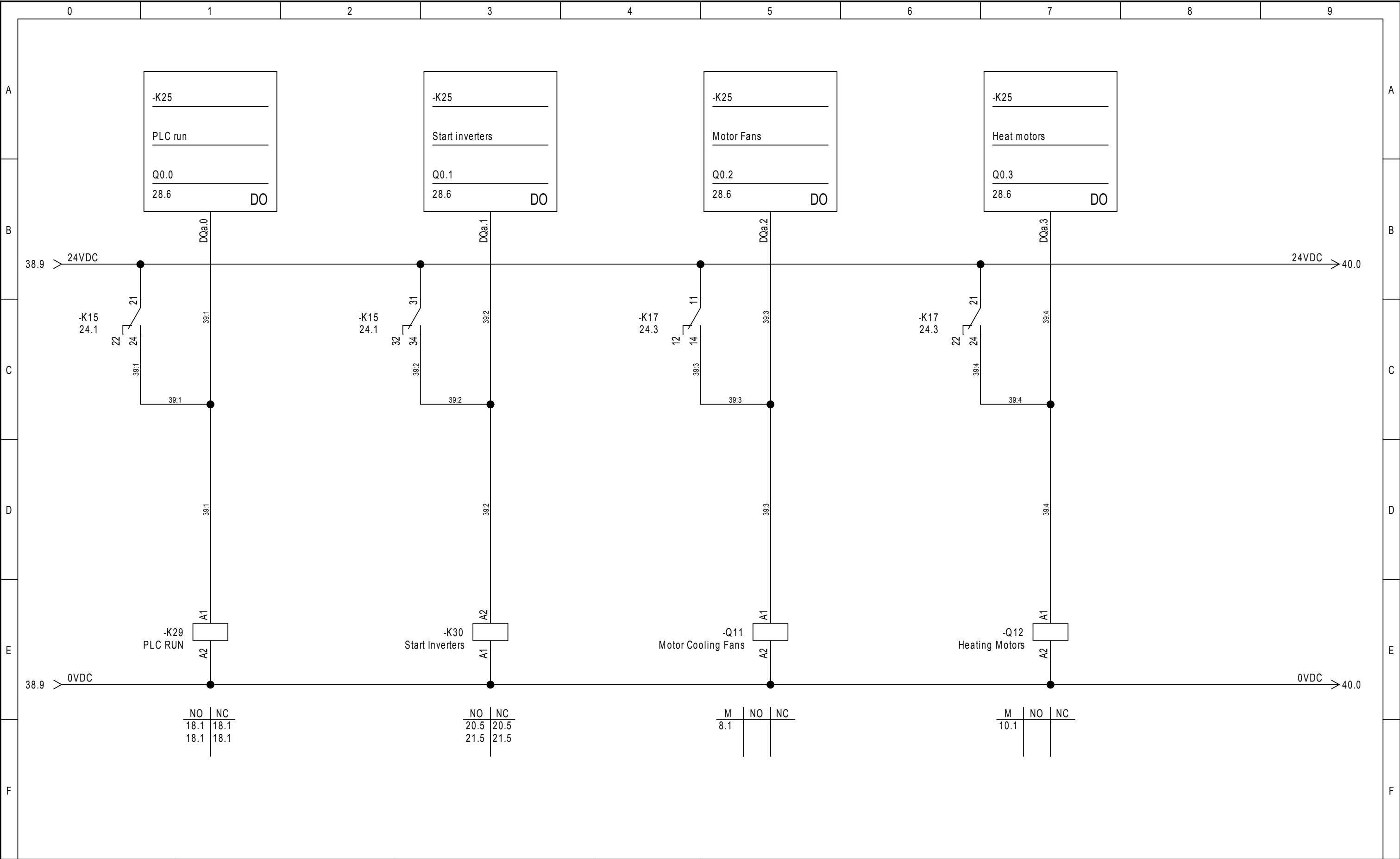


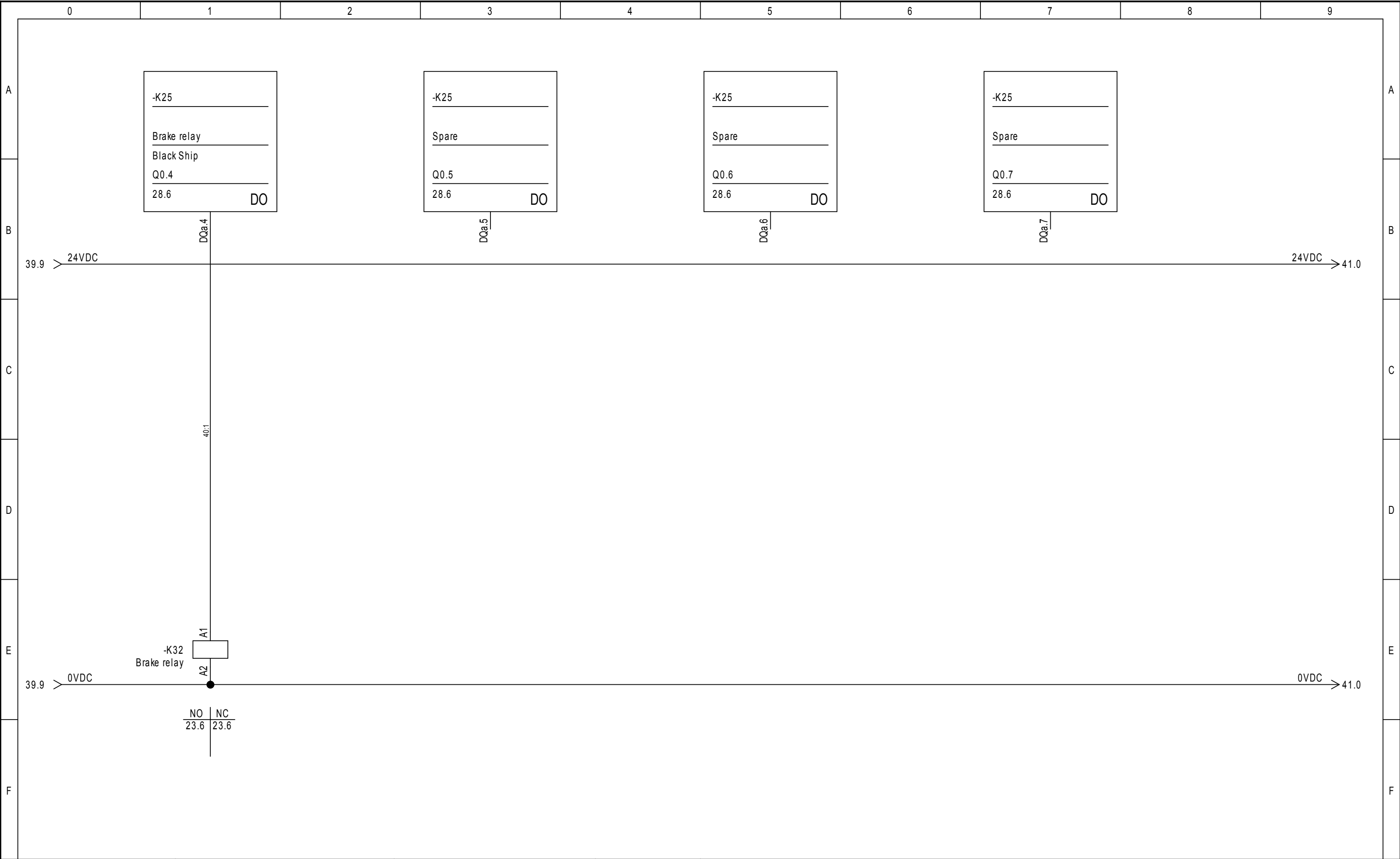




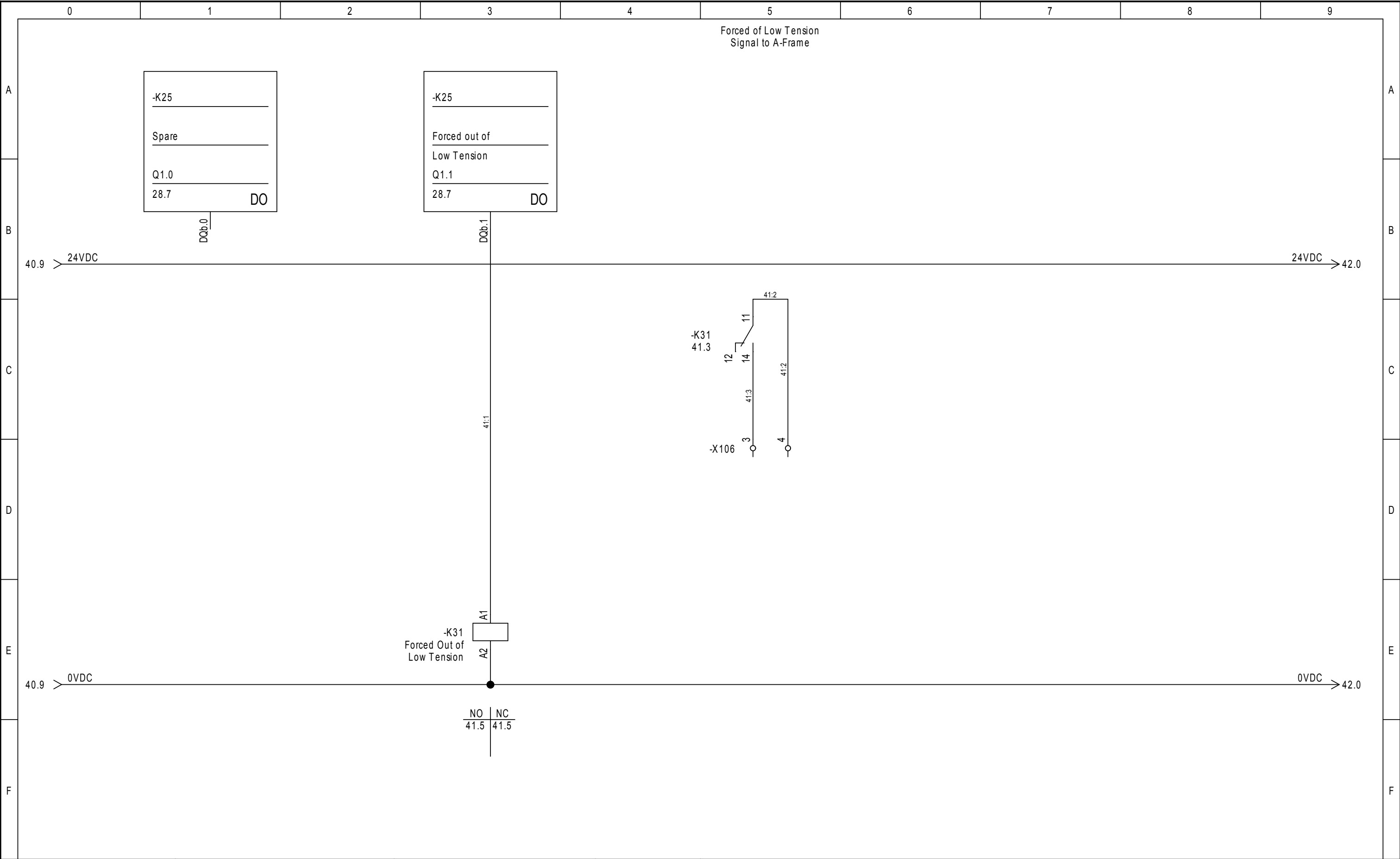


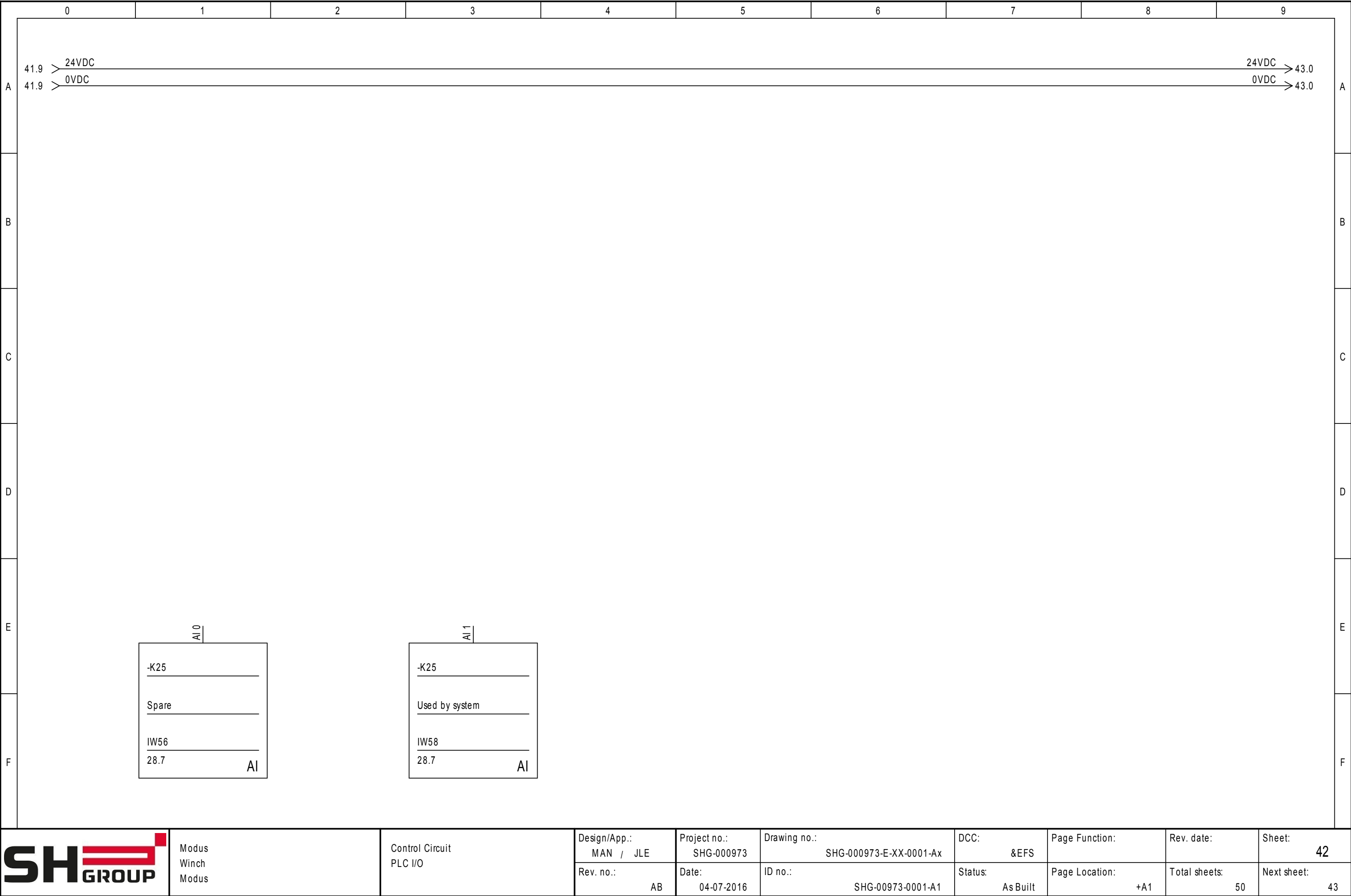


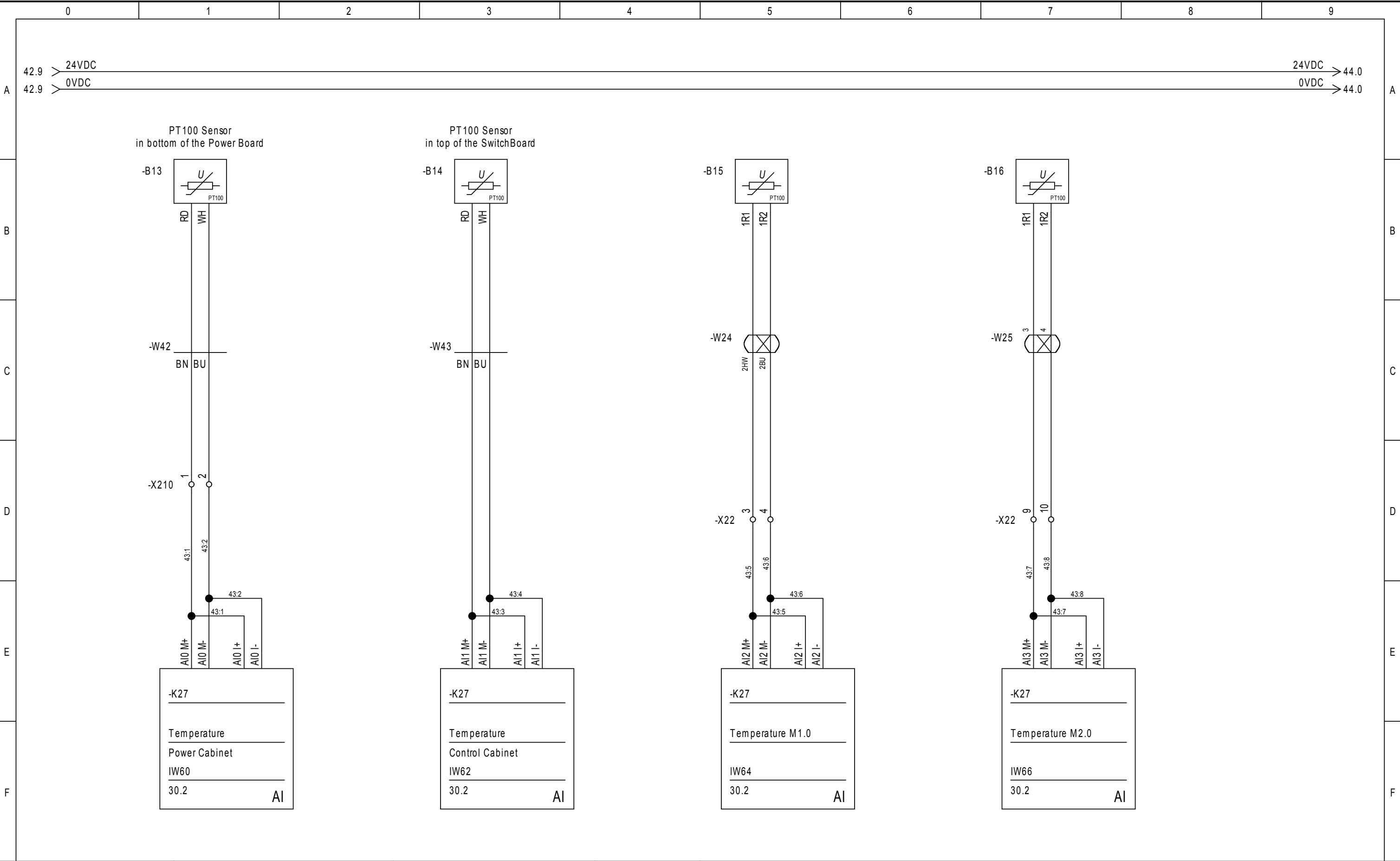


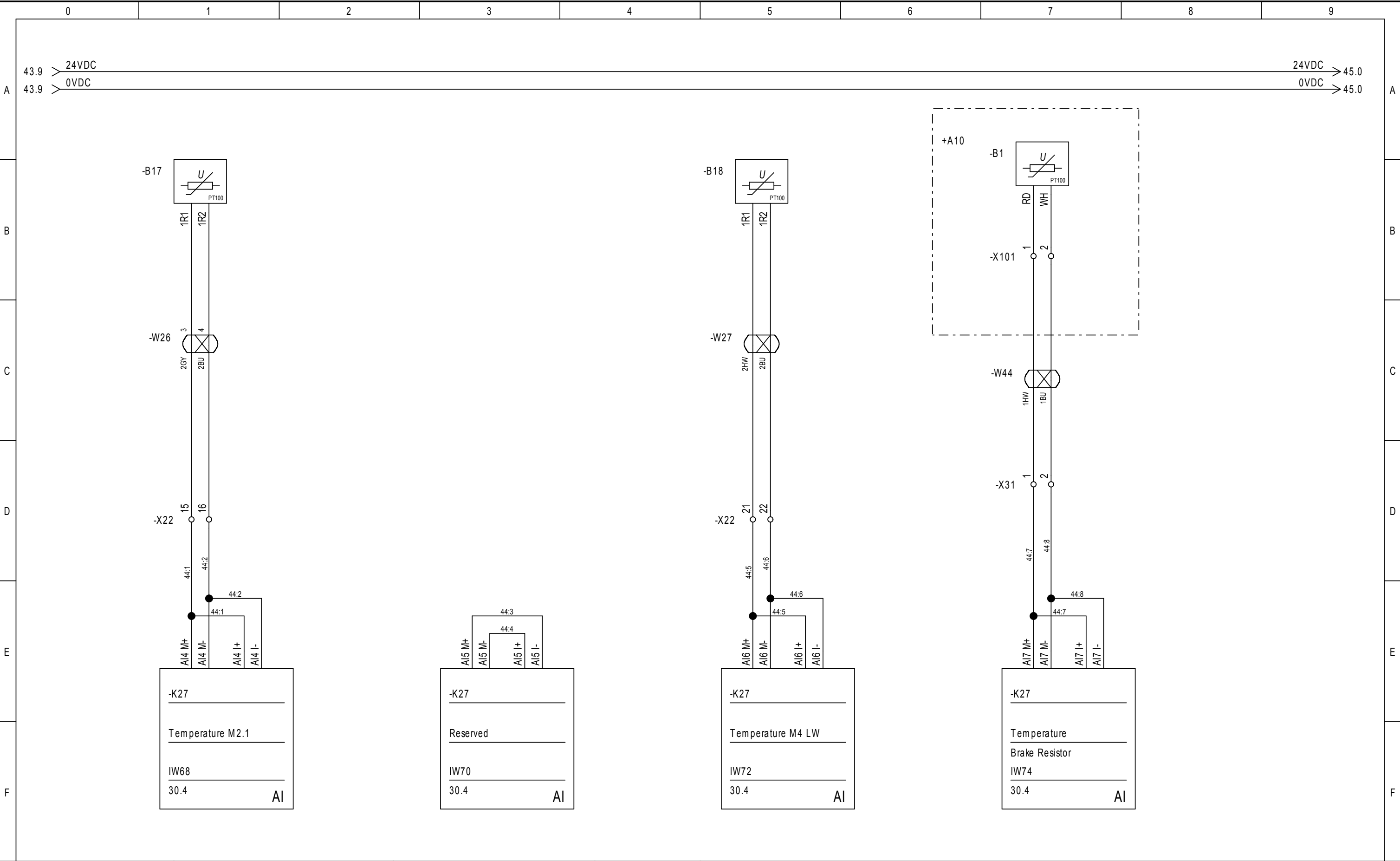


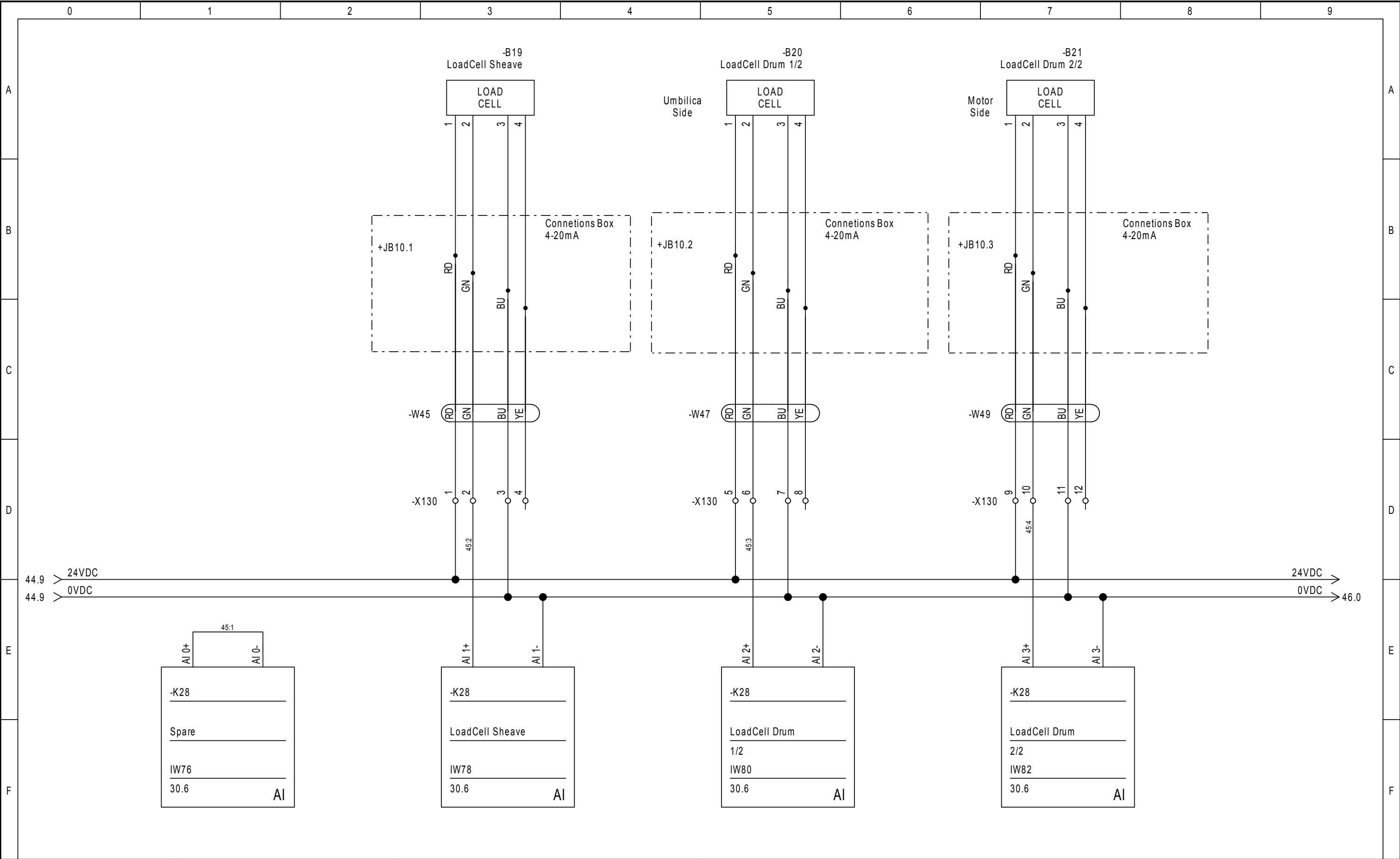
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		Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 50	Next sheet: 41

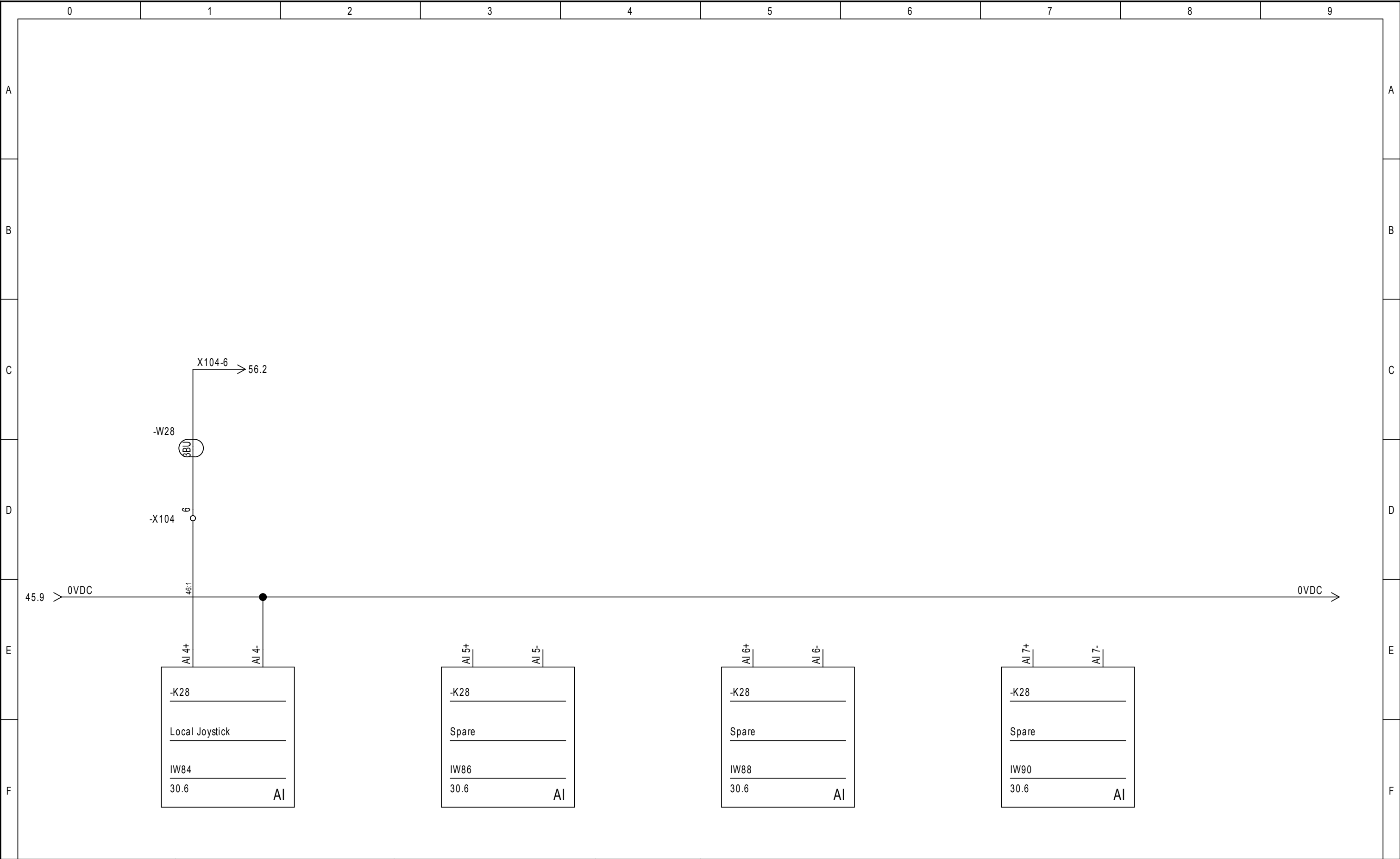












Modus
Winch
Modus

Control Circuit
PLC I/O

Design/App.:
MAN / JLE
Rev. no.:
AB

Project no.:
SHG-000973
Date:
04-07-2016

Drawing no.:
SHG-000973-E-XX-0001-Ax
ID no.:
SHG-00973-0001-A1

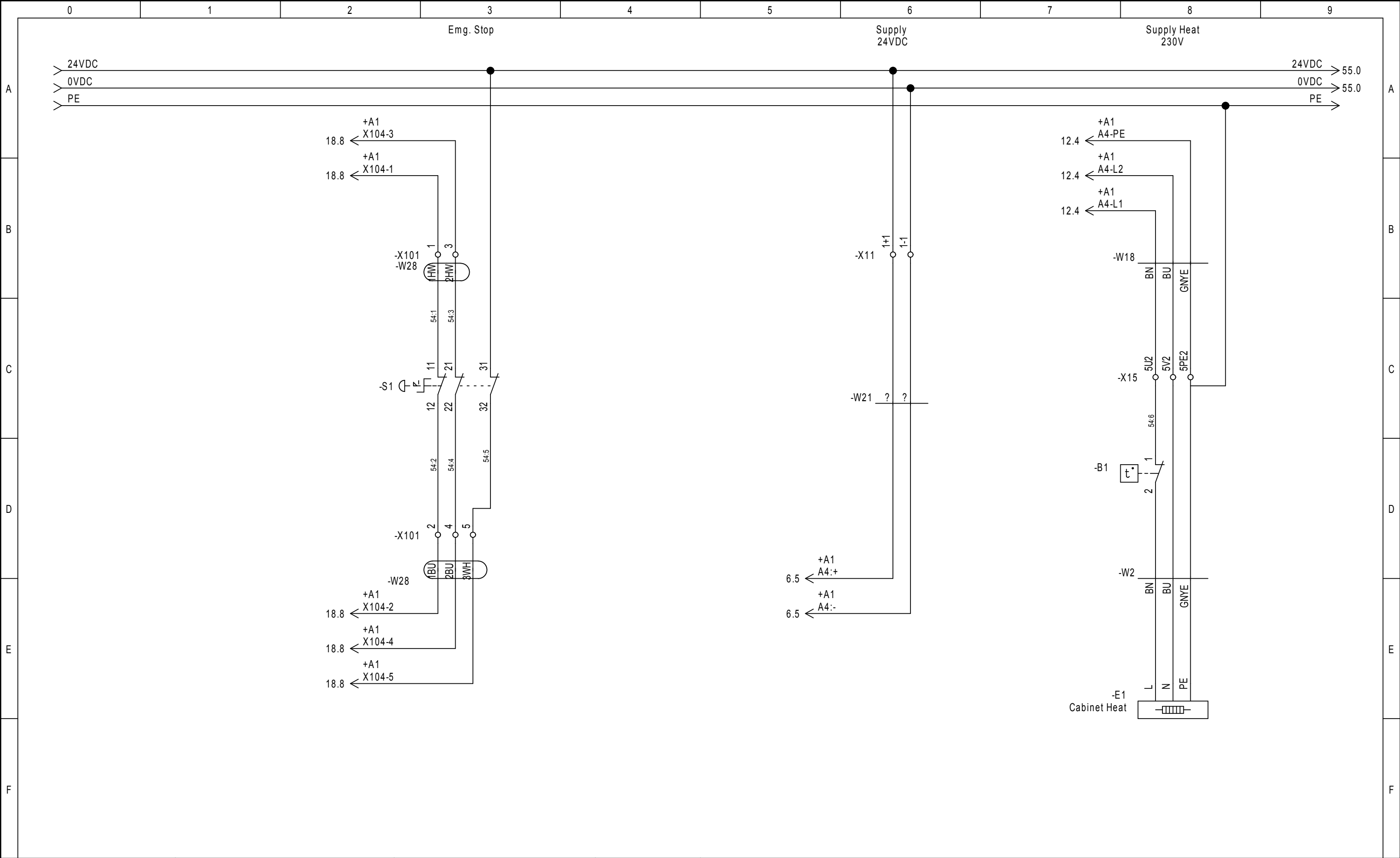
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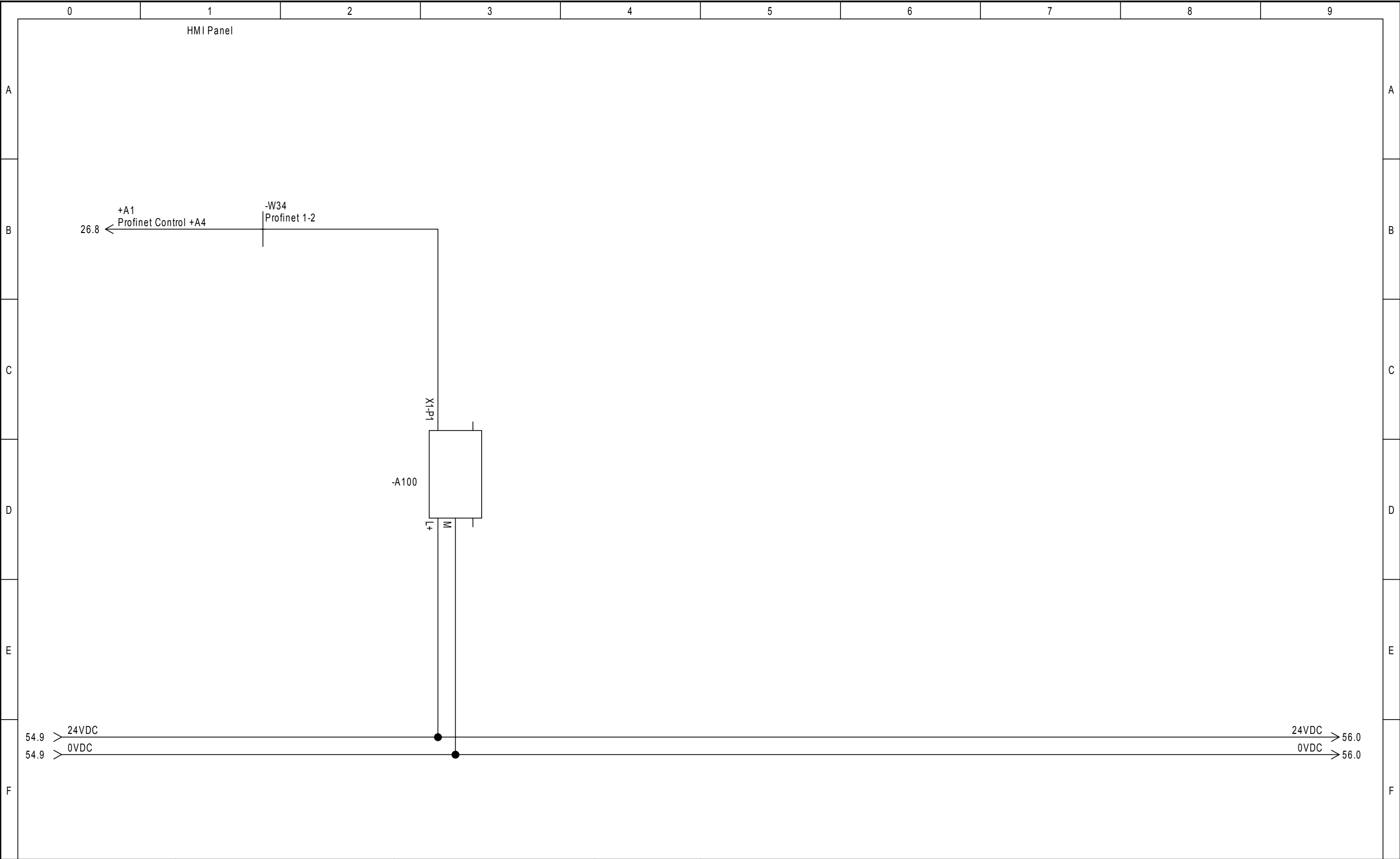
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Total sheets:
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Sheet:
46
Next sheet:
53

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A										A
B										B
C										C
D	<div><div><div>Project no.: Draw no.: ID no.:</div><div>SHG-000973 SHG-000973-E-XX-0001-Ax SHG-000973-0001-A4</div></div></div>									D
E	<div><div><div>Voltage Frekvens Earthing system Full load Largest load Ik min Ik max Maximum fuse IP class Ambient temperature</div><div>24VDC/230VAC -/60Hz IT 3,3A/0,22A 0,75A/0,22A - 10A/10A IP66/67 -20°C to +45°C</div></div></div>									E
F										F






List of Components

	Modus Winch Modus		Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EPB		Rev. date:	Sheet: 1
			Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built		Total sheets: 14	Next sheet: 2

List of Components

Function (=)	Location (+)	Product (-)	EAN 13	Type	Description	Amount	Manufacturer	Document type	Sheet	Cell			
	+A1	-B1	3606480152498	NSYCCOTHC	Thermostat 0-60° for heating	1.00	Schneider Electric	Circuit Diagram IEC	13	4			
	+A1	-B2	3606480152498	NSYCCOTHC	Thermostat 0-60° for heating	1.00	Schneider Electric	Circuit Diagram IEC	13	5			
	+A1	-B3	805981-02	RHI 504	TTL RHI 504 Encoder	1.00	Leine & Linde	Circuit Diagram IEC	15	1			
	+A1	-B4	805981-02	RHI 504	TTL RHI 504 Encoder	1.00	Leine & Linde	Circuit Diagram IEC	15	4			
	+A1	-B5	200-A11	200-A11	3xPTC Thermistor in Winding 130°C	1.00	Lönne	Circuit Diagram IEC	16	1			
	+A1	-B6	200-A11	200-A11	3xPTC Thermistor in Winding 130°C	1.00	Lönne	Circuit Diagram IEC	16	3			
	+A1	-B7	200-A11	200-A11	3xPTC Thermistor in Winding 130°C	1.00	Lönne	Circuit Diagram IEC	16	4			
	+A1	-B8	180-Q11	180-Q11	3xPTC Thermistor in Winding 130°C	1.00	Lönne	Circuit Diagram IEC	16	7			
	+A1	-B9	3389110197433	XCKD2145P16	End switch short NO+NC M16	1.00	Schneider Electric	Circuit Diagram IEC	22	6			
	+A1	-B10	3389110197433	XCKD2145P16	End switch short NO+NC M16	1.00	Schneider Electric	Circuit Diagram IEC	22	6			
	+A1	-B11	1181700-01	IHA 638	Absolute rotary encoder	1.00	Leine & Linde	Circuit Diagram IEC	27	1			
	+A1	-B12	1181700-01	IHA 638	Absolute rotary encoder	1.00	Leine & Linde	Circuit Diagram IEC	27	4			
	+A1	-B13	E29P6105	E29P6105	PT-100 Sensor ø6x100 Stainless AISI 316	1.00	Ledkon Sønderborg	Circuit Diagram IEC	43	1			
	+A1	-B14	E29P6105	E29P6105	PT-100 Sensor ø6x100 Stainless AISI 316	1.00	Ledkon Sønderborg	Circuit Diagram IEC	43	3			
	+A1	-B15	280-A62	280-A62	1xPT100 in Winding	1.00	Lönne	Circuit Diagram IEC	43	5			
	+A1	-B16	280-A62	280-A62	1xPT100 in Winding	1.00	Lönne	Circuit Diagram IEC	43	7			
	+A1	-B17	280-A62	280-A62	1xPT100 in Winding	1.00	Lönne	Circuit Diagram IEC	44	1			
	+A1	-B18	280-A62	280-A62	1xPT100 in Winding	1.00	Lönne	Circuit Diagram IEC	44	5			
	+A1	-E1	5703722160018	04007.0-00	Stago heat element 100W with silicone cable	1.00	Stego A/S	Circuit Diagram IEC	13	1			
	+A1	-E1.0A	SHG Part	Part Of Motor	Part Of Motor	1.00	-----	Circuit Diagram IEC	10	1			
	+A1	-E2	5703722160018	04007.0-00	Stago heat element 100W with silicone cable	1.00	Stego A/S	Circuit Diagram IEC	13	3			
	+A1	-E2.0A	SHG Part	Part Of Motor	Part Of Motor	1.00	-----	Circuit Diagram IEC	10	5			
	+A1	-E2.1A	SHG Part	Part Of Motor	Part Of Motor	1.00	-----	Circuit Diagram IEC	11	1			
	+A1	-E4	SHG Part	Part Of Motor	Part Of Motor	1.00	-----	Circuit Diagram IEC	11	5			
	+A1	-F1	3389110343052	GV2ME06	Motor circuit breaker Ir 1-1,6A	1.00	Schneider Electric	Circuit Diagram IEC	5	1			
	+A1	-F2	3606480441417	A9F05216	Automatsikring IC60N 2P 16A D	1.00	Schneider Electric	Circuit Diagram IEC	5	3			
	+A1	-F3	3389110343175	GV2ME16	Motor circuit breaker Ir 9-14A	1.00	Schneider Electric	Circuit Diagram IEC	5	3			
	+A1	-F3	3389110343434	GVAE11	Auxiliary contact 1NO+1NC, frontmounted	1.00	Schneider Electric	Circuit Diagram IEC	5	3			
	+A1	-F4	3606480440472	A9F04204	Circuit breaker IC60N 2P 4A C	1.00	Schneider Electric	Circuit Diagram IEC	6	2			
	+A1	-F5	3606480440458	A9F04202	Circuit breaker IC60N 2P 2A C	1.00	Schneider Electric	Circuit Diagram IEC	7	1			
		Modus Winch Modus				Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax		DCC: &EPB	Page Function:	Rev. date:	Sheet: 2
						Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1		Status: As Built	Page Location: +A1	Total sheets: 14	Next sheet: 3

List of Components

Function (=)	Location (+)	Product (-)	EAN 13	Type	Description	Amount	Manufacturer	Document type	Sheet	Cell		
	+A1	-F6	3606480440496	A9F04210	Circuit breaker IC60N 2P 10A C	1.00	Schneider Electric	Circuit Diagram IEC	7	7		
	+A1	-F7	3389110343434	GVAE11	Auxiliary contact 1NO+1NC, frontmounted	1.00	Schneider Electric	Circuit Diagram IEC	8	1		
	+A1	-F7	3389110516937	GV2LE08	Magnetic motor circuit breaker In 4,0A	1.00	Schneider Electric	Circuit Diagram IEC	8	1		
	+A1	-F8	3389110343434	GVAE11	Auxiliary contact 1NO+1NC, frontmounted	1.00	Schneider Electric	Circuit Diagram IEC	8	5		
	+A1	-F8	3389110516937	GV2LE08	Magnetic motor circuit breaker In 4,0A	1.00	Schneider Electric	Circuit Diagram IEC	8	5		
	+A1	-F9	3389110516937	GV2LE08	Magnetic motor circuit breaker In 4,0A	1.00	Schneider Electric	Circuit Diagram IEC	33	7		
	+A1	-F9	3389110343434	GVAE11	Auxiliary contact 1NO+1NC, frontmounted	1.00	Schneider Electric	Circuit Diagram IEC	33	7		
	+A1	-F10	3389110343434	GVAE11	Auxiliary contact 1NO+1NC, frontmounted	1.00	Schneider Electric	Circuit Diagram IEC	9	5		
	+A1	-F10	3389110516937	GV2LE08	Magnetic motor circuit breaker In 4,0A	1.00	Schneider Electric	Circuit Diagram IEC	9	5		
	+A1	-F11	3606480440458	A9F04202	Circuit breaker IC60N 2P 2A C	1.00	Schneider Electric	Circuit Diagram IEC	12	1		
	+A1	-F12	3606480440441	A9F04201	Circuit breaker IC60N 2P 1A C	1.00	Schneider Electric	Circuit Diagram IEC	12	3		
	+A1	-F13	3606480440489	A9F04206	Circuit breaker IC60N 2P 6A C	1.00	Schneider Electric	Circuit Diagram IEC	13	1		
	+A1	-F14	3606480440496	A9F04210	Circuit breaker IC60N 2P 10A C	1.00	Schneider Electric	Circuit Diagram IEC	14	1		
	+A1	-F15	3606480440496	A9F04210	Circuit breaker IC60N 2P 10A C	1.00	Schneider Electric	Circuit Diagram IEC	14	3		
	+A1	-F16	3606480440496	A9F04210	Circuit breaker IC60N 2P 10A C	1.00	Schneider Electric	Circuit Diagram IEC	14	5		
	+A1	-F18	51 058 05.2	51 058 05.1DC	URZ-U-Fuse-Bracket 1pole 1000V	1.00	Siba Fuses	Circuit Diagram IEC	2	4		
	+A1	-F18		50 118 06.16	16A Fuse-Link for Low Inductance App.	1.00	Siba Fuses	Circuit Diagram IEC	2	4		
	+A1	-F19		50 118 06.16	16A Fuse-Link for Low Inductance App.	1.00	Siba Fuses	Circuit Diagram IEC	2	4		
	+A1	-F19	51 058 05.2	51 058 05.1DC	URZ-U-Fuse-Bracket 1pole 1000V	1.00	Siba Fuses	Circuit Diagram IEC	2	4		
	+A1	-GND				1.00		Circuit Diagram IEC	2	3		
	+A1	-K1	3606480792137	RM22TG20	Phase Control Relay 3x208/480V	1.00	Schneider Electric	Circuit Diagram IEC	19	3		
	+A1	-K2	3606480689444	RGZE1S48M	Socket, DIN rail/surface mounting, 8-pin	1.00	Schneider Electric	Circuit Diagram IEC	7	2		
	+A1	-K2	3606480689147	RXG22P7	Relay 230VAC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators	1.00	Schneider Electric	Circuit Diagram IEC	7	2		
	+A1	-K3	3606480689147	RXG22P7	Relay 230VAC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators	1.00	Schneider Electric	Circuit Diagram IEC	13	1		
	+A1	-K3	3606480689444	RGZE1S48M	Socket, DIN rail/surface mounting, 8-pin	1.00	Schneider Electric	Circuit Diagram IEC	13	1		
	+A1	-K4	3606480689444	RGZE1S48M	Socket, DIN rail/surface mounting, 8-pin	1.00	Schneider Electric	Circuit Diagram IEC	13	3		
	+A1	-K4	3606480689147	RXG22P7	Relay 230VAC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators	1.00	Schneider Electric	Circuit Diagram IEC	13	3		
	+A1	-K5	2/025.000.6	2/025.000.6	Brake Inverter	1.00	Mayr	Circuit Diagram IEC	14	1		
	+A1	-K6	2/025.000.6	2/025.000.6	Brake Inverter	1.00	Mayr	Circuit Diagram IEC	14	3		
	+A1	-K7	2/025.000.6	2/025.000.6	Brake Inverter	1.00	Mayr	Circuit Diagram IEC	14	5		
<div><div><div>SH</div><div>GROUP</div></div><div>Modus Winch Modus</div></div>					Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax		DCC: &EPB	Page Function:	Rev. date:	Sheet: 3
					Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 14	Next sheet: 4	

List of Components

Function (=)	Location (+)	Product (-)	EAN 13	Type	Description	Amount	Manufacturer	Document type	Sheet	Cell			
	+A1	-K8	3389110080889	XPSAF5130	Safety module, cat.4, 3NO(s), 24VAC/DC	1.00	Schneider Electric	Circuit Diagram IEC	17	1			
	+A1	-K9	3389110842319	XPSAV11113	Safety module CAT.3 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	17	6			
	+A1	-K10	3606480689178	RXG22BD	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators	1.00	Schneider Electric	Circuit Diagram IEC	19	3			
	+A1	-K10	3606480689444	RGZE1S48M	Socket, DIN rail/surface mounting, 8-pin	1.00	Schneider Electric	Circuit Diagram IEC	19	3			
	+A1	-K11	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	19	5			
	+A1	-K11	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	19	5			
	+A1	-K11	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	19	5			
	+A1	-K12	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	23	3			
	+A1	-K12	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	23	3			
	+A1	-K12	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	23	3			
	+A1	-K13	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	23	6			
	+A1	-K13	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	23	6			
	+A1	-K13	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	23	6			
	+A1	-K14	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	23	8			
	+A1	-K14	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	23	8			
	+A1	-K14	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	23	8			
	+A1	-K15	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	24	1			
	+A1	-K15	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	24	1			
	+A1	-K15	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	24	1			
	+A1	-K16	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	20	5			
	+A1	-K16	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	20	5			
	+A1	-K16	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	20	5			
	+A1	-K17	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	24	3			
	+A1	-K17	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	24	3			
	+A1	-K17	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	24	3			
	+A1	-K18	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	20	3			
	+A1	-K18	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	20	3			
	+A1	-K18	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	20	3			
	+A1	-K19	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	20	3			
	+A1	-K19	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	20	3			
		Modus Winch Modus				Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax		DCC: &EPB	Page Function:	Rev. date:	Sheet: 4
						Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 14	Next sheet: 5	

List of Components

Function (=)	Location (+)	Product (-)	EAN 13	Type	Description	Amount	Manufacturer	Document type	Sheet	Cell		
	+A1	-K19	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	20	3		
	+A1	-K20	3606480689444	RGZE1S48M	Socket, DIN rail/surface mounting, 8-pin	1.00	Schneider Electric	Circuit Diagram IEC	22	3		
	+A1	-K20	3606480689178	RXG22BD	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators	1.00	Schneider Electric	Circuit Diagram IEC	22	3		
	+A1	-K21	3606480689178	RXG22BD	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators	1.00	Schneider Electric	Circuit Diagram IEC	22	3		
	+A1	-K21	3606480689444	RGZE1S48M	Socket, DIN rail/surface mounting, 8-pin	1.00	Schneider Electric	Circuit Diagram IEC	22	3		
	+A1	-K22	4019169401685	6XV1850-2HH20	Ethernet TP XP cord RJ45/RJ45 2M	1.00	Siemens	Circuit Diagram IEC	26	1		
	+A1	-K22	4019169403931	6GK1901-1BB10-2AA0	Simatic net IE FC PLUG 180	8.00	Siemens	Circuit Diagram IEC	26	1		
	+A1	-K22	4019169853934	6GK5008-0BA00-1AB2	SCALANCE SWITCH XB008	1.00	Siemens	Circuit Diagram IEC	26	1		
	+A1	-K23	4019169211215	6GK7243-5DX30-0XE0	Communication Module S7-1200 TO Profibus	1.00	Siemens	Circuit Diagram IEC	27	0		
	+A1	-K24	M212212	M212212	PROFIBUS/AB6200 MODUL	1.00	Nord Tech	Circuit Diagram IEC	27	8		
	+A1	-K24	TG-R9-6	TG-R9-6	Radio Reciever	1.00	Nord Tech	Circuit Diagram IEC	27	8		
	+A1	-K24	M769780	433-½	ANTENNA 1/2 - 35CM.BNC	1.00	Nord Tech	Circuit Diagram IEC	27	8		
	+A1	-K24	433-½	M769780	Charger (6W) 5VDC/1,2A	1.00	Nord Tech	Circuit Diagram IEC	27	8		
	+A1	-K24	4047623406877	6ES7972-0BA61-0XA0	PROFIBUS FC STIK 35°	1.00	Siemens	Circuit Diagram IEC	27	8		
	+A1	-K25	4047623402787	6ES7214-1AG40-0XB0	S7-1200 CPU 1214C DC/DC/DC	1.00	Siemens	Circuit Diagram IEC	28	1		
	+A1	-K25	4047623402350	6ES7954-8LC02-0AA0	S7-1x00 Memory Card 4MB	1.00	Siemens	Circuit Diagram IEC	28	1		
	+A1	-K25	4019169403931	6GK1901-1BB10-2AA0	Simatic net IE FC PLUG 180	1.00	Siemens	Circuit Diagram IEC	28	1		
	+A1	-K26	6940408101647	6ES7221-1BH32-0XB0	S7-1200, DIGITAL INPUT SM 1221, 16DI, 24VDC	1.00	Siemens	Circuit Diagram IEC	29	1		
	+A1	-K27	6940408101883	6ES7231-5PF32-0XB0	S7-1200, ANALOG INPUT SM1231 8AI RTD	1.00	Siemens	Circuit Diagram IEC	30	1		
	+A1	-K28	6940408102040	6ES7231-4HF32-0XB0	S7-1200, ANALOG INPUT SM1231 8AI	1.00	Siemens	Circuit Diagram IEC	30	5		
	+A1	-K29	3606480689444	RGZE1S48M	Socket, DIN rail/surface mounting, 8-pin	1.00	Schneider Electric	Circuit Diagram IEC	18	1		
	+A1	-K29	3606480689178	RXG22BD	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators	1.00	Schneider Electric	Circuit Diagram IEC	18	1		
	+A1	-K30	3389119404303	RXZR335	Plastic clamp for RXZ.. socket	1.00	Schneider Electric	Circuit Diagram IEC	20	5		
	+A1	-K30	3389119404280	RXZE2S114M	Socket for RXM4... relay	1.00	Schneider Electric	Circuit Diagram IEC	20	5		
	+A1	-K30	3389119403818	RXM4AB2BD	Plug-in relay w/LED 6A 4C/O Uc 24VDC	1.00	Schneider Electric	Circuit Diagram IEC	20	5		
	+A1	-K31	3606480689178	RXG22BD	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators	1.00	Schneider Electric	Circuit Diagram IEC	41	3		
	+A1	-K31	3606480689444	RGZE1S48M	Socket, DIN rail/surface mounting, 8-pin	1.00	Schneider Electric	Circuit Diagram IEC	41	3		
	+A1	-K32	3606480689178	RXG22BD	Relay 24VDC, plug-in, 8-pin, DPDT, 5A, mech & LED indicators	1.00	Schneider Electric	Circuit Diagram IEC	40	1		
	+A1	-K32	3606480689444	RGZE1S48M	Socket, DIN rail/surface mounting, 8-pin	1.00	Schneider Electric	Circuit Diagram IEC	40	1		
	+A1	-M1.0	K21R 100 L4 S9	K21R 100 L4 S9	Motor 2,2 kW 230/400V 60 Hz	1.00	R. Frimodt Pedersen A/S	Circuit Diagram IEC	2	2		
<div><div><div>SH</div><div>GROUP</div></div><div>Modus Winch Modus</div></div>					Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax		DCC: &EPB	Page Function:	Rev. date:	Sheet: 5
					Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 14	Next sheet: 6	

List of Components

Function (=)	Location (+)	Product (-)	EAN 13	Type	Description	Amount	Manufacturer	Document type	Sheet	Cell		
	+A1	-M1.0A	K21R100/DM90	K21R100/DM90	Cooling fan 169m3/h for motor size 90 housing	1.00	R. Frimodt Pedersen A/S	Circuit Diagram IEC	8	1		
	+A1	-M2.0	K21R 100 L4 S9	K21R 100 L4 S9	Motor 2,2 kW 230/400V 60 Hz	1.00	R. Frimodt Pedersen A/S	Circuit Diagram IEC	3	1		
	+A1	-M2.0A	K21R100/DM90	K21R100/DM90	Cooling fan 169m3/h for motor size 90 housing	1.00	R. Frimodt Pedersen A/S	Circuit Diagram IEC	8	5		
	+A1	-M2.1	K21R 100 L4 S9	K21R 100 L4 S9	Motor 2,2 kW 230/400V 60 Hz	1.00	R. Frimodt Pedersen A/S	Circuit Diagram IEC	3	2		
	+A1	-M2.1A	K21R100/DM90	K21R100/DM90	Cooling fan 169m3/h for motor size 90 housing	1.00	R. Frimodt Pedersen A/S	Circuit Diagram IEC	9	1		
	+A1	-M4.0	K25R 80G4 S9	K25R 80G4 S9	Motor 1,5 kW 230/400V 60 Hz	1.00	R. Frimodt Pedersen A/S	Circuit Diagram IEC	4	2		
	+A1	-M4A	K21R90/DM80	K21R90/DM80	Cooling fan 88m3/h for motor size 80 housing	1.00	R. Frimodt Pedersen A/S	Circuit Diagram IEC	9	5		
	+A1	-P2	4011209522534	3SB3644-6BA60	COMPLETE UNIT ROUND INDICATOR LIGHT METAL WITH CON	1.00	Siemens	Circuit Diagram IEC	19	2		
	+A1	-P3	4011209522534	3SB3644-6BA60	COMPLETE UNIT ROUND INDICATOR LIGHT METAL WITH CON	1.00	Siemens	Circuit Diagram IEC	19	4		
	+A1	-Q2	3389119405447	GV3L40	Magnetic motor circuit breaker In 40A	1.00	Schneider Electric	Circuit Diagram IEC	31	3		
	+A1	-Q2	3389110343434	GVAE11	Auxiliary contact 1NO+1NC, frontmounted	1.00	Schneider Electric	Circuit Diagram IEC	31	3		
	+A1	-Q3	3606480006500	LV429006	MCCB NSX100N w/o trip unit 3P	1.00	Schneider Electric	Circuit Diagram IEC	1	1		
	+A1	-Q3	3606480017834	LV429033	Trip unit TM50D 3P3T for NSX100-250	1.00	Schneider Electric	Circuit Diagram IEC	1	1		
	+A1	-Q3	3606480019890	LV429515	Terminal shield short 3P for NSX100-250	1.00	Schneider Electric	Circuit Diagram IEC	1	1		
	+A1	-Q4	3389110516975	GV2LE14	Magnetic motor circuit breaker In 10,0A	1.00	Schneider Electric	Circuit Diagram IEC	31	1		
	+A1	-Q4	3389110343434	GVAE11	Auxiliary contact 1NO+1NC, frontmounted	1.00	Schneider Electric	Circuit Diagram IEC	31	1		
	+A1	-Q5	3389110517033	GV2LE22	Magnetic motor circuit breaker In 25,0A	1.00	Schneider Electric	Circuit Diagram IEC	1	7		
	+A1	-Q6	3389110111699	LAD9V2	Mechanical latch block for reversing contactor	1.00	Schneider Electric	Circuit Diagram IEC	7	7		
	+A1	-Q6	3389110348903	LC1D09P7	Contactor 9A 3P+1NO+1NC, Uc 230V AC	1.00	Schneider Electric	Circuit Diagram IEC	7	7		
	+A1	-Q7	3389110384031	LADN22	Auxiliary contact block 2NO+2NC	1.00	Schneider Electric	Circuit Diagram IEC	7	6		
	+A1	-Q7	3389110348903	LC1D09P7	Contactor 9A 3P+1NO+1NC, Uc 230V AC	1.00	Schneider Electric	Circuit Diagram IEC	7	6		
	+A1	-Q8	3389110361070	LC1D09BL	Contactor 9A 3P+1NO+1NC, Uc 24V DC	1.00	Schneider Electric	Circuit Diagram IEC	14	1		
	+A1	-Q9	3389110361070	LC1D09BL	Contactor 9A 3P+1NO+1NC, Uc 24V DC	1.00	Schneider Electric	Circuit Diagram IEC	14	3		
	+A1	-Q10	3389110361070	LC1D09BL	Contactor 9A 3P+1NO+1NC, Uc 24V DC	1.00	Schneider Electric	Circuit Diagram IEC	23	7		
	+A1	-Q11	3389110361070	LC1D09BL	Contactor 9A 3P+1NO+1NC, Uc 24V DC	1.00	Schneider Electric	Circuit Diagram IEC	39	5		
	+A1	-Q12	3389110361070	LC1D09BL	Contactor 9A 3P+1NO+1NC, Uc 24V DC	1.00	Schneider Electric	Circuit Diagram IEC	39	7		
	+A1	-Q13	6417019389608	OT16F3C	CHANGE-OVER SWITCH 1-0-2, 3-pole 16A, Plan or DIN-Rail,	1.00	ABB	Circuit Diagram IEC	5	7		
	+A1	-QM1	32/891.230.1	32/891.230.1	Motor Brake 32Nm - 180VDC - 0,25Amp	1.00	Mayr	Circuit Diagram IEC	35	7		
	+A1	-QM1.0	32/891.230.1	32/891.230.1	Motor Brake 32Nm - 180VDC - 0,25Amp	1.00	Mayr	Circuit Diagram IEC	14	1		
	+A1	-QM2.0	32/891.230.1	32/891.230.1	Motor Brake 32Nm - 180VDC - 0,25Amp	1.00	Mayr	Circuit Diagram IEC	14	3		
		Modus Winch Modus				Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EPB	Page Function:	Rev. date:	Sheet: 6
						Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 14	Next sheet: 7

List of Components

Function (=)	Location (+)	Product (-)	EAN 13	Type	Description	Amount	Manufacturer	Document type	Sheet	Cell	
	+A1	-QM2.1	32/891.230.1	32/891.230.1	Motor Brake 32Nm - 180VDC - 0,25Amp	1.00	Mayr	Circuit Diagram IEC	14	5	
	+A1	-S1	4011209523135	3SB3645-0AA51	Illum. pushbutton blue 24V AC/DC, 1NO	1.00	Siemens	Circuit Diagram IEC	17	2	
	+A1	-S2	4011209030985	3SB3400-0C pos2	CONTACT BLOCK WITH 1 CONTACT ELEMENT SCREW TERMINAL, 1NC	1.00	Siemens	Circuit Diagram IEC	18	1	
	+A1	-S2	4011209030985	3SB3400-0C pos1	CONTACT BLOCK WITH 1 CONTACT ELEMENT SCREW TERMINAL, 1NC	1.00	Siemens	Circuit Diagram IEC	18	1	
	+A1	-S2	4011209030985	3SB3400-0C pos3	CONTACT BLOCK WITH 1 CONTACT ELEMENT SCREW TERMINAL, 1NC	1.00	Siemens	Circuit Diagram IEC	18	1	
	+A1	-S2	4011209031050	3SB3901-0AB	ACCESSORIES FOR 3SB3 Bracket FOR SNAPPING ON THREE	1.00	Siemens	Circuit Diagram IEC	18	1	
	+A1	-S2	4011209411395	3SB3500-1HA20	ACTUATOR MUSHROOM-SHAPED PUSHBUTTON MAINTAINED-CON	1.00	Siemens	Circuit Diagram IEC	18	1	
	+A1	-S2	4011209031197	3SB3921-0AB	ACCESSORY FOR 3SB3 YELLOW BACKING PLATE, ROUND SEL	1.00	Siemens	Circuit Diagram IEC	18	1	
	+A1	-S3	3389110089479	ZBE101 (pos3)	Contact block, 1NO	1.00	Schneider Electric	Circuit Diagram IEC	18	3	
	+A1	-S3	3389110089479	ZBE101 (pos2)	Contact block, 1NO	1.00	Schneider Electric	Circuit Diagram IEC	18	3	
	+A1	-S3	3606480377020	A9A15151	Bracket for DIN-rail	1.00	Schneider Electric	Circuit Diagram IEC	18	3	
	+A1	-S3	3389110887075	XB4BD21	Selector switch 2 pos., short handle, 1NO	1.00	Schneider Electric	Circuit Diagram IEC	18	3	
	+A1	-S4	3606480377020	A9A15151	Bracket for DIN-rail	1.00	Schneider Electric	Circuit Diagram IEC	23	3	
	+A1	-S4	3389110089486	ZBE102 (pos3)	Contact block, 1NC	1.00	Schneider Electric	Circuit Diagram IEC	23	3	
	+A1	-S4	3389110089479	ZBE101 (pos2)	Contact block, 1NO	1.00	Schneider Electric	Circuit Diagram IEC	23	3	
	+A1	-S4	3389110887075	XB4BD21	Selector switch 2 pos., short handle, 1NO	1.00	Schneider Electric	Circuit Diagram IEC	23	3	
	+A1	-S5	3389110887075	XB4BD21	Selector switch 2 pos., short handle, 1NO	1.00	Schneider Electric	Circuit Diagram IEC	23	6	
	+A1	-S5	3389110089486	ZBE102 (pos3)	Contact block, 1NC	1.00	Schneider Electric	Circuit Diagram IEC	23	6	
	+A1	-S5	3606480377020	A9A15151	Bracket for DIN-rail	1.00	Schneider Electric	Circuit Diagram IEC	23	6	
	+A1	-S5	3389110089479	ZBE101 (pos2)	Contact block, 1NO	1.00	Schneider Electric	Circuit Diagram IEC	23	6	
	+A1	-S7	3389110089479	ZBE101 (pos2)	Contact block, 1NO	1.00	Schneider Electric	Circuit Diagram IEC	24	1	
	+A1	-S7	3606480377020	A9A15151	Bracket for DIN-rail	1.00	Schneider Electric	Circuit Diagram IEC	24	1	
	+A1	-S7	3389110887143	XB4BG41	Key switch 2 pos., stay put, 1NO	1.00	Schneider Electric	Circuit Diagram IEC	24	1	
	+A1	-S8	3389110887112	XB4BD53	Selector switch 3 pos., short handle, 2NO, Spring return	1.00	Schneider Electric	Circuit Diagram IEC	25	1	
	+A1	-S8	3606480377020	A9A15151	Bracket for DIN-rail	1.00	Schneider Electric	Circuit Diagram IEC	25	1	
	+A1	-S9	3389110887112	XB4BD53	Selector switch 3 pos., short handle, 2NO, Spring return	1.00	Schneider Electric	Circuit Diagram IEC	25	3	
	+A1	-S9	3606480377020	A9A15151	Bracket for DIN-rail	1.00	Schneider Electric	Circuit Diagram IEC	25	3	
	+A1	-T1	130B1203	MCB-102	VLT Encoder Input MCB 102	1.00	Danfoss	Circuit Diagram IEC	2	2	
	+A1	-T1	5710107611539	MCA-120	DANFOSS MCA 120 PROFINET	1.00	Danfoss	Circuit Diagram IEC	2	2	
	+A1	-T1	135N1471	135N1471	Danfoss VLT FC 302 3 kW 380-500 VAC Without Supply	1.00	Danfoss	Circuit Diagram IEC	2	2	
<div><div><div>SH</div><div>GROUP</div></div><div>Modus Winch Modus</div></div>					Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EPB	Page Function:	Rev. date:	Sheet: 7
					Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 14	Next sheet: 8

List of Components

Function (=)	Location (+)	Product (-)	EAN 13	Type	Description	Amount	Manufacturer	Document type	Sheet	Cell		
	+A1	-T1	4019169401692	6XV1850-2HH60	Ethernet TP XP cord RJ45/RJ45 6M	1.00	Siemens	Circuit Diagram IEC	2	2		
	+A1	-T2	130B1203	MCB-102	VLT Encoder Input MCB 102	1.00	Danfoss	Circuit Diagram IEC	3	2		
	+A1	-T2	135N1472	135N1472	FC 302 11kW 3-Phase 380-500VAC	1.00	Danfoss	Circuit Diagram IEC	3	2		
	+A1	-T2	5710107611539	MCA-120	DANFOSS MCA 120 PROFINET	1.00	Danfoss	Circuit Diagram IEC	3	2		
	+A1	-T2	4019169401692	6XV1850-2HH60	Ethernet TP XP cord RJ45/RJ45 6M	1.00	Siemens	Circuit Diagram IEC	3	2		
	+A1	-T4	5710107611539	MCA-120	DANFOSS MCA 120 PROFINET	1.00	Danfoss	Circuit Diagram IEC	22	1		
	+A1	-T4	135N0458	135N0458	FC 302 1,1kW 3-Phase 380-500 VAC	1.00	Danfoss	Circuit Diagram IEC	22	1		
	+A1	-T4	4019169401692	6XV1850-2HH60	Ethernet TP XP cord RJ45/RJ45 6M	1.00	Siemens	Circuit Diagram IEC	22	1		
	+A1	-T5	45.62.022.946	SUL192E-460230	Trafo P:400-460V S:2x115V 2500VA	1.00	Noratel Denmark A/S	Circuit Diagram IEC	5	3		
	+A1	-T6	3389119405621	ABL8RPS24100	Power Supply 200...500Vac/24Vdc 240W 10A	1.00	Schneider Electric	Circuit Diagram IEC	6	2		
	+A1	-T7	5705150739927	1029426	9130-1kVA Installation Kit	1.00	EATON	Circuit Diagram IEC	5	5		
	+A1	-T7	5705150739774	103007846-6591	Eaton 9130M UPS 1000VA / 900W Marine Online	1.00	EATON	Circuit Diagram IEC	5	5		
	+A1	-T7	5705150739934	1029424	9130-1kVA Marine Filter	1.00	EATON	Circuit Diagram IEC	5	5		
	+A1	-X1	8011564441729	GW96522	Socket 2p 16A DK	1.00	Gewiss	Circuit Diagram IEC	7	1		
	+A1	-X4	4046356329781	PT 2,5	Push-In Terminals	12.00	Phoenix Contact	Circuit Diagram IEC	8	1		
	+A1	-X4	4046356329804	PT 2,5-PE	Push-In Terminals	4.00	Phoenix Contact	Circuit Diagram IEC	8	1		
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	+A1	-X130	4046356329781	PT 2,5	Push-In Terminals	12.00	Phoenix Contact	Circuit Diagram IEC	45	3		
		Modus Winch Modus				Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EPB	Page Function:	Rev. date:	Sheet: 8
						Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 14	Next sheet: 9

List of Components

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List of Components

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List of Components

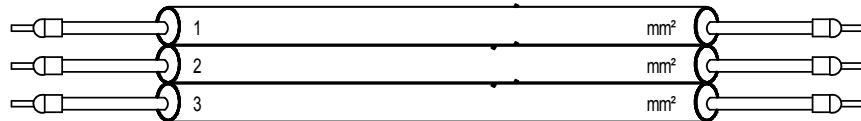

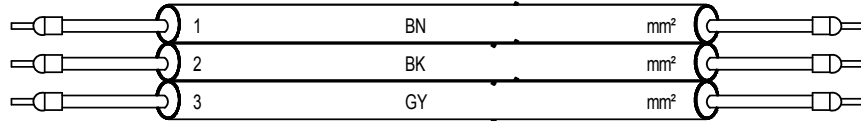
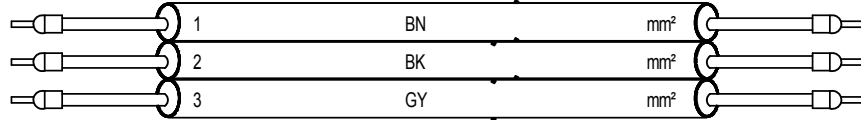

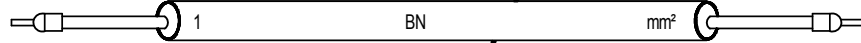
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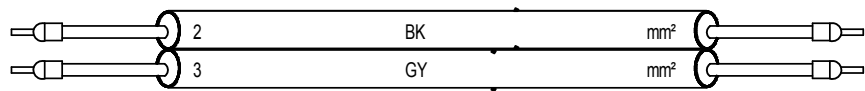
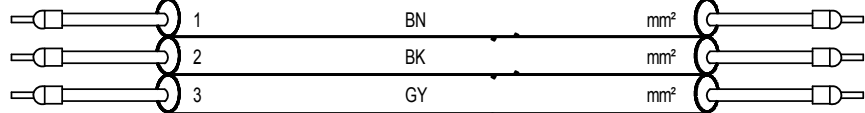
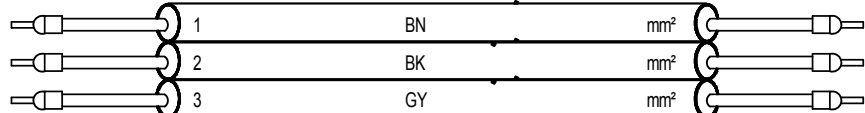
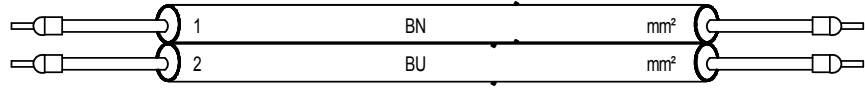
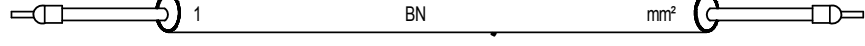
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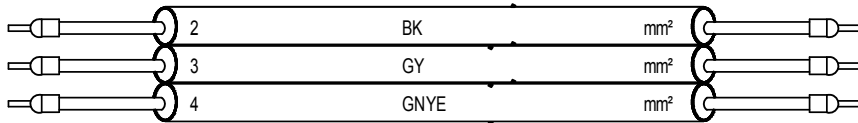
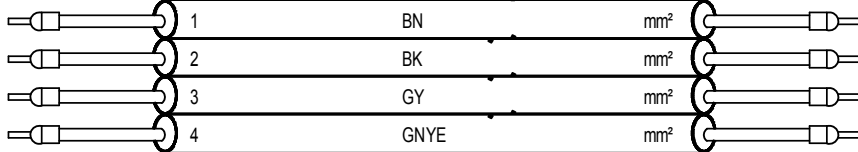
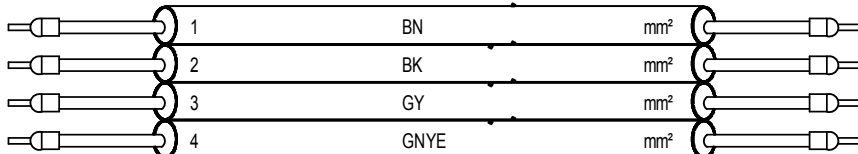
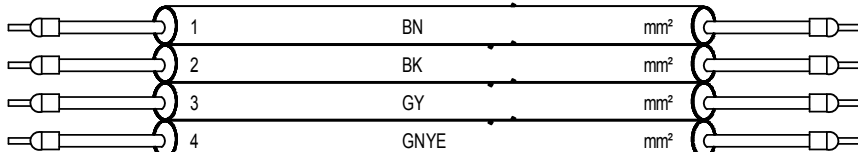

Graphical Cable Plan

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			Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built		Total sheets: 13	Next sheet: 2

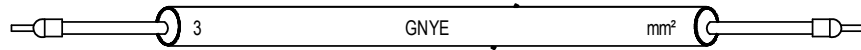
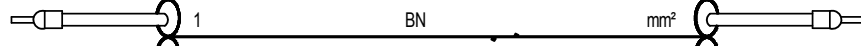
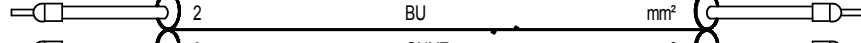
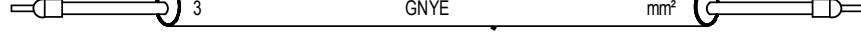
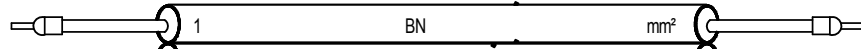
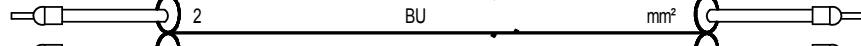
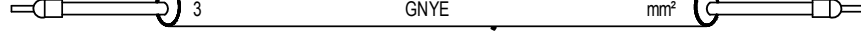

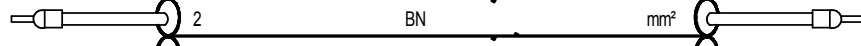
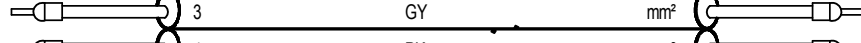
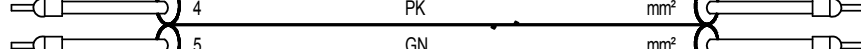
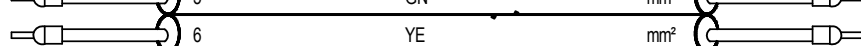
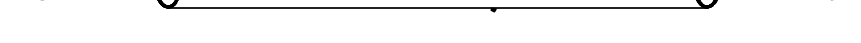

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	-Supply 1 Ship L1 -Supply 1 Ship L2 -Supply 1 Ship L3				mm²		-Q3:2 -Q3:4 -Q3:6					
B	Cable: -W1.1		Remark: SHIP HULL		Type:		Dimension:	Length:	1	2	B	
C	-Ship Hull				mm²							
D	Cable: -W2		Remark: Drum Motor 1.0		Type:		Dimension:	Length:	2 2 2	2 2 2	D	
	-M1.0:U1 -M1.0:V1 -M1.0:W1				BN BK GY		mm² mm² mm²	-T1:96 -T1:98 -T1:97				
	Cable: -W4		Remark: Winch motor 2.0		Type:		Dimension:	Length:				
	-M2.0:U1 -M2.0:V1 -M2.0:W1				BN BK GY		mm² mm² mm²	-T3 -T3 -T3				
E	Cable: -W5		Remark: Winch motor 2.1		Type:		Dimension:	Length:	3	2	E	
F					BN		mm²	-T3				
Modus Winch Modus			Design/App.: MAN / JLE		Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:	Sheet: 2		
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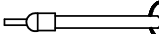
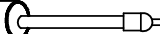
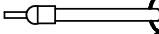
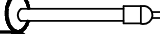
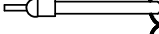
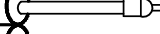
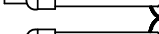
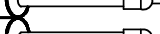
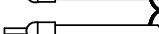
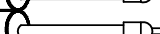

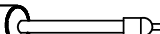
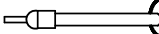
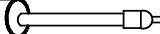



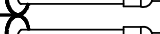
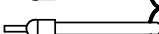
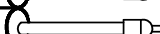
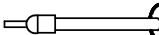
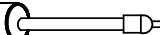
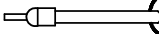
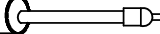
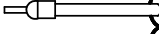
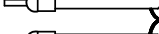
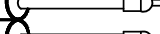
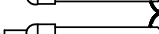
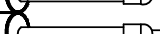
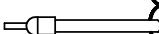
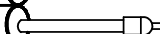



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											3	3
B	Cable: -W6		Remark: Winch Motor 2 Brake resistor			Type:		Dimension:		Length:		
	<div>+A10-X1:PE +A10-X1:2 +A10-X1:1</div> 										3	5
C	Cable: -W7		Remark: LW Motor 4.0			Type:		Dimension:		Length:		
	<div>-M4.0:U1 -M4.0:V1 -M4.0:W1</div> 										4	2
D	Cable: -W8		Remark: Supply 24VDC Control box +A4			Type:		Dimension:		Length:		
	<div>+A4-X11:1+1 +A4-X11:1-1</div> 										6	4
E	Cable: -W9		Remark: FAN Motor 1.0			Type:		Dimension:		Length:		
	<div>-M1.0A:U1</div> 										8	1
F												

	Modus Winch Modus		Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:	Sheet: 3
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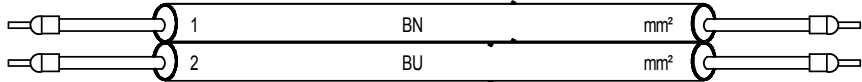
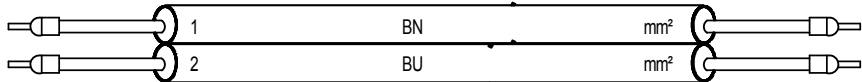

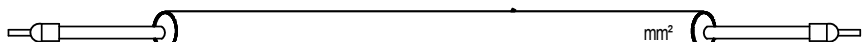
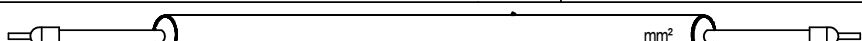
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	-M1.0A:V1				-X4:1V2						8	1	
	-M1.0A:W1				-X4:1W2						8	1	
	-M1.0A:?				-X4:1PE2						8	1	
C	Cable: -W10		Remark: FAN Motor 2.0			Type:		Dimension:		Length:			
	-M2.0A:U1				-X4:2U2						8	5	
	-M2.0A:V1				-X4:2V2						8	5	
	-M2.0A:W1				-X4:2W2						8	5	
D	Cable: -W11		Remark: FAN Motor 2.0			Type:		Dimension:		Length:			
	-M2.1A:U1				-X4:3U2						9	1	
	-M2.1A:V1				-X4:3V2						9	1	
	-M2.1A:W1				-X4:3W2						9	1	
E	Cable: -W12		Remark: FAN Motor 4 LW			Type:		Dimension:		Length:			
	-M4A:U1				-X4:4U2						9	5	
	-M4A:V1				-X4:4V2						9	5	
	-M4A:W1				-X4:4W2						9	5	
F	-M4A:?				-X4:4PE2						9	5	
												F	
			Modus Winch Modus				Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:	Sheet: 4
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A												A							
B	Cable: -W16		Remark: Heating motor 4 LW			Type:		Dimension:		Length:									
	-E4:PE				3		GNYE		mm²		-X15:4PE2								
C	Cable: -W17		Remark: Heating JB Umbilical			Type:		Dimension:		Length:									
	+JB11-X11:1U1				1		BN		mm²		-X15:5U2								
	+JB11-X11:1V1				2		BU		mm²		-X15:5V2								
	+JB11-X11:1PE1				3		GNYE		mm²		-X15:5PE2								
D	Cable: -W18		Remark: Heating Cabinet Control box			Type:		Dimension:		Length:									
	+A4-X15:5U2				1		BN		mm²		-X15:6U2								
	+A4-X15:5V2				2		BU		mm²		-X15:6V2								
	+A4-X15:5PE2				3		GNYE		mm²		-X15:6PE2								
E	Cable: -W21		Remark: Motor 1 encoder			Type:		Dimension:		Length:									
	-B3:RD				1		WH		mm²		-T1:3								
	-B3:BU				2		BN		mm²		-T1:4								
	-B3:GN				3		GY		mm²		-T1:5								
	-B3:WH				4		PK		mm²		-T1:6								
	-B3:YE				5		GN		mm²		-T1:7								
	-B3:BK				6		YE		mm²		-T1:8								
F												F							
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B	Cable: -W23		Remark: Motor 2 encoder			Type:		Dimension:		Length:		
	-B4:RD			1	WH	mm²		-T2:3			15	4
	-B4:BU			2	BN	mm²		-T2:4			15	4
	-B4:YE			3	GY	mm²		-T2:5			15	4
	-B4:BK			4	PK	mm²		-T2:6			15	5
	-B4:GN			5	GN	mm²		-T2:7			15	5
	-B4:WH			6	YE	mm²		-T2:8			15	5
C												C
D	Cable: -W24		Remark: Termistor, Temp & Brake Motor 1.0			Type:		Dimension:		Length:		
	-B5:2TP1			1	1GY	mm²		-X22:1			16	1
	-B5:2TP2			2	1BU	mm²		-X22:2			16	1
	-B15:1R1			3	2HW	mm²		-X22:3			43	5
	-B15:1R2			4	2BU	mm²		-X22:4			43	5
	-QM1.0:BU			5		mm²		-X22:5			35	3
	-QM1.0:BK			6	3BU	mm²		-X22:6			35	3
E	Cable: -W25		Remark: Termistor, Temp & Brake Motor 2.0			Type:		Dimension:		Length:		
	-B6:2TP1			1	1GY	mm²		-X22:7			16	3
	-B6:2TP2			2	1BU	mm²		-X22:8			16	3
	-B16:1R1			3	2GY	mm²		-X22:9			43	7
	-B16:1R2			4	2BU	mm²		-X22:10			43	7
	-QM2.0:BU			5		mm²		-X22:11			35	5
	-QM2.0:BK			6	3BU	mm²		-X22:12			35	5
F				7		mm²		-X22:24			35	4
	-QM2.0:BN											
												F
				Design/App.: MAN / JLE		Project no.: SHG-000973		Drawing no.: SHG-000973-E-XX-0001-Ax		DCC: &EFS		Sheet: 7
Modus Winch Modus				Rev. no.: AB		Date: 04-07-2016		ID no.: SHG-00973-0001-A1		Status: As Built		Next sheet: 8
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	-B9:21 -B9:22						-X25:1 -X25:2		22 22	6 6
B	Cable: -W30		Remark: Switch LW opp motor end		Type:		Dimension:		Length:	
	-B10:21 -B10:22						-X25:3 -X25:4		22 22	6 6
C	Cable: -W31		Remark: Profinet 1-5		Type:		Dimension:		Length:	
	-T1:P1						-K22:P5		26	3
D	Cable: -W32		Remark: Profinet 1-4		Type:		Dimension:		Length:	
	-T2:P1						-K22:P4		26	3
E	Cable: -W33		Remark: Profinet 1-3		Type:		Dimension:		Length:	
	-T4:P1						-K22:P3		26	4
F										

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Design/App.:
MAN / JLE

Rev. no.:
AB

Project no.:
SHG-000973

Date:
04-07-2016

Drawing no.:
SHG-000973-E-XX-0001-Ax

ID no.:
SHG-00973-0001-A1

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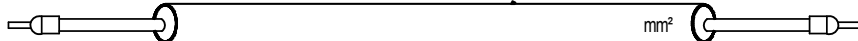
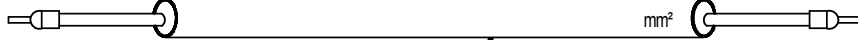
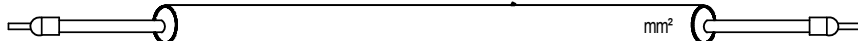
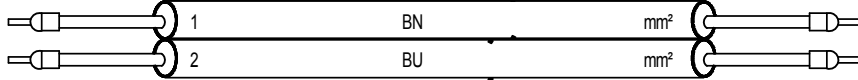

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B	Cable: -W35		Remark: Profinet 1-1		Type:		Dimension:		Length:		
		-K25:X1P1				mm²		-K22:P1		26	6
C	Cable: -W36		Remark: ProfiBus Encoder Drum		Type:		Dimension:		Length:		
		-B11:A In				mm²				27	1
D	Cable: -W37		Remark: Power Encoder DRUM		Type:		Dimension:		Length:		
		-B11:- -B11:+				1 BN mm² 2 BU mm²		-X12:1-2 -X12:1+2		27 27	2 2
E	Cable: -W38		Remark: ProfiBus Radio Reciever		Type:		Dimension:		Length:		
		-K24:P1				mm²		-K23:PB2		27	4
F											

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Modus
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Modus

Design/App.:
MAN / JLE

Rev. no.:
AB

Project no.:
SHG-000973

Date:
04-07-2016

Drawing no.:
SHG-000973-E-XX-0001-Ax

ID no.:
SHG-00973-0001-A1

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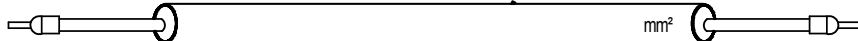
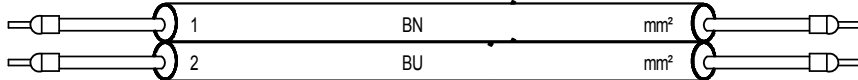
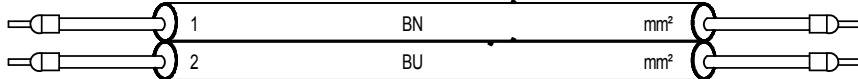
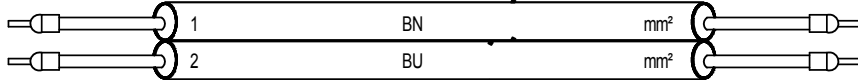
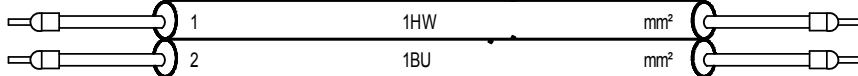
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Rev. date:

Total sheets:
13

Sheet:
10

Next sheet:
11

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A	Cable: -W39		Remark: ProfiBus Encoder LW			Type:	Dimension:	Length:	27	3
	-B12:A In					mm²				
B	Cable: -W40		Remark: Power Encoder LW			Type:	Dimension:	Length:	27	5
	-B12:- -B12:+					BN BU mm² mm²		-X12:2-2 -X12:2+2		
C	Cable: -W42		Remark: PT100 in bottom op Power Cabinet			Type:	Dimension:	Length:	43	1
	-B13:RD -B13:WH					BN BU mm² mm²		-X210:1 -X210:2		
D	Cable: -W43		Remark: PT100 in top op Control Cabinet			Type:	Dimension:	Length:	43	3
	-B14:RD -B14:WH					BN BU mm² mm²		-K27:AI1 M+ -K27:AI1 M-		
E	Cable: -W44		Remark: Temp+Temp OK Brake resistor			Type:	Dimension:	Length:	44	7
	+A10-X101:1 +A10-X101:2					1HW 1BU mm² mm²		-X31:1 -X31:2		
F									44	7

SHGROUP

Modus

Winch

Modus

Design/App.:
MAN / JLE

Rev. no.:
AB

Project no.:
SHG-000973

Date:
04-07-2016

Drawing no.:
SHG-000973-E-XX-0001-Ax

ID no.:
SHG-00973-0001-A1

DCC:
&EFS

Status:
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Page Function:

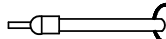
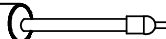
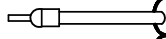
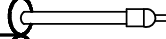
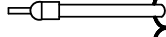
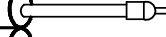
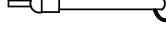
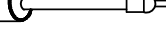
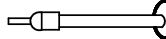
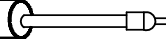
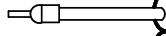
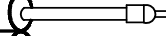
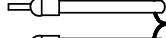
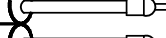
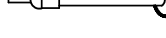
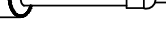
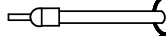
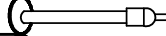
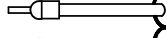
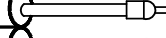
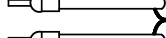
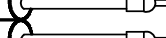
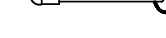
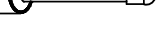

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Rev. date:

Total sheets:
13


Sheet:
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Next sheet:
12

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A												A	
B	Cable: -W45		Remark: Loadcell			Type:		Dimension:		Length:			
	+JB10.1-X10:RD				1	RD	mm²		-X130:1		45	3	
	+JB10.1-X11:GN				2	GN	mm²		-X130:2		45	3	
	+JB10.1-X12:BU				3	BU	mm²		-X130:3		45	3	
	+JB10.1-X13				4	YE	mm²		-X130:4		45	3	
C	Cable: -W47		Remark: Loadcell			Type:		Dimension:		Length:			
	+JB10.2-X6:RD				1	RD	mm²		-X130:5		45	5	
	+JB10.2-X7:GN				2	GN	mm²		-X130:6		45	5	
	+JB10.2-X8:BU				3	BU	mm²		-X130:7		45	5	
	+JB10.2-X9				4	YE	mm²		-X130:8		45	5	
D	Cable: -W49		Remark: Loadcell			Type:		Dimension:		Length:			
	+JB10.3-X10:RD				1	RD	mm²		-X130:9		45	7	
	+JB10.3-X11:GN				2	GN	mm²		-X130:10		45	7	
	+JB10.3-X12:BU				3	BU	mm²		-X130:11		45	7	
	+JB10.3-X13				4	YE	mm²		-X130:12		45	7	
E												E	
F												F	
				Modus Winch Modus				Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EFS	Page Function:	Rev. date:
								Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built	Page Location: +A1	Total sheets: 13
											Sheet: 12	Next sheet: 13	

	0	1	2	3	4	5	6	7	8	9								
	<<-----<<-----<< Direction <<-----<<-----<<										Page	Cell						
A												A						
	Cable: -W2		Remark: Cabinet Heat			Type:		Dimension:		Length:								
B	-E1:L -E1:N -E1:PE		<div><div><div><div></div><div></div><div></div></div><div>BN BU GNYE</div><div>mm² mm² mm²</div></div><div><div><div></div><div></div><div></div></div><div>-B1:2 -X15:5V2 -X15:5PE2</div><div></div></div></div>									54 54 54	8 8 8	B				
C												C						
D												D						
E												E						
F												F						
<div>SHGROUP</div> <div>Modus Winch Modus</div>					Design/App.: MAN / JLE		Project no.: SHG-000973		Drawing no.: SHG-000973-E-XX-0001-Ax		DCC: &EFS		Page Function:		Rev. date:		Sheet: 13	
					Rev. no.: AB		Date: 04-07-2016		ID no.: SHG-00973-0001-A1		Status: As Built		Page Location: +A4		Total sheets: 13		Next sheet:	

Terminal List

	Modus Winch Modus		Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Ax	DCC: &EMA		Rev. date:	Sheet: 1
			Rev. no.: AB	Date: 04-07-2016	ID no.: SHG-00973-0001-A1	Status: As Built		Total sheets: 22	Next sheet: 2

List of Terminals: -X4												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-F7:2			1U2	+A1-M1.0A:U1				PT 2,5	8	1		
+A1-F7:4			1V2	+A1-M1.0A:V1				PT 2,5	8	1		
+A1-F7:6			1W2	+A1-M1.0A:W1				PT 2,5	8	1		
+A1PE			1PE2	+A1-M1.0A:?				PT 2,5-PE	8	1		
+A1-F8:2			2U2	+A1-M2.0A:U1				PT 2,5	8	5		
+A1-F8:4			2V2	+A1-M2.0A:V1				PT 2,5	8	5		
+A1-F8:6			2W2	+A1-M2.0A:W1				PT 2,5	8	5		
+A1PE			2PE2	+A1-M2.0A:?				PT 2,5-PE	8	5		
+A1-F9:2			3U2	+A1-M2.1A:U1				PT 2,5	9	1		
+A1-F9:4			3V2	+A1-M2.1A:V1				PT 2,5	9	1		
+A1-F9:6			3W2	+A1-M2.1A:W1				PT 2,5	9	1		
+A1PE			3PE2	+A1-M2.1A:?				PT 2,5-PE	9	1		
+A1-F10:2			4U2	+A1-M4A:U1				PT 2,5	9	5		
+A1-F10:4			4V2	+A1-M4A:V1				PT 2,5	9	5		
+A1-F10:6			4W2	+A1-M4A:W1				PT 2,5	9	5		
+A1PE			4PE2	+A1-M4A:?				PT 2,5-PE	9	5		

List of Terminals: -X11												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-K2:21			1U1	+A1-SHORE 230V L				PT 2,5	7	5		
+A1-Q7:A2			1V1	+A1-SHORE 230V N				PT 2,5	7	5		
+A1PE			2PE1	+A1-SHORE 230V PE				PT 2,5-PE	7	5		

List of Terminals: -X12												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A124VDC			1+2	+A1-B11:+				PT 2,5	27	3		
+A10VDC			1-2	+A1-B11:-				PT 2,5	27	3		
+A124VDC			2+2	+A1-B12:+				PT 2,5	27	5		
+A124VDC			4+2	+A4-X11:1+1				PT 2,5	6	4		
+A10VDC			2-2	+A1-B12:-				PT 2,5	27	5		
+A10VDC			4-2	+A4-X11:1-1				PT 2,5	6	4		

List of Terminals: -X15													
Connection 1			Terminal	Connection 2				Type	Sheet	Cell			
+A13-L1			1U2	+A1-E1.0A:1HE1				PT 2,5	10	1			
+A13-L2			1V2	+A1-E1.0A:1HE2				PT 2,5	10	1			
+A1PE			1PE2	+A1-E1.0A:PE				PT 2,5-PE	10	1			
+A13-L1			2U2	+A1-E2.0A:1HE1				PT 2,5	10	5			
+A13-L2			2V2	+A1-E2.0A:1HE2				PT 2,5	10	5			
+A1PE			2PE2	+A1-E2.0A:PE				PT 2,5-PE	10	5			
+A13-L1			3U2	+A1-E2.1A:1HE1				PT 2,5	11	1			
+A13-L2			3V2	+A1-E2.1A:1HE2				PT 2,5	11	1			
+A1PE			3PE2	+A1-E2.1A:PE				PT 2,5-PE	11	1			
+A13-L1			4U2	+A1-E4:1HE1				PT 2,5	11	5			
+A13-L2			4V2	+A1-E4:1HE2				PT 2,5	11	5			
+A1PE			4PE2	+A1-E4:PE				PT 2,5-PE	11	5			
+A1-F11:2			5U2	+JB11-X11:1U1				PT 2,5	12	1			
+A1-F11:4			5V2	+JB11-X11:1V1				PT 2,5	12	1			
+A1PE			5PE2	+JB11-X11:1PE1				PT 2,5-PE	12	1			
+A1-F12:2			6U2	+A4-X15:5U2				PT 2,5	12	3			
+A1-F12:4			6V2	+A4-X15:5V2				PT 2,5	12	3			
+A1PE			6PE2	+A4-X15:5PE2				PT 2,5-PE	12	3			

List of Terminals: -X19												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-K5:5			1+2	+A1-QM1.0:BD1				PT 2,5	14	1		
+A1-K5:6			1-2	+A1-QM1.0:BD2				PT 2,5	14	1		
+A1PE			1PE2					PT 2,5-PE	14	1		
+A1-K6:5			2+2	+A1-QM2.0:BD1				PT 2,5	14	3		
+A1-K6:6			2-2	+A1-QM2.0:BD2				PT 2,5	14	3		
+A1PE			2PE2					PT 2,5-PE	14	3		
+A1-K7:5			3+2	+A1-QM2.1:BD1				PT 2,5	14	5		
+A1-K7:6			3-2	+A1-QM2.1:BD2				PT 2,5	14	5		
+A1PE			3PE2					PT 2,5-PE	14	5		
									</			

List of Terminals: -X22												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-T1:50			1	+A1-B5:2TP1				PT 2,5	16	1		
+A1-T1:54			2	+A1-B5:2TP2				PT 2,5	16	1		
+A1-K27:AI2 M+			3	+A1-B15:1R1				PT 2,5	43	5		
+A1-K27:AI2 M-			4	+A1-B15:1R2				PT 2,5	43	5		
+A124VDC			5	+A1-QM1.0:BU				PT 2,5	35	3		
+A1-K26:Dia .1			6	+A1-QM1.0:BK				PT 2,5	35	3		
+A1-T2:50			7	+A1-B6:2TP1				PT 2,5	16	3		
+A1-X22:13			8	+A1-B6:2TP2				PT 2,5	16	3		
+A1-K27:AI3 M+			9	+A1-B16:1R1				PT 2,5	43	7		
+A1-K27:AI3 M-			10	+A1-B16:1R2				PT 2,5	43	7		
+A124VDC			11	+A1-QM2.0:BU				PT 2,5	35	5		
+A1-K26:Dia .2			12	+A1-QM2.0:BK				PT 2,5	35	5		
+A1-X22:8			13	+A1-B7:2TP1				PT 2,5	16	4		
+A1-T2:54			14	+A1-B7:2TP2				PT 2,5	16	4		
+A1-K27:AI4 M+			15	+A1-B17:1R1				PT 2,5	44	1		
+A1-K27:AI4 M-			16	+A1-B17:1R2				PT 2,5	44	1		
+A124VDC			17	+A1-QM1:BU				PT 2,5	35	7		
+A1-K26:Dia .3			18	+A1-QM1:BK				PT 2,5	35	7		
+A1-T4:50			19	+A1-B8:2TP1				PT 2,5	16	7		
+A1-T4:54			20	+A1-B8:2TP2				PT 2,5	16	7		
+A1-K27:AI6 M+			21	+A1-B18:1R1				PT 2,5	44	5		
+A1-K27:AI6 M-			22	+A1-B18:1R2				PT 2,5	44	5		
+A10VDC			24	+A1-QM2.0:BN				PT 2,5	35	4		
+A10VDC			25	+A1-QM1.0:BN				PT 2,5	35	2		
+A10VDC			26	+A1-QM1:BN				PT 2,5	35	6		

List of Terminals: -X25												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-K16:41			1	+A1-B9:21				PT 2,5	22	6		
+A1-T4:32			2	+A1-B9:22				PT 2,5	22	6		
+A1-X25:1			3	+A1-B10:21				PT 2,5	22	6		
+A1-T4:33			4	+A1-B10:22				PT 2,5	22	6		

List of Terminals: -X31												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-K27:A17 M+			1	+A10-X101:1				PT 2,5	44	7		
+A1-K27:A17 M-			2	+A10-X101:2				PT 2,5	44	7		

List of Terminals: -X103												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-S3:23			1	+A1-X103:2				PT 2,5	18	5		
+A1-X104:1			2	+A1-X103:1				PT 2,5	18	5		
+A1-S3:13			3	+A1-X103:4				PT 2,5	18	5		
+A1-X104:3			4	+A1-X103:3				PT 2,5	18	5		

List of Terminals: -X104												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-X103:2			1	+A4-X101:1				PT 2,5	18	7		
+A1-K8:S12			2	+A4-X101:2				PT 2,5	18	7		
+A1-X103:4			3					PT 2,5	18	7		
+A1-K8:S22			4	+A4-X101:4				PT 2,5	18	7		
+A1-K26:Dia .5			5	+A4-X101:5				PT 2,5	18	7		
+A1-K28:Al 4+			6	+A4-X101:6				PT 2,5	46	1		
+A4-X101:7			7	+A1-K26:Dia .6				PT 2,5	36	5		

List of Terminals: -X106												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A124VDC			1					PT 2,5	34	3		
+A1-K25:D1b.5			2					PT 2,5	34	3		
+A1-K31:14			3					PT 2,5	41	5		
+A1-K31:11			4					PT 2,5	41	5		

List of Terminals: -X130													
Connection 1			Terminal	Connection 2				Type	Sheet	Cell			
+A124VDC			1	+JB10.1-X10:RD				PT 2,5	45	3			
+A1-K28:AI 1+			2	+JB10.1-X11:GN				PT 2,5	45	3			
+A10VDC			3	+JB10.1-X12:BU				PT 2,5	45	3			
			4	+JB10.1-X13				PT 2,5	45	3			
+A124VDC			5	+JB10.2-X6:RD				PT 2,5	45	5			
+A1-K28:AI 2+			6	+JB10.2-X7:GN				PT 2,5	45	5			
+A10VDC			7	+JB10.2-X8:BU				PT 2,5	45	5			
			8	+JB10.2-X9				PT 2,5	45	5			
+A124VDC			9	+JB10.3-X10:RD				PT 2,5	45	7			
+A1-K28:AI 3+			10	+JB10.3-X11:GN				PT 2,5	45	7			
+A10VDC			11	+JB10.3-X12:BU				PT 2,5	45	7			
			12	+JB10.3-X13				PT 2,5	45	7			

List of Terminals: -X201												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
			+					PT 2,5-QUATTRO	6	2		
			+					PT 2,5-QUATTRO	6	2		
			+					PT 2,5-QUATTRO	6	2		
			+					PT 2,5-QUATTRO	6	2		
			+					PT 2,5-QUATTRO	6	3		
			+					PT 2,5-QUATTRO	6	3		
			+					PT 2,5-QUATTRO	6	3		
+A124VDC			+					PT 2,5-QUATTRO	6	3		
+A10VDC			-					PT 2,5-QUATTRO	6	3		
			-					PT 2,5-QUATTRO	6	3		
			-					PT 2,5-QUATTRO	6	3		
			-					PT 2,5-QUATTRO	6	3		
			-					PT 2,5-QUATTRO	6	4		
			-					PT 2,5-QUATTRO	6	4		
			-					PT 2,5-QUATTRO	6	4		
			-					PT 2,5-QUATTRO	6	4		
										</		

List of Terminals: -X210												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-K27:A10 M+			1	+A1-B13:RD				PT 2,5	43	1		
+A1-K27:A10 M-			2	+A1-B13:WH				PT 2,5	43	1		

List of Terminals: -X220												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-K3:14			1U2	+A1-E1:L				PT 2,5	13	1		
+A1-F13:4			1V2	+A1-E1:N				PT 2,5	13	1		
+A1PE			1PE2	+A1-E1:PE				PT 2,5-PE	13	1		

List of Terminals: -X221												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-K4:14			1U2	+A1-E2:L				PT 2,5	13	3		
+A1-K3:A2			1V2	+A1-E2:N				PT 2,5	13	3		
+A1PE			1PE2	+A1-E2:PE				PT 2,5-PE	13	3		
									</			

List of Terminals: -X11												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A424VDC			1+1	+A1-X12:4+2				PT 2,5	54	6		
+A40VDC			1-1	+A1-X12:4-2				PT 2,5	54	6		

List of Terminals: -X15												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A4-B1:1			5U2	+A1-X15:6U2				PT 2,5	54	8		
+A4-E1:N			5V2	+A1-X15:6V2				PT 2,5	54	8		
+A4PE			5PE2	+A1-X15:6PE2				PT 2,5-PE	54	8		

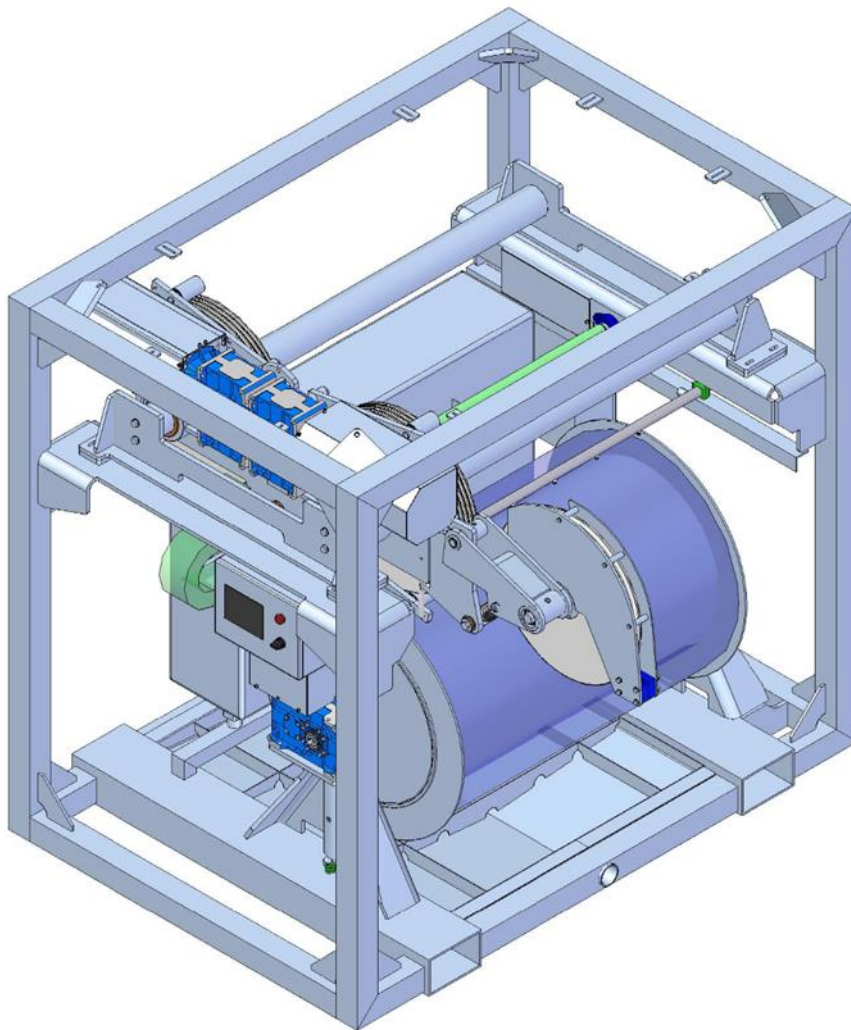
List of Terminals: -X101												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A4-S1:11			1	+A1-X104:1				PT 2,5	54	3		
+A4-S1:12			2	+A1-X104:2				PT 2,5	54	3		
+A4-S1:21			3					PT 2,5	54	3		
+A4-S1:22			4	+A1-X104:4				PT 2,5	54	3		
+A4-S1:32			5	+A1-X104:5				PT 2,5	54	3		
+A4-S4:Signal			6	+A1-X104:6				PT 2,5	56	3		
+A4-S2:14			7	+A1-X104:7				PT 2,5	56	1		

List of Terminals: -X1												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A1-T2:82/R+			1	+A10-R6				UT 16	3	5		
+A1-T2:81/R-			2	+A10-R5				UT 16	3	5		
+A1PE			PE					UT 16-PE	3	5		

List of Terminals: -X101												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
+A10-B1:RD			1	+A1-X31:1				PT 2,5	44	7		
+A10-B1:WH			2	+A1-X31:2				PT 2,5	44	7		

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.3.3 Termination Diagram



Termination diagram

Slip Ring & Umbilical

FA010 Slipring

Project no.: SHG-000973
Draw no.: SHG-000973-E-XX-0001-Term
ID no.: SHG-000973-0001-JBX
Rev. no.: M1

Voltage 24VDC-250VAC-20kVAC
Frekvens - -60-60Hz
Earthing system -
Full load -
Largest load -
Ik min -
Ik max -
Maximum fuse -
IP class 56
Ambient temperature -25°C to +45°C


SH-Group
Kuopiovej 20
DK-5700 Svendborg
Phone: +45 6221 7810
E-mail: sh@shgroup.dk



Modus

.

List of Documents

	Termination diagram Slip Ring & Umbilical Modus		Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Term	DCC: &EAB		Rev. date: 29-11-2016	Sheet: 1
			Rev. no.: M1	Date: 17-08-2016	ID no.: SHG-000973-0001-JBX	Status: Montage		Total sheets: 2	Next sheet: 2

List of Documents

[illegible]

Termination diagram
Slip Ring & Umbilical
Modus

Design/App.:
MAN / JLE

Rev. no.:

Project no.:
SHG-000973

Date:
17-08-2016

Drawing no.: SHG-000973-E-XX-0001-Term

ID no.: SHG-000973-0001-JBX

DCC: &EAB

Status: Montage

Page Function:

Page Location:


Rev. date:
29-11-2016

Total sheets: 2

Sheet: 2

Next sheet:

Aspect Functions & Locations Lists

	Termination diagram Slip Ring & Umbilical Modus		Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Term	DCC: &EPF	Page Function:	Rev. date: 29-11-2016	Sheet: 1
			Rev. no.: M1	Date: 17-08-2016	ID no.: SHG-000973-0001-JBX	Status: Montage	Page Location:	Total sheets: 2	Next sheet: 2

List of Aspect Functions

[illegible][illegible]

Termination diagram Slip Ring & Umbilical Modus

Design/App.:	MAN / JLE
Rev. no.:	

Project no.:	SHG-000973
Date:	17-08-2016

Drawing no.: SHG-000973-E-XX-0001-Term
ID no.: SHG-000973-0001-JBX

DCC:	&EPF
Status:	Montage

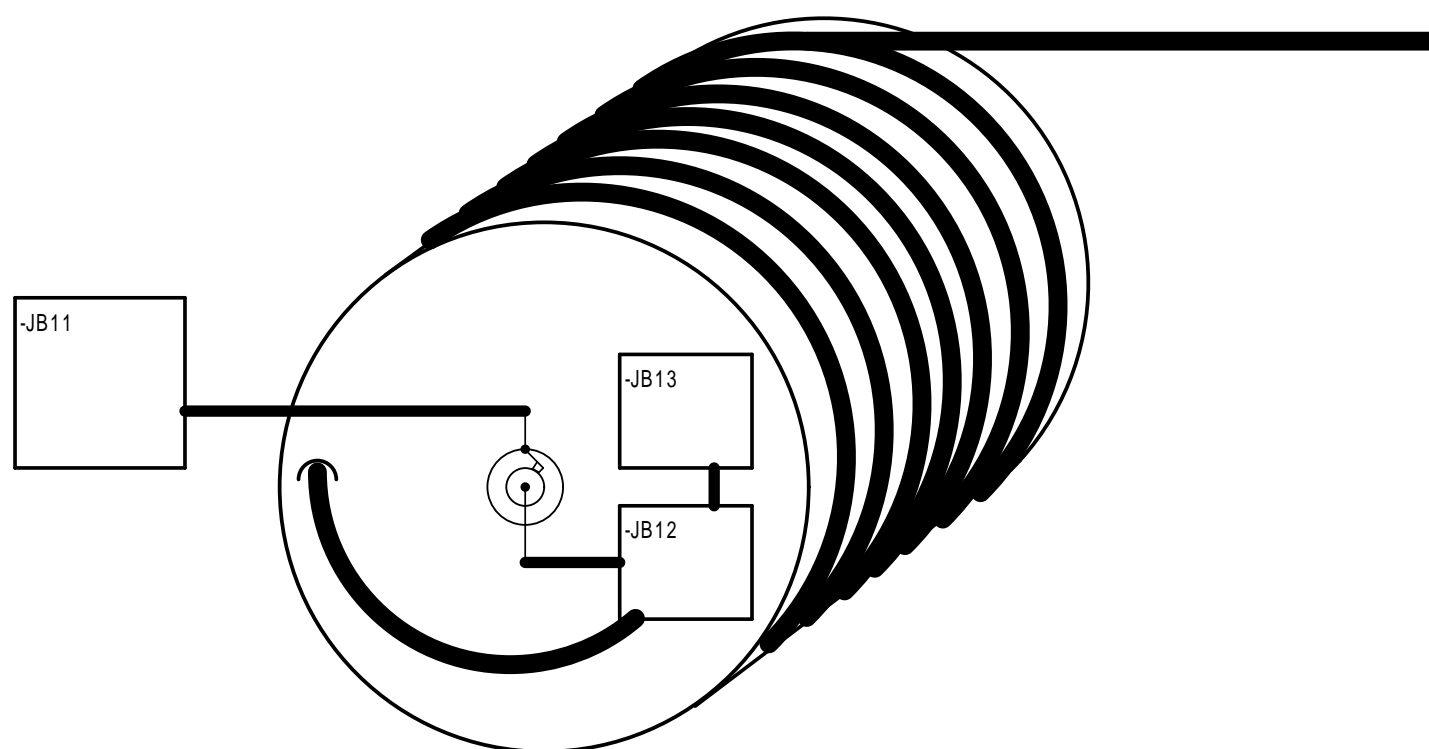
Page Function:
Page Location:

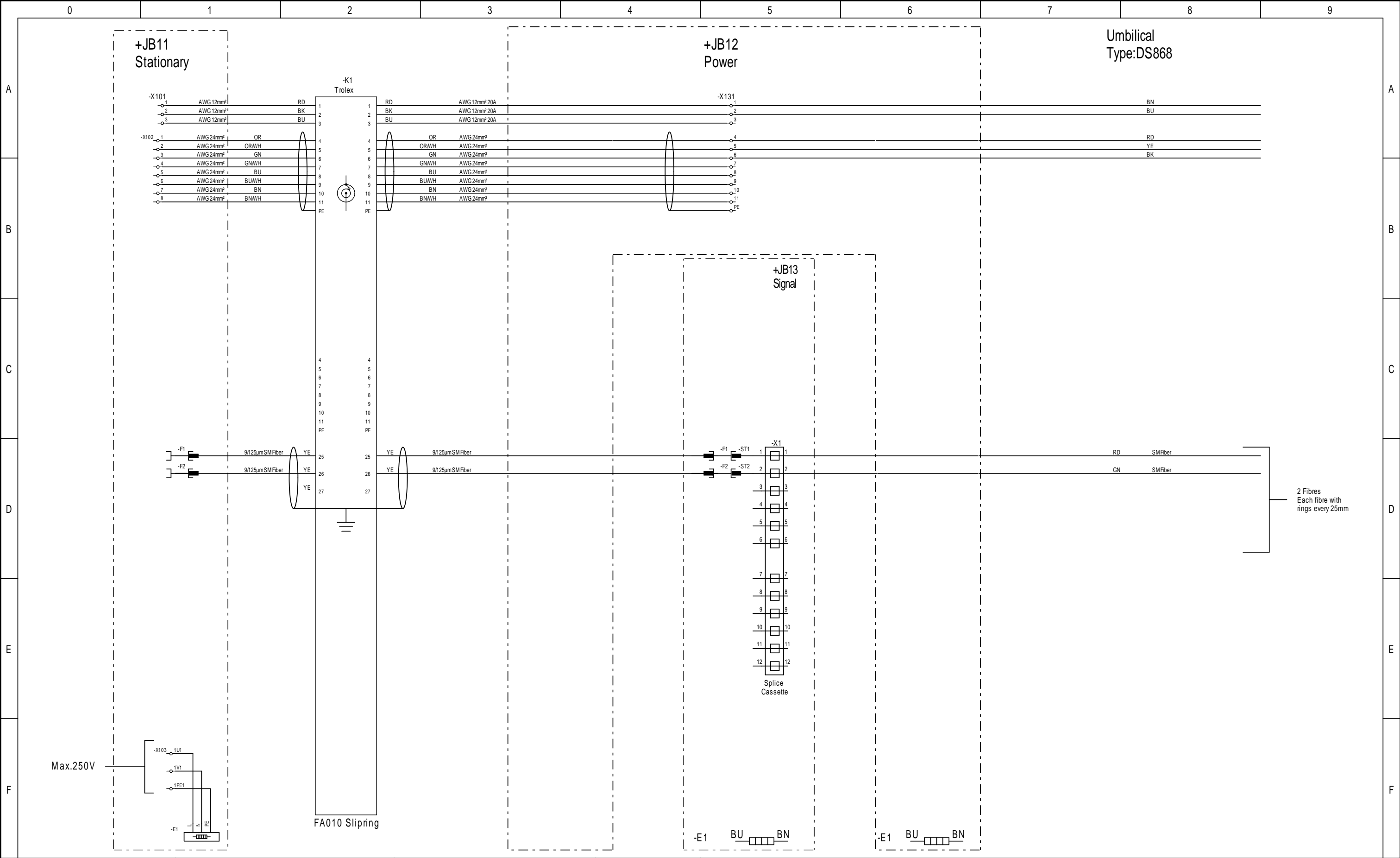
Rev. date: 29-11-2016

Total sheets: 2


Sheet: 2

Next sheet:





List of Components

	Termination diagram Slip Ring & Umbilical Modus		Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Term	DCC: &EPB		Rev. date: 29-11-2016	Sheet: 1
			Rev. no.: M1	Date: 17-08-2016	ID no.: SHG-000973-0001-JBX	Status: Montage		Total sheets: 5	Next sheet: 2

List of Components

[illegible]

List of Components

[illegible]

List of Components

[illegible]

Terminal List



Termination diagram
Slip Ring & Umbilical
Modus

Design/App.: MAN / JLE	Project no.: SHG-000973	Drawing no.: SHG-000973-E-XX-0001-Term	DCC: &EMA	Rev. date: 29-11-2016	Sheet: 1
Rev. no.: M1	Date: 17-08-2016	ID no.: SHG-000973-0001-JBX	Status: Montage	Total sheets: 5	Next sheet: 2

List of Terminals: -X101												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
			1	-K1:1				UT 35	1	1		
			2	-K1:2				UT 35	1	1		
			3	-K1:3				UT 35	1	1		
				</								

List of Terminals: -X102												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
			1	-K1:4				UT 2,5	1	1		
			2	-K1:5				UT 2,5	1	1		
			3	-K1:6				UT 2,5	1	1		
			4	-K1:7				UT 2,5	1	1		
			5	-K1:8				UT 2,5	1	1		
			6	-K1:9				UT 2,5	1	1		
			7	-K1:10				UT 2,5	1	1		
			8	-K1:11				UT 2,5	1	1		

List of Terminals: -X103												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
			1U1	+JB11-E1:L				UT 6	1	1		
			1V1	+JB11-E1:N				UT 6	1	1		
			1PE1	+JB11-E1:PE				UT 6-PE	1	1		

List of Terminals: -X131												
Connection 1			Terminal	Connection 2				Type	Sheet	Cell		
-K1:1			1					UT 35	1	5		
-K1:4			4					UT 2,5	1	5		
-K1:2			2					UT 35	1	5		
-K1:3			3					UT 35	1	5		
-K1:5			5					UT 2,5	1	5		
-K1:6			6					UT 2,5	1	5		
-K1:7			7					UT 2,5	1	5		
-K1:8			8					UT 2,5	1	5		
-K1:9			9					UT 2,5	1	5		
-K1:10			10					UT 2,5	1	5		
-K1:11			11					UT 2,5	1	5		
			PE					UT 2,5-PE	1	5		

System documentation

Winch Ocean Enviro-2000-A3-4-7-2-FS-NZ-003- - Serial No SHG-000973

2.3.4 Block Diagram

