



UCH COMPRESSION PROJECT



Design Engineering, Procurement (Supply), Construction, Installation/Erection,
Pre-Commissioning, Commissioning & Start-up (including performance testing and Reliability Guarantee Test) of UCH Front End Compression Project

Tender Enquiry No. PROC-FC/CB/PROJ/UCH (COM)-5155/2021

Pre-Bid Clarification-07

(Pre-Bid Site Visit)

Sr. No.	Tender Document Reference	Description
1	Electrical Package <u>Volume IIC</u>	<p>Refer to Electrical Power Distribution philosophy, it is mentioned in the tender documents that power supply for UCH Compression Project shall be taken from UCH-I plant and UCH-II plant respectively. Only change is that “Spare feeder (-L29) available on MV Bus II of UCH-II Switchgear/MCC shall be utilized now instead of L-07 (previously mentioned) on MV Bus I”.</p> <p>Remaining power distribution philosophy shall remain same as given in documents submitted with tender. Updated drawings i.e. 4985-ELB-6601-13, 0221-ELB-6600-3 & 14-4985-ELB-6602-4 are attached as ATTACHMENT-I for your reference. Furthermore, relevant vendor drawings are also attached as ATTACHMENT-II.</p>
2	Electrical Package <u>Volume IIC</u>	<p>Transformers shall be oil-immersed hermetically sealed type instead of transformer with conservator tanks. All the protections i.e. gas monitoring Buchholz relay, pressure relive device, oil level indicator, oil pressure relay, Off-load tap changer, temperature indication device/relay (responsive to both oil and load current) and so on shall be provided. Transformer must be manufactured based on proven design and type tested as per relevant section of IEC-60076. All the relevant type test reports including of detail results shall be shared with OGDCL. Remaining specs as given in tender documents shall remain same, however, specific clauses applicable to conservator tank type transformer shall be replaced with equivalent or better spec appropriate to hermetically sealed transformers. Detail specification and data sheet/drawings of hermetically sealed transformer shall be developed by EPCC during detail engineering and submit to OGDCL for review and approval.</p>

ATTACHMENT-I

NOTES—

17—DEVELOPED SINGLE LINE DIAGRAM BASED ON FEED ENGINEERING & DETAILS ILLUSTRATED HEREIN ARE MINIMUM REQUIRED. EPCO CONTRACTOR SHALL ENHANCE ALL OF THESE REQUIREMENTS, AND SHALL DEVELOP DETAIL ENGINEERING DRAWINGS REQUIRED FOR CONSTRUCTION. THE REQUIREMENTS OF DETAIL ENGINEERING EXPLICITLY MENTIONED HEREIN, BUT REQUIRED FOR THE INTENDED OBJECTIVE OF THE SUBJECT PROJECT SHALL BE INCLUDED AND PART OF EPCO SCOPE OF WORK.

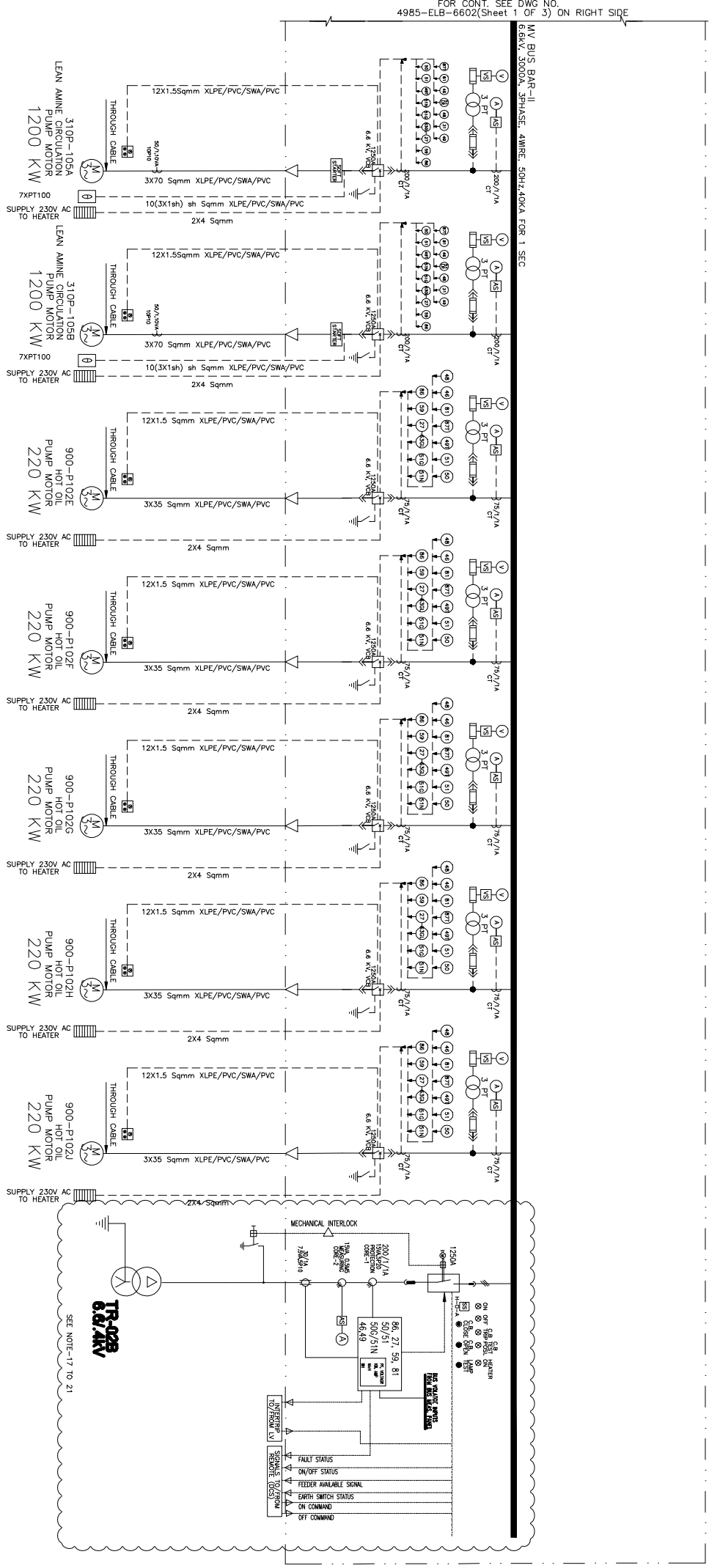
18—VENDOR/MANUFACTURER SHALL DEVELOP DETAIL DOCUMENTS OF RESPECTIVE SWITCHGEAR/MCC, I.E. COMPONENT LIST, SCHEMATICS, SINGLE DIAGRAM AND TO BE SUBMITTED FOR M/S OQOOL REVIEW AND APPROVAL.

19—EXISTING 220KV MW SPARE MOTOR STARTER PANEL (1250A, 400A, 1250A, 1250A) SHALL BE MODIFIED TO TRANSFORMER FEEDER (SCHEMATIC DETAILS—(3) A6678 5175) IN ORDER TO POWER-UP THE NEW TRANSFORMER (TR-028, 2.5MVA) COMES UNDER THE SUBJECT PROJECT AS ILLUSTRATED IN THIS SINGLE LINE DIAGRAM. AS THE INTEND OF THIS SINGLE LINE DIAGRAM IS BASED ON FEED ENGINEERING AND JUST GIVE AN OVERVIEW OF WORK/SCOPE, THEREFORE, ANY CONCRETE, FOUNDATION WORK OR ELSE THAT WOULD BE NEEDED FOR THE SUBJECT JOB, HOWEVER, NOT EXPLICITLY MENTIONED IN THIS SINGLE LINE, BUT REQUIRED FOR THE INTENDED OBJECTIVE OF THE SUBJECT PROJECT, SHALL BE PROVIDED BY EPCO CONTRACTOR WITHOUT ANY ADDITIONAL COST AND TIME.

20—PROTECTIONS LIKE 87M, INDICATIONS AND INTERFACING DETAILS THAT ARE RELEVANT TO MOTOR PROTECTION AND HAVE NOTHING TO DO WITH TRANSFORMER PROTECTION CIRCUIT SHALL BE SUITABLY REPLACED/DISABLE AS PER MANUFACTURER/VENDOR INSTRUCTIONS.

21—ALL THE MODIFICATION WORKS SHALL BE PERFORMED IN A SATISFACTORY MANNER WITHOUT JEOPARDIZING THE EXISTING SYSTEM INTEGRITY & IP RATING. ALSO, ACTIVITIES WHICH REQUIRES SHUTDOWN OF EXISTING SYSTEM SHALL BE SCHEDULED/ARRANGED IN SUCH A MANNER THAT ALL THE RELATED ACTIVITIES SHALL BE COMPLETED WITHIN THE ALLOCATED TIME OF SHUTDOWN. NO SPARE SHUTDOWN SHALL BE PROVIDED.

4



(MODIFIED UNDER
PROJECT # 0221)

RE-ISSUED FOR
BIDDING

4	02-12-2021	BE ASSIGNED FOR BIDDING (MODIFIED UNDER PROJECT # 0221)	WAA	21W	AIB	WPM	TH
3	07-10-2013	ISSUED FOR CONSTRUCTION	WAA	SW/WG	AR	MHO	FS
2	08-07-2013	ISSUED FOR BID	WAA	SAW	WAK	MHO	FS
1	14-11-2012	ISSUED FOR BID	WAS	SAW	WAK	MHO	FS
REV	DATE	DESCRIPTION OF REVISION	DRW	DESIGNED	CHECKED	QA	APP

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SERVICES (PRIVATE)
Dwg. No. 14-4985

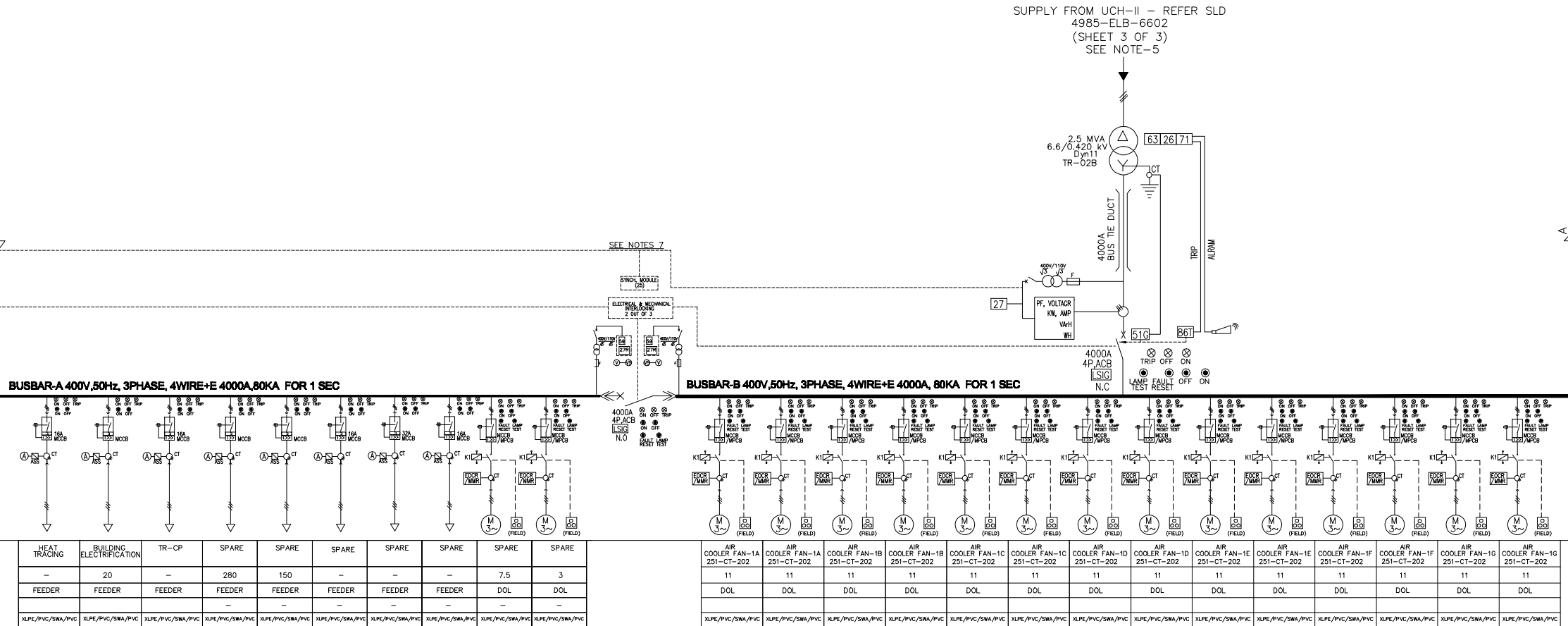
GAS PLANT FACILITY PROJECT
4985-ELB-6602
(SHEET 3 OF 3)

SINGLE LINE DIAGRAM FOR
MV SWITCHGEAR

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LV INCOMING DEVICES WITH PROTECTION, MONITORING, METERING & CONTROL, CABLE
TRANSFORMER
LV INCOMING DEVICES WITH PROTECTION, MONITORING, METERING & CONTROL, CABLE/BTD
BUS-BARS
STARTERS/FEEDERS
DESCRIPTION
RATING (K.W)
STARTER TYPE
CONTROLLING TYPE
CABLE TYPE

FOR CONT. SEE DWG.NO. 0221-ELB-6600 (SHEET 1 OF 3)



NOTES--

- 11- EACH MOTOR STARTER SHALL BE COMBINATION TYPE AND BE FITTED WITH:
 - SHORT CIRCUIT PROTECTION BY MEANS OF INSTANTANEOUS THROUGH A 3 POLE MOTOR PROTECTION CIRCUIT BREAKER WITH ADJUSTABLE TRIP SETTINGS (IN MULTIPLES OF THE CONTINUOUS CURRENT RATING) ALLOWS FOR CUSTOMIZED MOTOR PROTECTION.
 - THREE POLE AIR BREAK CONTRACTOR (S), AC-3 UTILIZATION CATEGORY.
 - ELECTRONIC OVER CURRENT RELAY/MOTOR MANAGEMENT RELAY ALONG WITH ASSOCIATED CT'S FOR PHASE/OVERLOAD AND TOROIDAL CT FOR EARTH FAULT PROTECTION.
 - SPACE HEATER PROVISION FOR MOTORS RATED 11KW OR ABOVE. SPACE HEATER SHALL HAVE CONTROL CIRCUIT IN THE RESPECTIVE STARTER THAT WHEN MOTOR IS IN OPERATION, THE SPACE HEATER IS CUTOFF AND WHEN MOTOR IS OFF, THE SPACE HEATER CIRCUIT ON/ENERGIZED.
 - AUXILIARY POWER SUPPLY FOR EACH MOTOR STARTER SHALL BE FETCHED INTERNALLY FROM RESPECTIVE STARTER.
- 12- ALL FEEDER CIRCUITS SHALL BE PROVIDED WITH LOAD SHEDDING.
- 13- EACH COMPRESSOR MOTOR SHALL BE PROVIDED WITH FIELD MOUNTED SUITABLE SOFT STARTER & DISTRIBUTION BOARD. POWER SUPPLY FOR THE COMPRESSOR AUXILIARIES AND HEATERS SHALL BE SUPPLIED FROM THEIR RESPECTIVE DISTRIBUTION BOARDS AS STATED ABOVE.
 - EACH COMPRESSOR/COMPRESSOR MOTOR SHALL HAVE FACILITIES FOR MANUAL AND AUTOMATIC STARTING IN CASE OF FAILURE OF THE ONE COMPRESSOR/COMPRESSOR MOTOR.
 - ELECTRICAL CONTROLS TO BE SUPPLIED AS AN INTEGRAL PART OF THE COMPRESSOR SHALL BE INTERLOCKED WITH THE START/STOP CONTROLS AND BE SUITABLE FOR THE ENVIRONMENT WHERE THEY INSTALLED.
- 14- ALL FEEDER MCCB'S SHALL BE FITTED WITH MINIMUM OF THERMAL & MAGNETIC PROTECTION.
- 15- THE RATINGS OF CT'S, VT'S, MCCB'S/MPCB'S, MAGNETIC CONTRACTOR, ELECTRONIC OVERLOAD/OVER CURRENT RELAYS ETC. SHALL BE SELECTED BY VENDOR AS PER CONNECTED LOAD CURRENT, FAULT CURRENT AND DEVICE CO-ORDINATION REQUIREMENT AND COMPLETE CALCULATION SHALL BE SUBMITTED TO CLIENT FOR REVIEW & APPROVAL.
- 16- ALL FEEDER MCCB'S SHALL BE FITTED WITH MINIMUM OF THERMAL & MAGNETIC PROTECTION.
- 17- LOAD SHEDDING CONTACT SHALL BE PROVIDED IN ALL LV OUTGOING CIRCUITS.
- 18- LOAD FLOW, SHORT CIRCUIT, VOLTAGE DROP, HARMONIC, ARC FLASH, TRANSIENT STABILITY, MOTOR STARTING STUDY AND RELAY CO-ORDINATION STUDY SHALL BE CARRIED OUT BY EPCC ON LICENSED SOFTWARE I.E. ETAP OR EQUIVALENT. VALID LICENSE OF SOFTWARE SHALL ALSO BE SHARED WITH M/S OGDCL AT THE TIME OF BIDDING OR WHENEVER REQUIRED BY OGDCL.
- 19- SHORT CIRCUIT STUDY OF NEW SYSTEM SHALL BE PERFORMED IN SUCH A WAY THAT CONTRIBUTION FROM BOTH UCH-I AND UCH-II SHALL BE ANALYZED AT MV AND LV SWITCHGEAR/MCC OF COMPRESSION FACILITY COMES UNDER THE SUBJECT PROJECT SCOPE. BOTH MAX. AND MINIMUM VALUES OF SHORT CIRCUIT VALUES SHALL BE CALCULATED CONSIDERING DIFFERENT/APPLICABLE PLANT OPERATING/PEAK DEMAND SCENARIOS. SINCE SHORT CIRCUIT STUDIES OF EXISTING FACILITIES UCH-I AND UCH-II AVAILABLE IN REPORT (PDF FORMAT) AND WAS CONDUCTED/PERFORMED AT THE TIME OF VERY EARLY STAGES OF PREVIOUS PROJECTS, THEREFORE, AS FAR AS PRACTICABLE, EPCC SHALL COLLECT ACTUAL DATA FROM SITE AT THEIR OWN AND MAY INPUT/FEED IN STUDY TO BE PERFORMED UNDER SUBJECT PROJECT. EXISTING STUDY REPORTS SHALL BE SHARED WITH EPCC AFTER THE AWARD OF CONTRACT.
- 20- SYSTEM DYNAMIC STABILITY (TRANSIENT STABILITY) STUDIES SHALL BE PERFORMED UNDER THREE PHASE AND SINGLE PHASE FAULT CONDITIONS.
- 21- DYNAMIC PERFORMANCE STUDIES SHALL BE CARRIED OUT UNDER MOTOR STARTING AS WELL AS LOSS OF GENERATION CONDITIONS.
- 22- PROTECTION GRADING STUDIES, INCLUDING RELAY SETTING SCHEDULES; AN ARC FLASH STUDY SHOULD BE CARRIED OUT.
- 23- A PROTECTION REPORT DESCRIBING THE BASIC PHILOSOPHY, AND COMPRISING A PROTECTION KEY DIAGRAM, RELAY SETTING SCHEDULES AND RELAY DISCRIMINATION CURVES, SHALL BE PREPARED AS STATED ABOVE.
- 24- SYSTEM STUDIES AND PROTECTION REPORTS, INCLUDING SOFTWARE FILES, SHALL BE PROVIDED IN SUPPORT OF THE DESIGN, FOR M/S OGDCL APPROVAL AND RECORD.

NOTE: SYMMETRICAL SHORT CIRCUIT OF 80KA FOR LV SWITCHGEAR/MCC AS ILLUSTRATED ON TO PROJECT SINGLE LINE ARE MINIMUM REQUIRED. HOWEVER, IF IT IS EMERGED DURING THE DETAIL ENGINEERING STUDIES THAT HIGHER VALUES OF SHORT CIRCUIT ARE REQUIRED THEN SHALL BE ABSORBED AND INCORPORATED BY EPCC WITHOUT ANY ADDITIONAL COST AND TIME.

RE-ISSUED FOR BIDDING

3	02-12-2021	RE-ISSUED FOR BIDDING	MAA	ZHW	AIB	TH
2	18-10-2021	RE-ISSUED FOR BIDDING	MAA	ZHW	AIB	FS
1	17-09-2021	RE-ISSUED FOR BIDDING	MAA	ZHW	AIB	FS
0	25-07-2019	ISSUED FOR BIDDING	MAA	ZHW	AIB	FS
B	31-05-2019	OGDCL COMMENTS INCORPORATED	MAA	ZHW	AIB	FS
A	30-04-2019	ISSUED FOR REVIEW & APPROVAL	MAA	ZHW	AIB	FS
REV.	DATE	DESCRIPTION OF REVISION	DRAWN	DESIGNED	CHECKED	APPR.

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OIL & GAS DEVELOPMENT CORPORATION
UCH COMPRESSION PROJECT

TITLE: SINGLE LINE DIAGRAM
0.4kV L.V SWITCHGEAR/MCC

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Job No. 14-0221

Dwg. No.

0221-ELB-6600
SHEET 2 OF 3

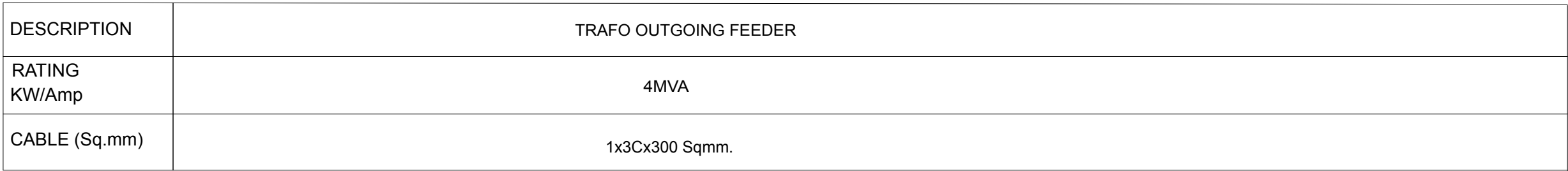
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SHEET SIZE A1
SCALE 1:1
REPLACES SHEET NO.

ATTACHMENT-II

E:\A2678,44100062.L-22916-OGDCL\UCH-II GAS PLANT FACILITY\SCHEMATICS\175-OUTGOING FEEDER#A.A.e3s 2/24/2014 12:32		<div>Schneider Electric</div>																	
		<div>CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II</div>																	
		<div><u>SCHEMATIC DIAGRAMS:</u> TRAFO OUTGOING FEEDERS</div>																	
		<div><u>LOCATION:</u> +S2: VCB COMPARTMENT +S4: CT/PT COMPARTMENT +S1.D: LV COMPARTMENT DOOR +S1.R: INSTRUMENT BOX (LV COMPARTMENT)</div>																	
A3	A2	F AS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12			QTY 02	Applicable Panel =L10,21	Document type S	Sheet name A01	HLA =L10,21					
Scale N/A	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II			Engineering-P4	COVER SHEET SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 U175-A2	Sales No. : L-22916 PPS No. : 44100062	Location					
	A.A	DFA	21/11/2013	ARK	Checked	MSG								page number					
	Rev	Revision comment	Date	Mod. by	Approved	KMS								1 / 38					
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								Type	Designation	Sheet name					
			(3) A2678 U175-A2		A2	A1	A.A	S	=L10,21	A01	1	COVER SHEET TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 L175-A2		A2	A1	A.A	B	=L10,21	B01	2	LIST OF CONTENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 L175-A2		A2	A1	A.A	B	=L10,21	B02	3	LIST OF CONTENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S01	4	DETAILED SLD TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S02	5	PROTECTION CIRCUIT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S03	6	CT MET. CCT. TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S04	7	BUS-PT CCT. TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S05	8	CB TRIP CIRCUIT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S06	9	CB CONTROL/IND. CIRCUIT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S07	10	RELAY OPTO/MODBUS CCT. TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S08	11	TRAFO FAULT CCT. TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S09	12	VCB MOTOR CIRCUIT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S10	13	CONTROL VOLTAGE DIST. TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S11	14	230V AC CCT. TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S12	15	SPARE/REMOTE SIGNALS TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	S13	16	INTERLOCKING SIGNALS TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V02	17	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V02.1	18	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V03	19	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V08	20	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V09	21	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V10	22	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V11	23	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V12	24	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V20	25	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V40	26	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V50	27	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V70	28	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	V	=L10,21	V80	29	TERMINAL PLAN TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
			(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	Z01	30	LIST OF EQUIPMENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
		(3) A2678 S175-A2		A2	A1	A.A	S	=L10,21	Z02	31	LIST OF EQUIPMENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR				
A3	A2	F AS BUILT		17/02/2014	SUD	Date	21/11/2013	PRODUCT TYPE PIX-12		QTY 02	Applicable Panel =L10,21	Document type B	Sheet name B01	HLA =L10,21	
Scale N/A	A1	REV.(ENAR)		06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL		Engineering-P4	LIST OF CONTENT		Document No: (3) A2678 U175-A2	Sales No. : L-22916	Location
	A.A	DFA		21/11/2013	ARK	Checked	MSG	CONSULTANT: M/s ENAR			TRAFO O/G FEEDERS				page number
	Rev	Revision comment		Date	Mod. by	Approved	KMS	PROJECT: UCH-II			6.6kV, 40kA, 75kVBIL SWGR				2 / 38

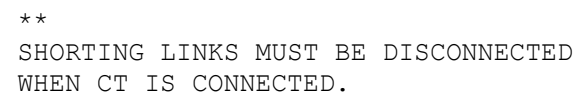
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					(3) A2678 S175-A2			A2	A1	A.A	S	=L10,21	Z03	32	LIST OF EQUIPMENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR				
					(3) A2678 S175-A2			A2	A1	A.A	S	=L10,21	Z04	33	LIST OF EQUIPMENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR				
					(3) A2678 S175-A2			A2	A1	A.A	S	=L10,21	Z05	34	LIST OF EQUIPMENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR				
					(3) A2678 S175-A2			A2	A1	A.A	S	=L10,21	Z06	35	LIST OF EQUIPMENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR				
					(3) A2678 S175-A2			A2	A1	A.A	S	=L10,21	Z07	36	LIST OF EQUIPMENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR				
					(3) A2678 S175-A2			A2	A1	A.A	S	=L10,21	Z08	37	LIST OF EQUIPMENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR				
					(3) A2678 S175-A2			A2	A1	A.A	S	=L10,21	Z09	38	LIST OF EQUIPMENT TRAFO O/G FEEDERS SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR				
A3	A2	F AS BUILT			17/02/2014	SUD	Date	21/11/2013	PRODUCT TYPE PIX-12			QTY	02	Applicable Panel =L10,21		Document type B	Sheet name B02	HLA	=L10,21
Scale N/A	A1	REV.(ENAR)			06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II			Engineering-P4	LIST OF CONTENT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR		Document No:		Sales No. : L-22916		Location
	A.A	DFA			21/11/2013	ARK	Checked	MSG							(3) A2678 U175-A2		PPS No. : 44100062		page number
	Rev	Revision comment			Date	Mod. by	Approved	KMS											3 / 38
1		2			3			4			5		6		7		8		



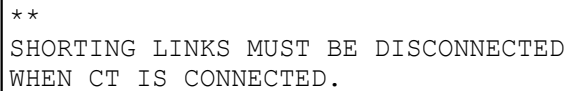
WIRING DETAILS:
CT CCT: 2.5Sqmm.
PT/CONTROL CCT: 1.5Sqmm.
WIRE COLOUR: BLACK
UNLESS SPECIFIED OTHERWISE

REFER DRGS.:
GENERAL SLD: (3) A2678 S103
GEN. ARRANGEMENT: (3) A2678 A114
SEC. SIDE VIEW: (3) A2678 V115

1	2	3	4	5	6	7	8
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Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY. 02	Applicable Panel =L10,21	Document type S	Sheet name S02	HLA =L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	PROTECTION CIRCUIT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location
		A.A	DFA	21/11/2013	ARK	Checked	MSG							page number
		Rev	Revision comment		Date	Mod. by	Approved							KMS



Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY. 02	Applicable Panel =L10,21	Document type S	Sheet name S03	HLA =L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CT MET. CCT. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location
		A.A	DFA	21/11/2013	ARK	Checked	MSG							page number
		Rev	Revision comment		Date	Mod. by	Approved							KMS

A

B

C

D

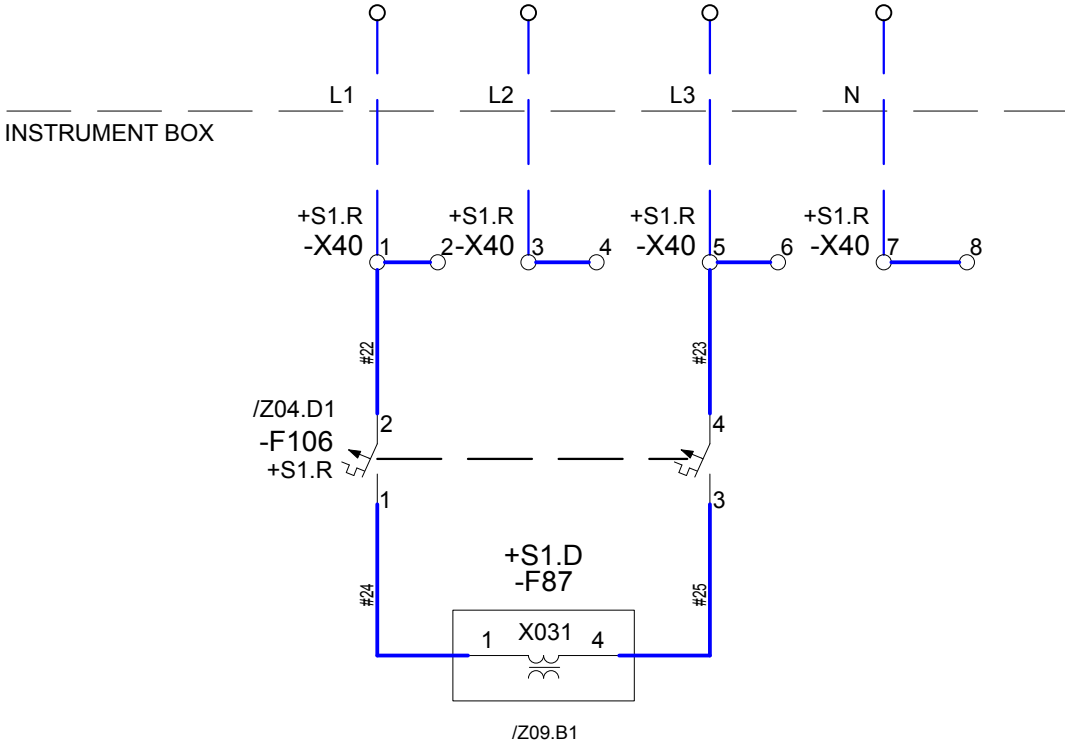
E

F

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2/24/2014 12:32

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BUS - PT SIGNALS -/110VAC



Scale N/A	A3	A2	F AS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY. 02	Applicable Panel =L10,21	Document type S	Sheet name S04	HLA =L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	BUS-PT CCT. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location
		A.A	DFA	21/11/2013	ARK	Checked	MSG							page number
		Rev	Revision comment	Date	Mod. by	Approved	KMS							7 / 38



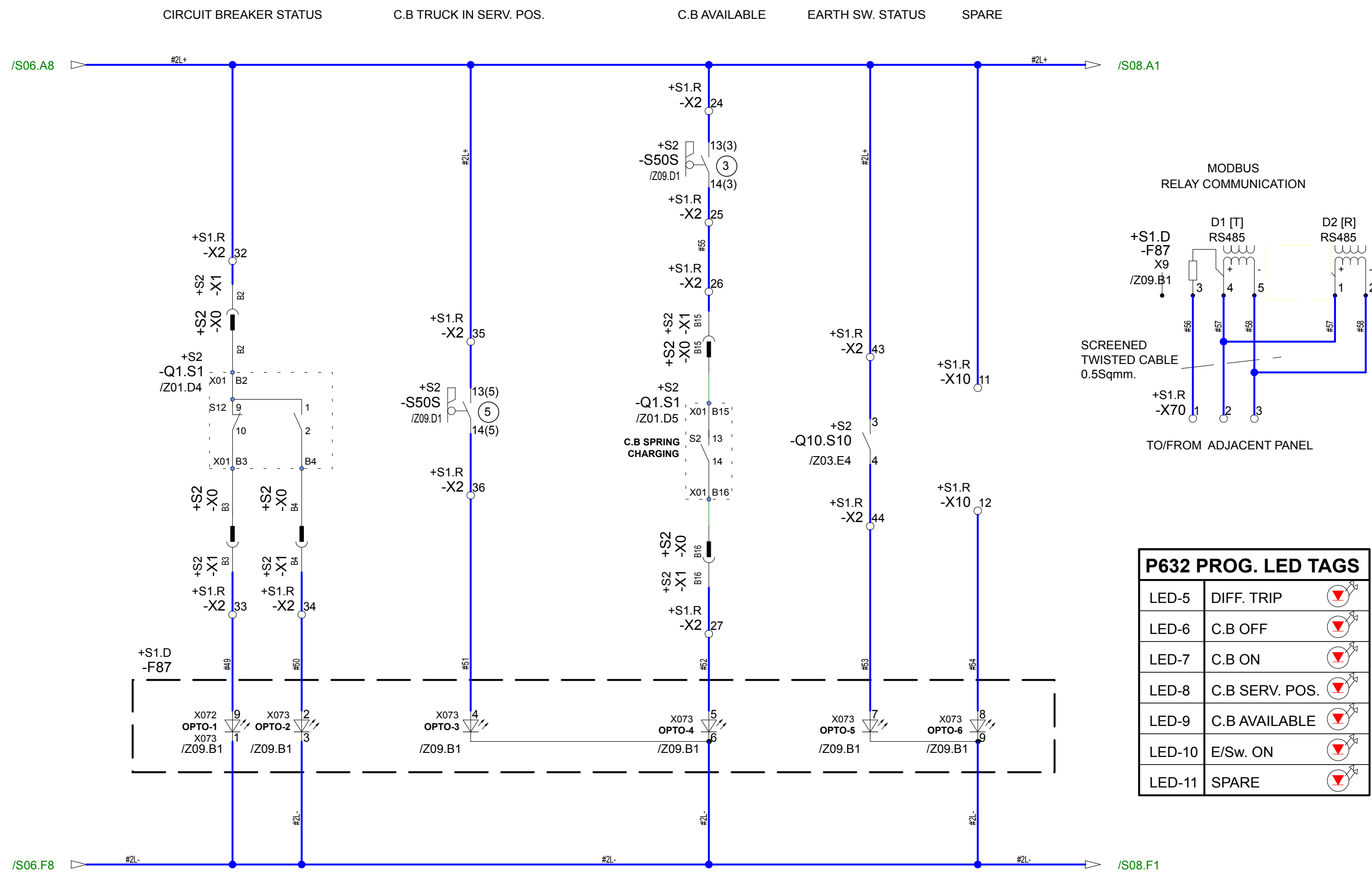
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	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CB TRIP CIRCUIT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location
Scale N/A	A.A	DFA	21/11/2013	ARK	Checked	MSG							page number 8 / 38
	Rev	Revision comment	Date	Mod. by	Approved	KMS							



A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY. 02	Applicable Panel =L10,21	Document type S	Sheet name S06	HLA=L10,21
	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CB CONTROL/IND. CIRCUIT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV. 40kA. 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location
Scale N/A	A.A	DFA	21/11/2013	ARK	Checked	MSG							page number 9 / 38
	Rev	Revision comment	Date	Mod. by	Approved	KMS							

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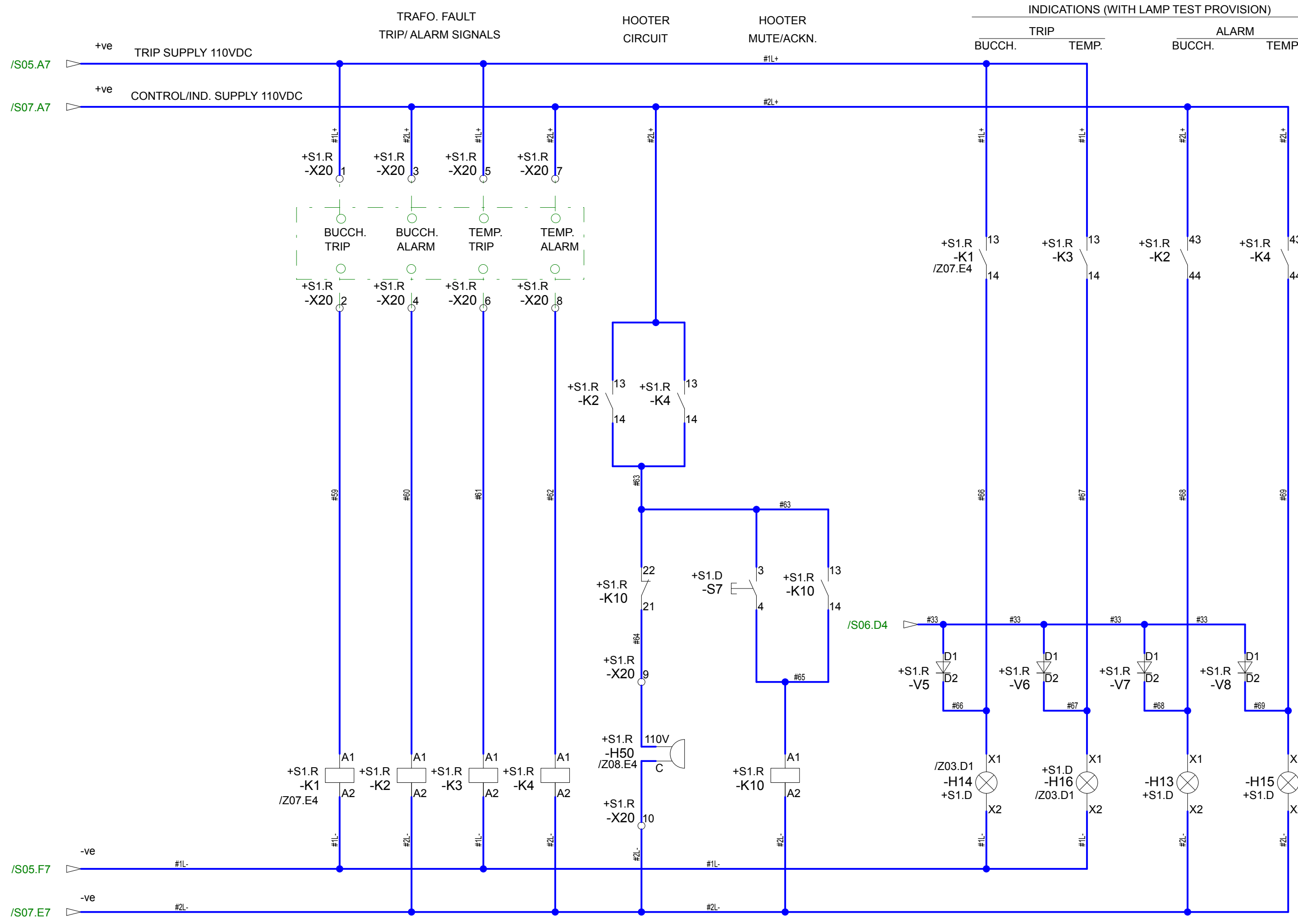
P632 PROG. LED TAGS		
LED-5	DIFF. TRIP	
LED-6	C.B OFF	
LED-7	C.B ON	
LED-8	C.B SERV. POS.	
LED-9	C.B AVAILABLE	
LED-10	E/Sw. ON	
LED-11	SPARE	


Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY.	02	Applicable Panel	=L10,21	Document type	S	Sheet name	S07	HLA	=L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	RELAY OPTO/MODBUS CCT. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	(3) A2678 S175-A2	Document No: PPS No. : 44100062	Sales No. : L-22916		Location			
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		Rev	Revision comment		Date	Mod. by	Approved									KMS	10 / 38		

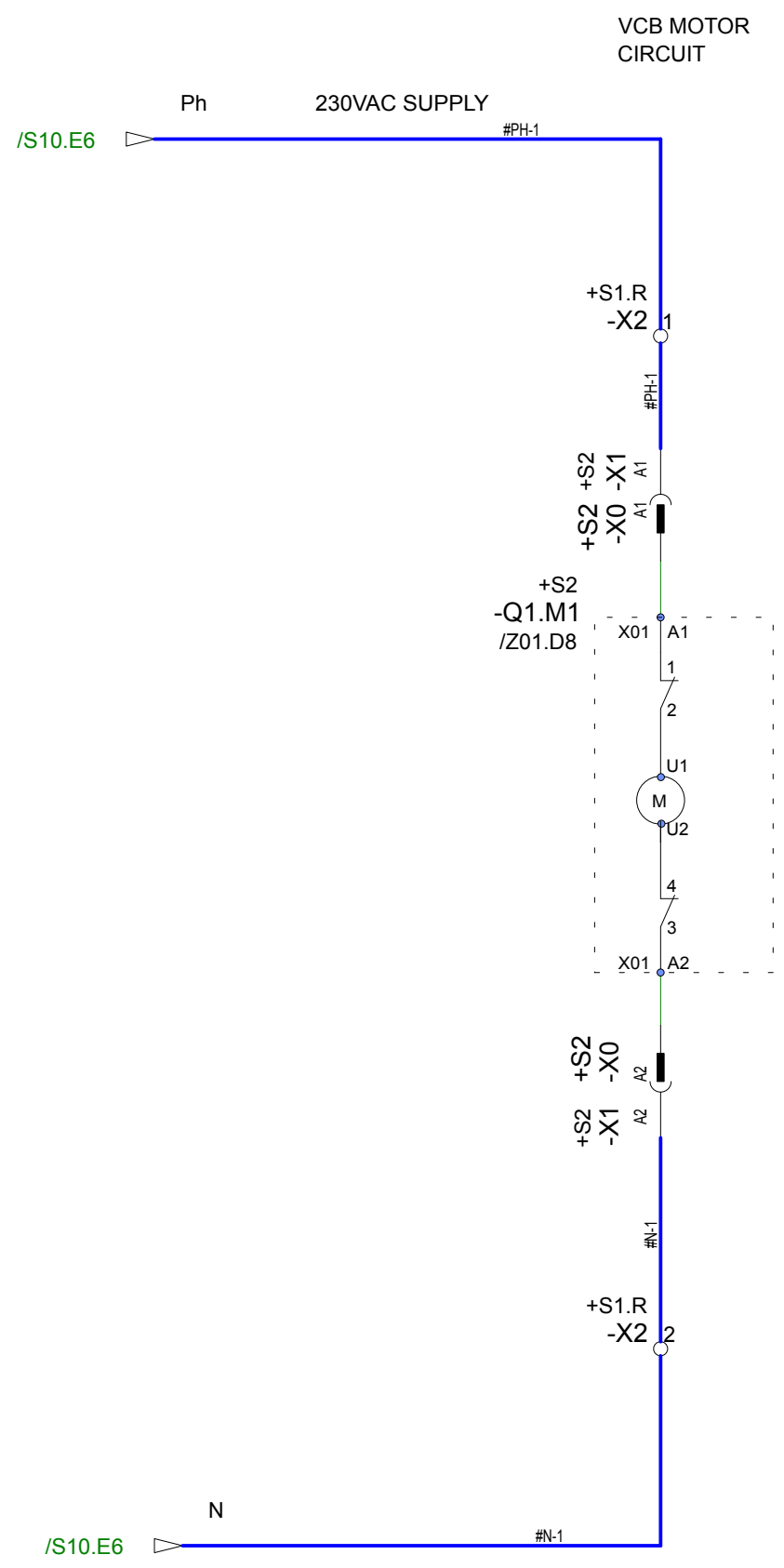


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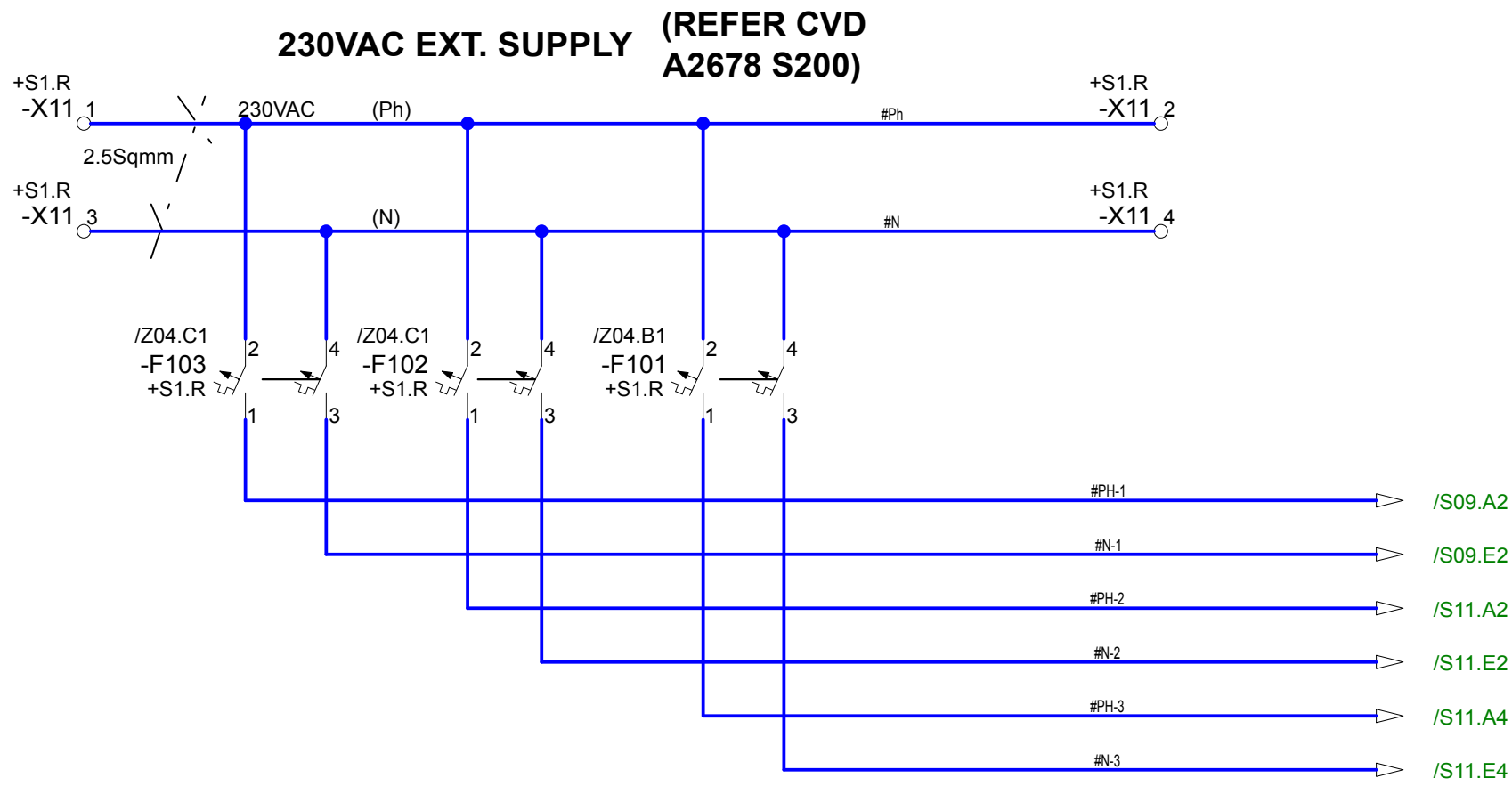
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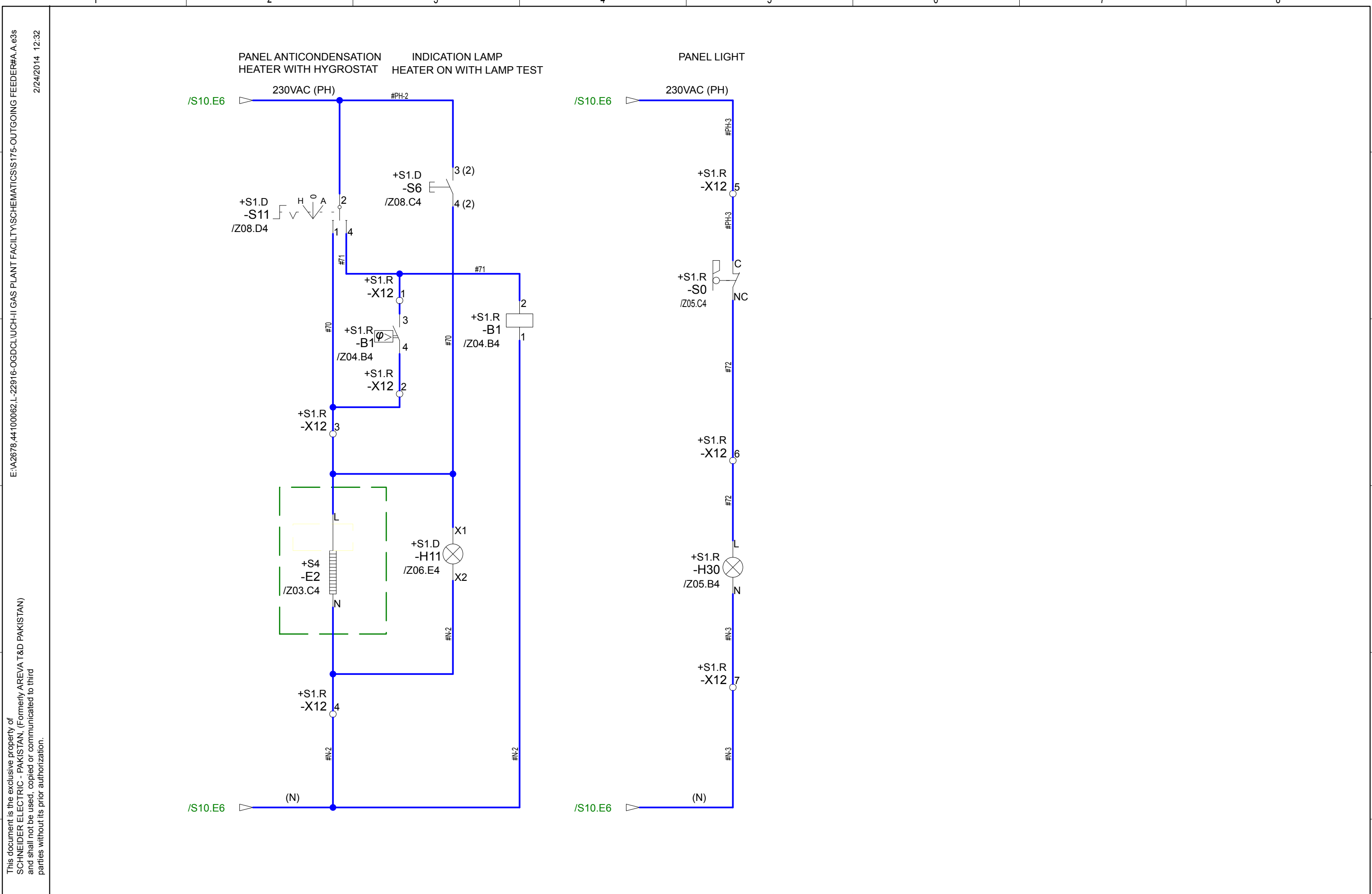
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	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	TRAFO FAULT CCT. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location					
Scale N/A	A.A	DFA	21/11/2013	ARK	Checked	MSG							page number					
	Rev	Revision comment	Date	Mod. by	Approved	KMS							11 / 38					



A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY. 02	Applicable Panel =L10,21	Document type S	Sheet name S09	HLA =L10,21
Scale N/A	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	VCB MOTOR CIRCUIT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No:	Sales No. : L-22916	Location
	A.A	DFA	21/11/2013	ARK	Checked	MSG					(3) A2678 S175-A2	PPS No. : 44100062	page number
	Rev	Revision comment		Date	Mod. by	Approved					KMS	12 / 38	



Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY. 02	Applicable Panel =L10,21	Document type S	Sheet name S10	HLA =L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CONTROL VOLTAGE DIST. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No:	Sales No. : L-22916	Location
		A.A	DFA	21/11/2013	ARK	Checked	MSG					(3) A2678 S175-A2	PPS No. : 44100062	page number
		Rev	Revision comment		Date	Mod. by	Approved					KMS	13 / 38	

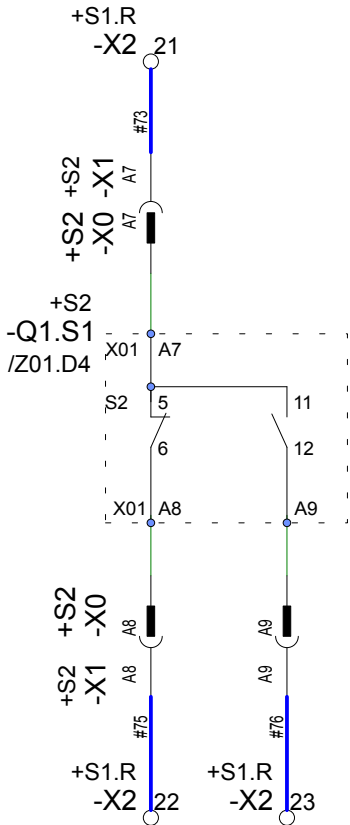


Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12			QTY.	02	Applicable Panel	=L10,21	Document type	S	Sheet name	S11	HLA	=L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	230V AC CCT. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location						
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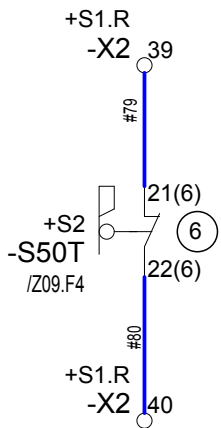
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C.B SPRING CHARGED



C.B IN TEST POS.

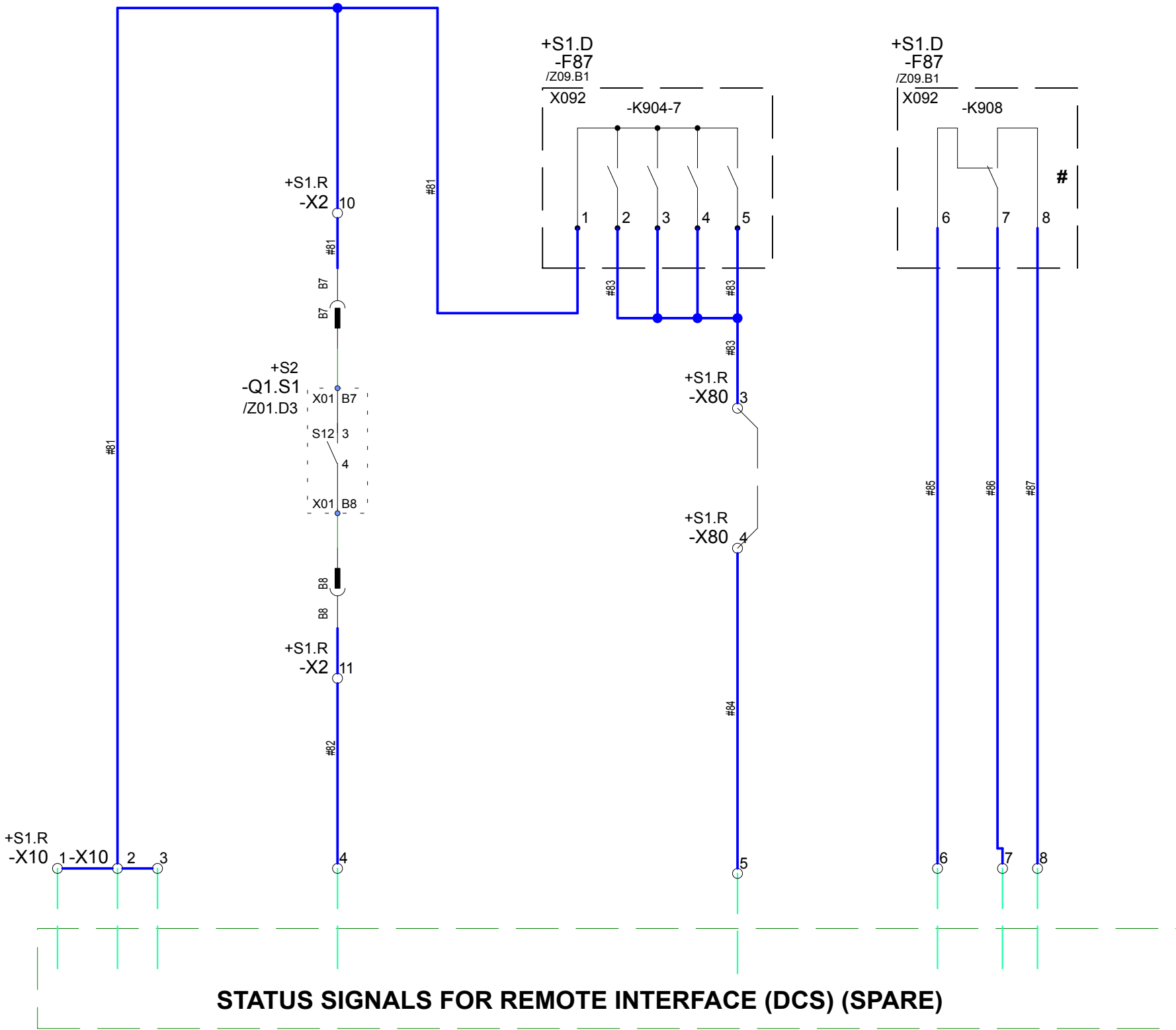


COMMON

CB ON
STATUS

PROTECTION RELAY
OPERATED

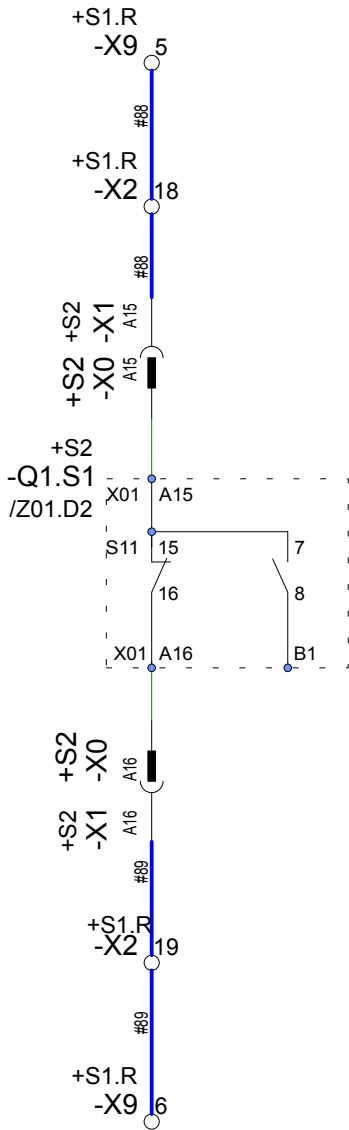
RELAY WATCH DOG
CONTACT



CONTACT TO BE PROGRAMMED WATCHDOG

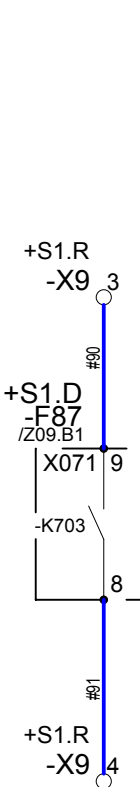
TO BUS MEAS./EARTHING PANELS
+L11,+L20

FOR BUS E/Sw. INTERLOCK

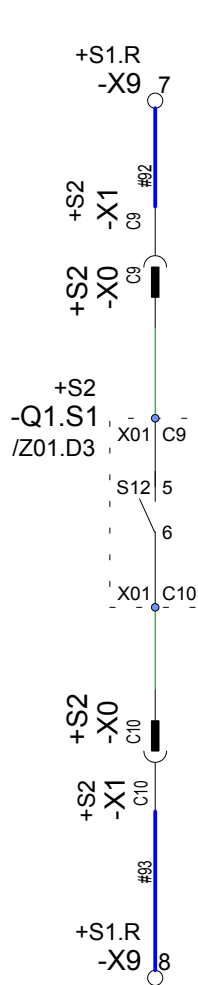


TO LV FOR INTERTRIPPING / INTERLOCKING

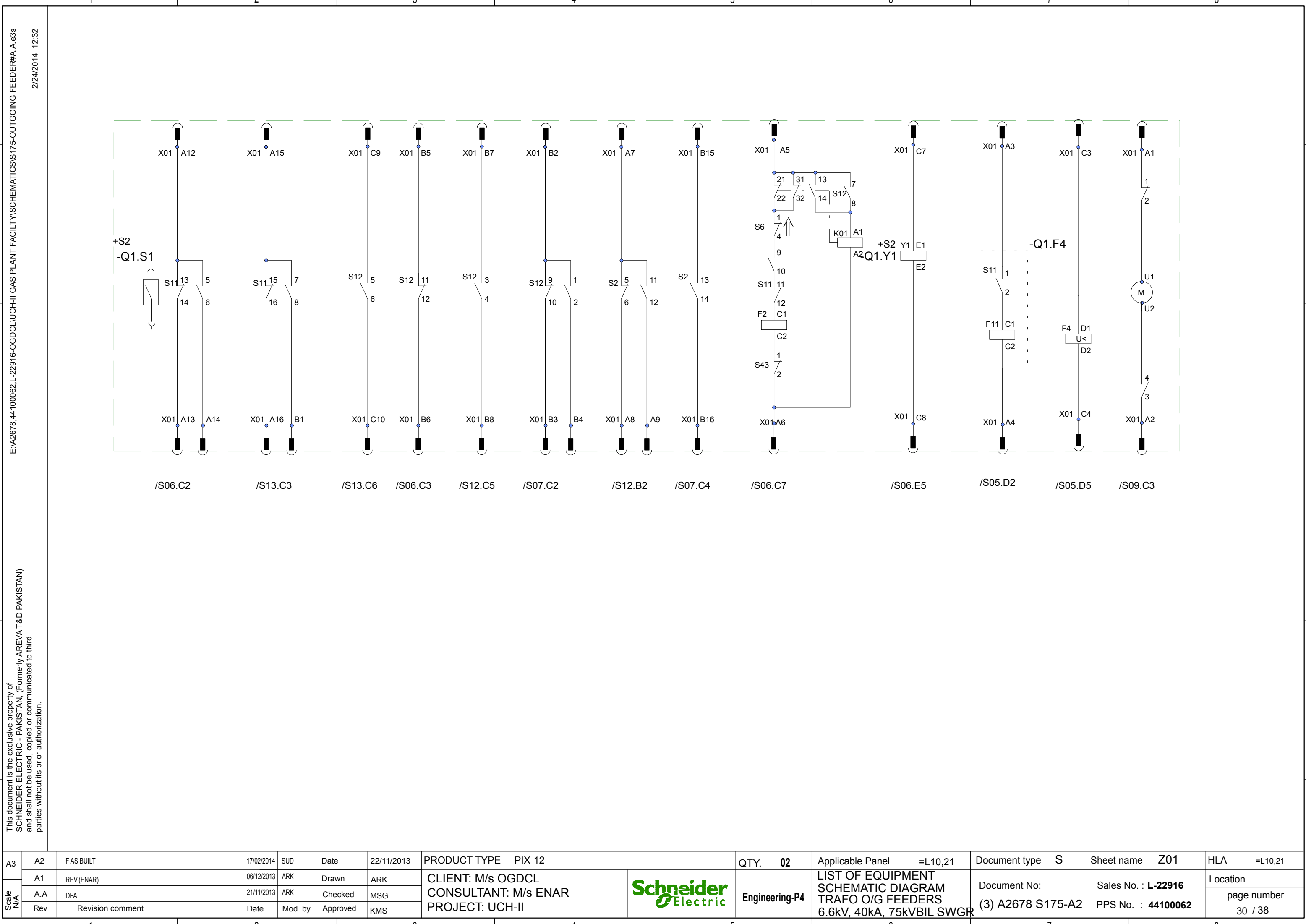
PROTECTION
RELAY CONTACT



VCB NO
CONTACT



Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY.	02	Applicable Panel	=L10,21	Document type	S	Sheet name	S13	HLA	=L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	INTERLOCKING SIGNALS SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	(3) A2678 S175-A2	Document No: Sales No. : L-22916 PPS No. : 44100062	Location page number 16 / 38					
		A.A	DFA	21/11/2013	ARK	Checked	MSG												
		Rev	Revision comment	Date	Mod. by	Approved	KMS												



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Scale N/A	A3	A2	F AS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY.	02	Applicable Panel	=L10,21	Document type	S	Sheet name	Z01	HLA	=L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	Schneider Electric	LIST OF EQUIPMENT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR		Document No: (3) A2678 S175-A2		Sales No. : L-22916 PPS No. : 44100062		Location	
		A.A	DFA	21/11/2013	ARK	Checked	MSG											page number	
		Rev	Revision comment	Date	Mod. by	Approved	KMS											30 / 38	

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		1		CURRENT TRANSFORMER		manufacturer: CURRENT ELECTRIC		type:													
				order number:																	
		RATED CURRENT		CHARACTERISTIC																	
		Technical components per device		Typ		Ordering number															
		Application		Settings		Location		Item designation				/S02.A1		/S03.A1		/S02.C1					
						+S4		-T1													
						+S4		-T2				/S02.B1		/S03.B1							
						+S4		-T3				/S02.B1		/S03.B1							
1		Resistance		manufacturer: LOCAL		type: APK10101001															
		order number: APK10101001																			
RATED CURRENT		CHARACTERISTIC																			
Technical components per device		Typ		Ordering number																	
Application		Settings		Location		Item designation				/S11.D2											
				+S4		-E2															
1		Pilot_Light		manufacturer: PEGASUS		type: PK631951															
		order number: PK631951																			
RATED CURRENT		CHARACTERISTIC																			
Technical components per device		Typ		Ordering number																	
Application		Settings		Location		Item designation				/S06.E3											
				+S1.D		-H6															
				+S1.D		-H16				/S08.E7											
				+S1.D		-H14				/S08.E6											
1		HVX Earthing Switch		manufacturer: SCHNEIDER		type: E/Sw._AUX. CONTACTS															
		order number:																			
RATED CURRENT		CHARACTERISTIC																			
Technical components per device		Typ		Ordering number																	
1		E.SW																			
Application		Settings		Location		Item designation				/S07.C5				/S05.E7							
				+S2		-Q10.S10															

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		1		Hygrostat		manufacturer: ELAB		type: ELH220		<div><div><div>2</div><div>1</div></div><div><div>3</div><div>4</div></div></div>																									
						order number: ELH220																													
		RATED CURRENT		5A		CHARACTERISTIC																													
		Technical components per device		Typ		Ordering number																													
				Application		Settings		Location		Item designation																									
						25° C to 50°C,40% to 90%H		+S1.R		-B1		/S11.C3		/S11.C3																					
		1		Miniature Circuit Breaker		manufacturer: SCHNEIDER ELECTRIC		type: C60L_25419																											
						order number: 25419																													
RATED CURRENT		2A		CHARACTERISTIC		C																													
Technical components per device		Typ		Ordering number																															
								<div><div><div>1</div><div>2</div></div><div><div>3</div><div>4</div></div></div>																											
		Application		Settings		Location		Item designation																											
						+S1.R		-F101		/S10.D4		/S10.D4																							
						+S1.R		-F102		/S10.D3		/S10.D4																							
						+S1.R		-F103		/S10.D3		/S10.D3																							
1		Miniature Circuit Breaker		manufacturer: SCHNEIDER ELECTRIC		type: C60H_MGN61524																													
				order number: MGN61524																															
RATED CURRENT		4A		CHARACTERISTIC		C																													
Technical components per device		Typ		Ordering number																															
								<div><div><div>1</div><div>2</div></div><div><div>3</div><div>4</div></div></div>																											
		Application		Settings		Location		Item designation																											
						+S1.R		-F104		/S10.B4		/S10.B5																							
						+S1.R		-F105		/S10.B3		/S10.B3																							
1		Miniature Circuit Breaker		manufacturer: SCHNEIDER ELECTRIC		type: C60L_25419																													
				order number: 25419																															
RATED CURRENT		2A		CHARACTERISTIC		C																													
Technical components per device		Typ		Ordering number																															
1		Miniature Circuit Breaker		OF_26924.		26924		<div><div><div>1</div><div>2</div></div><div><div>3</div><div>4</div></div><div><div>12</div><div>14</div><div>11</div></div></div>																											
Application		Settings		Location		Item designation																													
				+S1.R		-F106										/S04.C2		/S04.C3		/S05.C5															
A3		A2		F AS BUILT		17/02/2014		SUD		Date		22/11/2013		PRODUCT TYPE PIX-12				QTY. 02		Applicable Panel =L10,21				Document type S		Sheet name Z04		HLA =L10,21							
Scale N/A		A1		REV.(ENAR)		06/12/2013		ARK		Drawn		ARK		CLIENT: M/s OGDCL				Engineering-P4		LIST OF EQUIPMENT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR				Document No: (3) A2678 S175-A2		Sales No. : L-22916 PPS No. : 44100062		Location							
		A.A		DFA		21/11/2013		ARK		Checked		MSG		page number																					
		Rev		Revision comment		Date		Mod. by		Approved		KMS		PROJECT: UCH-II		33 / 38																			
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Scale
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		<div>CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-I EXTENSION</div>												
A3	A.C	F AS BUILT	24/10/2013	SUD	Date	09/10/2013	PRODUCT TYPE PIX-12			QTY 01	Applicable Panel =L06	Document type A	Sheet name A01	HLA =L06
Scale N/A	A.B	PT ADDED	12/10/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-I EXTENSION		<div><div><div></div></div></div> <div>Schneider</div> <div>Electric</div>	Engineering-P4	COVER SHEET O/G FEEDER TO UCH-II 6.6kV, 25kA, 75kVBIL SWGR	Document No: (3) A2678 U11	Sales No. : L-22916 PPS No. : 44100062	Location
	A.A	DFA	09/10/2013	ARK	Checked	JIB								page number
	Rev	Revision comment	Date	Mod. by	Approved	KMS								1 / 27

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							Type	Designation	Sheet name						
			(3) A2678 U11			A.C	A	=L01	A01	1	COVER SHEET O/G FEEDER TO UCH-II 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 U11			A.C	B	=L01	B01	2	LIST OF CONTENT O/G FEEDER TO UCH-II 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	S01	3	SINGLE LINE DIAGRAM O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	S02	4	PROTECTION CIRCUIT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	S03	5	METERING CIRCUIT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	S04	6	CB CONTROL/IND. CIRCUIT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	S05	7	CB TRIP CIRCUIT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	S06	8	VCB MOTOR CIRCUIT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	S07	9	CONTROL VOLTAGE DIST. O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	S08	10	230V AC CCT. O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	S09	11	CB AND RELAY SPARE O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	V	=L01	V02	12	TERMINAL PLAN O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.A	V	=L01	V02.1	13	TERMINAL PLAN O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	V	=L01	V03	14	TERMINAL PLAN O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	V	=L01	V08	15	TERMINAL PLAN O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	V	=L01	V10	16	TERMINAL PLAN O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	V	=L01	V11	17	TERMINAL PLAN O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	V	=L01	V41	18	TERMINAL PLAN O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	V	=L01	V50	19	TERMINAL PLAN O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	Z01	20	LIST OF EQUIPMENT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	Z02	21	LIST OF EQUIPMENT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	Z03	22	LIST OF EQUIPMENT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	Z04	23	LIST OF EQUIPMENT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	Z05	24	LIST OF EQUIPMENT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	Z06	25	LIST OF EQUIPMENT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
			(3) A2678 S13			A.C	S	=L01	Z07	26	LIST OF EQUIPMENT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR				
		(3) A2678 S13			A.C	S	=L01	Z08	27	LIST OF EQUIPMENT O/G FEEDER TO UCH-II SCHEMATIC DIAGRAM 6.6kV, 25kA, 75kVBIL SWGR					
A3	A.C	F AS BUILT	24/10/2013	SUD	Date	09/10/2013	PRODUCT TYPE PIX-12			QTY 01	Applicable Panel =L06	Document type B	Sheet name B01	HLA =L06	
Scale N/A	A.B	PT ADDED	12/10/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-I EXTENSION			Engineering-P4	LIST OF CONTENT		Document No: (3) A2678 L12	Sales No. : L-22916 PPS No. : 44100062	Location
	A.A	DFA	09/10/2013	ARK	Checked	JIB					page number				
	Rev	Revision comment		Date	Mod. by	Approved					KMS	2 / 27			
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Scale N/A	A3	A.C	F AS BUILT	24/10/2013	SUD	Date	09/10/2013
		A.B	PT ADDED	12/10/2013	ARK	Drawn	ARK
		A.A	DFA	09/10/2013	ARK	Checked	JIB
		Rev	Revision comment	Date	Mod. by	Approved	KMS

PRODUCT TYPE PIX-12
CLIENT: M/s OGDCL
CONSULTANT: M/s ENAR
PROJECT: UCH-I EXTENSION



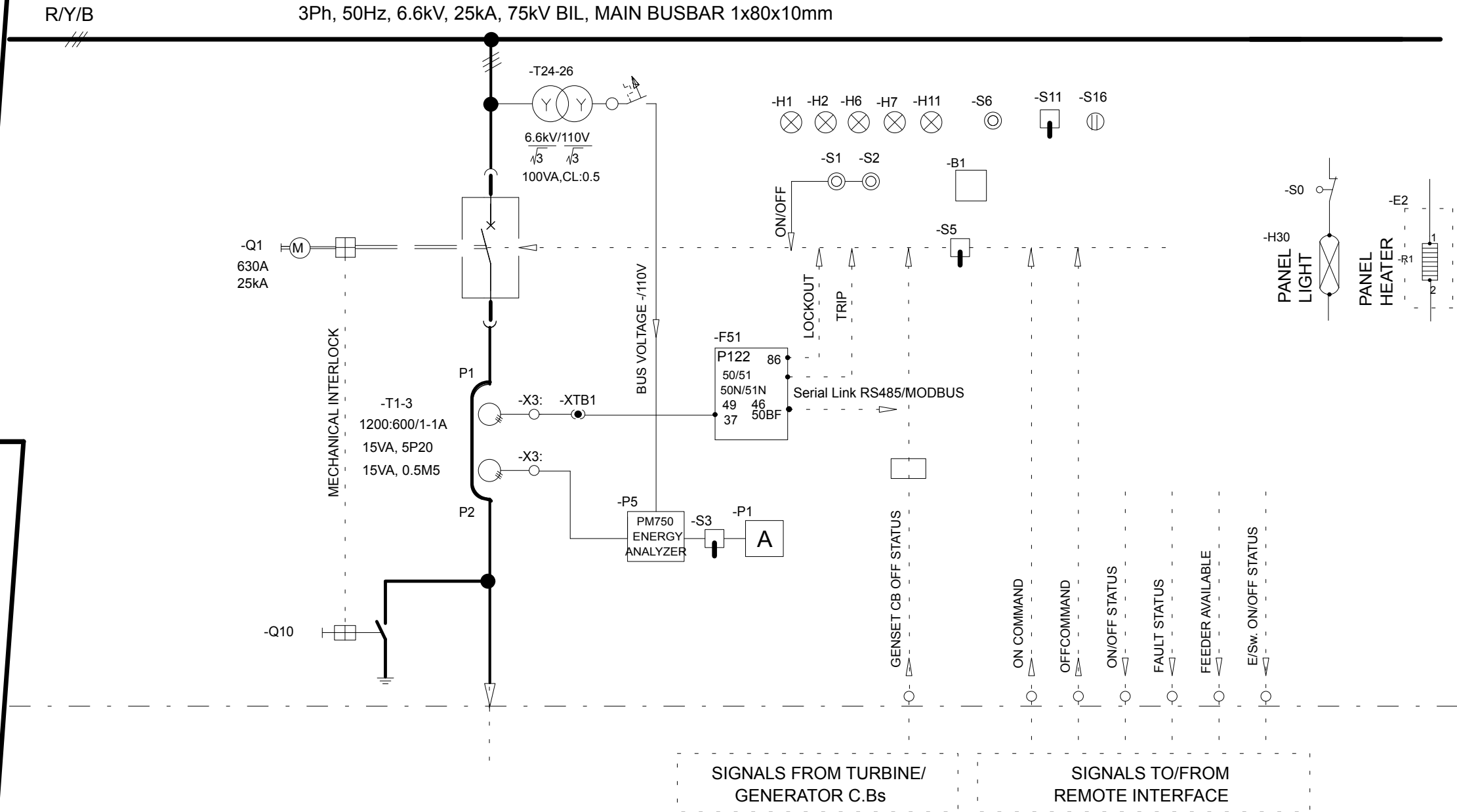
QTY. 01
Engineering-P4

Applicable Panel =L06
SINGLE LINE DIAGRAM
SCHEMATIC DIAGRAM
O/G FEEDER TO UCH-II
6.6kV, 25kA, 75kVBIL SWGR

Document type S Sheet name S01
Document No: Sales No. : L-22916
(3) A2678 S13 PPS No. : 44100062

HLA =L06
Location
page number
3 / 27

COUPLING WITH
EXISTING GT
BUS THROUGH
DUMMY PANEL

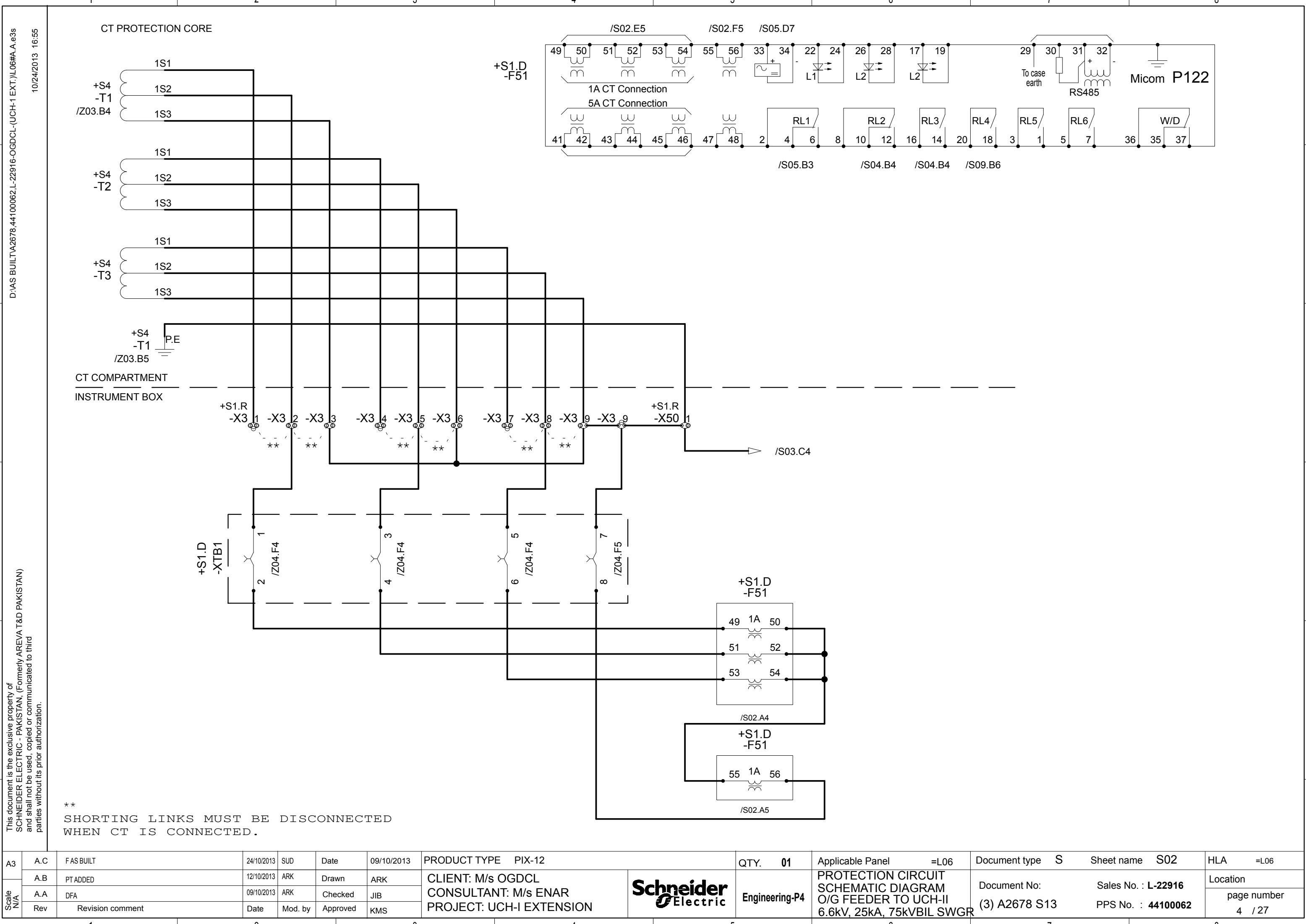


DESCRIPTION	OUTGOING FEEDER TO UCH-II
RATING KW/Amp	630A (<2.5MW)
SLD DRG.(3) A2678...	S3
CABLE (Sq.mm)	2x3Cx300 Sqmm.

WIRING:
CONTROL CIRCUIT:
CT SECOND. CIRCUITS:
COLOUR-BLACK UNLESS SPECIFIED OTHERWISE

1.5MM²
2.5MM²

REFER DRGS.:
FRONT VIEW: (3) A2678 A4
SEC. SIDE VIEW: (3) A2678 V5



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Scale N/A

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SHORTING LINKS MUST BE DISCONNECTED
WHEN CT IS CONNECTED.

A3	A.C	FAS BUILT	24/10/2013	SUD	Date	09/10/2013	PRODUCT TYPE PIX-12		QTY. 01	Applicable Panel =L06	Document type S	Sheet name S02	HLA =L06
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	A.A	DFA	09/10/2013	ARK	Checked	JIB							page number
	Rev	Revision comment		Date	Mod. by	Approved							KMS





A3	A.C	FAS BUILT	24/10/2013	SUD	Date	09/10/2013	PRODUCT TYPE PIX-12		QTY. 01	Applicable Panel =L06	Document type S	Sheet name S03	HLA =L06
	A.B	PT ADDED	12/10/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-I EXTENSION		Engineering-P4	METERING CIRCUIT SCHEMATIC DIAGRAM O/G FEEDER TO UCH-II 6.6kV, 25kA, 75kVBIL SWGR	Document No: (3) A2678 S13	Sales No. : L-22916 PPS No. : 44100062	Location
Scale N/A	A.A	DFA	09/10/2013	ARK	Checked	JIB							page number
	Rev	Revision comment	Date	Mod. by	Approved	KMS							5 / 27

Scale N/A	A3	A.C	F AS BUILT	24/10/2013	SUD	Date	09/10/2013
		A.B	PT ADDED	12/10/2013	ARK	Drawn	ARK
		A.A	DFA	09/10/2013	ARK	Checked	JIB
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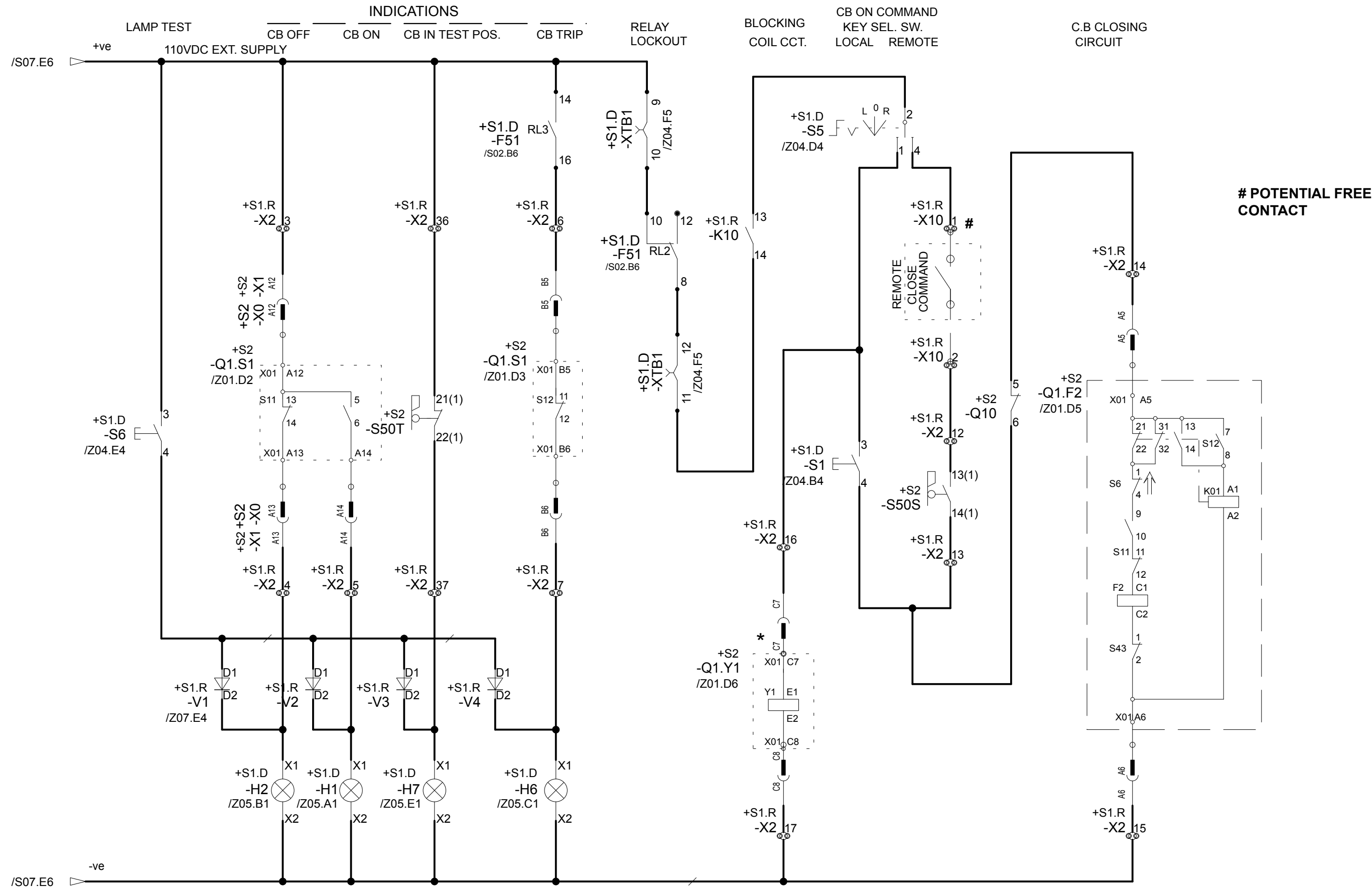
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CONSULTANT:	M/s ENAR
PROJECT:	UCH-I EXTENSION

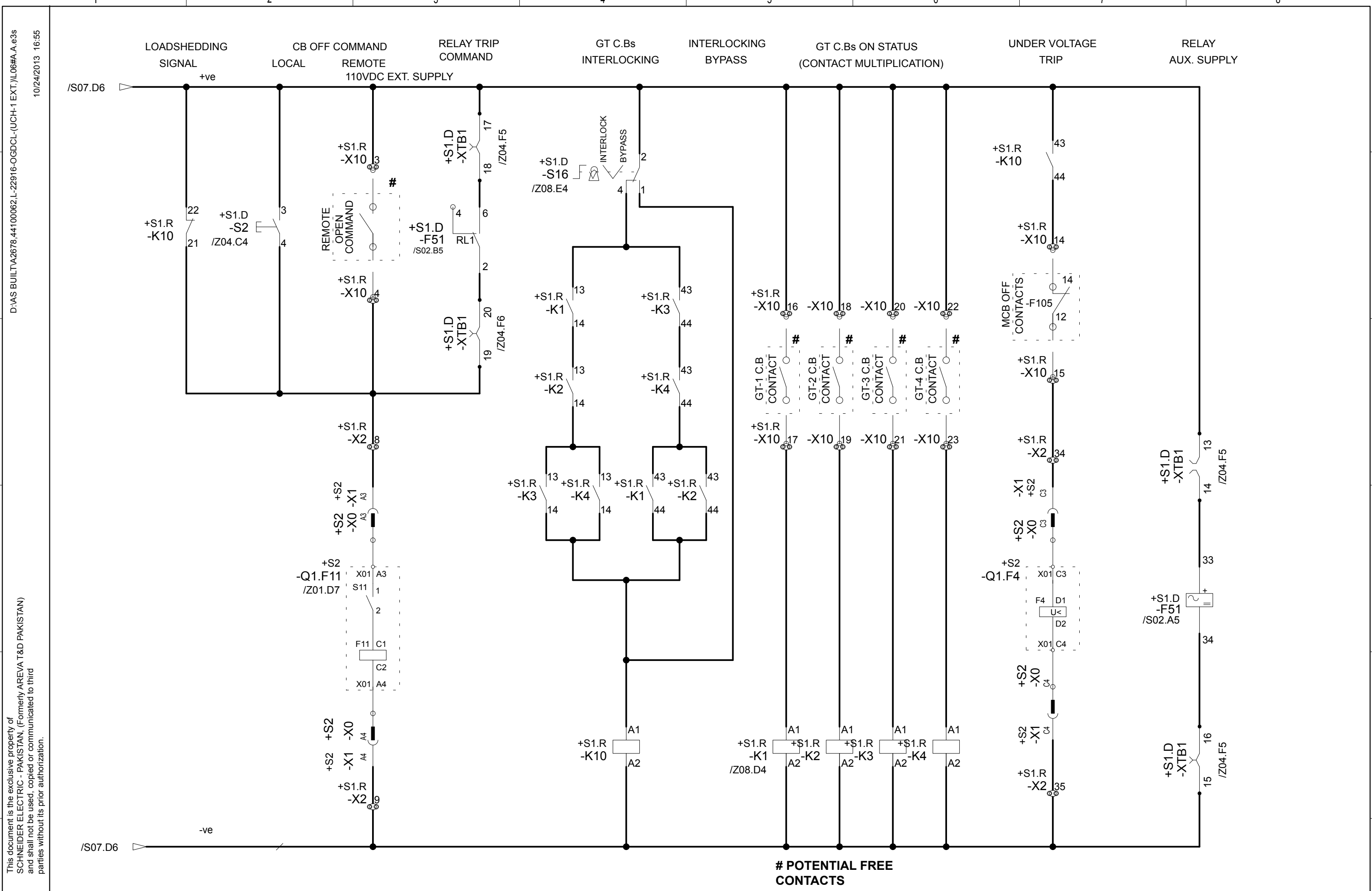


QTY.	01
Engineering-P4	

Applicable Panel	=L06
CB CONTROL/IND. CIRCUIT SCHEMATIC DIAGRAM O/G FEEDER TO UCH-II 6.6kV, 25kA, 75kVBIL SWGR	

Document type	S	Sheet name	S04	HLA	=L06
Document No:		Sales No. : L-22916		Location	
(3) A2678 S13		PPS No. : 44100062		page number 6 / 27	



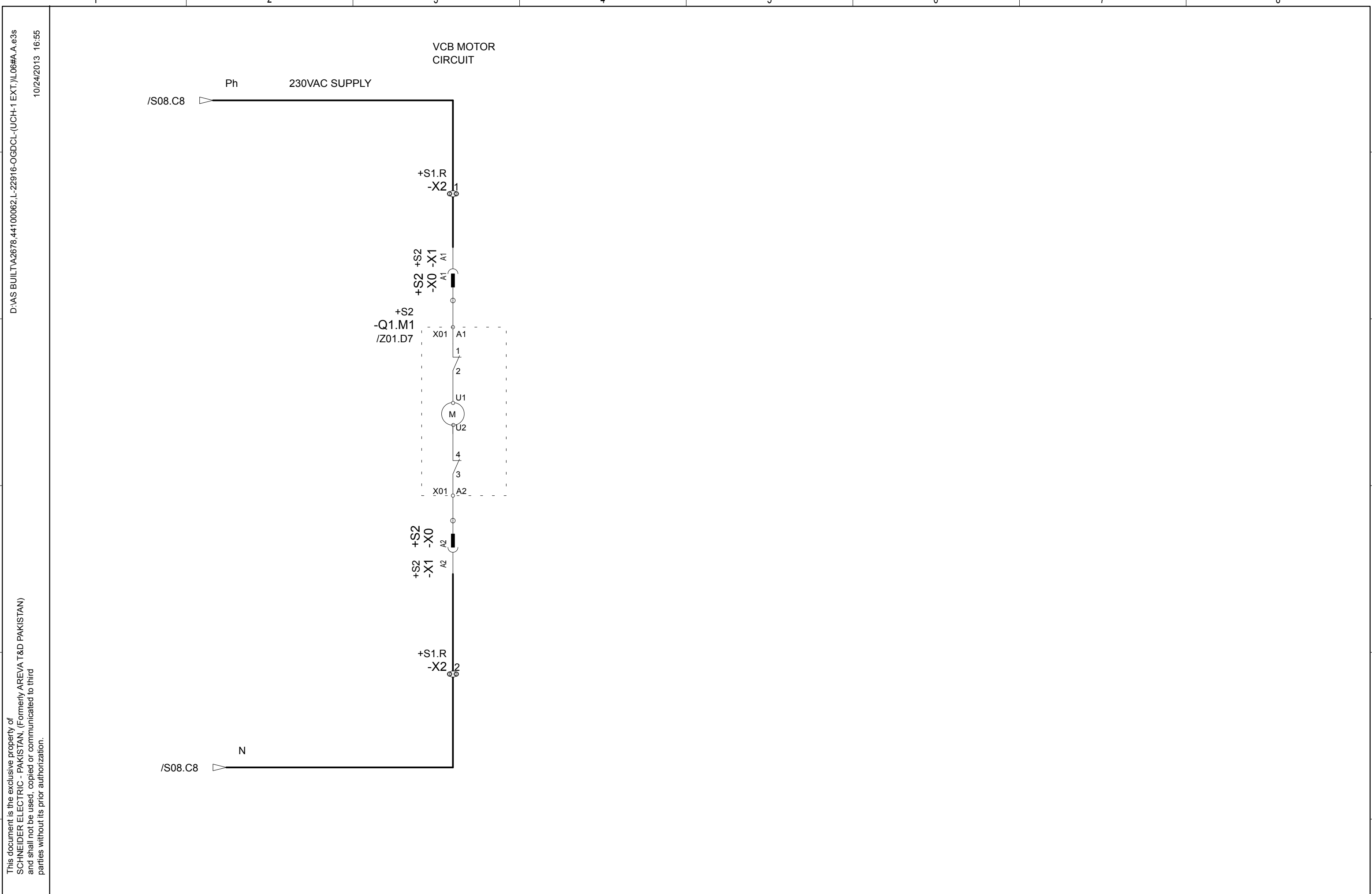


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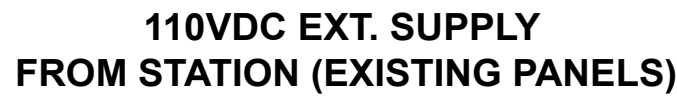
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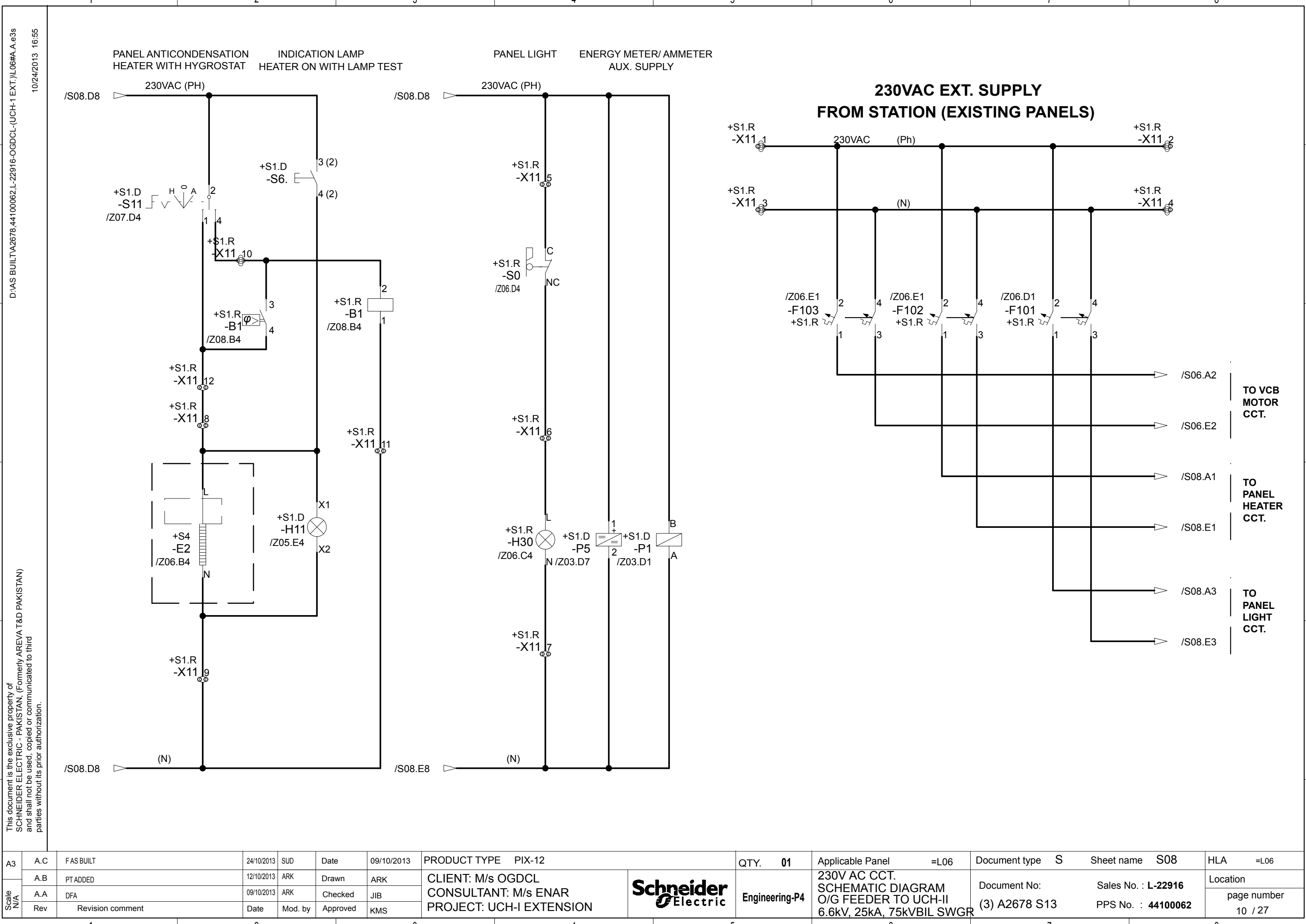




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		Rev	Revision comment		Date	Mod. by	Approved							KMS	8 / 27				



A3	A.C	FAS BUILT	24/10/2013	SUD	Date	09/10/2013	PRODUCT TYPE PIX-12		QTY. 01	Applicable Panel =L06	Document type S	Sheet name S07	HLA =L06
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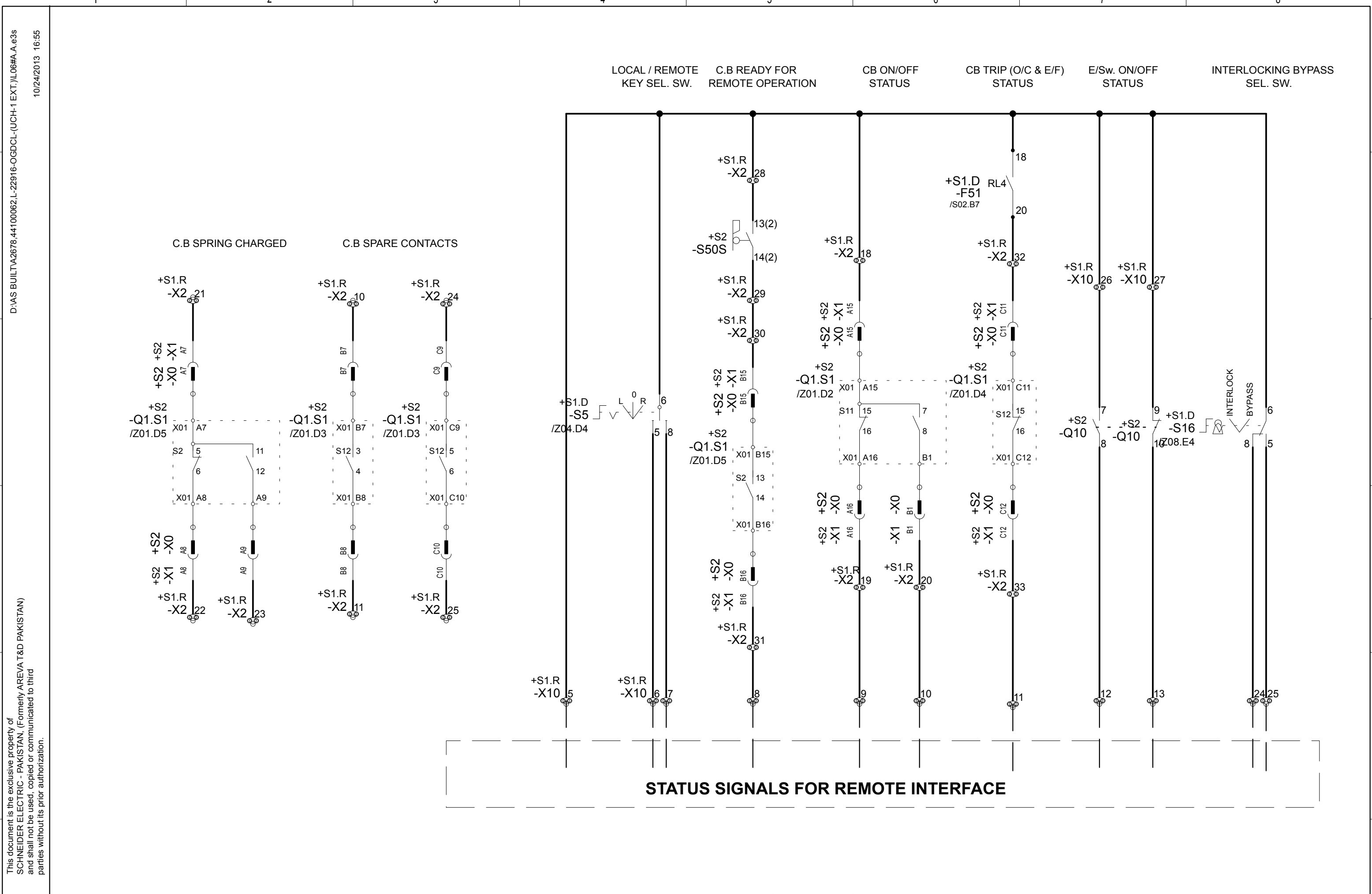


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Scale N/A	A3	A.C	F AS BUILT	24/10/2013	SUD	Date	09/10/2013	PRODUCT TYPE PIX-12		QTY. 01	Applicable Panel =L06	Document type S	Sheet name S08	HLA =L06
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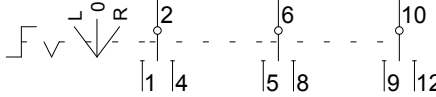

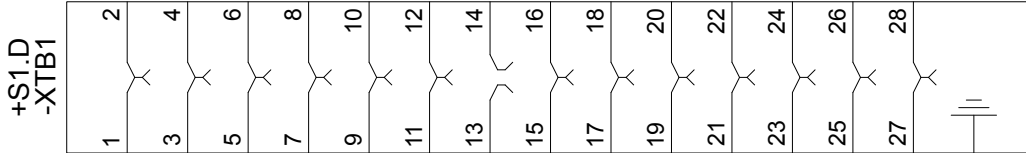





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		Rev	Revision comment	Date	Mod. by	Approved	KMS													

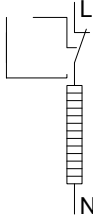


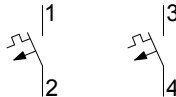

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		1		Pushbuttons		manufacturer: SCHNEIDER ELECTRIC type: ZB5AA3-GREEN																															
				order number: ZB5AA3																																	
		RATED CURRENT		CHARACTERISTIC																																	
		Technical components per device		Typ		Ordering number																															
		1		Pushbuttons		ZB5AZ101-NO		ZB5AZ101																													
				Application		Settings		Location		Item designation																											
								+S1.D		-S1		/S04.C5																									
		1		Pushbuttons		manufacturer: SCHNEIDER ELECTRIC type: ZB5AA4-RED																															
		order number: ZB5AA4																																			
RATED CURRENT		CHARACTERISTIC																																			
Technical components per device		Typ		Ordering number																																	
1		Pushbuttons		ZB5AZ101-NO		ZB5AZ101																															
		Application		Settings		Location		Item designation																													
								-S2		/S05.B2																											
1		Switches		manufacturer: LOVATO type: 7GN1253U																																	
		order number: 7GN1253U																																			
RATED CURRENT		CHARACTERISTIC																																			
Technical components per device		Typ		Ordering number																																	
		Application		Settings		Location		Item designation																													
						+S1.D		-S5		/S04.B5		/S09.C4																									
1		Pushbuttons		manufacturer: SCHNEIDER ELECTRIC type: ZB5AA2-BLACK																																	
		order number: ZB5AA2																																			
RATED CURRENT		CHARACTERISTIC																																			
Technical components per device		Typ		Ordering number																																	
1		Pushbuttons		ZB5AZ101-NO		ZB5AZ101																															
		Application		Settings		Location		Item designation																													
						+S1.D		-S6		/S04.C2																											
1		Test Block		manufacturer: type: MMLG01_01																																	
		order number:																																			
RATED CURRENT		CHARACTERISTIC																																			
Technical components per device		Typ		Ordering number																																	
		Application		Settings		Location		Item designation																													
						+S1.D		-XTB1		/S02.D2		/S02.D3		/S02.D4		/S02.D4		/S04.B4		/S04.C5		/S05.C8		/S05.E8		/S05.A3		/S05.C3									
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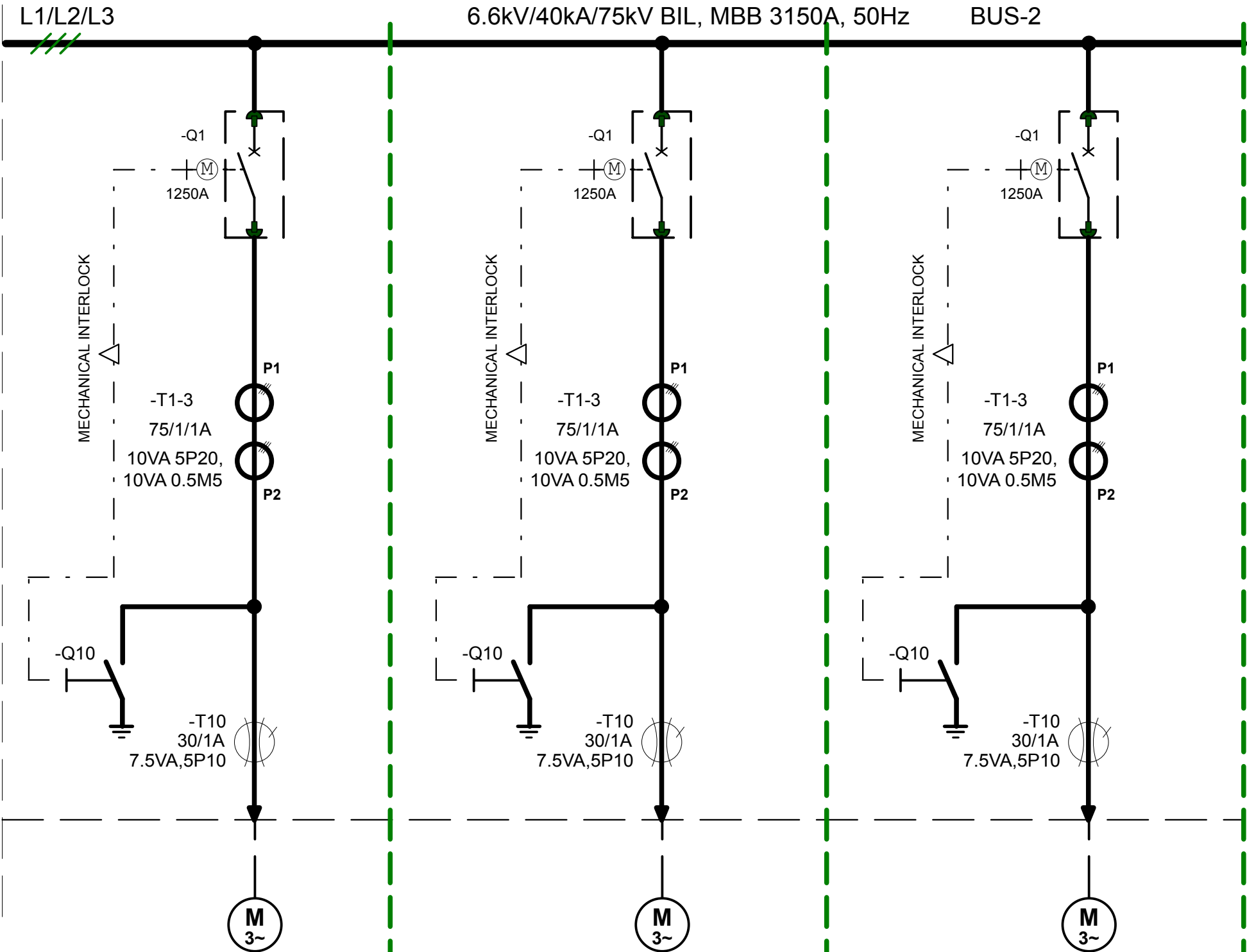
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		1		Resistance				manufacturer: LOCAL				type:																																									
						order number:																																															
		RATED CURRENT				CHARACTERISTIC																																															
		Technical components per device				Typ				Ordering number																																											
				Application		Settings		Location		Item designation				/S08.D2																																							
		1		Light				manufacturer: ALL SUPPLIER				type: STRIPLIGHT S15																																									
						order number: PK604610+PK604611																																															
		RATED CURRENT				CHARACTERISTIC																																															
Technical components per device				Typ				Ordering number																																													
		Application		Settings		Location		Item designation				/S08.D4																																									
1		Switches				manufacturer: LOCAL				type: PK604574																																											
				order number: PK604574																																																	
RATED CURRENT				CHARACTERISTIC																																																	
Technical components per device				Typ				Ordering number																																													
		Application		Settings		Location		Item designation				/S08.B4																																									
1		Miniature Circuit Breaker				manufacturer: SCHNEIDER ELECTRIC				type: C60N_24332																																											
				order number: 24332																																																	
RATED CURRENT				2A		CHARACTERISTIC		C																																													
Technical components per device				Typ				Ordering number																																													
		Application		Settings		Location		Item designation				/S08.C7		/S08.C7																																							
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		A.A		DFA				09/10/2013		ARK		Checked		JIB																				page number																			
		Rev		Revision comment				Date		Mod. by		Approved		KMS																				25 / 27																			
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		External								Internal							
Sh Ref:	Wire Group Core Colour	Core Crossection Core length	Core name	Item Desig.	Pin name	Signal		Pin number	Item Desig.	Pin name	Core name	Core Crossection Core length	Wire Group Core Colour				
>/S04.B6				=L06 +S1.D -S5	:4	#1080		○ 1									
>/S04.C6						#881		○ 2	=L06 +S1.R -X2	:12							
>/S05.B3				=L06 +S1.D -XTB1	:17	2L+		○ 3									
>/S05.B3				=L06 +S1.D -S2	:4	#969		○ 4	=L06 +S1.R -X2	:8							
>/S05.B3				=L06 +S1.D -XTB1	:19	#969		○									
>/S09.E4				=L06 +S1.D -S5	:6	1L-		○ 5									
>/S09.E4				=L06 +S1.D -S5	:5	#1011		○ 6									
>/S09.E4				=L06 +S1.D -S5	:8	#1012		○ 7									
>/S09.E5						1L-		○ 8	=L06 +S1.R -X2	:31							
>/S09.E6						1L-		○ 9	=L06 +S1.R -X2	:19							
>/S09.E6						1L-		○ 10	=L06 +S1.R -X2	:20							
>/S09.E6						1L-		○ 11	=L06 +S1.R -X2	:33							
>/S09.E7				=L06 +S2 -Q10	:8	#1053		○ 12									
>/S09.E7				=L06 +S2 -Q10	:10	#1054		○ 13									
>/S05.B7						#1147		○ 14	=L06 +S1.R -K10	:44							
>/S05.C7						2L+		○ 15	=L06 +S1.R -X2	:34							
>/S05.B5						2L+		○ 16									
>/S05.C5						#1134		○ 17	=L06 +S1.R -K1	:A1							
>/S05.B5						2L+		○ 18									
>/S05.C5						#1135		○ 19	=L06 +S1.R -K2	:A1							
>/S05.B6						2L+		○ 20									
>/S05.C6						#1136		○ 21	=L06 +S1.R -K3	:A1							
>/S05.B6						2L+		○ 22	=L06 +S1.R -K10	:43							
>/S05.C6						#1137		○ 23	=L06 +S1.R -K4	:A1							
>/S09.E8				=L06 +S1.D -S16	:8	#1148		○ 24									
>/S09.E8				=L06 +S1.D -S16	:5	#1149		○ 25									
>/S09.B7				=L06 +S1.D -F51	:18	1L-		○ 26	=L06 +S2 -Q10	:7							
>/S09.B7				=L06 +S1.D -S16	:6	1L-		○ 27	=L06 +S2 -Q10	:9							
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	A.A	DFA	09/10/2013	ARK	Checked	JIB								page number			
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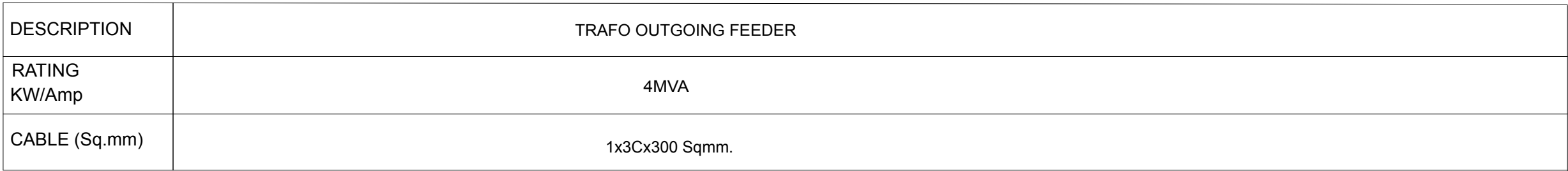
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		External						Internal							
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		>/S08.B5						#985	●	○ 1	=L06 +S1.R -F103	:2			
		>/S08.B8						#985	●	○ 2					
		>/S08.B5						N1	●	○ 3	=L06 +S1.R -F103	:4			
		>/S08.B8						N1	●	○ 4					
		>/S08.B4				=L06 +S1.D -P5	:+	PH-2		○ 5	=L06 +S1.R -F101	:1			
		>/S08.B4						PH-2		○	=L06 +S1.R -S0	:C			
		>/S08.C4				=L06 +S1.R -H30	:L	#987		○ 6	=L06 +S1.R -S0	:NC			
>/S08.E4				=L06 +S1.D -P5	:-	N1		○ 7	=L06 +S1.R -H30	:N					
>/S08.C2				=L06 +S4 -E2	:L	#PH-1	●	○ 8	=L06 +S1.D -H11	:X1					
>/S08.E2				=L06 +S1.D -H11	:X2	N1	●	○ 9	=L06 +S1.R -F102	:3					
>/S08.E2				=L06 +S4 -E2	:N	N1	●	○							
>/S08.B2				=L06 +S1.D -S11	:4	N1	●	○ 10	=L06 +S1.R -B1	:3					
>/S08.C3						N1	●	○ 11	=L06 +S1.R -B1	:1					
>/S08.C2						#PH-1	●	○ 12	=L06 +S1.R -B1	:4					
Scale N/A		A3	A.C	F AS BUILT	24/10/2013	SUD	Date	09/10/2013	PRODUCT TYPE PIX-12		QTY 01	Applicable Panel =L06	Document type V	Sheet name V11	HLA =L06
		A.B	PT ADDED	12/10/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-I EXTENSION		Engineering-P4	TERMINAL PLAN SCHEMATIC DIAGRAM O/G FEEDER TO UCH-II 6.6kV, 25kA, 75kVBIL SWGR	Document No: (3) A2678 S13	Sales No. : L-22916 PPS No. : 44100062	Location +S1.R	
		A.A	DFA	09/10/2013	ARK	Checked	JIB							page number	
		Rev	Revision comment	Date	Mod. by	Approved	KMS							17 / 27	
				1	2		3	4	5	6	7	8			



PANEL NO:	-L27	-L28	-L29
DESIGNATION	900-P102H HOT OIL PUMP MOTOR	900-P102J HOT OIL PUMP MOTOR	SPARE FEEDER-3
RATING (KW/A)	220kW/26.4A	220kW/26.4A	220kW/26.4A
DETAILED TYPICAL SLD	(3) A2678 S110	(3) A2678 S110	(3) A2678 S110
CABLE SIZE	1x3Cx35Sqmm	1x3Cx35Sqmm	1x3Cx35Sqmm
TYPICAL SCHEMATICS	(3) A2678 S185	(3) A2678 S185	(3) A2678 S185

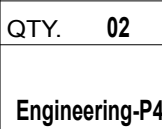
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A3	A2	F AS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY 02	Applicable Panel =L10,21	Document type S	Sheet name A01	HLA =L10,21		
Scale N/A	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II	<div><div>Schneider</div><div>Electric</div></div>	Engineering-P4	COVER SHEET SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 U175-A2	Sales No. : L-22916 PPS No. : 44100062	Location		
	A.A	DFA	21/11/2013	ARK	Checked	MSG							page number		
	Rev	Revision comment	Date	Mod. by	Approved	KMS							1 / 38		
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					(3) A2678 S175-A2	A2	A1	A.A	S	=L10,21	Z03	32	LIST OF EQUIPMENT TRAFO O/G FEEDERS	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR						
					(3) A2678 S175-A2	A2	A1	A.A	S	=L10,21	Z04	33	LIST OF EQUIPMENT TRAFO O/G FEEDERS	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR						
					(3) A2678 S175-A2	A2	A1	A.A	S	=L10,21	Z05	34	LIST OF EQUIPMENT TRAFO O/G FEEDERS	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR						
					(3) A2678 S175-A2	A2	A1	A.A	S	=L10,21	Z06	35	LIST OF EQUIPMENT TRAFO O/G FEEDERS	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR						
					(3) A2678 S175-A2	A2	A1	A.A	S	=L10,21	Z07	36	LIST OF EQUIPMENT TRAFO O/G FEEDERS	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR						
					(3) A2678 S175-A2	A2	A1	A.A	S	=L10,21	Z08	37	LIST OF EQUIPMENT TRAFO O/G FEEDERS	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR						
					(3) A2678 S175-A2	A2	A1	A.A	S	=L10,21	Z09	38	LIST OF EQUIPMENT TRAFO O/G FEEDERS	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR						
A3	A2	F AS BUILT			17/02/2014	SUD	Date	21/11/2013	PRODUCT TYPE PIX-12			QTY 02	Applicable Panel =L10,21		Document type B	Sheet name B02	HLA =L10,21			
Scale N/A	A1	REV.(ENAR)			06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II			Engineering-P4	LIST OF CONTENT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR		Document No:		Sales No. : L-22916	Location		
	A.A	DFA			21/11/2013	ARK	Checked	MSG							(3) A2678 U175-A2		PPS No. : 44100062		page number 3 / 38	
	Rev	Revision comment			Date	Mod. by	Approved	KMS												
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REFER DRGS.:
GENERAL SLD: (3) A2678 S103
GEN. ARRANGEMENT: (3) A2678 A114
SEC. SIDE VIEW: (3) A2678 V115

Accepted	22/11/2013	PRODUCT TYPE	PIX-12
Reviewed	ARK	CLIENT: M/s OGDCL	CONSULTANT: M/s ENAR PROJECT: UCH-II
Checked	MSG		
Approved	KMS		



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Document No:	Sales No. : L-22916		
(3) A2678 S175-A2	PPS No. : 44100062		

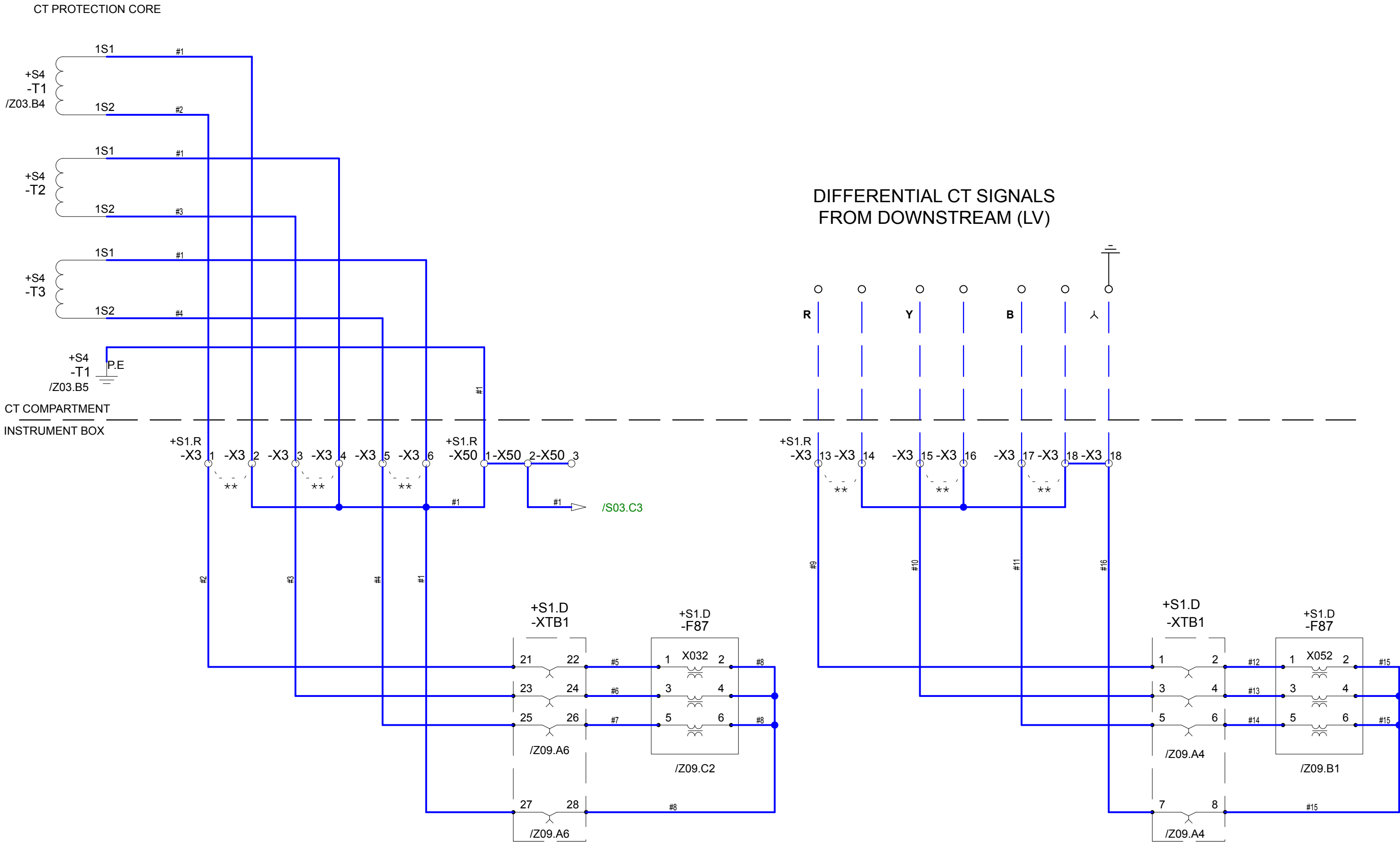
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page number	
4 / 38	

Scale N/A	A3	A2	F AS BUILT	17/02/2014	SUD	Date	22/11/2013
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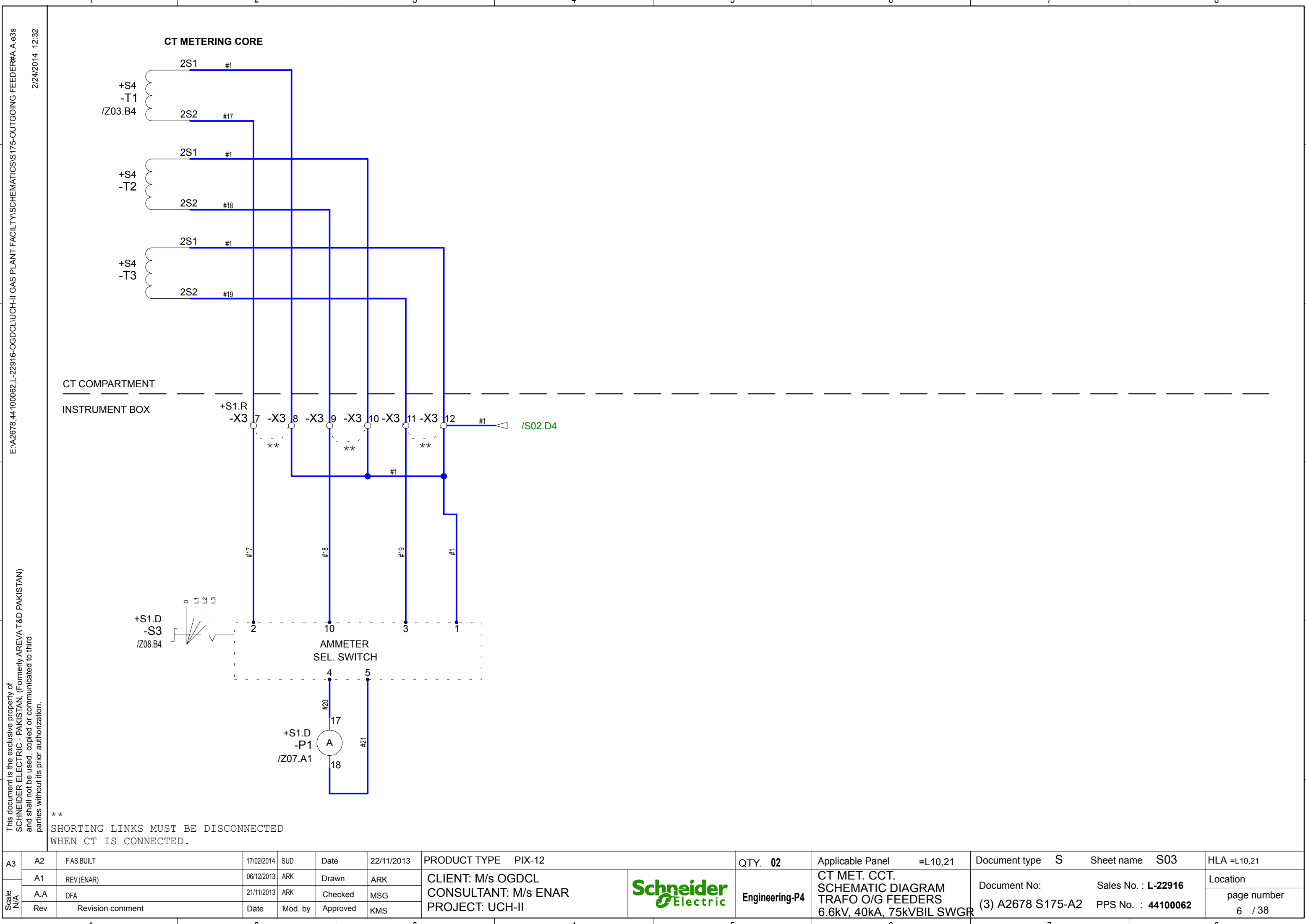
PRODUCT TYPE	PIX-12
CLIENT:	M/s OGDCL
CONSULTANT:	M/s ENAR
PROJECT:	UCH-II



QTY.	02	Applicable Panel	=L10,21	Document type	S	Sheet name	S02	HLA	=L10,21
Engineering-P4		PROTECTION CIRCUIT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR		Document No:		Sales No. : L-22916		Location	
				(3) A2678 S175-A2		PPS No. : 44100062		page number 5 / 38	



**
SHORTING LINKS MUST BE DISCONNECTED
WHEN CT IS CONNECTED.



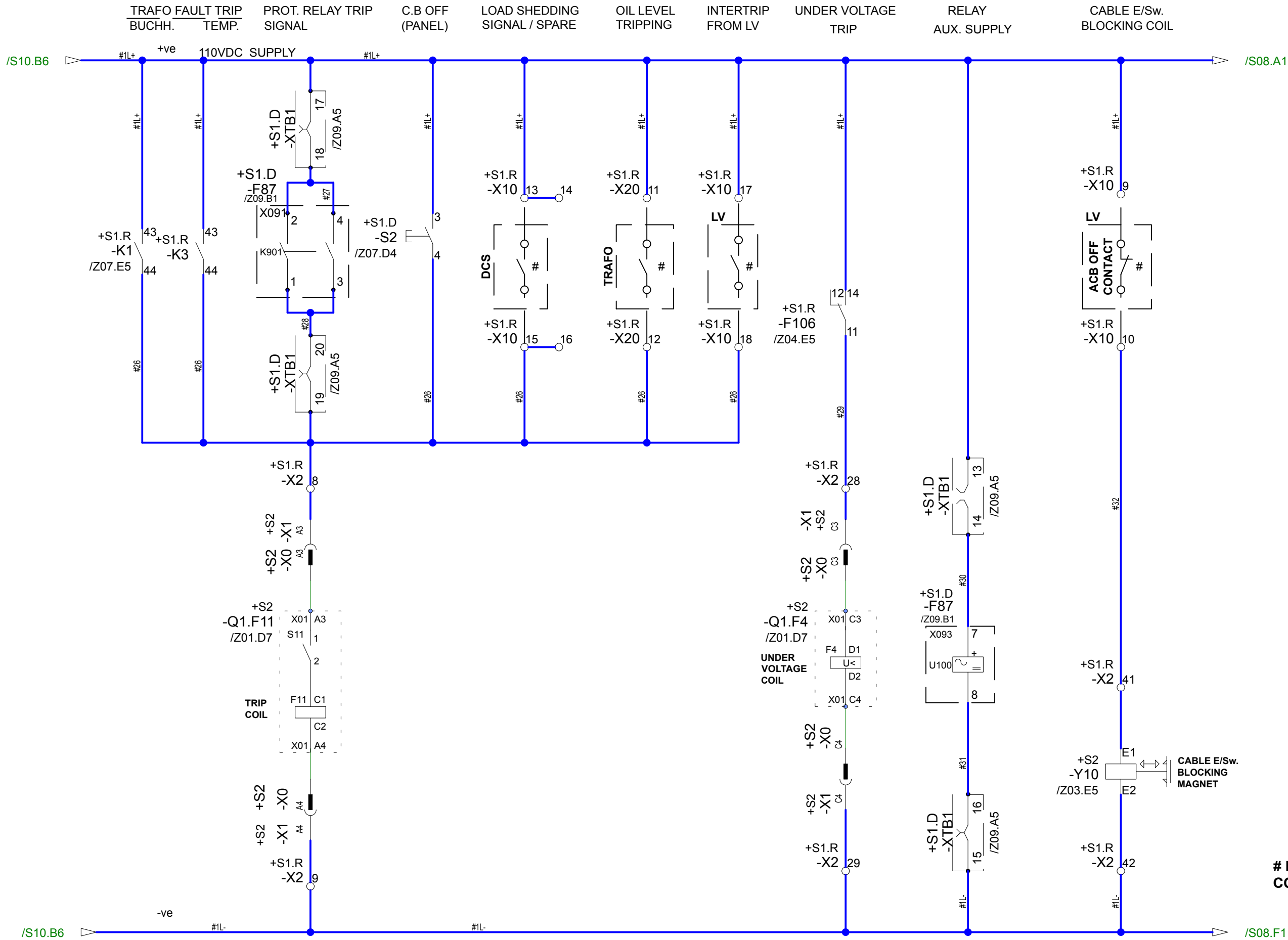
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Scale N/A

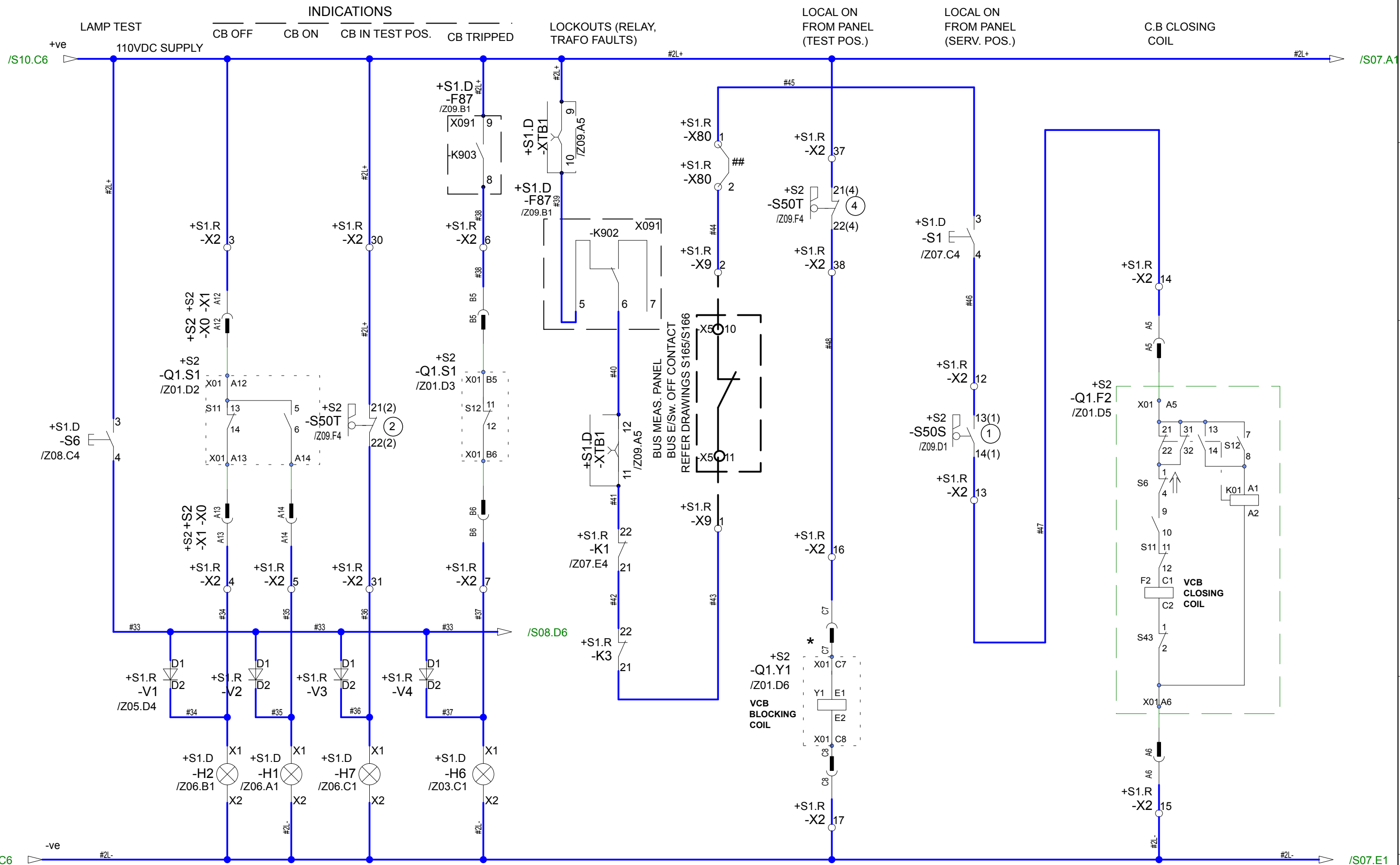
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	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CT MET. CCT. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location
	A.A	DFA	21/11/2013	ARK	Checked	MSG							page number
	Rev	Revision comment	Date	Mod. by	Approved	KMS							6 / 38



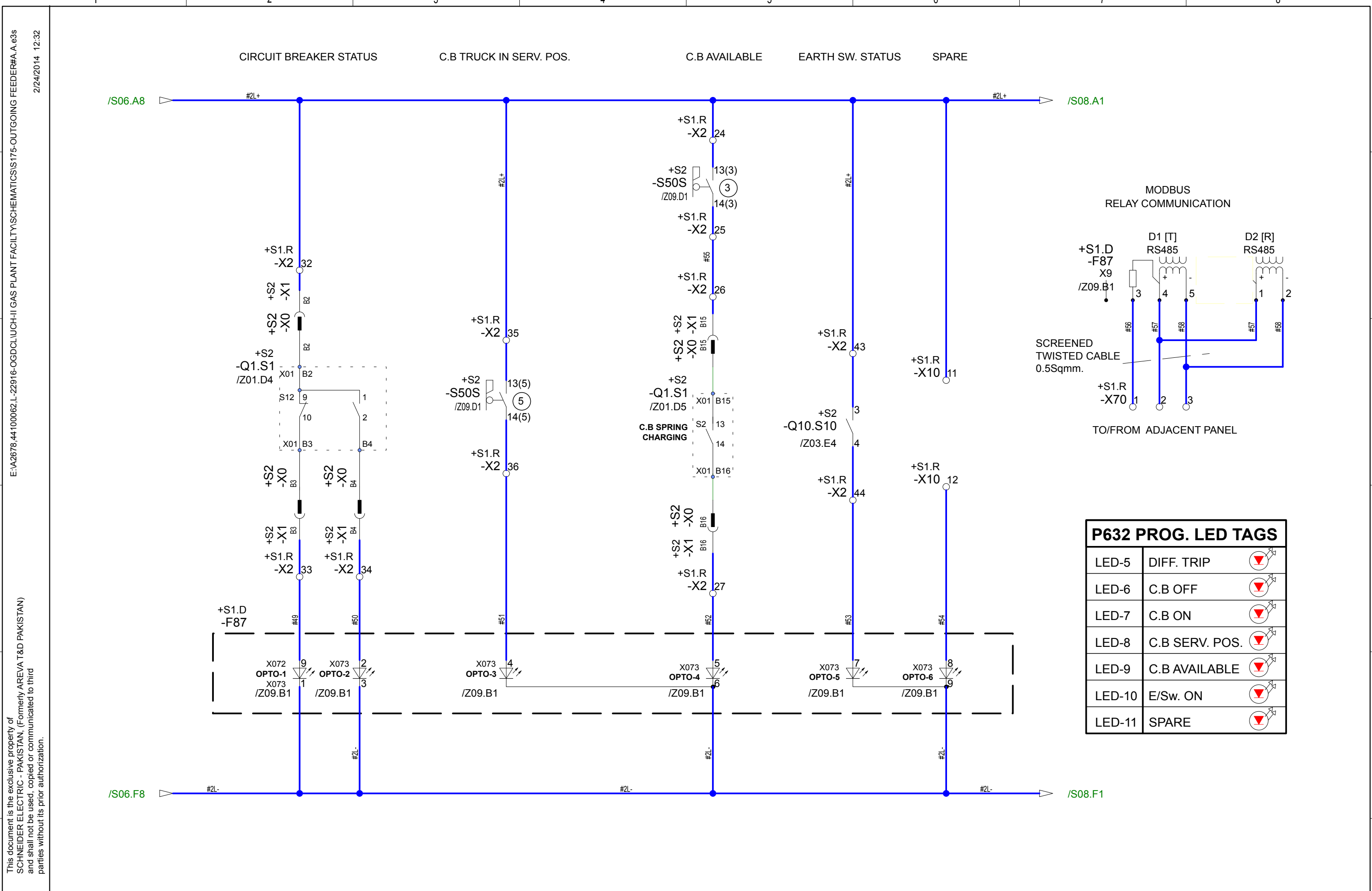


POTENTIAL FREE CONTACTS

Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12			QTY.	02	Applicable Panel	=L10,21	Document type	S	Sheet name	S05	HLA	=L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CB TRIP CIRCUIT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location						
		A.A	DFA	21/11/2013	ARK	Checked	MSG							page number						
		Rev	Revision comment		Date	Mod. by	Approved							KMS	8 / 38					




Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12			QTY.	02	Applicable Panel	=L10,21	Document type	S	Sheet name	S06	HLA=L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CB CONTROL/IND. CIRCUIT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location					
		A.A	DFA	21/11/2013	ARK	Checked	MSG							page number					
		Rev	Revision comment		Date	Mod. by	Approved							KMS	9 / 38				



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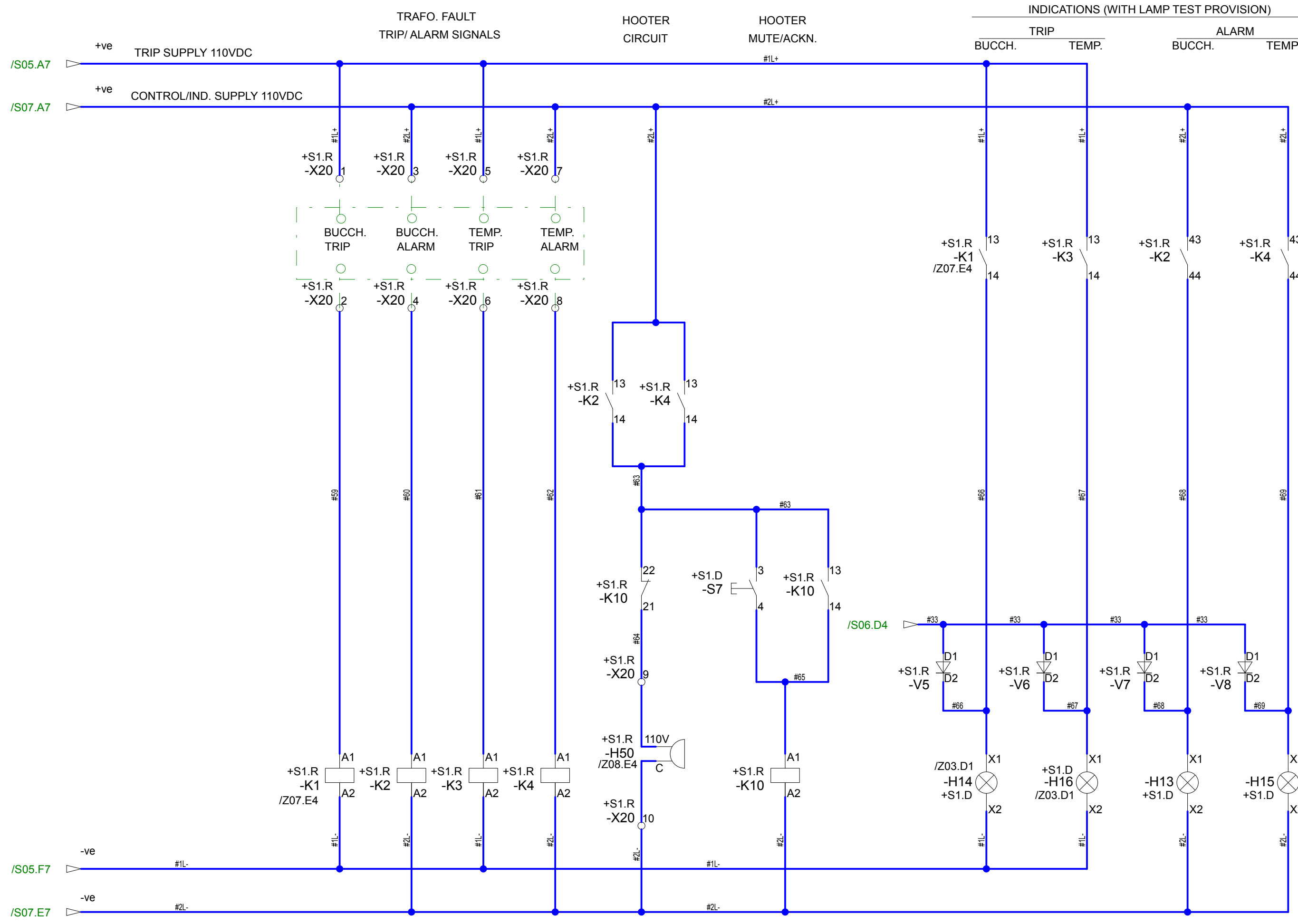
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	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	RELAY OPTO/MODBUS CCT. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location
Scale N/A	A.A	DFA	21/11/2013	ARK	Checked	MSG							page number
	Rev	Revision comment	Date	Mod. by	Approved	KMS							10 / 38

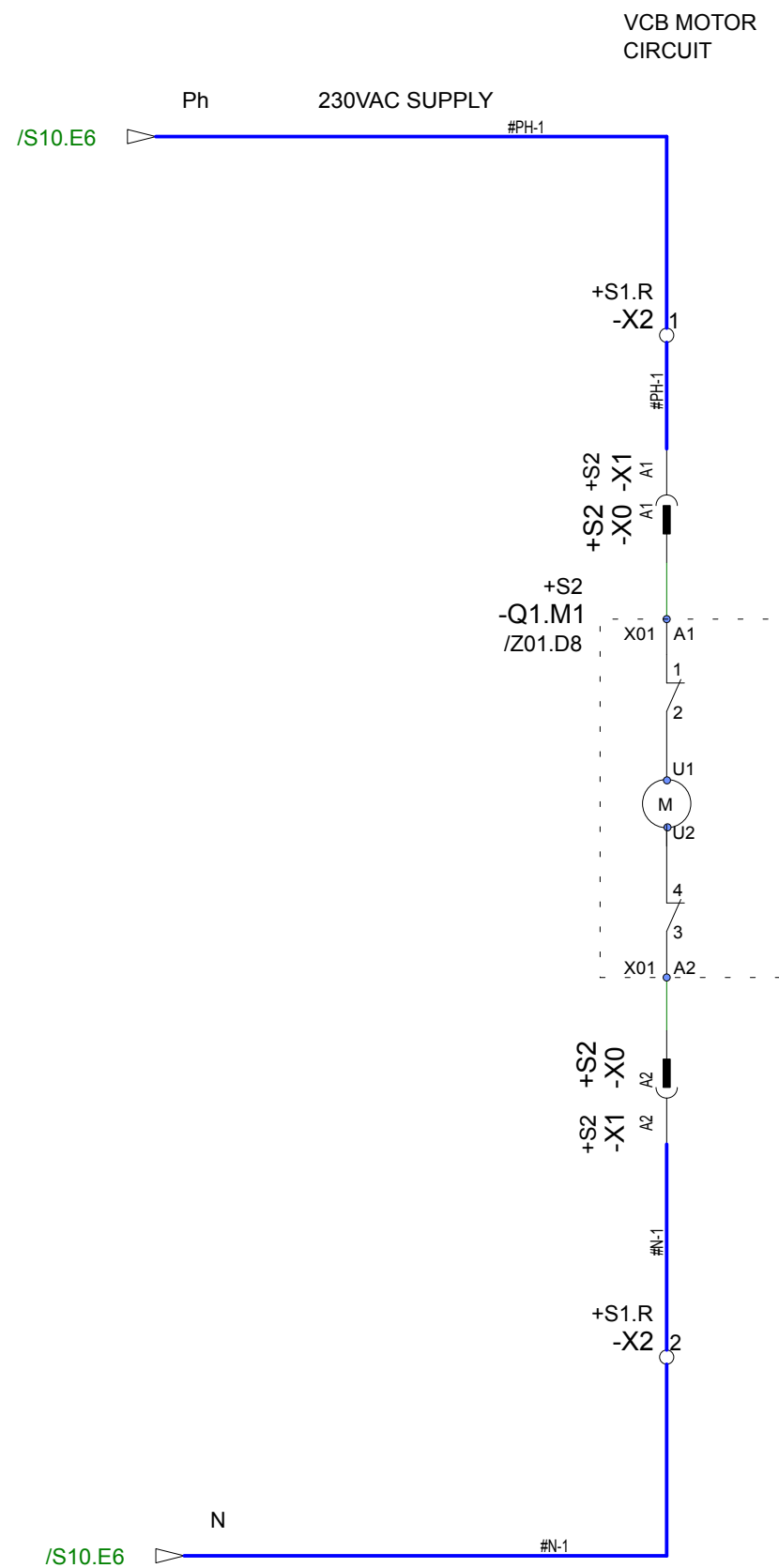


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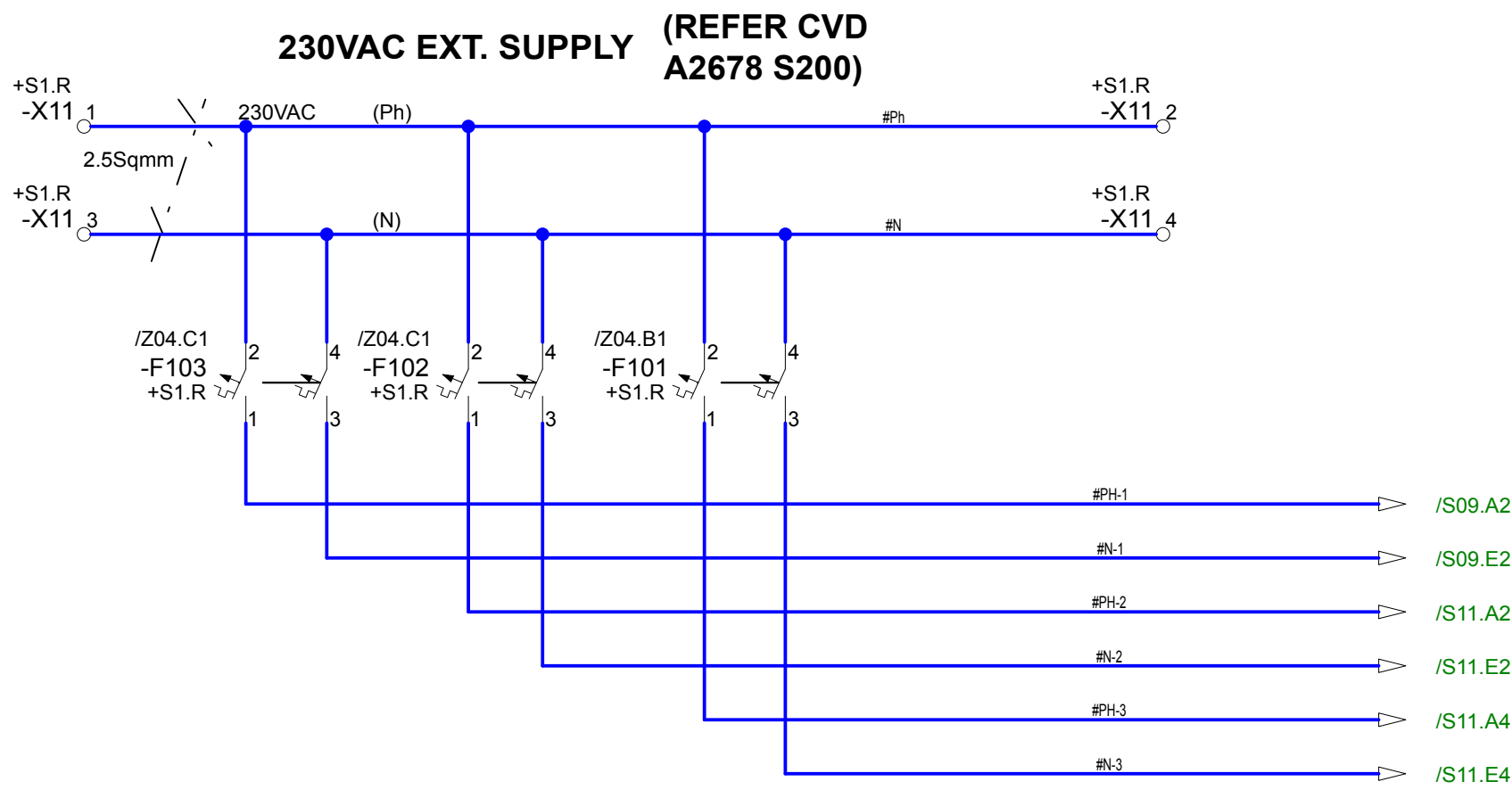
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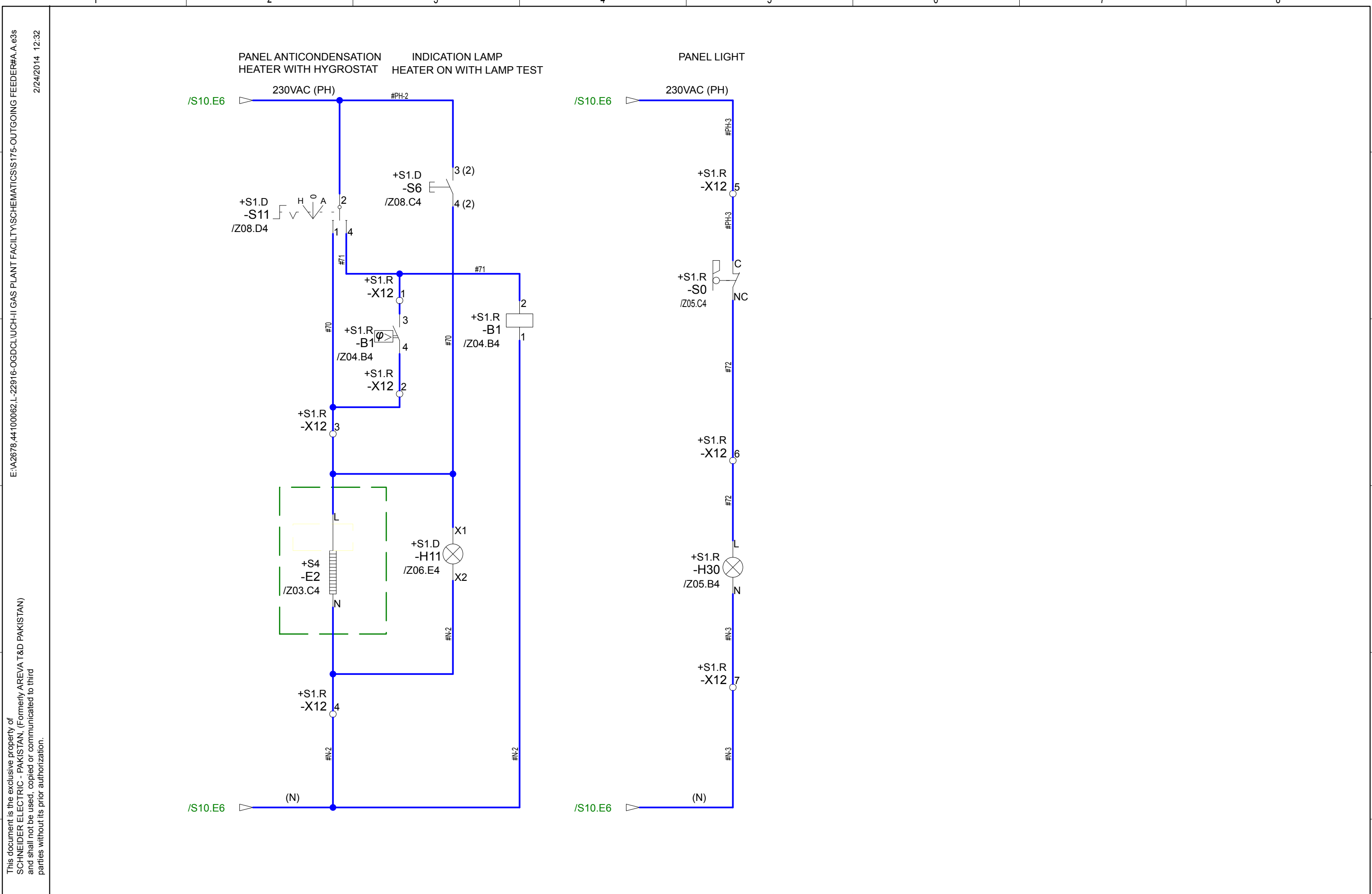
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	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	TRAFO FAULT CCT. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	(3) A2678 S175-A2	Document No: Sales No. : L-22916 PPS No. : 44100062	Location page number 11 / 38					
Scale N/A	A.A	DFA	21/11/2013	ARK	Checked	MSG												
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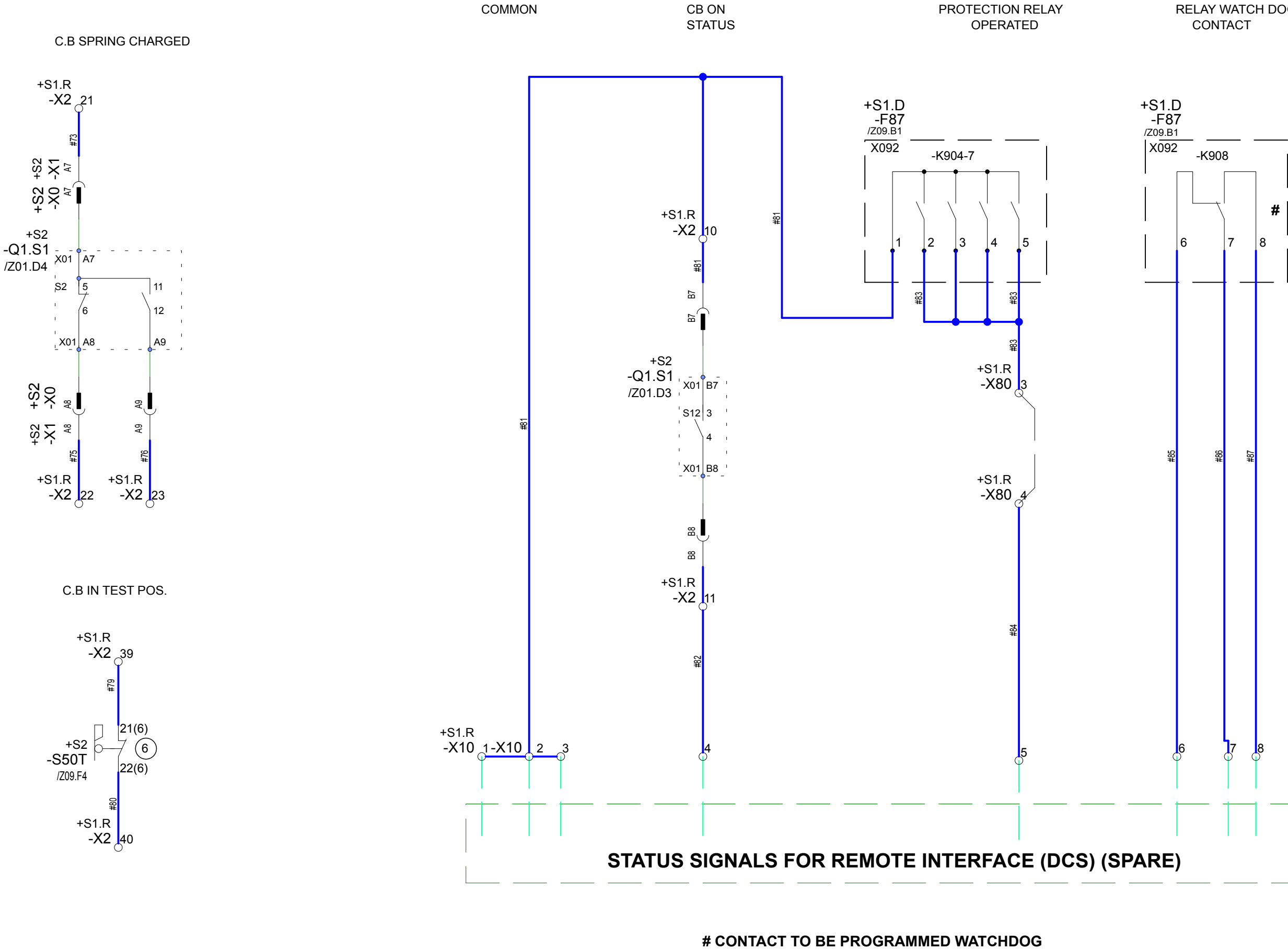
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Scale N/A	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	VCB MOTOR CIRCUIT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No:	Sales No. : L-22916	Location
	A.A	DFA	21/11/2013	ARK	Checked	MSG					(3) A2678 S175-A2	PPS No. : 44100062	page number
	Rev	Revision comment		Date	Mod. by	Approved					KMS	12 / 38	

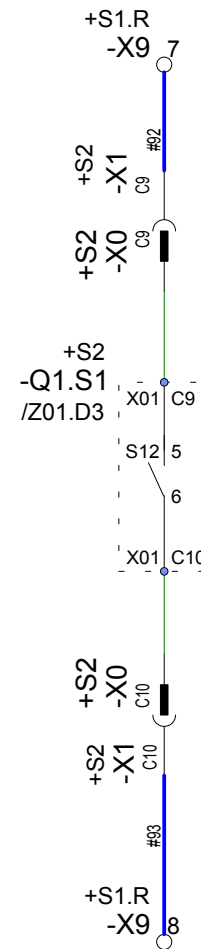
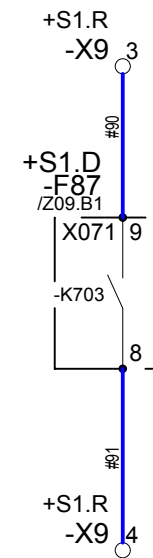
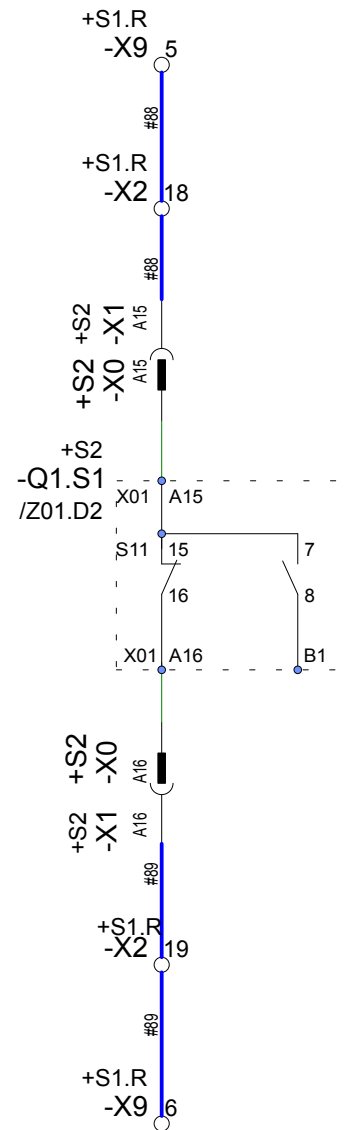


Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY. 02	Applicable Panel =L10,21	Document type S	Sheet name S10	HLA =L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CONTROL VOLTAGE DIST. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No:	Sales No. : L-22916	Location
		A.A	DFA	21/11/2013	ARK	Checked	MSG					(3) A2678 S175-A2	PPS No. : 44100062	page number
		Rev	Revision comment	Date	Mod. by	Approved	KMS							13 / 38

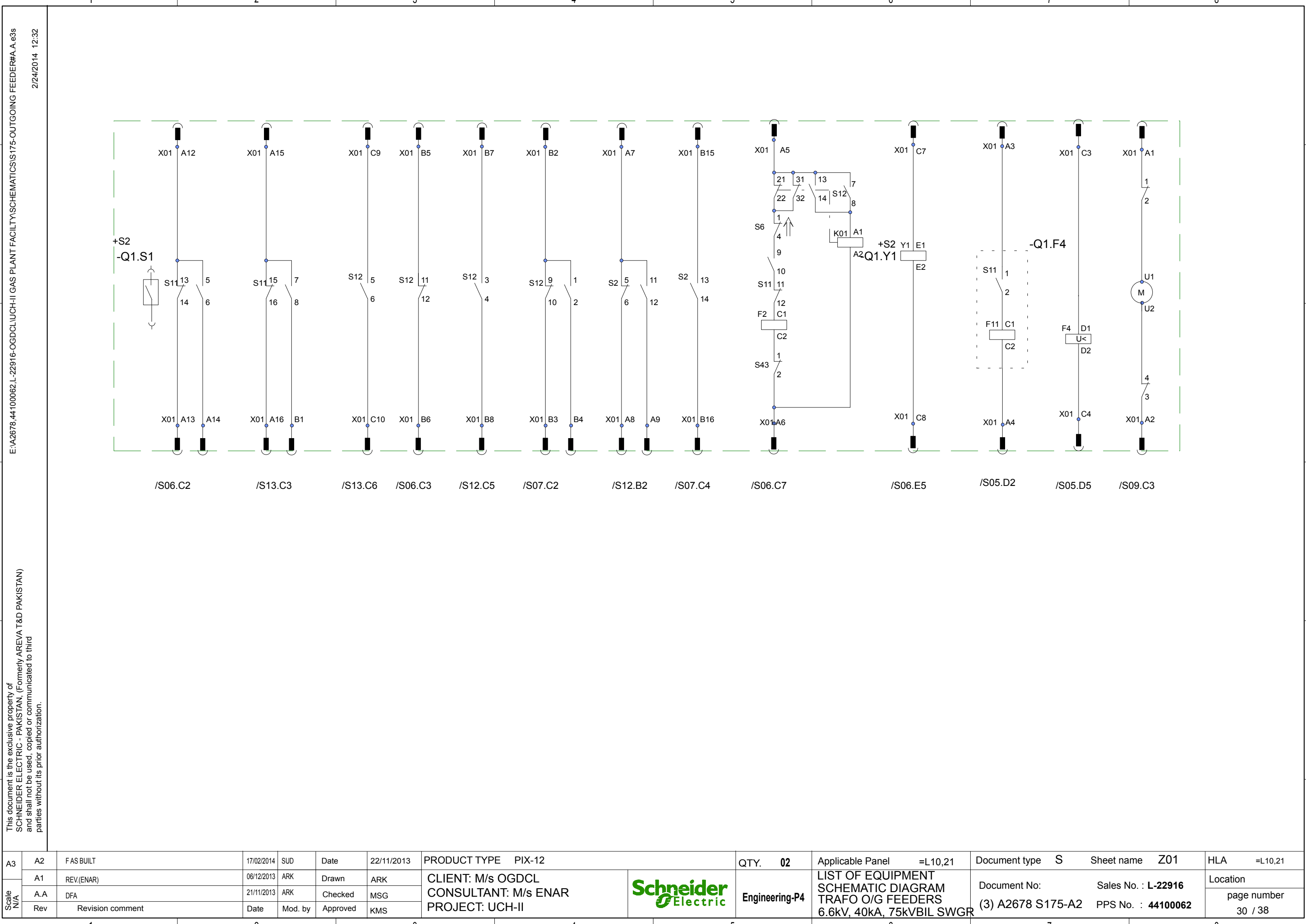


Scale N/A	A3	A2	FAS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY.	02	Applicable Panel	=L10,21	Document type	S	Sheet name	S11	HLA	=L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	230V AC CCT. SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location					
		A.A	DFA	21/11/2013	ARK	Checked	MSG							page number					
		Rev	Revision comment		Date	Mod. by	Approved							KMS	14 / 38				





A3	A2	F AS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY. 02	Applicable Panel =L10,21	Document type S	Sheet name S13	HLA =L10,21
	A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	INTERLOCKING SIGNALS SCHEMATIC DIAGRAM TRAF0 O/G FEEDERS 6.6kV. 40kA. 75kVBIL SWGR	Document No: (3) A2678 S175-A2	Sales No. : L-22916 PPS No. : 44100062	Location
Scale N/A	A.A	DFA	21/11/2013	ARK	Checked	MSG							page number 16 / 38
	Rev	Revision comment		Date	Mod. by	Approved							KMS



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Scale N/A	A3	A2	F AS BUILT	17/02/2014	SUD	Date	22/11/2013	PRODUCT TYPE PIX-12		QTY.	02	Applicable Panel	=L10,21	Document type	S	Sheet name	Z01	HLA	=L10,21
		A1	REV.(ENAR)	06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	Schneider Electric	LIST OF EQUIPMENT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR		Document No: (3) A2678 S175-A2		Sales No. : L-22916 PPS No. : 44100062		Location	
		A.A	DFA	21/11/2013	ARK	Checked	MSG											page number	
		Rev	Revision comment	Date	Mod. by	Approved	KMS											30 / 38	

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		1		Hygrostat		manufacturer: ELAB		type: ELH220		<div><div><div>2</div><div>1</div></div><div><div>3</div><div>4</div></div></div>											
						order number: ELH220															
		RATED CURRENT		5A		CHARACTERISTIC															
		Technical components per device		Typ		Ordering number															
		Application		Settings		Location		Item designation													
				25° C to 50°C,40% to 90%H		+S1.R		-B1		/S11.C3		/S11.C3									
		1		Miniature Circuit Breaker		manufacturer: SCHNEIDER ELECTRIC		type: C60L_25419		<div><div><div>1</div><div>2</div></div><div><div>3</div><div>4</div></div></div>											
						order number: 25419															
RATED CURRENT		2A		CHARACTERISTIC		C															
Technical components per device		Typ		Ordering number																	
Application		Settings		Location		Item designation															
				+S1.R		-F101		/S10.D4		/S10.D4											
				+S1.R		-F102		/S10.D3		/S10.D4											
				+S1.R		-F103		/S10.D3		/S10.D3											
1		Miniature Circuit Breaker		manufacturer: SCHNEIDER ELECTRIC		type: C60H_MGN61524		<div><div><div>1</div><div>2</div></div><div><div>3</div><div>4</div></div></div>													
				order number: MGN61524																	
RATED CURRENT		4A		CHARACTERISTIC		C															
Technical components per device		Typ		Ordering number																	
Application		Settings		Location		Item designation															
				+S1.R		-F104		/S10.B4		/S10.B5											
				+S1.R		-F105		/S10.B3		/S10.B3											
1		Miniature Circuit Breaker		manufacturer: SCHNEIDER ELECTRIC		type: C60L_25419		<div><div><div>1</div><div>2</div></div><div><div>3</div><div>4</div></div><div><div>12</div><div>14</div><div>11</div></div></div>													
				order number: 25419																	
RATED CURRENT		2A		CHARACTERISTIC		C															
Technical components per device		Typ		Ordering number																	
1		Miniature Circuit Breaker		OF_26924.		26924															
Application		Settings		Location		Item designation															
				+S1.R		-F106		/S04.C2		/S04.C3		/S05.C5									
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Scale N/A	A1	REV.(ENAR)			06/12/2013	ARK	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II			Engineering-P4	LIST OF EQUIPMENT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR		Document No: (3) A2678 S175-A2		Sales No. : L-22916 PPS No. : 44100062		Location		
	A.A	DFA			21/11/2013	ARK	Checked	MSG											page number		
	Rev	Revision comment			Date	Mod. by	Approved	KMS											33 / 38		
1		2			3			4			5			6			7			8	


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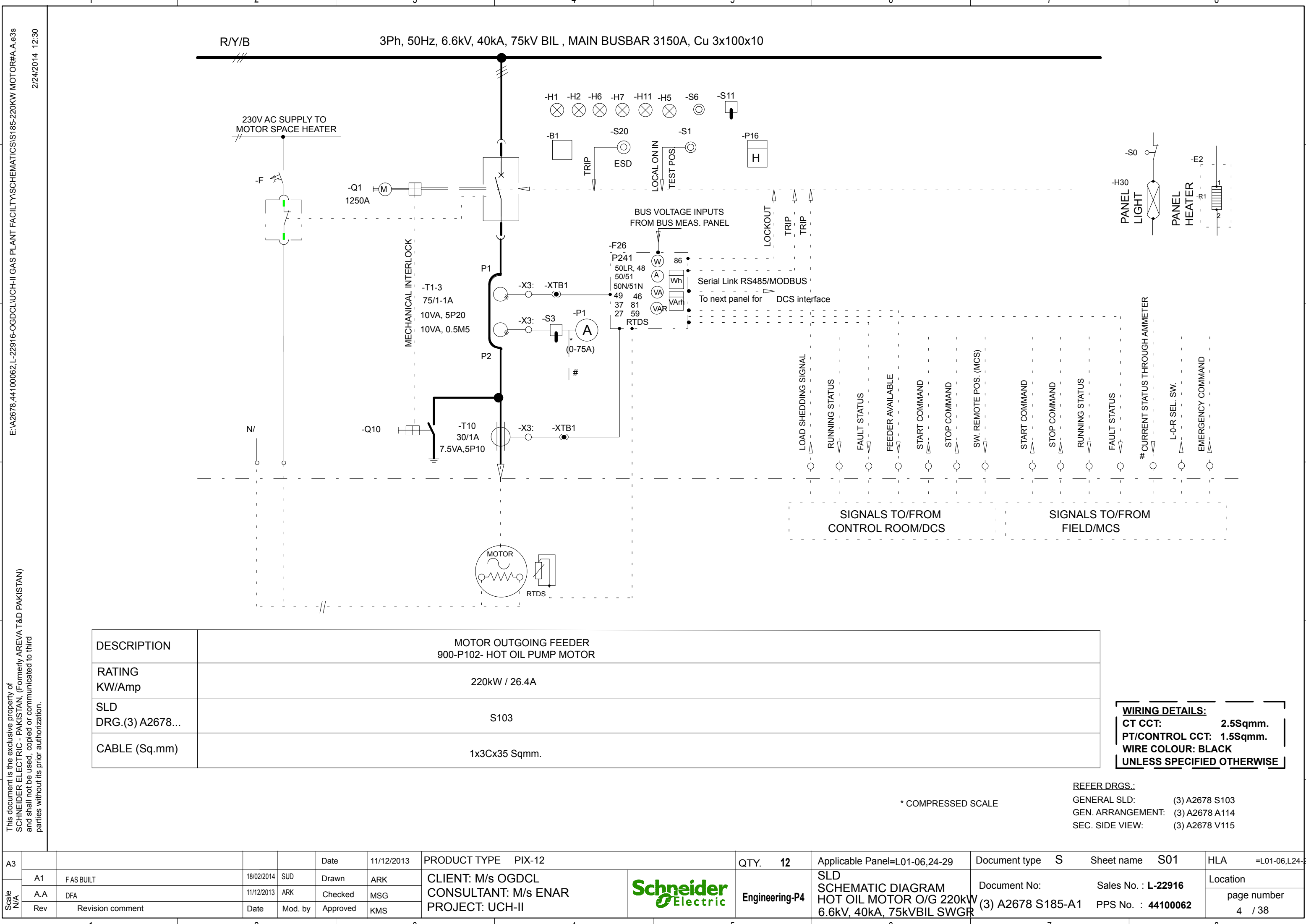
E:\A2678.44100062.L-22916-OGDCL UCH-II GAS PLANT FACILITY SCHEMATICS\175-OUTGOING FEEDER#A.A.e3s 2/24/2014 12:32		1	Ammeter	manufacturer: ZIEGLER	type: AMP_34	order number: AMZA9C5200	RATED CURRENT	CHARACTERISTIC	Technical components per device	Typ	Ordering number	<div><div>17</div><div>A</div><div>18</div></div>																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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		1		Test Block				manufacturer: MMLG01_01				<div><div>+S1.D -XTB1</div><div><div><div>12</div><div>2</div><div>4</div><div>6</div><div>8</div><div>10</div><div>12</div><div>14</div><div>16</div><div>18</div><div>20</div><div>22</div><div>24</div><div>26</div><div>28</div></div><div><div>/S02.E7</div><div>/S02.D7</div><div>/S02.E7</div><div>/S02.E7</div><div>/S06.A4</div><div>/S06.C4</div><div>/S05.C6</div><div>/S05.E6</div><div>/S05.A3</div><div>/S05.C3</div><div>/S02.E4</div><div>/S02.D4</div><div>/S02.E4</div><div>/S02.E4</div></div></div></div>															
				RATED CURRENT				CHARACTERISTIC																			
				Technical components per device				Typ												Ordering number							
				Application		Settings		Location		Item designation																	
								+S1.D		-XTB1																	
		1		Protection Relay				manufacturer: P632_01																			
				RATED CURRENT				CHARACTERISTIC																			
				Technical components per device				Typ												Ordering number							
				Application		Settings		Location		Item designation																	
								+S1.D		-F87																	
		<div><div>+S1.D -F87</div><div><div><div><div>/S02.E5</div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div></div><div>X032</div><div>CT-1 Connection</div></div><div><div><div>/S04.C2</div><div>1</div><div>4</div></div><div>X031</div><div>VT Conn.</div></div><div><div><div>/S07.E2</div><div>9</div><div>1</div></div><div>X072</div><div>U70</div></div><div><div><div>/S07.E3</div><div>2</div><div>3</div></div><div>X073</div><div>U702</div></div><div><div><div>/S07.E3</div><div>4</div></div><div>X073</div><div>U703</div></div><div><div><div>/S07.E5</div><div>5</div><div>6</div></div><div>X073</div><div>U704</div></div><div><div><div>/S07.E5</div><div>7</div><div>8</div></div><div>X073</div><div>U705</div></div><div><div><div>/S07.E6</div><div>8</div><div>9</div></div><div>X073</div><div>U706</div></div><div><div><div>/S05.D6</div><div>7</div><div>8</div></div><div>X093</div><div>RS485</div></div><div><div><div>/S07.B7</div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div><div>X9</div><div>RS485</div></div><div><div><div>/S07.B7</div><div>4</div><div>5</div></div><div>X9</div><div>Micom P632</div></div></div><div><div><div>/S02.D8</div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div></div><div>X052</div><div>CT-2 Connection</div></div><div><div><div>RELAY OUTPUTS</div><div><div>X091</div><div>K901</div><div>1</div><div>2</div><div>3</div><div>4</div><div>6</div><div>5</div><div>7</div><div>8</div><div>9</div></div><div><div>X091</div><div>K902</div><div>6</div><div>5</div><div>7</div><div>8</div><div>9</div></div><div><div>X091</div><div>K903</div><div>8</div><div>9</div></div><div><div>X092</div><div>K904-7</div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div></div><div><div>X092</div><div>K908</div><div>7</div><div>6</div><div>8</div></div><div><div>X071</div><div>K703</div><div>8</div><div>9</div></div></div><div><div>/S05.B3</div><div>/S05.B2</div><div>/S06.B4</div><div>/S06.A3</div><div>/S12.B6</div><div>/S12.B8</div><div>/S13.C5</div></div></div></div>																									
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		RATED CURRENT				CHARACTERISTIC																					
		Technical components per device				Typ				Ordering number																	
		Application		Settings		Location		Item designation																			
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1		HVX_POSITIONINDICATOR_TEST				manufacturer: SCHNEIDER				type:																	
		RATED CURRENT				CHARACTERISTIC																					
		Technical components per device				Typ				Ordering number																	
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A3		A2		F AS BUILT		17/02/2014		SUD		Date		22/11/2013		PRODUCT TYPE PIX-12				QTY. 02		Applicable Panel =L10,21		Document type S		Sheet name Z09		HLA =L10,21	
Scale N/A		A1		REV.(ENAR)		06/12/2013		ARK		Drawn		ARK		CLIENT: M/s OGDCL				Engineering-P4		LIST OF EQUIPMENT SCHEMATIC DIAGRAM TRAFO O/G FEEDERS 6.6kV, 40kA, 75kVBIL SWGR		Document No: (3) A2678 S175-A2		Sales No. : L-22916 PPS No. : 44100062		Location	
		A.A		DFA		21/11/2013		ARK		Checked		MSG		page number													
		Rev		Revision comment		Date		Mod. by		Approved		KMS		PROJECT: UCH-II		38 / 38											
		1		2		3		4		5		6		7		8											

<div><div><div>E:\A2678,44100062,L-22916-OGDCL\UCH-II GAS PLANT FACILITY\SCHEMATICS\185-220KW MOTOR#A.A.e3s</div><div>2/24/2014 12:30</div></div><div><div>This document is the exclusive property of SCHNEIDER ELECTRIC - PAKISTAN, (Formerly AREVA T&D PAKISTAN) and shall not be used, copied or communicated to third parties without its prior authorization.</div><div>Scale N/A</div></div></div>		<div><div><div>1</div><div>2</div><div>3</div><div>4</div><div>5</div><div>6</div><div>7</div><div>8</div></div><div><div><div>Schneider</div><div>Electric</div></div></div></div>																	
		<div><div>CLIENT: M/s OGDCL</div><div>CONSULTANT: M/s ENAR</div><div>PROJECT: UCH-II</div></div>																	
		<div><div>SCHEMATIC DIAGRAMS:</div><div>OUTGOING FEEDERS TO 220kW HOT OIL PUMP MOTOR</div></div>																	
		<div><div>LOCATION:</div><div>+S2: VCB COMPARTMENT</div><div>+S4: CT/PT COMPARTMENT</div><div>+S1.D: LV COMPARTMENT DOOR</div><div>+S1.R: INSTRUMENT BOX (LV COMPARTMENT)</div></div>																	
A3					Date	11/12/2013	PRODUCT TYPE PIX-12				QTY	12	Applicable Panel=L01-06,24-29	Document type	A	Sheet name	A01	HLA	=L01-06,L24-29
Scale N/A	A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		<div><div>Schneider</div><div>Electric</div></div>	Engineering-P4	COVER SHEET SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 U185-A1	Sales No. : L-22916 PPS No. : 44100062	Location					
	A.A	DFA	11/12/2013	ARK	Checked	MSG								page number					
	Rev	Revision comment	Date	Mod. by	Approved	KMS								1 / 38					
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		Client- Document number		Originator- Document number		Version- Status		Document-identification			Sheet	Description				
								Type	Designation	Sheet name						
E:\A2678,44\100062,L-22916-OGDCL\UCH-II GAS PLANT FACILITY\SCHEMATICS\185-220KW MOTOR#A.A.e3s 2/24/2014 12:30				(3) A2678 U185-A1		A1	A.A	A	=L01-06,L24-29	A01	1	COVER SHEET HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 L185-A1		A1	A.A	B	=L01-06,L24-29	B01	2	LIST OF CONTENT HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 L185-A1		A1	A.A	B	=L01-06,L24-29	B02	3	LIST OF CONTENT HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S01	4	SLD HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S02	5	PROTECTION CIRCUIT HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S03	6	CT METERING CCT. HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S04	7	CB TRIP CIRCUIT HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S05	8	CB CONTROL/IND. CIRCUIT HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S06	9	RELAY OPTO/MODBUS CCT. HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S07	10	VCB MOTOR CIRCUIT HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S08	11	CONTROL VOLTAGE DIST. HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S09	12	230V AC CCT. HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S10	13	SIGNALS TO/FROM DCS/MCS HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S11	14	SPARES HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	S12	15	RTDs INPUT TO RELAY HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V02	16	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V02.1	17	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V03	18	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V08	19	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V12	20	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V10	21	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V10.1	22	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V11	23	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V31	24	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V40	25	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V50	26	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V60	27	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V70	28	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	V	=L01-06,L24-29	V80	29	TERMINAL PLAN HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	Z01	30	VCB DETAILS HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	Z02	31	VCB CONNECTOR DETAILS HOT OIL MOTOR O/G 220kW	SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR			
A3						Date	11/12/2013	PRODUCT TYPE PIX-12			QTY 12	Applicable Panel+L01-06,24-29		Document type B	Sheet name B01	HLA =L01-06,L24-29
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	A.A	DFA		11/12/2013	ARK	Checked	MSG									
	Rev	Revision comment		Date	Mod. by	Approved	KMS									
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				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	Z03	32	LIST OF EQUIPMENT HOT OIL MOTOR O/G 220kW		SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR								
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	Z04	33	LIST OF EQUIPMENT HOT OIL MOTOR O/G 220kW		SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR								
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	Z05	34	LIST OF EQUIPMENT HOT OIL MOTOR O/G 220kW		SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR								
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	Z06	35	LIST OF EQUIPMENT HOT OIL MOTOR O/G 220kW		SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR								
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	Z07	36	LIST OF EQUIPMENT HOT OIL MOTOR O/G 220kW		SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR								
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	Z08	37	LIST OF EQUIPMENT HOT OIL MOTOR O/G 220kW		SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR								
				(3) A2678 S185-A1		A1	A.A	S	=L01-06,L24-29	Z09	38	LIST OF EQUIPMENT HOT OIL MOTOR O/G 220kW		SCHEMATIC DIAGRAM 6.6kV, 40kA, 75kVBIL SWGR								
A3					Date	11/12/2013	PRODUCT TYPE PIX-12				QTY	12	Applicable Panel+L01-06,24-29		Document type	B	Sheet name	B02	HLA	=L01-06,L24-29		
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	Rev	Revision comment		Date	Mod. by	Approved	KMS											3 / 38				
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Scale
N/A

DESCRIPTION	MOTOR OUTGOING FEEDER 900-P102- HOT OIL PUMP MOTOR
RATING KW/Amp	220kW / 26.4A
SLD DRG.(3) A2678...	S103
CABLE (Sq.mm)	1x3Cx35 Sqmm.

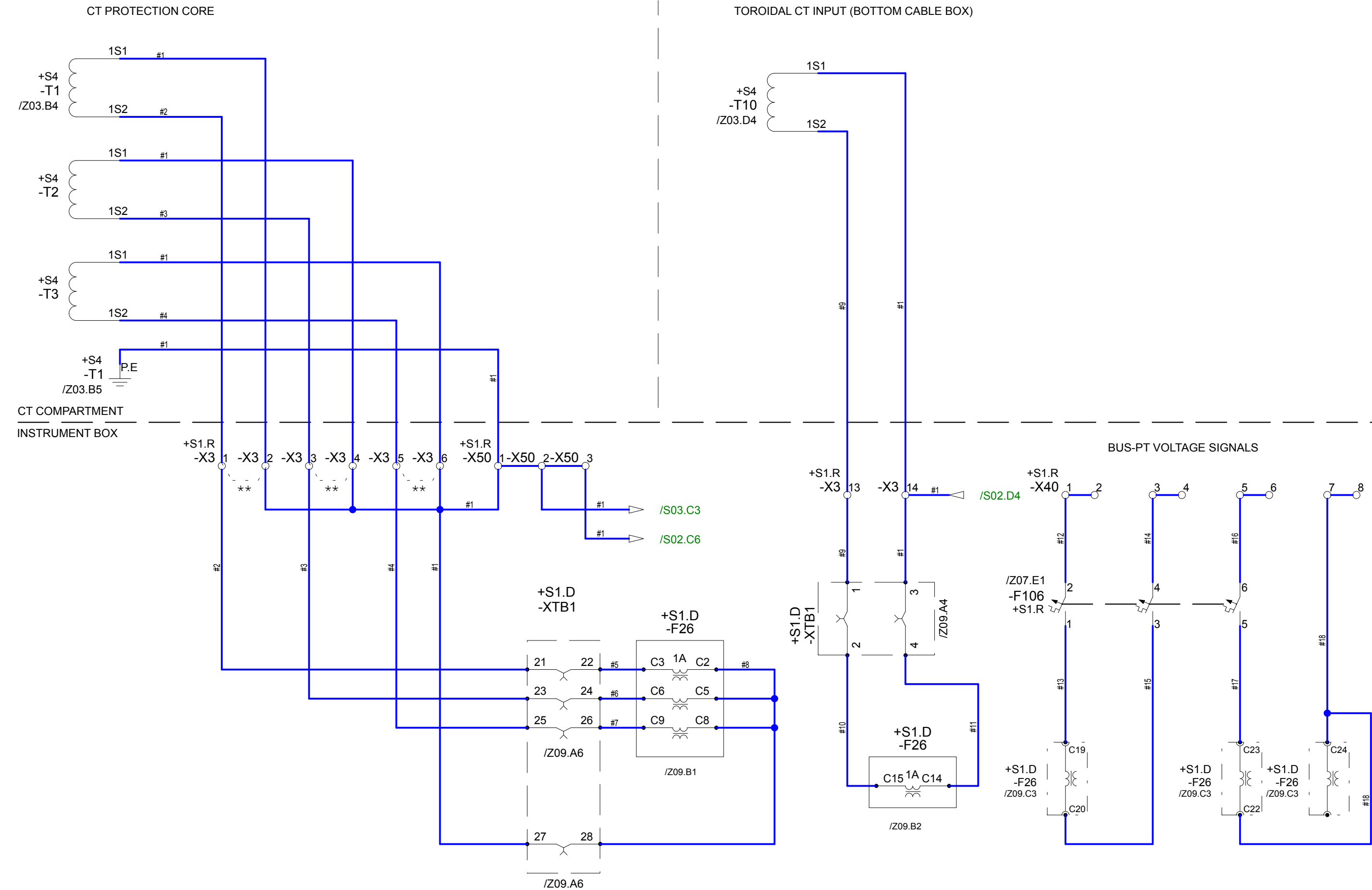
WIRING DETAILS:
CT CCT: 2.5Sqmm.
PT/CONTROL CCT: 1.5Sqmm.
WIRE COLOUR: BLACK
UNLESS SPECIFIED OTHERWISE

* COMPRESSED SCALE

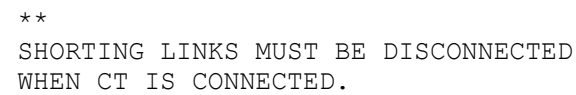
REFER DRGS.:
GENERAL SLD: (3) A2678 S103
GEN. ARRANGEMENT: (3) A2678 A114
SEC. SIDE VIEW: (3) A2678 V115

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	Rev	Revision comment	Date	Mod. by	Approved	KMS						4 / 38

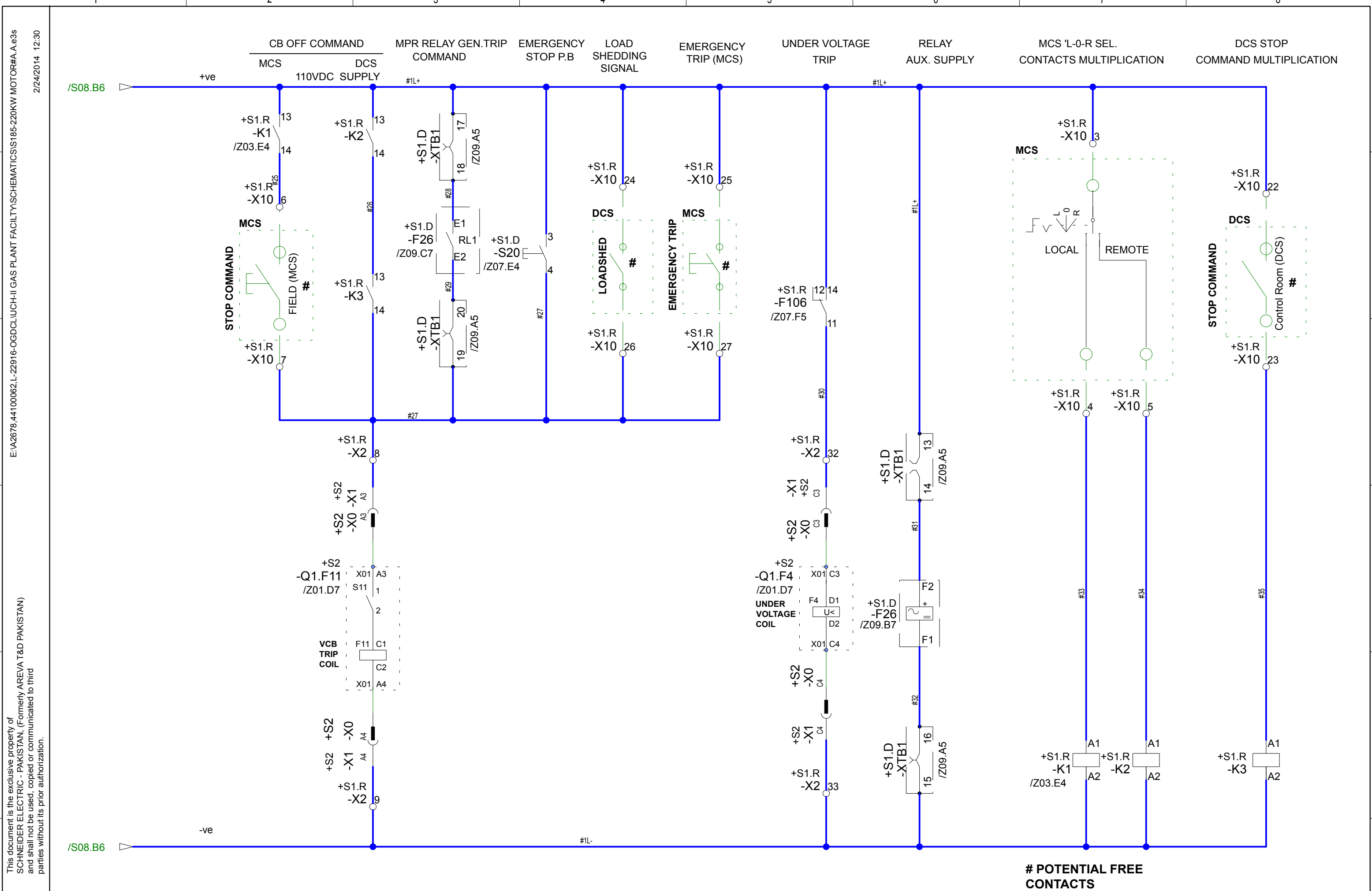




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	A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	PROTECTION CIRCUIT SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S185-A1	Sales No. : L-22916 PPS No. : 44100062	Location				
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	Rev	Revision comment		Date	Mod. by	Approved							KMS	5 / 38			



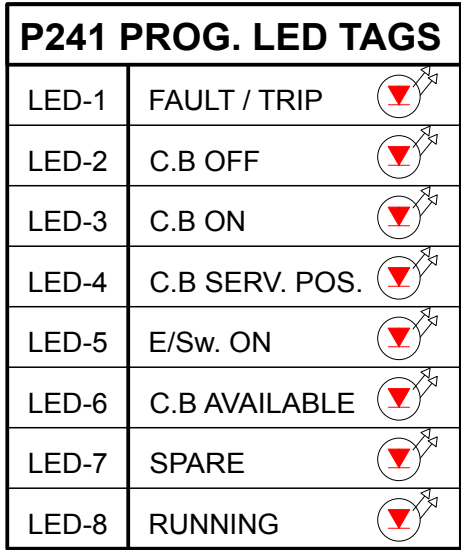
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	A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CT METERING CCT. SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S185-A1	Sales No. : L-22916 PPS No. : 44100062	Location
	A.A	DFA	11/12/2013	ARK	Checked	MSG							page number 6 / 38
	Rev	Revision comment	Date	Mod. by	Approved	KMS							



A3					Date	11/12/2013	PRODUCT TYPE PIX-12		QTY.	12	Applicable Panel=L01-06,24-29	Document type	S	Sheet name	S04	HLA =L01-06,L24-29
Scale N/A	A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CB TRIP CIRCUIT SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S185-A1		Sales No. : L-22916 PPS No. : 44100062		Location	
	A.A	DFA	11/12/2013	ARK	Checked	MSG									page number	
	Rev	Revision comment		Date	Mod. by	Approved									7 / 38	

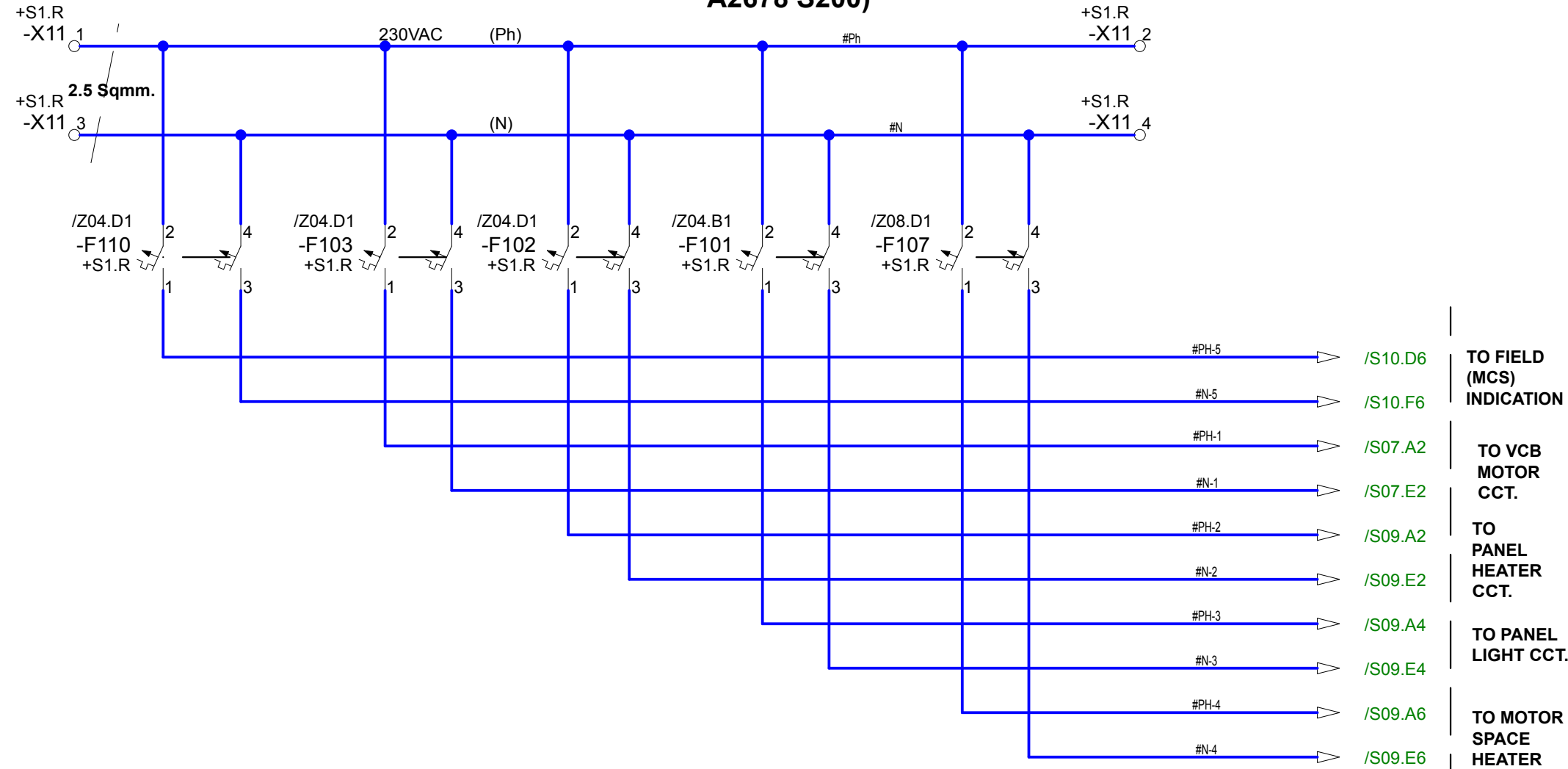


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Schneider
Electric

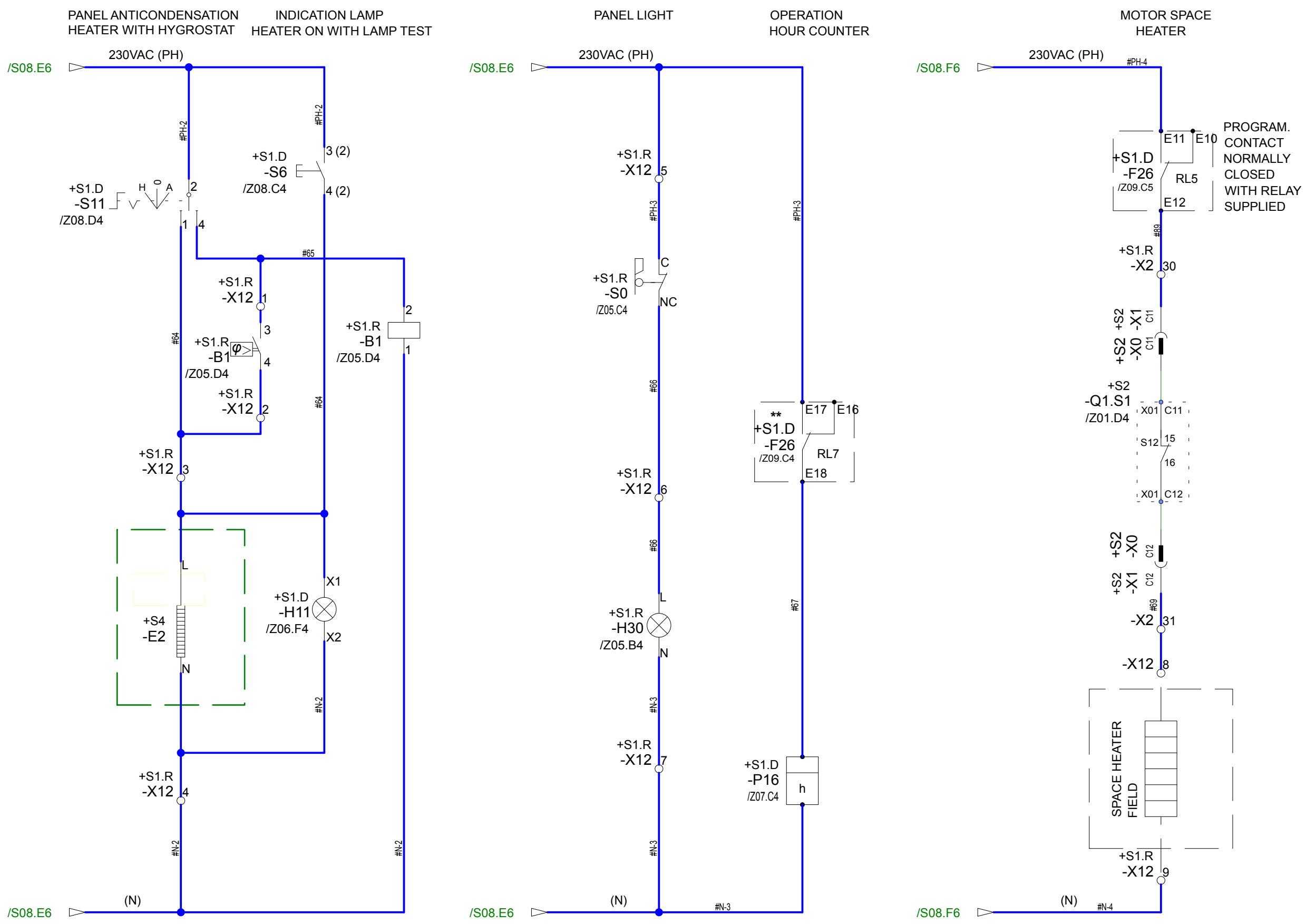
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	A1	FAS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	RELAY OPTO/MODBUS CCT. SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No:		Sales No. : L-22916	Location
	A.A	DFA	11/12/2013	ARK	Checked	MSG					(3) A2678 S185-A1		PPS No. : 44100062	page number
	Rev	Revision comment		Date	Mod. by	Approved					KMS			9 / 38



Scale N/A	A3				Date	11/12/2013	PRODUCT TYPE PIX-12		QTY. 12	Applicable Panel=L01-06,24-29	Document type S	Sheet name S08	HLA =L01-06,L24-29
	A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	CONTROL VOLTAGE DIST. SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No:	Sales No. : L-22916	Location
	A.A	DFA	11/12/2013	ARK	Checked	MSG					(3) A2678 S185-A1	PPS No. : 44100062	page number
	Rev	Revision comment	Date	Mod. by	Approved	KMS					11 / 38		

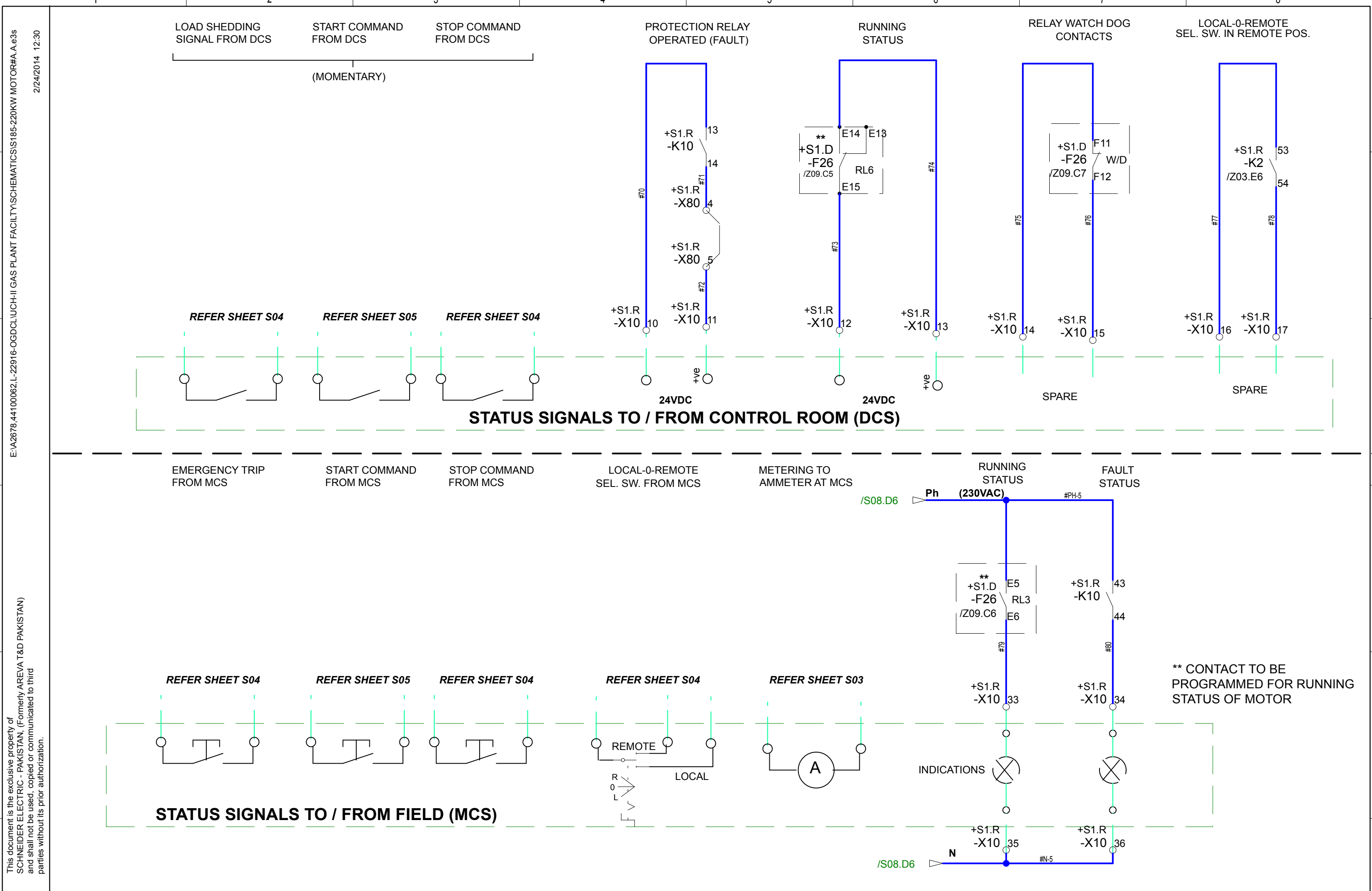
E:\A2678,44100062,L-22916-OGDCL\UCH-II GAS PLANT FACILITY\SCHEMATICS\S185-220KW MOTOR#A.A.e3s
2/24/2014 12:30

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** CONTACT PROGRAMMED FOR RUNNING STATUS OF MOTOR

A3				Date	11/12/2013	PRODUCT TYPE PIX-12			QTY. 12	Applicable Panel=L01-06,24-29	Document type S	Sheet name S09	HLA =L01-06,L24-29
Scale N/A	A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	230V AC CCT. SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S185-A1	Sales No. : L-22916 PPS No. : 44100062	Location
	A.A	DFA	11/12/2013	ARK	Checked	MSG							page number
	Rev	Revision comment	Date	Mod. by	Approved	KMS							12 / 38



Scale N/A	A3				Date	11/12/2013	PRODUCT TYPE PIX-12		QTY.	12	Applicable Panel=L01-06,24-29	Document type	S	Sheet name	S10	HLA=L01-06,L24-29
	A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	SIGNALS TO/FROM DCS/MCS SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S185-A1		Sales No. : L-22916 PPS No. : 44100062		Location page number 13 / 38	
	A.A	DFA	11/12/2013	ARK	Checked	MSG										
	Rev	Revision comment		Date	Mod. by	Approved										

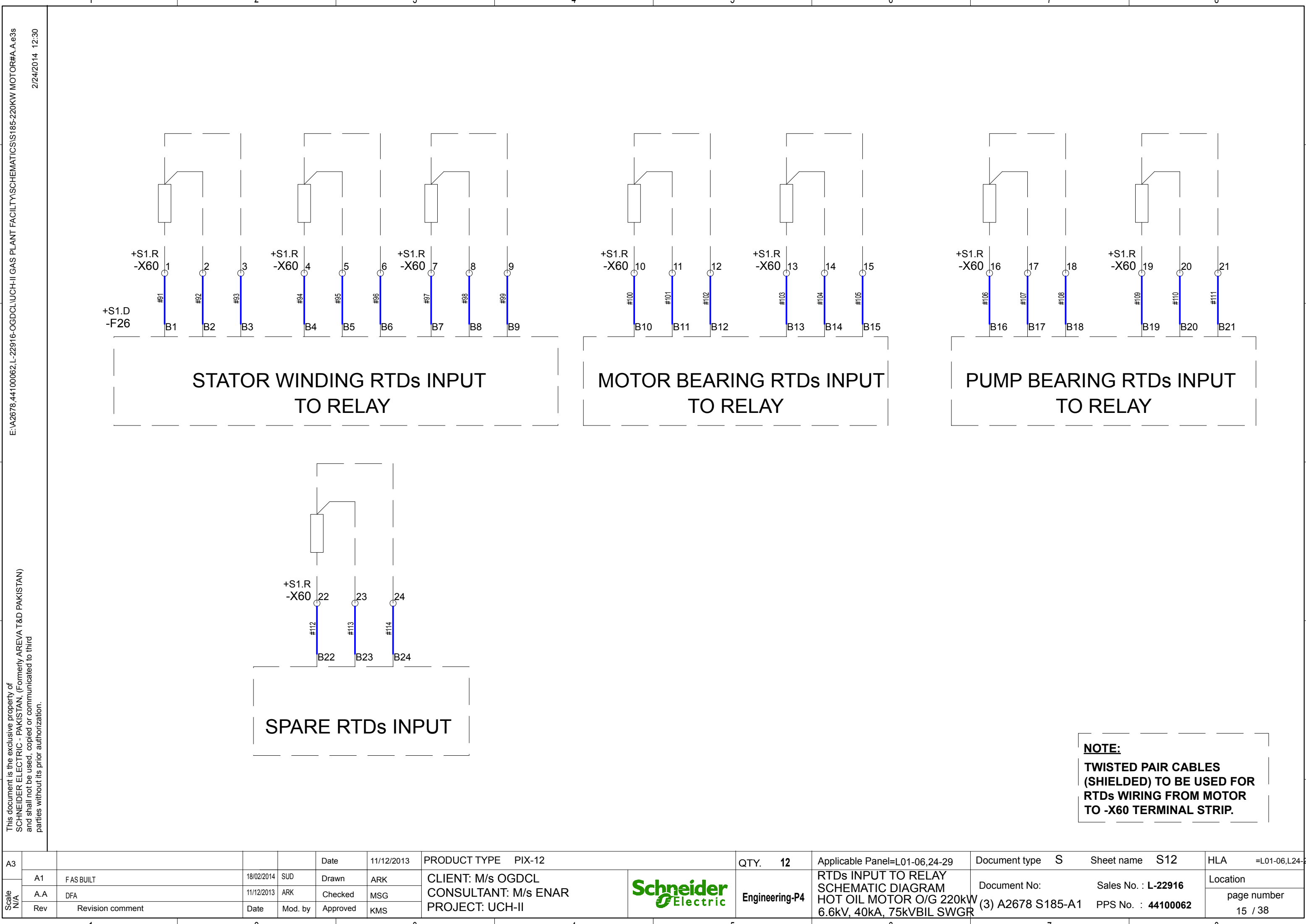
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2/24/2014 12:30


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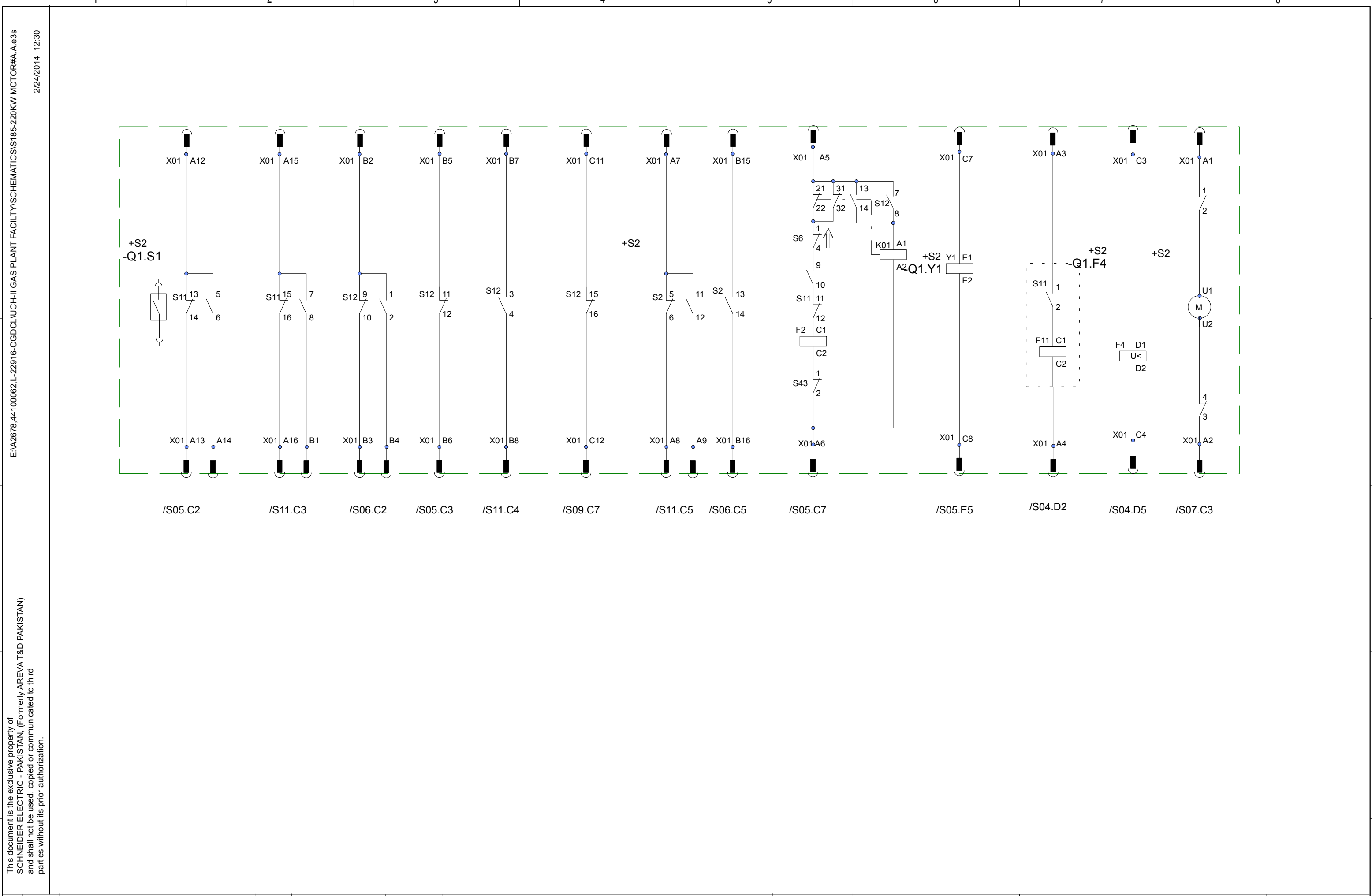




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	A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		Engineering-P4	SPARES SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No:	Sales No. : L-22916	Location
	A.A	DFA	11/12/2013	ARK	Checked	MSG					(3) A2678 S185-A1	PPS No. : 44100062	page number 14 / 38
Rev	Revision comment		Date	Mod. by	Approved	KMS							



			Date	11/12/2013	PRODUCT TYPE PIX-12			QTY.	12	Applicable Panel=L01-06,24-29	Document type	S	Sheet name	S12	HLA	=L01-06,L24-29
F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II				Engineering-P4	RTDs INPUT TO RELAY SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No:		Sales No. : L-22916		Location	
DFA	11/12/2013	ARK	Checked	MSG							(3) A2678 S185-A1		PPS No. : 44100062		page number	
Revision comment		Date	Mod. by	Approved							KMS	15 / 38				




Scale N/A	A3				Date	11/12/2013	PRODUCT TYPE PIX-12		QTY.	12	Applicable Panel=L01-06,24-29	Document type	S	Sheet name	Z01	HLA	=L01-06,L24-29
		A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II	Engineering-P4	VCB DETAILS SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR	Document No: (3) A2678 S185-A1	Sales No. : L-22916 PPS No. : 44100062					Location
		A.A	DFA	11/12/2013	ARK	Checked	MSG										
		Rev	Revision comment	Date	Mod. by	Approved	KMS										

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2/24/2014 12:30


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		<table><tr><td>A1</td><td>#PH-1</td><td>+S1.R-X2:1</td><td>155</td></tr><tr><td>A2</td><td>#N-1</td><td>+S1.R-X2:2</td><td>154</td></tr><tr><td>A3</td><td>#27</td><td>+S1.R-X2:8</td><td>99</td></tr><tr><td>A4</td><td>#1L-</td><td>+S1.R-X2:9</td><td>100</td></tr><tr><td>A5</td><td>#51</td><td>+S1.R-X2:14</td><td>86</td></tr><tr><td>A6</td><td>#2L-</td><td>+S1.R-X2:15</td><td>89</td></tr><tr><td>A7</td><td>#86</td><td>+S1.R-X2:21</td><td>250</td></tr><tr><td>A8</td><td>#87</td><td>+S1.R-X2:22</td><td>251</td></tr><tr><td>A9</td><td>#88</td><td>+S1.R-X2:23</td><td>252</td></tr><tr><td>A10</td><td></td><td></td><td></td></tr><tr><td>A11</td><td></td><td></td><td></td></tr><tr><td>A12</td><td>#2L+</td><td>+S1.R-X2:3</td><td>58</td></tr><tr><td>A13</td><td>#37</td><td>+S1.R-X2:4</td><td>59</td></tr><tr><td>A14</td><td>#38</td><td>+S1.R-X2:5</td><td>60</td></tr><tr><td>A15</td><td>#81</td><td>+S1.R-X2:18</td><td>196</td></tr><tr><td>A16</td><td>#83</td><td>+S1.R-X2:19</td><td>202</td></tr><tr><td>B1</td><td>#84</td><td>+S1.R-X2:20</td><td>201</td></tr><tr><td>B2</td><td>#2L+</td><td>+S1.R-X2:36</td><td>698</td></tr><tr><td>B3</td><td>#53</td><td>+S1.R-X2:37</td><td>699</td></tr><tr><td>B4</td><td>#54</td><td>+S1.R-X2:38</td><td>700</td></tr><tr><td>B5</td><td>#41</td><td>+S1.R-X2:6</td><td>66</td></tr><tr><td>B6</td><td>#116</td><td>+S1.R-X2:7</td><td>67</td></tr><tr><td>B7</td><td>#82</td><td>+S1.R-X2:10</td><td>248</td></tr><tr><td>B8</td><td>#85</td><td>+S1.R-X2:11</td><td>253</td></tr><tr><td>B9</td><td>1L-</td><td></td><td></td></tr><tr><td>B10</td><td>1L-</td><td></td><td></td></tr><tr><td>B13</td><td></td><td></td><td></td></tr><tr><td>B14</td><td></td><td></td><td></td></tr><tr><td>B15</td><td>#115</td><td>+S1.R-X2:28</td><td>245</td></tr><tr><td>B16</td><td>#57</td><td>+S1.R-X2:29</td><td>811</td></tr><tr><td>C1</td><td>#940</td><td></td><td></td></tr><tr><td>C2</td><td>#970</td><td></td><td></td></tr><tr><td>C3</td><td>#30</td><td>+S1.R-X2:32</td><td>399</td></tr><tr><td>C4</td><td>#1L-</td><td>+S1.R-X2:33</td><td>401</td></tr><tr><td>C7</td><td>#48</td><td>+S1.R-X2:16</td><td>755</td></tr><tr><td>C8</td><td>#2L-</td><td>+S1.R-X2:17</td><td>78</td></tr><tr><td>C9</td><td>PH-2</td><td></td><td></td></tr><tr><td>C10</td><td>#72</td><td></td><td></td></tr><tr><td>C11</td><td>#89</td><td>+S1.R-X2:30</td><td>238</td></tr><tr><td>C12</td><td>#69</td><td>+S1.R-X2:31</td><td>239</td></tr><tr><td>C13</td><td></td><td></td><td></td></tr><tr><td>C14</td><td></td><td></td><td></td></tr><tr><td>D15</td><td></td><td></td><td></td></tr><tr><td>D16</td><td></td><td></td><td></td></tr><tr><td>D11</td><td></td><td></td><td></td></tr><tr><td>46</td><td></td><td></td><td></td></tr><tr><td>47</td><td></td><td></td><td></td></tr><tr><td>48</td><td></td><td></td><td></td></tr><tr><td>49</td><td></td><td></td><td></td></tr><tr><td>50</td><td></td><td></td><td></td></tr><tr><td>51</td><td></td><td></td><td></td></tr><tr><td>52</td><td></td><td></td><td></td></tr><tr><td>53</td><td></td><td></td><td></td></tr><tr><td>54</td><td></td><td></td><td></td></tr><tr><td>55</td><td></td><td></td><td></td></tr><tr><td>56</td><td></td><td></td><td></td></tr><tr><td>57</td><td></td><td></td><td></td></tr><tr><td>58</td><td></td><td></td><td></td></tr><tr><td>59</td><td></td><td></td><td></td></tr><tr><td>60</td><td></td><td></td><td></td></tr><tr><td>61</td><td></td><td></td><td></td></tr><tr><td>62</td><td></td><td></td><td></td></tr><tr><td>63</td><td></td><td></td><td></td></tr><tr><td>64</td><td></td><td></td><td></td></tr></table>								A1	#PH-1	+S1.R-X2:1	155	A2	#N-1	+S1.R-X2:2	154	A3	#27	+S1.R-X2:8	99	A4	#1L-	+S1.R-X2:9	100	A5	#51	+S1.R-X2:14	86	A6	#2L-	+S1.R-X2:15	89	A7	#86	+S1.R-X2:21	250	A8	#87	+S1.R-X2:22	251	A9	#88	+S1.R-X2:23	252	A10				A11				A12	#2L+	+S1.R-X2:3	58	A13	#37	+S1.R-X2:4	59	A14	#38	+S1.R-X2:5	60	A15	#81	+S1.R-X2:18	196	A16	#83	+S1.R-X2:19	202	B1	#84	+S1.R-X2:20	201	B2	#2L+	+S1.R-X2:36	698	B3	#53	+S1.R-X2:37	699	B4	#54	+S1.R-X2:38	700	B5	#41	+S1.R-X2:6	66	B6	#116	+S1.R-X2:7	67	B7	#82	+S1.R-X2:10	248	B8	#85	+S1.R-X2:11	253	B9	1L-			B10	1L-			B13				B14				B15	#115	+S1.R-X2:28	245	B16	#57	+S1.R-X2:29	811	C1	#940			C2	#970			C3	#30	+S1.R-X2:32	399	C4	#1L-	+S1.R-X2:33	401	C7	#48	+S1.R-X2:16	755	C8	#2L-	+S1.R-X2:17	78	C9	PH-2			C10	#72			C11	#89	+S1.R-X2:30	238	C12	#69	+S1.R-X2:31	239	C13				C14				D15				D16				D11				46				47				48				49				50				51				52				53				54				55				56				57				58				59				60				61				62				63				64			
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<div>E:\A2678,44100062,L-22916-OGDCL\UCH-II GAS PLANT FACILITY\SCHEMATIC\SI185-220KW MOTOR#A.A.e3s</div> <div>2/24/2014 12:30</div> <div>This document is the exclusive property of SCHNEIDER ELECTRIC - PAKISTAN. (Formerly AREVA T&D PAKISTAN) and shall not be used, copied or communicated to third parties without its prior authorization.</div>		1		2		3		4		5		6		7		8																	
		1		Pilot_Light		manufacturer: PEGASUS		type: PK631949		<div><div>X2</div><div><div></div></div><div>X1</div></div>																							
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		RATED CURRENT		CHARACTERISTIC																													
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		1		Pilot_Light		manufacturer: PEGASUS		type: PK631950		<div><div>X2</div><div><div></div></div><div>X1</div></div>																							
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1		Pilot_Light		manufacturer: PEGASUS		type: PK631951		<div><div>X2</div><div><div></div></div><div>X1</div></div>																									
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1		Pilot_Light		manufacturer: PEGASUS		type: PK632040		<div><div>X2</div><div><div></div></div><div>X1</div></div>																									
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Scale N/A		A1		FAS BUILT		18/02/2014		SUD		Drawn		ARK		CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II				Engineering-P4		LIST OF EQUIPMENT SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV, 40kA, 75kVBIL SWGR		Document No:		Sales No. : L-22916		Location							
		A.A		DFA		11/12/2013		ARK		Checked		MSG										(3) A2678 S185-A1		PPS No. : 44100062		page number							
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Engineering-P4

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The diagram illustrates the internal wiring of the Micom P241 terminal block. It shows connections for current transformers (CTs), diodes, relays, and other components. Key labels include: +S1.D -F26, 1A CT Connection, 5A CT Connection, OPTO INPUTS 1-8, RELAY OUTPUTS 1-7, Micom P241, and various terminal numbers (C2-C15, C19-C24, E18-E1, F14-F11, B1-B25).

A3				Date	11/12/2013	PRODUCT TYPE PIX-12		QTY. 12	Applicable Panel=L01-06,24-29	Document type S	Sheet name Z09	HLA =L01-06,L24
Scale N/A	A1	F AS BUILT	18/02/2014	SUD	Drawn	ARK	CLIENT: M/s OGDCL CONSULTANT: M/s ENAR PROJECT: UCH-II		LIST OF EQUIPMENT SCHEMATIC DIAGRAM HOT OIL MOTOR O/G 220kW 6.6kV. 40kA. 75kVBIL SWGR	Document No:	Sales No. : L-22916	Location
	A.A	DFA	11/12/2013	ARK	Checked	MSG				(3) A2678 S185-A1	PPS No. : 44100062	page number
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