Base Load Power Hub (BLPH)

NITROGEN GENERATION PACKAGE
PACKAGE WIRING DIAGRAM
INCLUDING LAYOUT OF PACKAGE CONTROL PANEL

Document Number: 1724000437-MAC-DG-00009

Document Class: 2

04	24/01/2025	Accepted for Construction (AFC)	GT	MC	TM
03	13/12/2024	Accepted for Construction (AFC)	GT	MC	TM
02	22/10/2024	Accepted for Construction (AFC)	GT	MC	TM
01	01/07/2024	Issue for Review (IFR)	GT	MC	TM
00	08/05/2024	Issue for Review (IFR)	GT	MC	TM
Rev.	Date	Description	Prepared	Reviewed	Approved

COES

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

	PREPARED	CHECKED AND APPROVED	CUSTOMER APPROVAL	DATE	DESCRIPTION
	ASSOLARI O.	TIRABOSCHI T.		02.05.2024	FIRST ISSUE
A	ASSOLARI O.	TIRABOSCHI T.		30.05.2024	ACCORDING TO CUSTOMER COMMENTS
B	ASSOLARI O.	TIRABOSCHI T.		01.08.2024	ACCORDING TO CUSTOMER COMMENTS
C	ASSOLARI O.	TIRABOSCHI T.		04.09.2024	AS-BUILT
D	ASSOLARI O.	TIRABOSCHI T.		18.11.2024	COMMENTS AFTER COMMISSIONING
E	ASSOLARI O.	BERETTA L.		23.01.2025	COMMENTS AFTER COMMISSIONING
F					

	PREPARED	CHECKED AND APPROVED	CUSTOMER APPROVAL	DATE	DESCRIPTION
G					
H					
I					
L					
M					
N					

TEST CERTIFICATE N	2024.134

ELECTRICAL CABINET	=PLANT +LOCATION	WORK ORDER SERIAL NUMBER

TITLE

COMMAND AND CONTROL SWITCHBOARDS NITROGEN GENERATION PACKAGE 64-LP-001 WIRING DIAGRAM

REF. Netherlands

TECHNICAL AND CONSTRUCTIVE FEATURES

ELECTRICAL

RATED VOLTAGE:

RATED FREQUENCY:
50Hz

RATED CURRENT:
32A

AUXILIARY CIRCUIT SUPPLY:
230Vac~ 24Vdc

SHORT CIRCUIT CURRENT:
10kA

EARTH BUSBAR SECTION:
Cu 20x5 mm²

REFERENCE STANDARDS:
IEC 61439-1

MECHANICALS

DEGREE OF PROTECTION (INT.):
IP20

DEGREE OF PROTECTION (EXT.):
IP66

INTERNAL PAINTING:
STEEL

EXTERNAL PAINTING:
STEEL

SEGREGATION FORM:
--

PAINTING PROCEDURE:

DOCUMENT NUMBER:
1724000437-MAT-PRO-00021

INSTALLATION CONDITIONS

ENVIRONMENT TEMPERATURE:
-5° - 41°C

RELATIVE HUMIDITY:
90%

ALTITUDE:
<= 1000mt s.l.m.

INSTALLATION:
FOR EXTERNAL

CABLE INCOMING:
FROM LOW

CABLE OUTGOING:
FROM LOW

WIRING

COLORS

POWER CIRCUITS:
BLACK

ac AUXILIARY CIRCUITS:
BLACK

dc AUXILIARY CIRCUITS:
BLACK

CIRCUITS NOT ISOLATED BY GENERAL DEVICE:
ORANGE

EARTH CIRCUITS:
YELLOW/GREEN

SECTIONS

POWER CIRCUITS:
MINIMUM 2,5mm²

AUXILIARY CIRCUITS:
MINIMUM 1,5mm²

ELECTRONIC CIRCUITS:
MINIMUM 0,5mm²

CURRENT MEASURE CIRCUITS:
2,5mm²

VOLTAGE MEAUSURE CIRCUITS:
2,5mm²

CABLE TYPE:
FS17

TERMINALS

AUXILIARY:
2,5mm²

VOLTAGE MEAUSURE CIRCUITS:
6mm² WITH DISCONNECTING SLIDE-LINK

CURRENT MEASURE CIRCUITS:
6mm² WITH DISCONNECTING SLIDE-LINK AND SHORT-CIRCUIT CROSS CONNECT.

THE COLORS OF THE WIRE DON'T SPECIFIED ARE;
THE SECTIONS OF THE WIRE DON'T SPECIFIED ARE mm²;

COES S.r.l.
Via Pontida , 265
24040 Stezzano (BG)-Italy
Tel. +39 035 2050 511 Fax +39 035 2050 532
www.coessrl.com coes@coessrl.com

LEVELS	DRAWING N.	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	d241024-WD		01
	WORK ORDER N. 2024.4813_001	LOCATION	NEXT 02
DESCRIPTION: COVER			TOTAL 49

LETTER	TYPE OF COMPONENT	EXAMPLE	MARK
A	ASSEMBLED	LASER MASER REGULATOR	A
		TRANSISTOR AMPLIFIER INTEGRATED CIRCUITS AMPLIFIER MAGNETIC AMPLIFIER VALVE AMPLIFIER	AD AJ - AP AM - AT AV - AR
B	TRASDUCER OF QUANTITY NON-ELECTIC TO ELECTRIC OR VICEVERSA	PHOTOELECTRIC CELL ELECTRIC DYNAMOMETER CRISTAL TRASDUCER MICROPHONE PICK-UP LOUDSPEAKER SYNCRONOUS TRANSMITTER	B
		TRANSDUCER OR ANALOGIC SENSOR OR NUMERIC WITH MULTIPLE STEPS (USABLE FOR INDICATION OR THE MEASURE): PRESSURE TRANSDUCER POSITION TRANSDUCER ROTATION TRANSDUCER (TACHOMETRIC GENERATOR) TEMPERATURE TRANSDUCER VELOCITY TRANSDUCER	 BP BQ BR BT BV
C	CAPACITORS	CAPACITORS	C
D	BYNARY ELEMENTS DEVICE OF DELAY DEVICE OF STORAGE	DEVICE AND INTEGRATED CIRCUITS DIGITAL: DELAY LINE ELEMENT BISTABLE ELEMENT MONOSTABLE RECORDER MEMORY MAGNETIC RECORDER ON TAPE OR ON DISC	D
E	MATERIALS SUNDRIES	DEVICE NOT SPECIFIED IN THIS TABLE	E
		HEATER ILLUMINATION LAMP VENTILATOR	EH EL EV
F	PROTECTION DEVICE	OVER-VOLTAGE DEVICE SOURGE ARRESTER	F
		DEVICE OF PROTECTION WITH CURRENT THRESHOLD WITH INSTANTANEOUS ACTION DEVICE OF PROTECTION WITH CURRENT THRESHOLD WITH DELAYED ACTION DEVICE OF PROTECTION WITH CURRENT THRESHOLD WITH INSTANTANEOUS ACTION AND DELAYED FUSE DEVICE OF PROTECTION WITH VOLTAGE THRESHOLD	 FA FR FS FU FV
G	GENERATOR POWER SUPPLY	ROTATING GENERATOR QUARZ OSCILLATOR	G
		BATTERY OF ACCUMULATORS CONVERTER OF FREQUENCY ROTATING OR STATIC POWER SUPPLY	GB GF GS
H	SEGNALLING DEVICE	ACUSTIC SIGNAL OPTICAL / LUMINOUS INDICATOR	HA HL
K	RELAY CONTACTOR	RELÈ ISTANTANEO CON TUTTO O NIENTE O CONTATTORI ISTANTANEO RELÈ BISTABILI O CONTATTORI INTERBLOCCATI (RELÈ CON TUTTO O NIENTE CON ACCOPPIATORE MECCANICO O MAGNETE PERMANENTE) CONTATTORI RELÈ POLARIZZATO RELÈ REED RELÈ TEMPO CON TUTTO O NIENTE (TIMER)	 KA KL KM KP KR KT
L	INDUCTOR, REACTOR	INDUCTOR, RECTOR, COIL	L
M	MOTOR	MOTOR	M
N	ANALOG CIRCUIT INTEGRATED	OPERATIONAL AMPLIFIER ANALOG/DIGITAL HYBRID APPARATUS	N

LETTER	TYPE OF COMPONENT	EXAMPLE	MARK
P	TEST DEVICE AND INSTRUMENT	DEVICE OF MEASURE INDICATOR RECORDERS AND INTEGRATORS GENERATOR OF SIGNALS	P
		AMPEROMETER COUNTER OF IMPULSES WATTMETER APPARATUS RECORDER CLOCK / COUNTER OF HOURS OF SERVICE VOLTMETER	PA PC PJ PS PT PV
Q	MANOEUVRE APPARATUS FOR POWER CIRCUITS	SWITCH AUTOMATIC MOTOR PROTECTION DISCONNETTING SWITCH	QF QM QS
R	RESISTOR	FIXED OR VARIABLE (RHEOSTAT) RESISTOR	R
		POTENTIOMETER DERIVATIVE RESISTOR WITH INTRINSIC VARIATION DEPENDENT OF TEMPERATURE (THERMISTOR) RESISTOR WITH INTRINSIC VARIATION DEPENDENT OF VOLTAGE (VARISTOR)	RP RS RT RV
S	COMMAND OR CONTROL APPARATUS	SELECTOR OR COMMUTATOR PUSH BUTTON (INTO DEVICE ELECTRONIC OF COMMAND WITH PROXIMITY) SENSORS WITH ALL OR NOTHING NUMERIC (WITH STEP SINGLE) OF NATURE MECCANIC AND ELECTRONIC: - SENSOR OF LEVEL OF LIQUID - SENSOR OF PRESSURE - SENSOR OF POSITION (INTO OF PROXIMITY) - SENSOR OF ROTATION - SENSOR OF TEMPERATURE	SA SB SL SP SQ SR ST
T	TRANSFORMER	CURRENT TRANSFORMER COMMAND CIRCUITS POWER SUPPLY TRANSFORMER POWER TRANSFORMER MAGNETIC STABILIZER VOLTAGE TRANSFORMER	TA TC TM TS TV
U	MODULATOR CONVERTER	DISCRIMINATOR DEMODULATOR FREQUENCY CONVERTER ENCODER CONVERTER INVERTER TELEGRAPHIC TRANSLATOR	U
V	ELECTRONIC TUBE SEMICONDUCTOR	ELECTRONIC TUBE GAS DISCHARGE TUBE DIODE TRANSISTOR THYRISTOR	V
		RECTIFIER FOR COMMAND CIRCUITS POWER SUPPLY	VC
W	TRANSMISSION WAYS WAVE GUIDES AERIALS	WIRE CABLE BUS BAR WAVE GUIDE WAVE GUIDE DIRECTIONAL COUPLER DIPOLE PARABOLIC AERIAL	W
X	TERMINAL OUTLET PLUG	CONNECTING BUS BAR TEST PLUG PLUG OUTLET TERMINAL BOARD	XB XJ XP XS XT
Y	APPARATUS MECHANICS ELECTRICALLY OPERATED	ELECTROMAGNET ELECTROMAGNETIC BRAKE ELECTROMAGNETIC FRICTION MAGNETIC MANDREL OR TABLE ELECTROMAGNETIC VALVE	YA YB YC YH YV
Z	TRANSFORMER, IMPEDANCE ADAPTOR EQUALIZER, BAND LIMITER	EQUALIZER OF LINE COMPRESSOR CRYSTAL FILTER	Z

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM

DESCRIPTION
MARKS OF IDENTIFIERS ACC. TO IEC 204-2

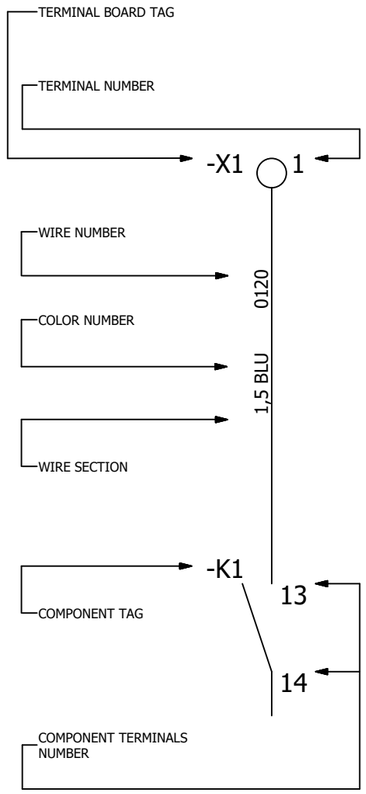
PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= NITROGEN	02
DATE	APPROVED	LOCATION	NEXT
02.05.2024		+ QE	03
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4813_001	d241024-WD		49

TABLE SYMBOLS

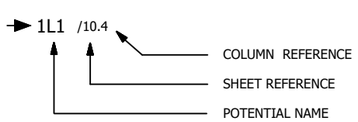
DEFINITION OF IDENTIFIERS (CEI3-34)		
CODE 1	PLANT	=
CODE 2	LOCATION	+
CODE 3	TAG	-
CODE 4	TERMINAL	:

NUMERATION WIRES AND TERMINALS

(CEI 16-1)



POTENTIAL CHAIN



SYMBOL	DESCRIPTION
	TERMINAL
	COLLECTOR BUS-BAR CONNECTION
	FUSE TERMINAL
	FUSE TERMINAL WITH LED
	PUSH BUTTONS
COLOR	HEAD
COLOR	GENERICS
COLOR	LUMINOUS
	SELECTORS
NC	POSITION 0/1
NO	POSITION 1/0/2 FIXED
	POSITION 1/0/2 IMPULSIVE
COLOR	LUMINOUS
	WITH KEY
COLOR COLOR	LED - LAMP
COLOR	LIGHTING BODY FOR OPERATOR LIGHT
	ISOLATED BARRIER (SWITCH AMPLIFIER)
	ISOLATED BARRIER (TEMPERATURE REPEATER)

SYMBOL	DESCRIPTION
	AUXILIARY RELAY POWER RELAY
	TIMED RELAY DELAYED TO EXCITATION
	TIMED RELAY DELAYED TO THE DROP-OUT
	RELAY STEP BY STEP
	POWER CONTACT
	OPEN AND CLOSE AUXILIARY CONTACT
	EXCHANGE AUXILIARY CONTACT
	NORMALLY OPEN NORMALLY CLOSE AUXILIARY CONTACT DELAYED ON OPENING
	NORMALLY OPEN NORMALLY CLOSE AUXILIARY CONTACT DELAYED ON CLOSING
RC	OVERVOTAGE LIMITER

SYMBOL	DESCRIPTION
	TOROIDAL TRANSFORMER
NETWORK ANALIZER	NETWORK ANALIZER
	GENERIC PROTECTION COMMON: -VOLTMETRIC -AMMETRIC -TRANSDUCER
V	VOLTMETER
A	AMMETER
	COMMUTATOR: VOTMETRIC
	AMMETRIC
...n	DIODE MODULE
	Ac/Dc POWER SUPPLY
	BIT PLC
	PIN NUMBER
	PIN DESCRIPTION
	TAG CARD
	REF. SHEET.COLUMN
	PLC ADRESS
	SYMBOLIC ADRESS
	PLC BIT COMMENT
	TAG CARD
	PIN DESCRIPTION
	PLC ADRESS
	SHEET REFERENCE
	COLUMN REFERENCE
	PLC BIT COMMENT

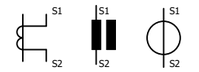
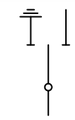
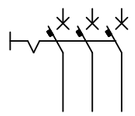
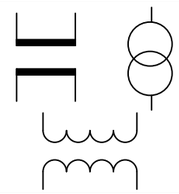
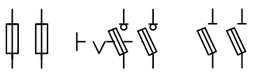
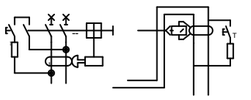
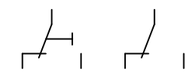
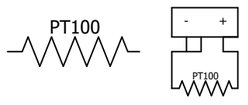
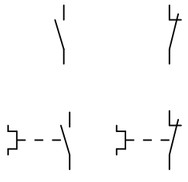
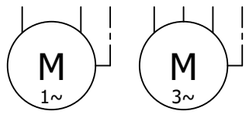
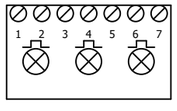
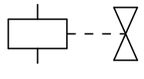
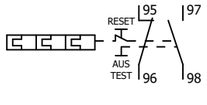
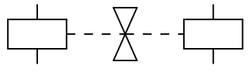
SYMBOL	DESCRIPTION
	HORN
	RESISTOR
	OUTLET SOCKET
	FAN
	MECHANICAL INTERLOCKED
	KEY FREE WITH CLOSED DOOR
	KEY FREE
	KEY LOCKED
	CONNECTOR
	LIMIT SWITCH
P>	AIR PRESSURE SWITCH
L	LEVEL SWITCH
F	SENSOR FILTER
T f	THERMOSTAT
	REED MAGNETIC PROXIMITY SENSOR

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 03
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 04
DESCRIPTION: COMMON SYMBOLS	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

TABLE SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SWITCH DISCONNETING SWITCH		GEARED MOTOR DEVICE		LINE/EARTH DISCONNECTING SWITCH MEDIUM VOLTAGE		CURRENT TRANSFORMER
	SWITCH: MAGNETOTHERMAL MAGNETOTERMAL+DIFFERENTIAL		OPENING COIL		LINE/EARTH DISCONNECTING SWITCH MEDIUM VOLTAGE		VOLTAGE TRANSFORMER
	AUTOMATIC SWITCH		CLOSING COIL		MEDIUM VOLTAGE SWITCH		POWER TRANSFORMER
	DISCONNETTING SWITCH WITH FUSE		MINIMUM VOLTAGE COIL		EARTH DISCONNETTING SWITCH MEDIUM VOLTAGE		
	DIFFERENTIAL SWITCH MINIATURE DIFFERENTIAL		CAPACITOR POLARIZD CAPACITOR		CAPACITIVE LIVE LINE INDICATOR		
	SOURGE ARRESTER		REACTOR				
	EXCHANGE AUXILIARY CONTACT OF: -POSITION -SIGNALLING FOR SWITCH-DISCONNECTOR		THERMIC PROBE PT100				
	NORMALLY OPEN/CLOSE AUXILIARY CONTACT FOR: -SWITCH-DISCONNECTING SWITCH -AUTOMATIC/MAGNETOTH. SWITCH -THERMAL RELAY		THERMOCOUPLE				
			ASYNCHRONOUS MOTOR SINGLE-PHASE THREE-PHASE				
			THREE-PHASE FLASHING-LIGHT				
			SIMPLE SOLENOID VALVE				
	RELAY THERMAL WITH AUXILIARY CONTACTS		DOUBLE SOLENOID VALVE				

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED ASSOLARI O.	CHECKED TIRABOSCHI T.	PLANT = NITROGEN	PAGE 04
	DATE 02.05.2024	APPROVED	LOCATION + QE	NEXT 05
DESCRIPTION COMMON SYMBOLS	WORK ORDER N 2024.4813_001	DRAWING N d241024-WD		TOTAL SHEETS 49

INDEX PAGES

PAGE	DATE	PREPARED	DESCRIPTION	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.
=NITROGEN+QE/01	02.05.2024	ASSOLARI O.	COVER	30.05.2024	A	01.08.2024	B	04.09.2024	C	18.11.2024	D	23.01.2025	E														
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=NITROGEN+QE/43	02.05.2024	ASSOLARI O.	SUMMARY CARD PN COUPLER AND SWITCH SCALANCE																								
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=NITROGEN+QE/45	02.05.2024	ASSOLARI O.	POWER SUPPLY PN/PN COUPLER																								
=NITROGEN+QE/46	02.05.2024	ASSOLARI O.	DIGITAL INPUT I/O RACK	30.05.2024	A																						
=NITROGEN+QE/47	02.05.2024	ASSOLARI O.	DIGITAL INPUT I/O RACK	30.05.2024	A																						
=NITROGEN+QE/48	02.05.2024	ASSOLARI O.	DIGITAL INPUT I/O RACK	30.05.2024	A			04.09.2024	C																		
=NITROGEN+QE/49	02.05.2024	ASSOLARI O.	DIGITAL INPUT I/O RACK			01.08.2024	B																				
=NITROGEN+QE/51	02.05.2024	ASSOLARI O.	DIGITAL OUTPUT I/O RACK	30.05.2024	A																						
=NITROGEN+QE/52	02.05.2024	ASSOLARI O.	DIGITAL OUTPUT I/O RACK	30.05.2024	A	01.08.2024	B																				
=NITROGEN+QE/53	02.05.2024	ASSOLARI O.	DIGITAL OUTPUT I/O RACK			01.08.2024	B																				

REV.	DATE	PREPARED	REV.	DATE	PREPARED
E	23.01.2025	O.A.			
D	18.11.2024	O.A			
C	04.09.2024	O.A.			
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 05
DESCRIPTION: INDEX PAGES	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 06
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

INDEX PAGES

PAGE	DATE	PREPARED	DESCRIPTION	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.	DATE	REV.
=NITROGEN+QE/54	02.05.2024	ASSOLARI O.	ANALOG INPUT I/O RACK	30.05.2024	A																						
=NITROGEN+QE/55	02.05.2024	ASSOLARI O.	ANALOG INPUT I/O RACK	30.05.2024	A					18.11.2024	D	23.01.2025	E														
=NITROGEN+QE/60	02.05.2024	ASSOLARI O.	AUXILIARY CIRCUIT SWTCH 5 PORT PROFINET																								
=NITROGEN+QE/61	02.05.2024	ASSOLARI O.	CONNECTION ProfiNet INTERNAL SWITCHBOARD	30.05.2024	A																						
=NITROGEN+QE/62	02.05.2024	ASSOLARI O.	CONNECTION ProfiNet EXTERNAL SWITCHBOARD	30.05.2024	A																						
=NITROGEN+QE/70	02.05.2024	ASSOLARI O.	TERMINAL BOARD -X1																								
=NITROGEN+QE/71	02.05.2024	ASSOLARI O.	TERMINAL BOARD -X2																								
=NITROGEN+QE/72	02.05.2024	ASSOLARI O.	TERMINAL BOARD -XA	30.05.2024	A			04.09.2024	C																		
=NITROGEN+QE/73	02.05.2024	ASSOLARI O.	TERMINAL BOARD -XDI			01.08.2024	B																				
=NITROGEN+QE/74	02.05.2024	ASSOLARI O.	TERMINAL BOARD -XDI			01.08.2024	B																				
=NITROGEN+QE/75	02.05.2024	ASSOLARI O.	TERMINAL BOARD -XDO			01.08.2024	B																				
=NITROGEN+QE/76	02.05.2024	ASSOLARI O.	TERMINAL BOARD -XY			01.08.2024	B																				
=NITROGEN+QE/77	02.05.2024	ASSOLARI O.	TERMINAL BOARD -XAI					04.09.2024	C																		
=NITROGEN+QE/78	02.05.2024	ASSOLARI O.	TERMINAL BOARD -XAI					04.09.2024	C																		
=NITROGEN+QE/79	02.05.2024	ASSOLARI O.	TERMINAL BOARD -XCOM					04.09.2024	C																		
=NITROGEN+QE/85	02.05.2024	ASSOLARI O.	COMPONENT LIST	30.05.2024	A	01.08.2024	B																				
=NITROGEN+QE/86	02.05.2024	ASSOLARI O.	COMPONENT LIST	30.05.2024	A	01.08.2024	B																				
=NITROGEN+QE/87	02.05.2024	ASSOLARI O.	COMPONENT LIST	30.05.2024	A	01.08.2024	B																				
=NITROGEN+QE/88	02.05.2024	ASSOLARI O.	COMPONENT LIST	30.05.2024	A	01.08.2024	B																				

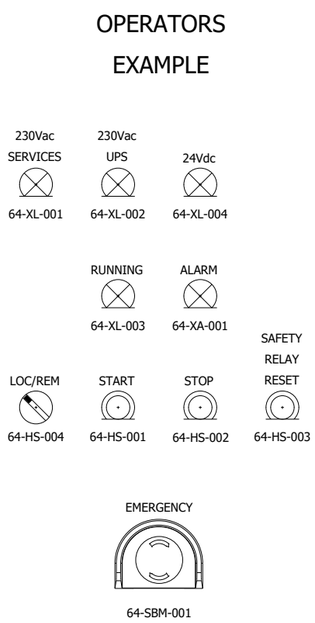
REV.	DATE	PREPARED	REV.	DATE	PREPARED
E	23.01.2025	O.A.			
D	18.11.2024	O.A			
C	04.09.2024	O.A.			
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

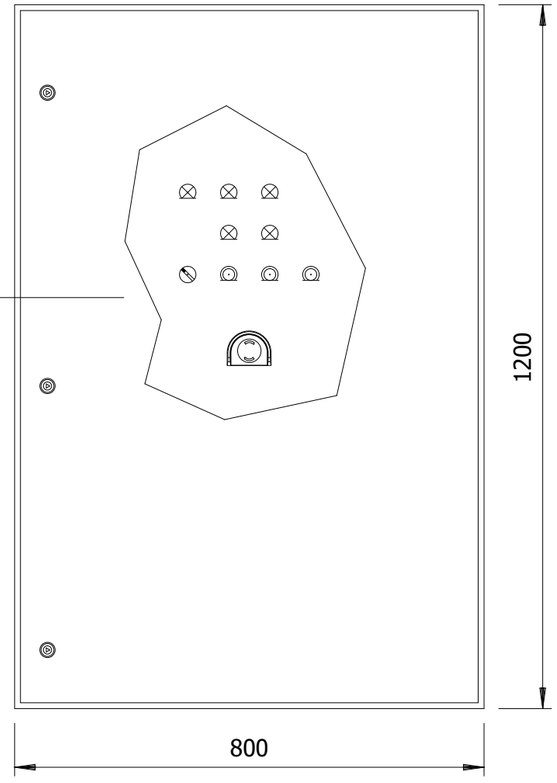
PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 06
DESCRIPTION: INDEX PAGES	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 10
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

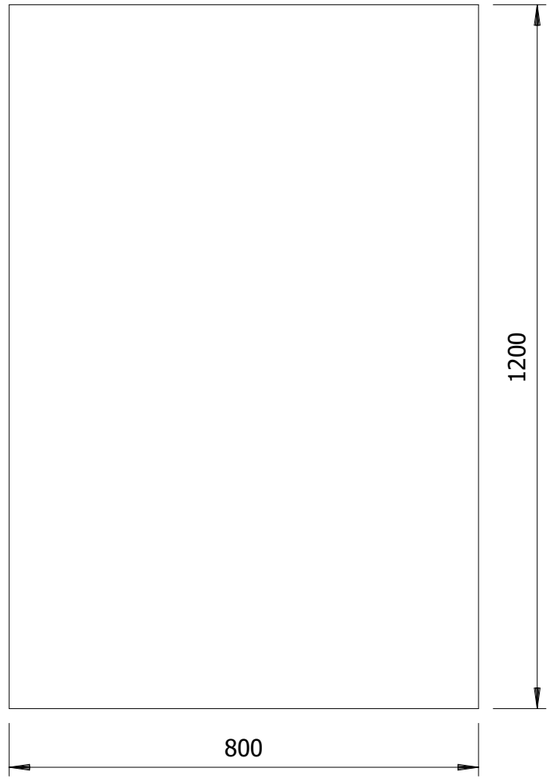
64-LP-001

FRONT

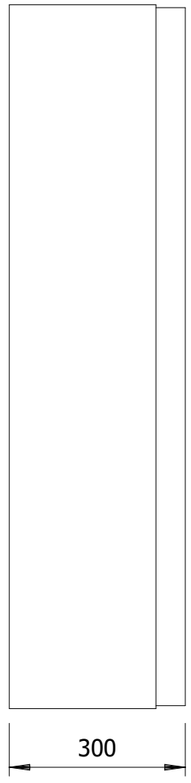




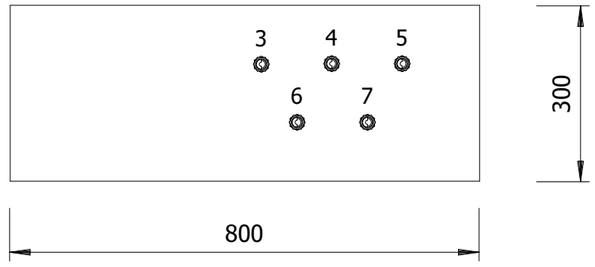
FRONT WITHOUT DOOR



SIDE



FRONT BOTTTOM



3 =M20 CABLE "84312-CEL"

4 =M20 CABLE "83111-CEL"

5 =M20 CABLE "C-64-XS-001/B400-SIS-001"

6 =M20 CABLE "C-64-XA-003/B400-SIS-001"

7 =M20 CABLE "64-LP-001/B400-NET-001"

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024				
A	30.05.2024	O.A.			

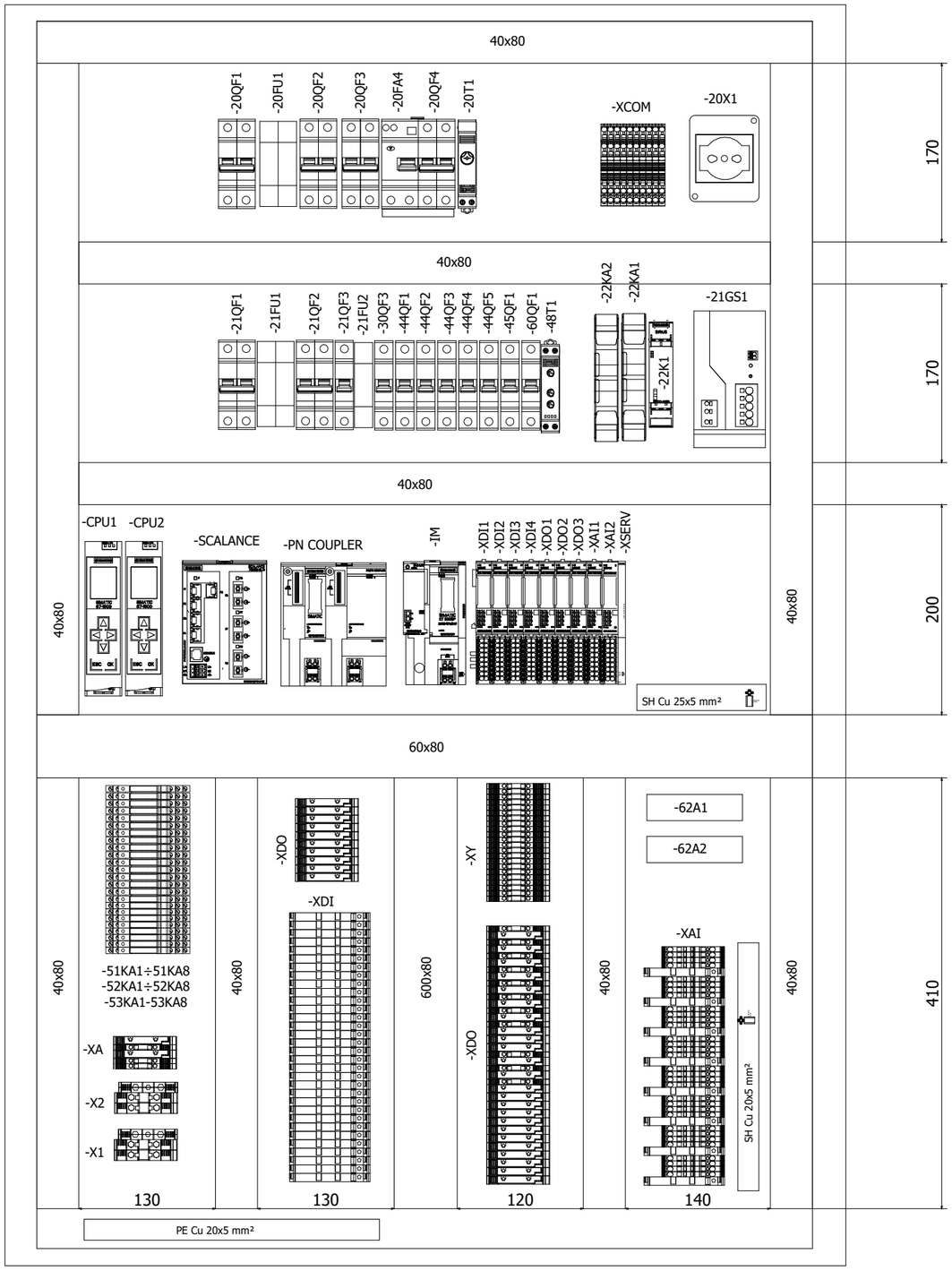
PLANT
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM

DESCRIPTION
EXTERNAL VIEWS

PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= NITROGEN	10
DATE	APPROVED	LOCATION	NEXT
02.05.2024		+ QE	11
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4813_001	d241024-WD		49

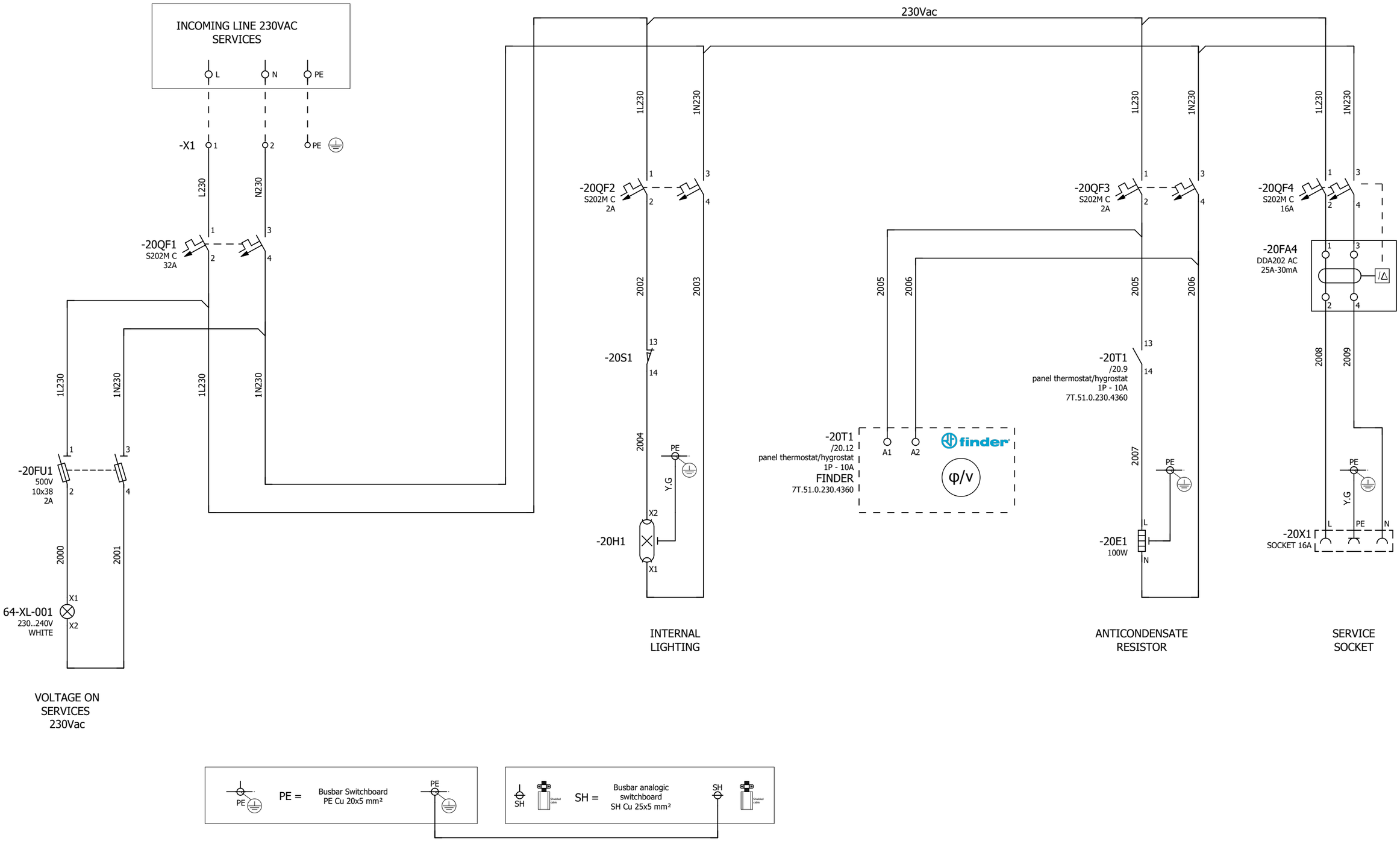
64-LP-001

INTERNAL



REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

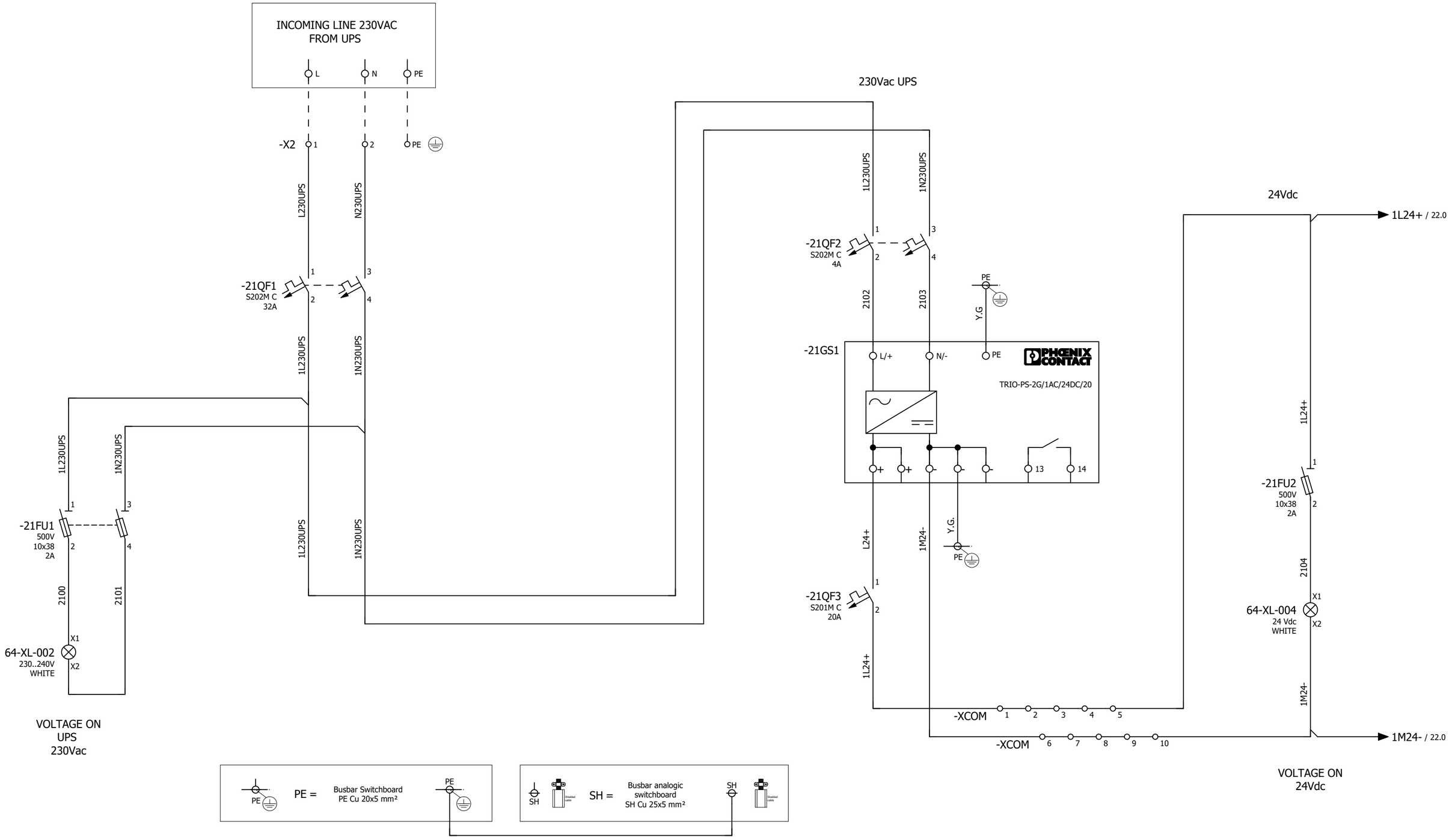
PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: INTERNAL VIEWS	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	TOTAL SHEETS: 49
			PAGE: 11
			NEXT: 20



REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

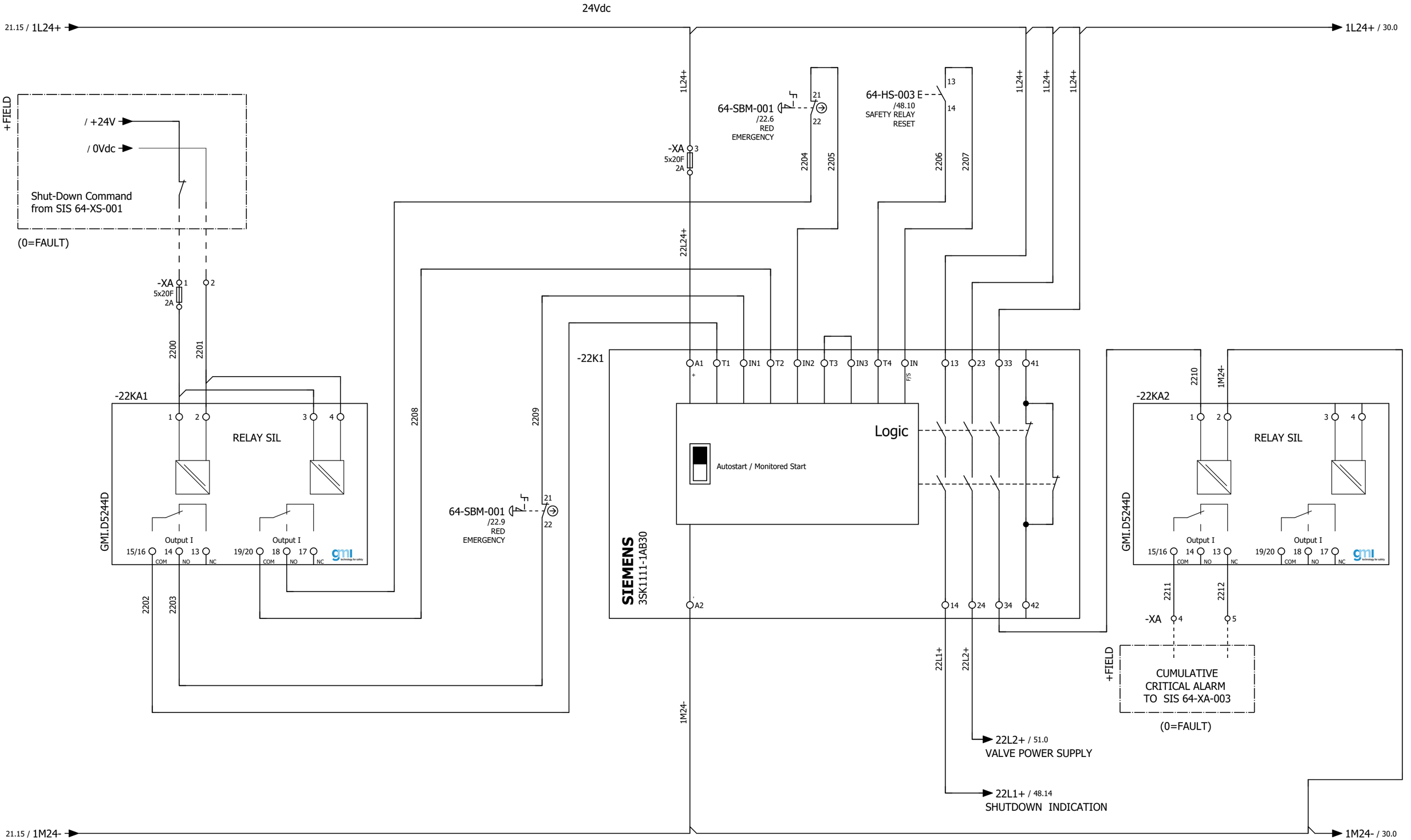
PLANT	PREPARED	CHECKED	PLANT
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= NITROGEN
DESCRIPTION	DATE	APPROVED	LOCATION
INCOMING LINE 230Vac SERVICES	02.05.2024		+ QE
	WORK ORDER N	DRAWING N	
	2024.4813_001	d241024-WD	

PAGE	NEXT	TOTAL SHEETS
20	21	49



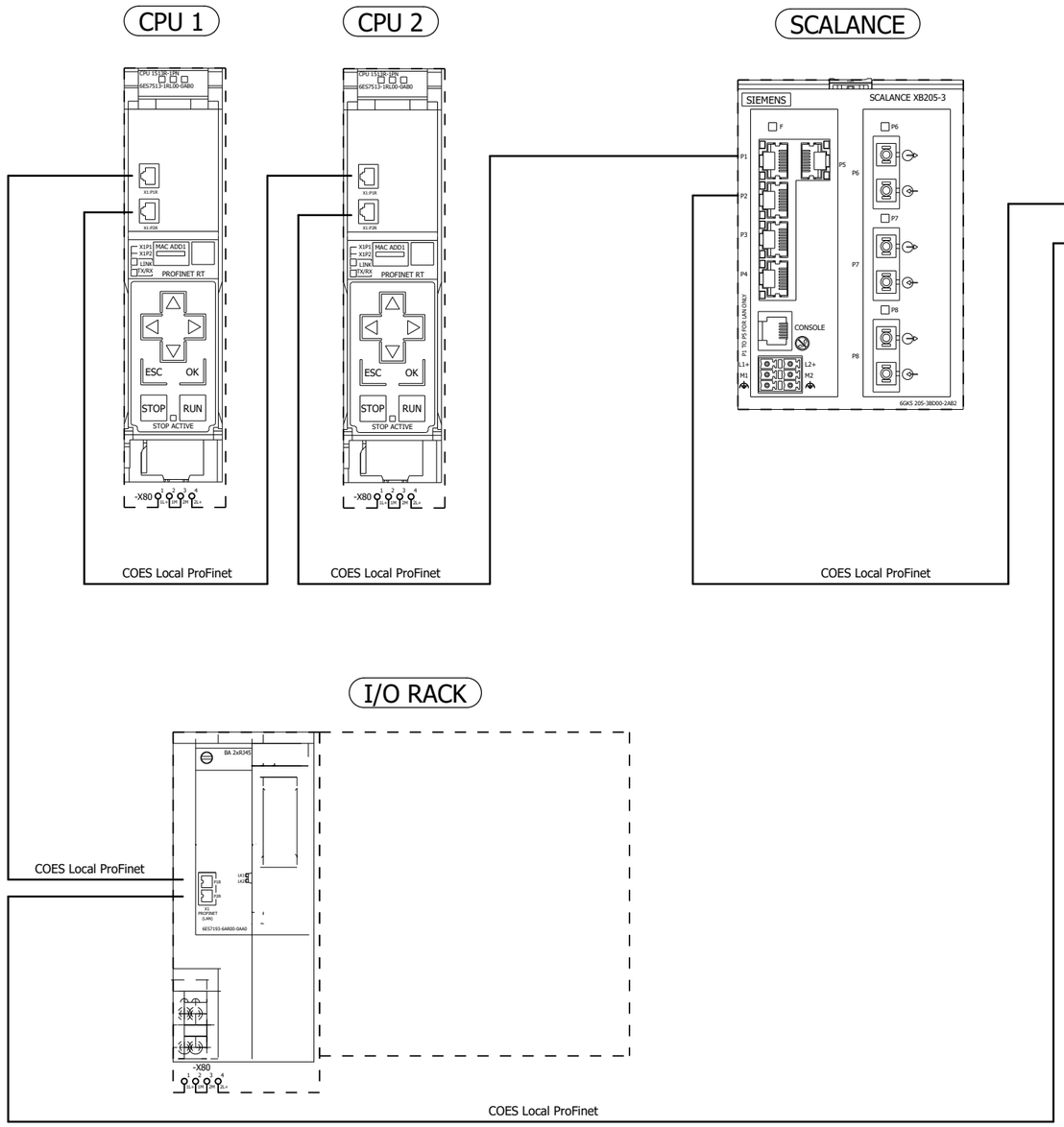
REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
DESCRIPTION: INCOMING LINE 230Vac FROM UPS	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	TOTAL SHEETS: 49
			PAGE: 21
			NEXT: 22



REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

PLANT	PREPARED	CHECKED	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= NITROGEN	22
DESCRIPTION	DATE	APPROVED	LOCATION	NEXT
SAFETY RELAY 24Vdc	02.05.2024		+ QE	25
	WORK ORDER N	DRAWING N		TOTAL SHEETS
	2024.4813_001	d241024-WD		49



NOTE:
this ProFinet cable
is not in COES'S
scope of supply

CUSTOMER'S
PROFINET
NETWORK

FIELD

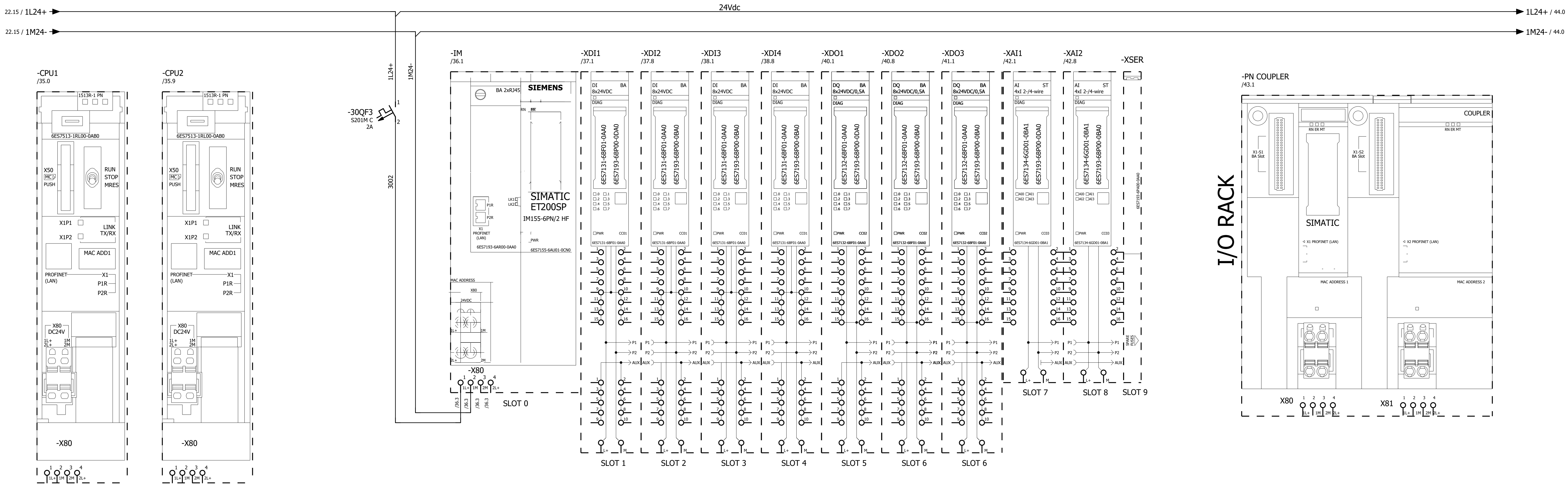
NITROGEN UCP

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM

DESCRIPTION
NETWORK ARCHITECTURE

PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= NITROGEN	25
DATE	APPROVED	LOCATION	NEXT
02.05.2024		+ QE	30
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4813_001	d241024-WD		49



B	01.08.2024	O.A.			
REV.	DATE	PREPARED	REV.	DATE	PREPARED

PLANT COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED ASSOLARI O.	CHECKED TIRABOSCHI T.	PLANT = NITROGEN	PAGE 30
	DATE 02.05.2024	APPROVED	LOCATION + QE	NEXT 35
DESCRIPTION PLC CONFIGURATION	WORK ORDER N 2024.4813_001	DRAWING N d241024-WD		TOTAL SHEETS 49

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

-CPU1
/30.0
/44.10
SIE.6ES7513-1RL00-0AB0
SIE.6ES7954-8LF03-0AA0

S7-1500 SIEMENS
CPU 1513 R

X1P1 R: PN /61.1
X1P2 R: PN /61.2

-X80:1 1L+ /44.10 POWER SUPPLY CPU 1513R-1PN - CPU1
-X80:2 1M /44.10
-X80:3 2M /44.10
-X80:4 2L+ /44.11

6ES7513-1RL00-0AB0

-CPU2
/30.1
/44.13
SIE.6ES7513-1RL00-0AB0
SIE.6ES7954-8LF03-0AA0

S7-1500 SIEMENS
CPU 1513 R

X1P1 R: PN /61.5
X1P2 R: PN /61.6

-X80:1 1L+ /44.13 POWER SUPPLY CPU 1513R-1PN - CPU2
-X80:2 1M /44.13
-X80:3 2M /44.13
-X80:4 2L+ /44.13

6ES7513-1RL00-0AB0

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 35
DESCRIPTION: SUMMARY CPU	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 36
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

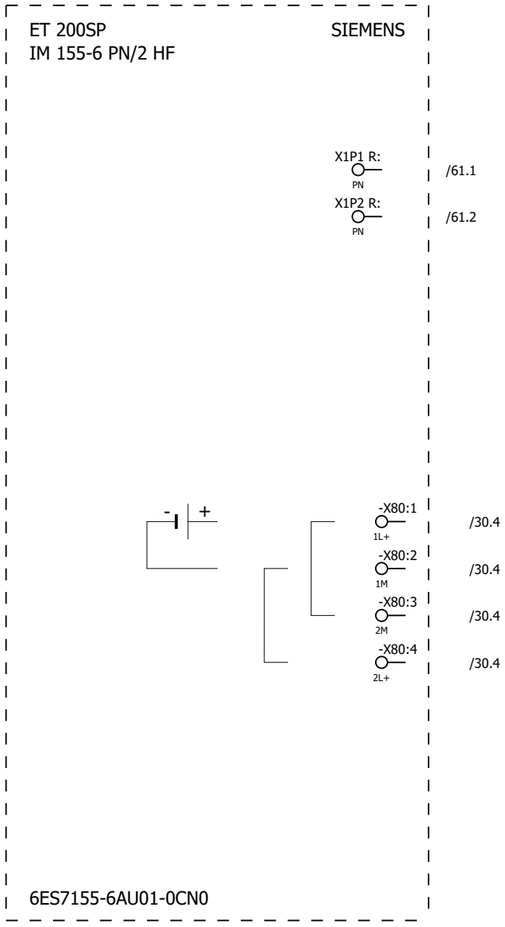
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

/30.4

-IM

SIE.6ES7155-6AU01-0CN0

SIE.6ES7193-6AR00-0AA0



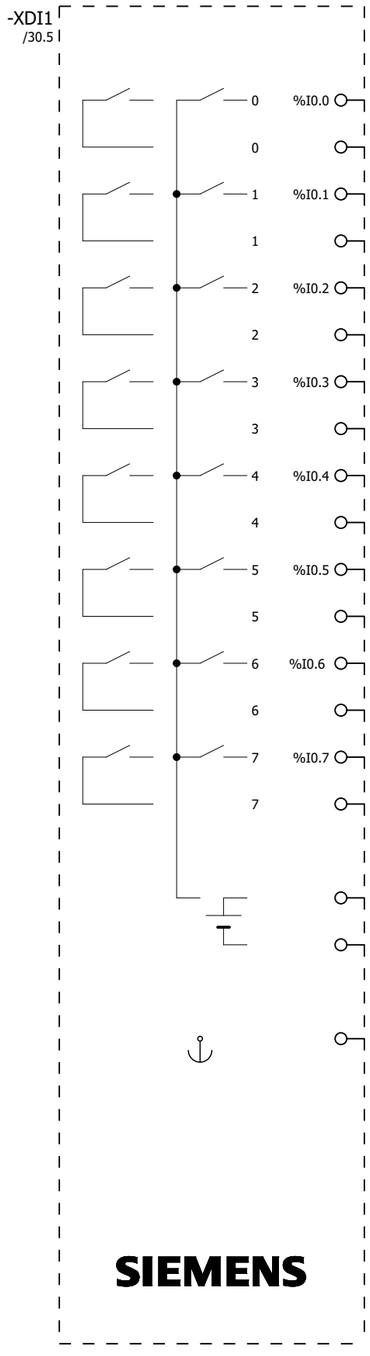
REV.	DATE	PREPARED	REV.	DATE	PREPARED

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 36
DESCRIPTION: SUMMARY CARDS I/O RACK	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 37
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

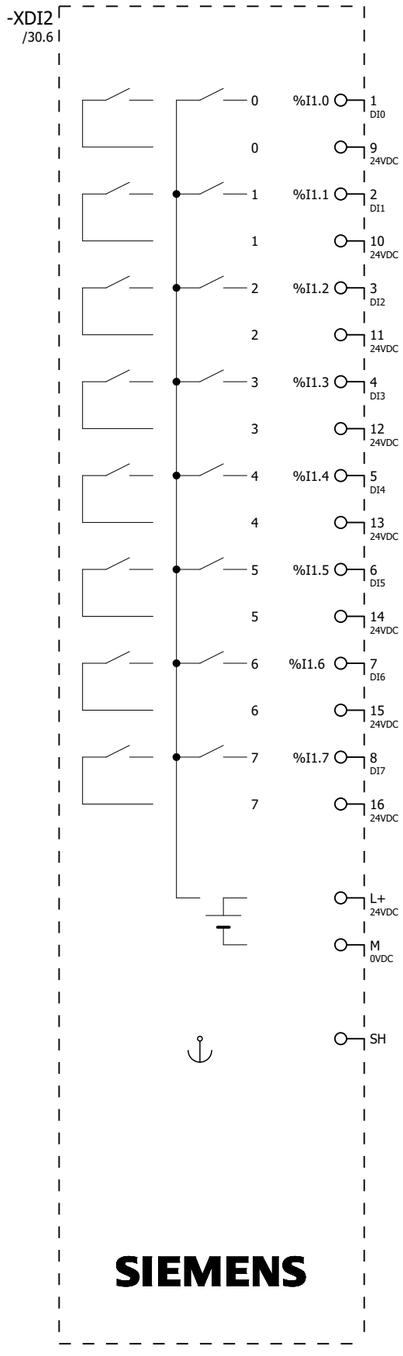
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

6ES7131-6BF01-0AA0
6ES7193-6BP00-0DA0



/46.0	64-ZSH-051	VALVE 64-XV-051 OPEN LIMIT SWITCH	
/46.2	64-ZSL-051	VALVE 64-XV-051 CLOSED LIMIT SWITCH	
/46.4	64-ZSH-052	VALVE 64-XV-052 OPEN LIMIT SWITCH	
/46.6	64-ZSL-052	VALVE 64-XV-052 CLOSED LIMIT SWITCH	
/46.8	64-ZSH-053	VALVE 64-XV-053 OPEN LIMIT SWITCH	
/46.10	64-ZSL-053	VALVE 64-XV-053 CLOSED LIMIT SWITCH	
/46.12	64-ZSH-0514	VALVE 64-XV-054 OPEN LIMIT SWITCH	
/46.14	64-ZSL-054	VALVE 64-XV-054 CLOSED LIMIT SWITCH	
/44.1		POWER SUPPLY WHITE CARD DIGITAL INPUT -XDI1	
/44.1			

6ES7131-6BF01-0AA0
6ES7193-6BP00-0BA0



/47.0	64-ZSH-055	VALVE 64-XV-055 OPEN LIMIT SWITCH	
/47.2	64-ZSL-055	VALVE 64-XV-055 CLOSED LIMIT SWITCH	
/47.4	64-ZSH-056	VALVE 64-XV-056 OPEN LIMIT SWITCH	
/47.6	64-ZSL-056	VALVE 64-XV-056 CLOSED LIMIT SWITCH	
/47.8	64-ZSH-057	VALVE 64-XV-057 OPEN LIMIT SWITCH	
/47.10	64-ZSL-057	VALVE 64-XV-057 CLOSED LIMIT SWITCH	
/47.12	64-ZSH-058	VALVE 64-XV-058 OPEN LIMIT SWITCH	
/47.14	64-ZSL-058	VALVE 64-XV-058 CLOSED LIMIT SWITCH	

REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

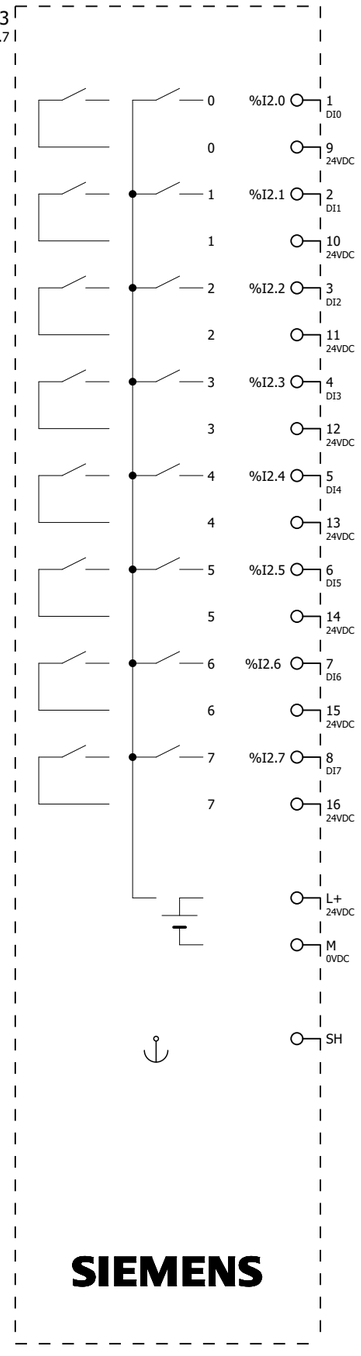
coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 37
DESCRIPTION: SUMMARY CARDS I/O RACK	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 38
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

6ES7131-6BF01-0AA0
6ES7193-6BP00-0BA0

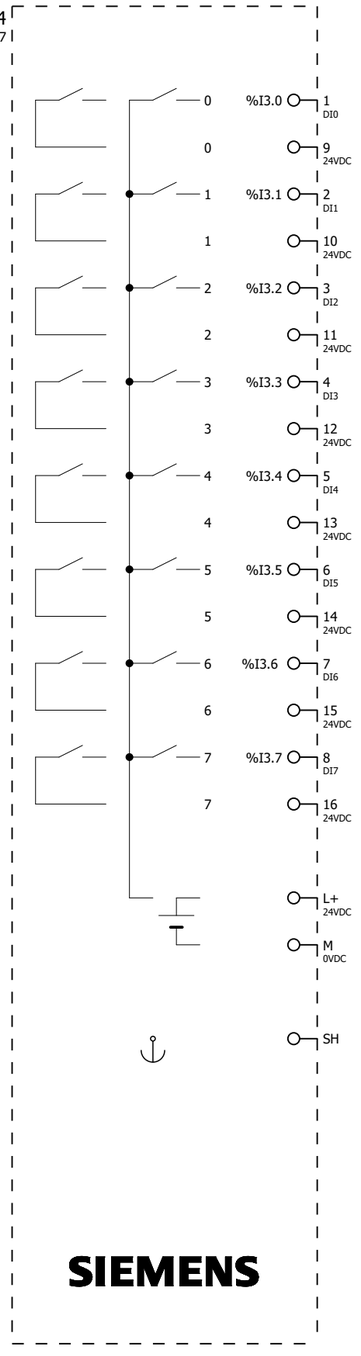
-XDI3
/30.7



/48.0	64-ZSH-059	VALVE 64-XV-059 OPEN LIMIT SWITCH		
/48.2	64-ZSL-059	VALVE 64-XV-059 CLOSED LIMIT SWITCH		
/48.4	64-TH-001	INTERNAL CABINET THERMOSTAT		
/48.6	64-HS-001	LOCAL START PUSH BUTTON		
/48.8	64-HS-002	LOCAL STOP PUSH BUTTON		
/48.10	64-HS-003	LOCAL ALARM RESET		
/48.12	64-HS-004	LOCAL REMOTE SELECTOR STATUS		
/48.14	64-ESD-001	SHUTDOWN ALARM FROM SIS - INDICATION ONLY		

6ES7131-6BF01-0AA0
6ES7193-6BP00-0BA0

-XDI4
/30.7



/49.0	64-ZSH-060	VALVE 64-XV-060 OPEN LIMIT SWITCH		
/49.2	64-ZSL-060	VALVE 64-XV-060 CLOSED LIMIT SWITCH		
/49.4	64-ZSH-061	VALVE 64-XV-061 OPEN LIMIT SWITCH		
/49.6	64-ZSL-061	VALVE 64-XV-061 CLOSED LIMIT SWITCH		
/49.8		SPARE		
/49.10		SPARE		
/49.12		SPARE		
/49.14		SPARE		

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 38
DESCRIPTION: SUMMARY CARDS I/O RACK	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 40
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

6ES7132-6BF01-0AA0
6ES7193-6BP00-0DA0

-XDO1
/30.8

%Q0.0	/51.0	64-XV-051	VALVE 64-XV-051 COMMAND		
%Q0.1	/51.2	64-XV-052	VALVE 64-XV-052 COMMAND		
%Q0.2	/51.4	64-XV-053	VALVE 64-XV-053 COMMAND		
%Q0.3	/51.6	64-XV-054	VALVE 64-XV-054 COMMAND		
%Q0.4	/51.8	64-XV-055	VALVE 64-XV-055 COMMAND		
%Q0.5	/51.10	64-XV-056	VALVE 64-XV-056 COMMAND		
%Q0.6	/51.12	64-XV-057	VALVE 64-XV-057 COMMAND		
%Q0.7	/51.14	64-XV-058	VALVE 64-XV-058 COMMAND		
L+ 24VDC	/44.3		POWER SUPPLY WHITE CARD DIGITAL OUTPUT -XDO1		
M 0VDC	/44.3				
SH					

SIEMENS

6ES7132-6BF01-0AA0
6ES7193-6BP00-0BA0

-XDO2
/30.8

%Q1.0	/52.0	64-XV-059	VALVE 64-XV-059 COMMAND		
%Q1.1	/52.2		SPARE		
%Q1.2	/52.4	64-XL-003	RUNNING SYSTEM LAMP		
%Q1.3	/52.6	64-XA-001	GENERAL ALARM SYSTEM LAMP		
%Q1.4	/52.8	64-XL-003-DCS	NITROGEN GENERATOR RUNNING (TO DCS)		
%Q1.5	/52.10	64-XA-001-DCS	NITROGEN GENERATOR ALARM (TO DCS)		
%Q1.6	/52.12	64-XV-060	VALVE 64 XV-060 COMMAND		
%Q1.7	/52.14	64-XV-061	VALVE 64 XV-061 COMMAND		
L+ 24VDC					
M 0VDC					
SH					

SIEMENS

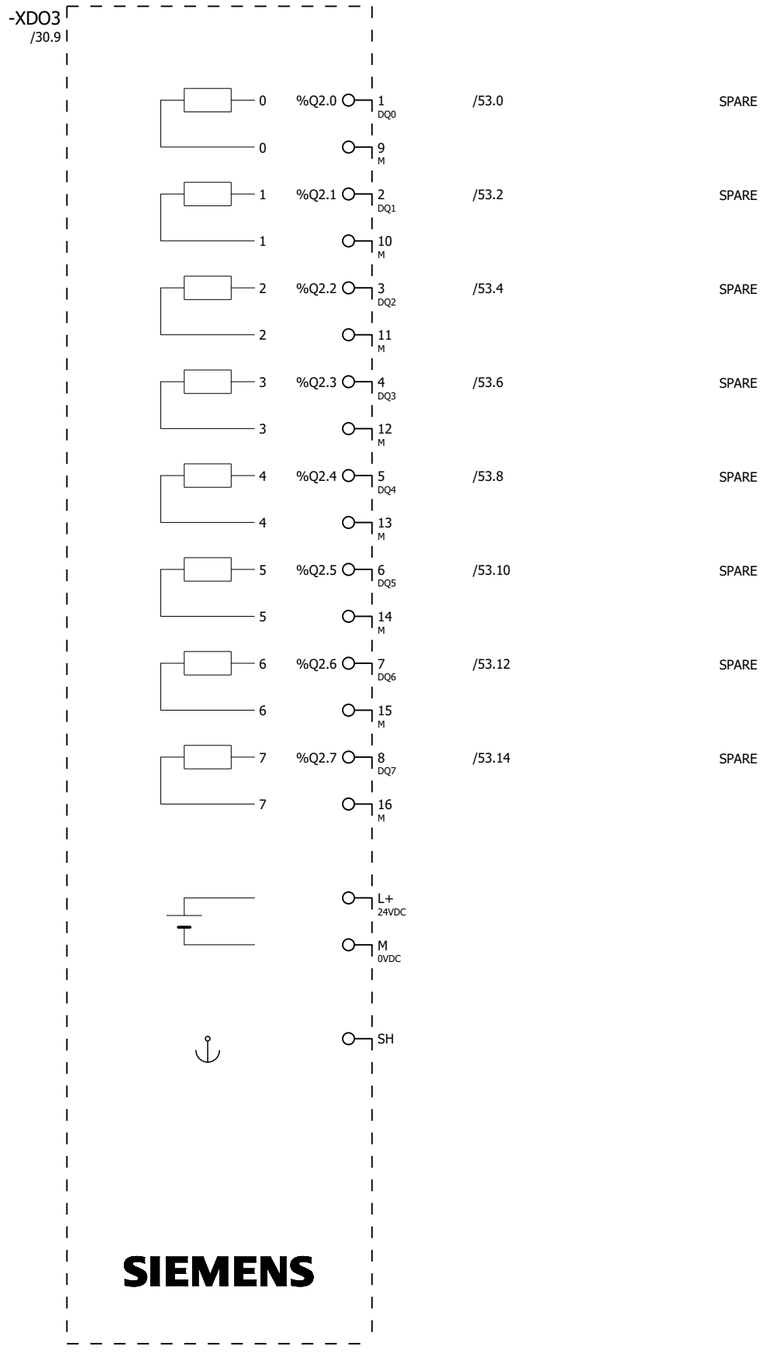
REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 40
DESCRIPTION: SUMMARY CARDS I/O RACK	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 41
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

6ES7132-6BF01-0AA0
6ES7193-6BP00-0BA0



REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

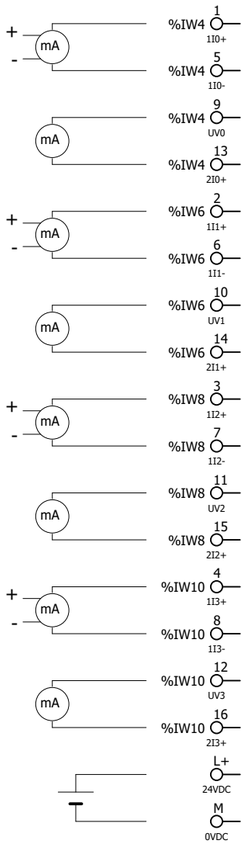
PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 41
DESCRIPTION: SUMMARY CARDS I/O RACK	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 42
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

/30.9

-XAI1

SIE.6ES7134-6GD01-0BA1
SIE.6ES7193-6BP00-0DA0

ET 200SP SIEMENS
AI 4xI 2-/4-wire ST



/54.1				
/54.1				
/54.2	64_PT_051	INLET PRESSUTE TRANSMITTER		
/54.2				
/54.5				
/54.5				
/54.6	64_PT_052	TOWER 1 PRESSUTE TRANSMITTER		
/54.6				
/54.9				
/54.9				
/54.10	64_PT_053	TOWER 2 PRESSUTE TRANSMITTER		
/54.10				
/54.13				
/54.13				
/54.14	64_PT_057	OUTLET B PRESSUTE TRANSMITTER		
/54.14				
/44.6		POWER SUPPLY WHITE CARD ANALOG INPUT -XAI1		
/44.7				

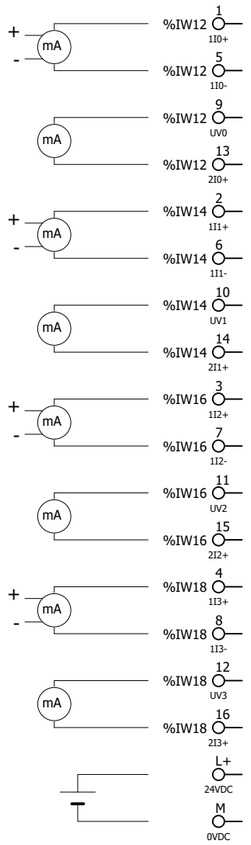
6ES7134-6GD01-0BA1

/30.10

-XAI2

SIE.6ES7134-6GD01-0BA1
SIE.6ES7193-6BP00-0BA0

ET 200SP SIEMENS
AI 4xI 2-/4-wire ST



/55.1				
/55.1				
/55.2	64_PT_059	PRESSURE TRANSMITTER INSTRUMENT AIR RECIEVER		
/55.2				
/55.5				
/55.5				
/55.6	64_PDIT_056	DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS		
/55.6				
/55.10	64_AT_051	OXYGEN TRANSMITTER		
/55.10				
/55.10				
/55.11				
/55.13				
/55.13				
/55.14	_XAI_45	SPARE		
/55.14				

6ES7134-6GD01-0BA1

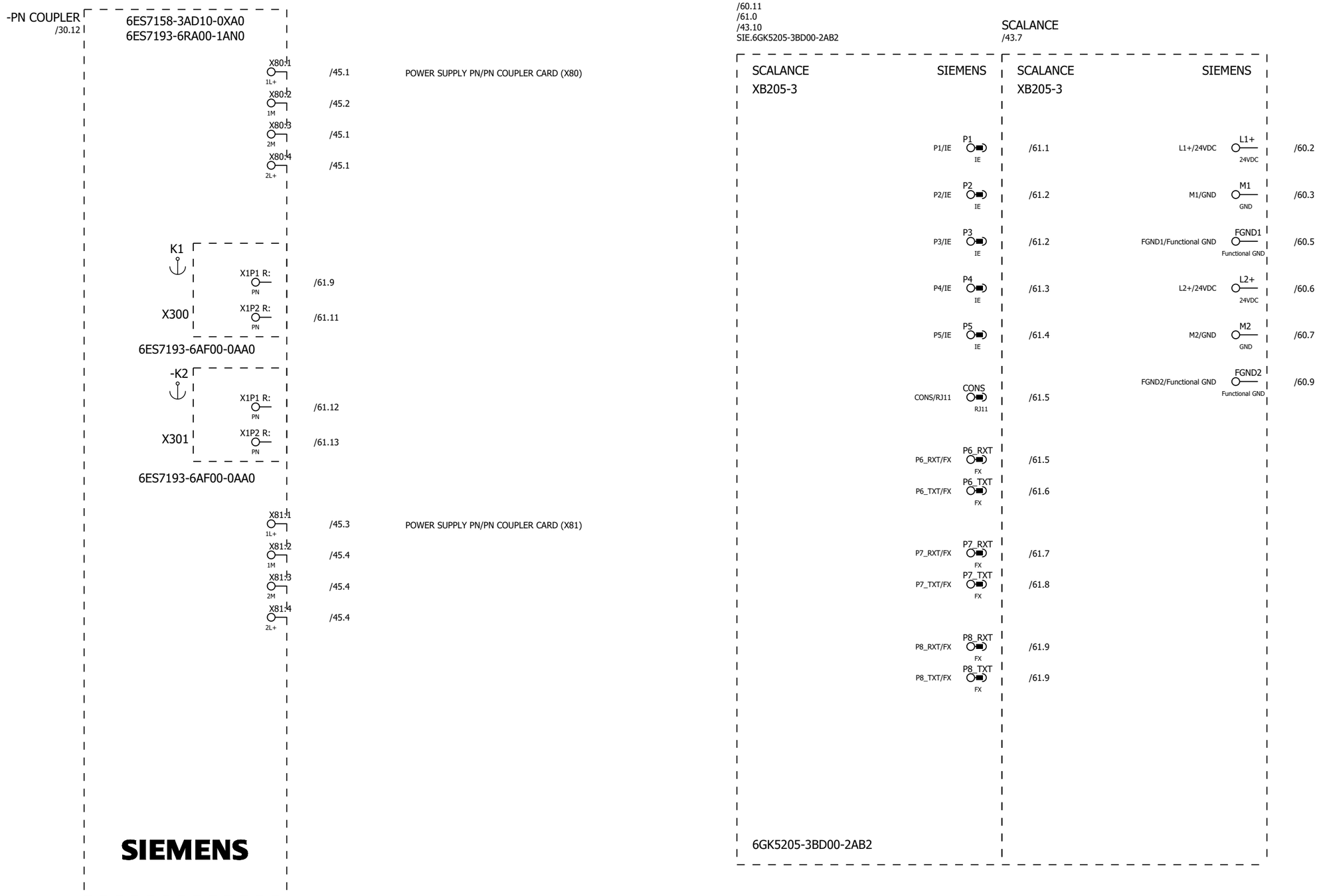
REV.	DATE	PREPARED	REV.	DATE	PREPARED
E	23.01.2025	O.A.			
A	30.05.2024	O.A.			

coes 20th 1997 - 2017

PLANT
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM

DESCRIPTION
SUMMARY CARDS I/O RACK

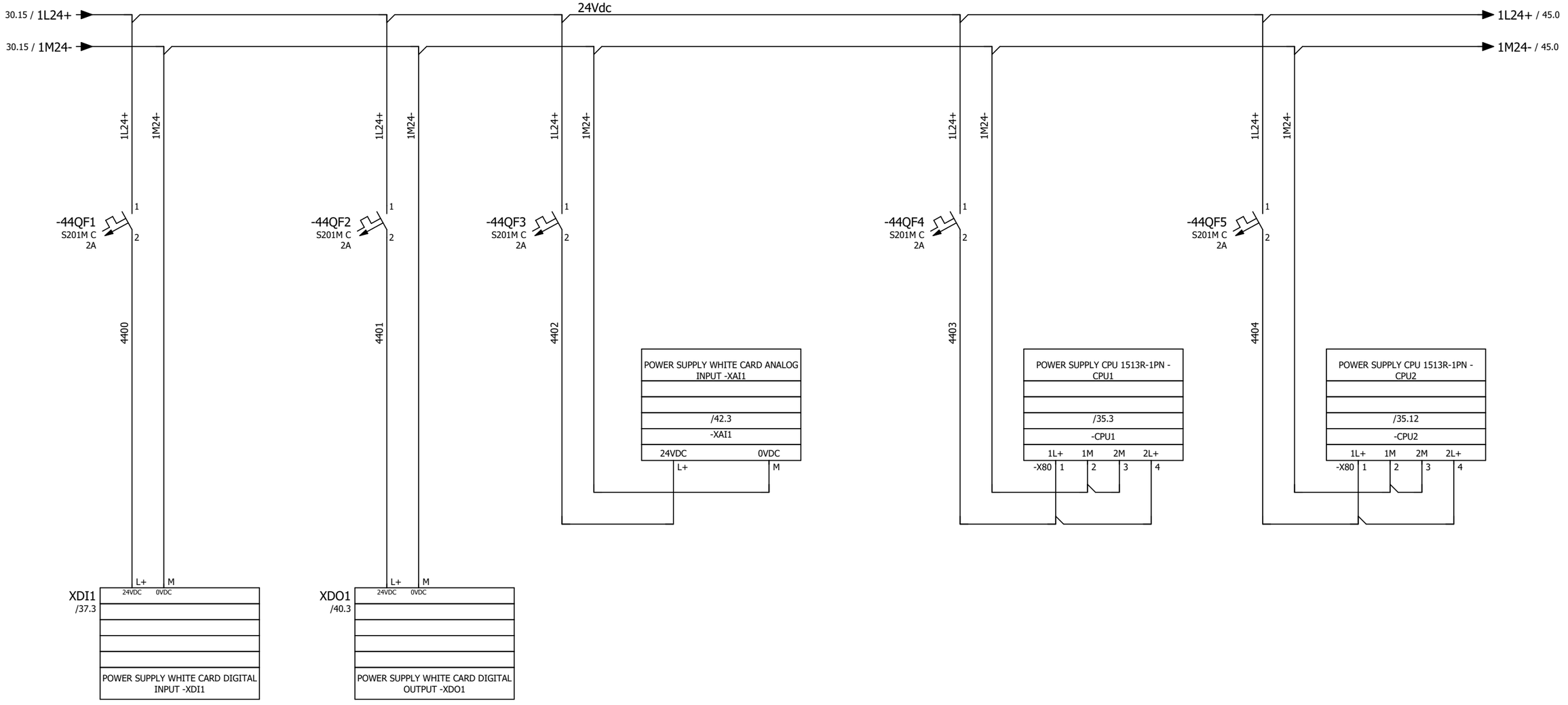
PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= NITROGEN	42
DATE	APPROVED	LOCATION	NEXT
02.05.2024		+ QE	43
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4813_001	d241024-WD		49



REV.	DATE	PREPARED	REV.	DATE	PREPARED

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: SUMMARY CARD PN COUPLER AND SWITCH SCALANCE	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	TOTAL SHEETS: 49

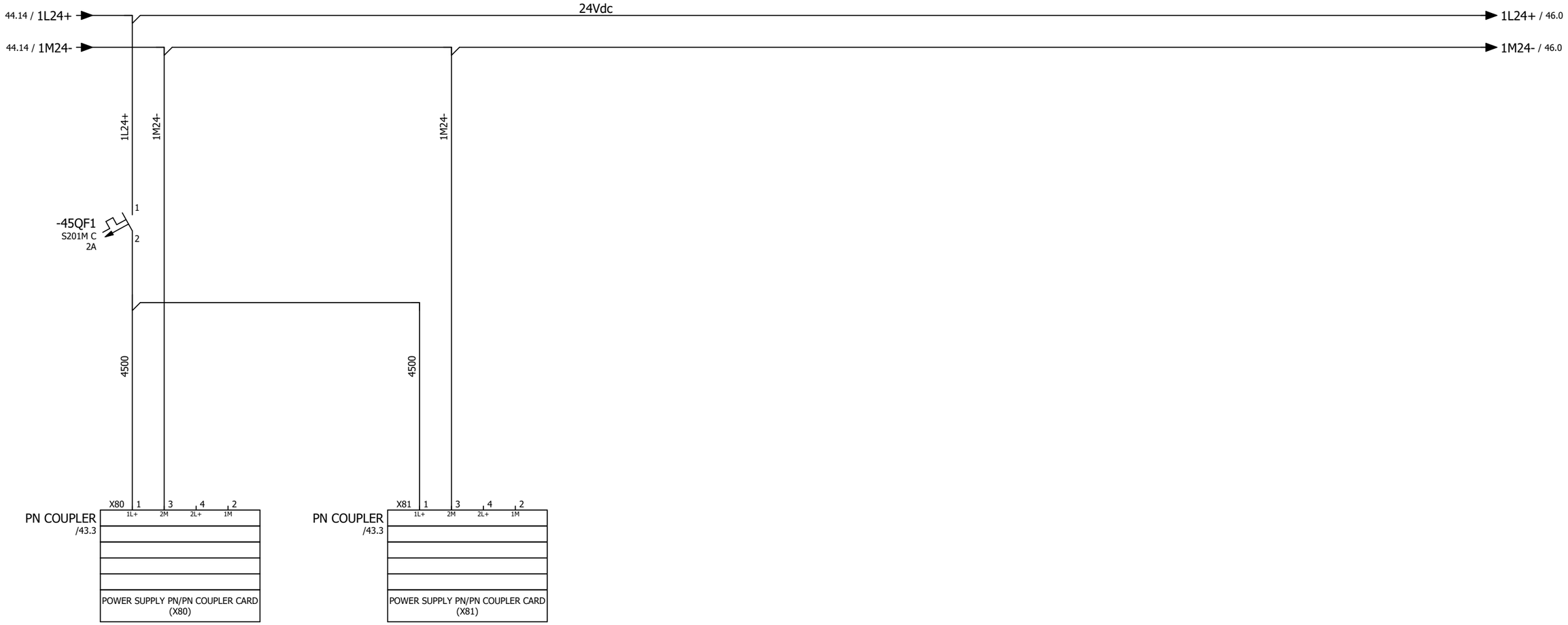
PAGE	NEXT
43	44



REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: POWER SUPPLY CPU AND CARDS I/O RACK	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	

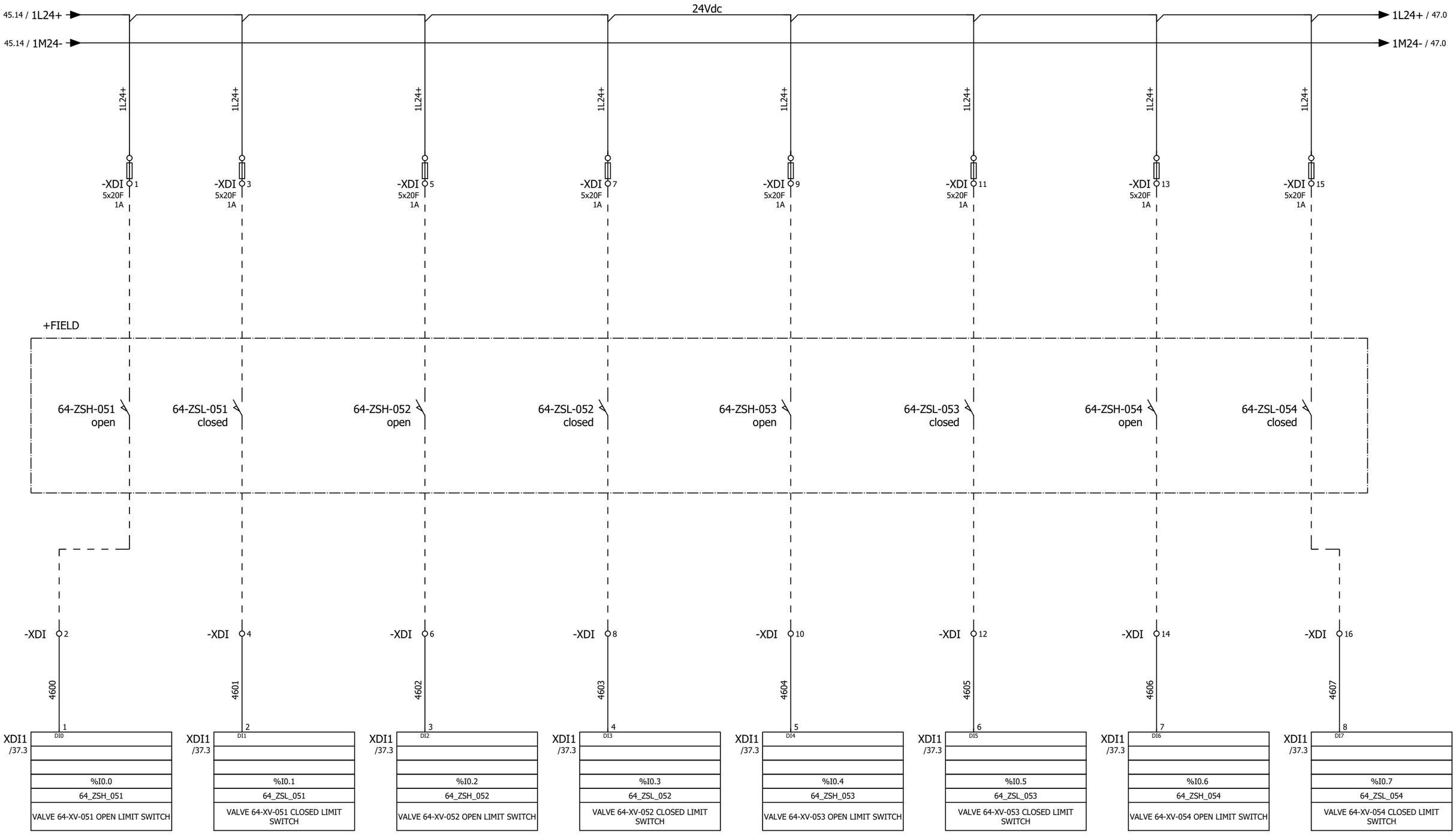
PAGE	NEXT	TOTAL SHEETS
44	45	49



REV.	DATE	PREPARED	REV.	DATE	PREPARED

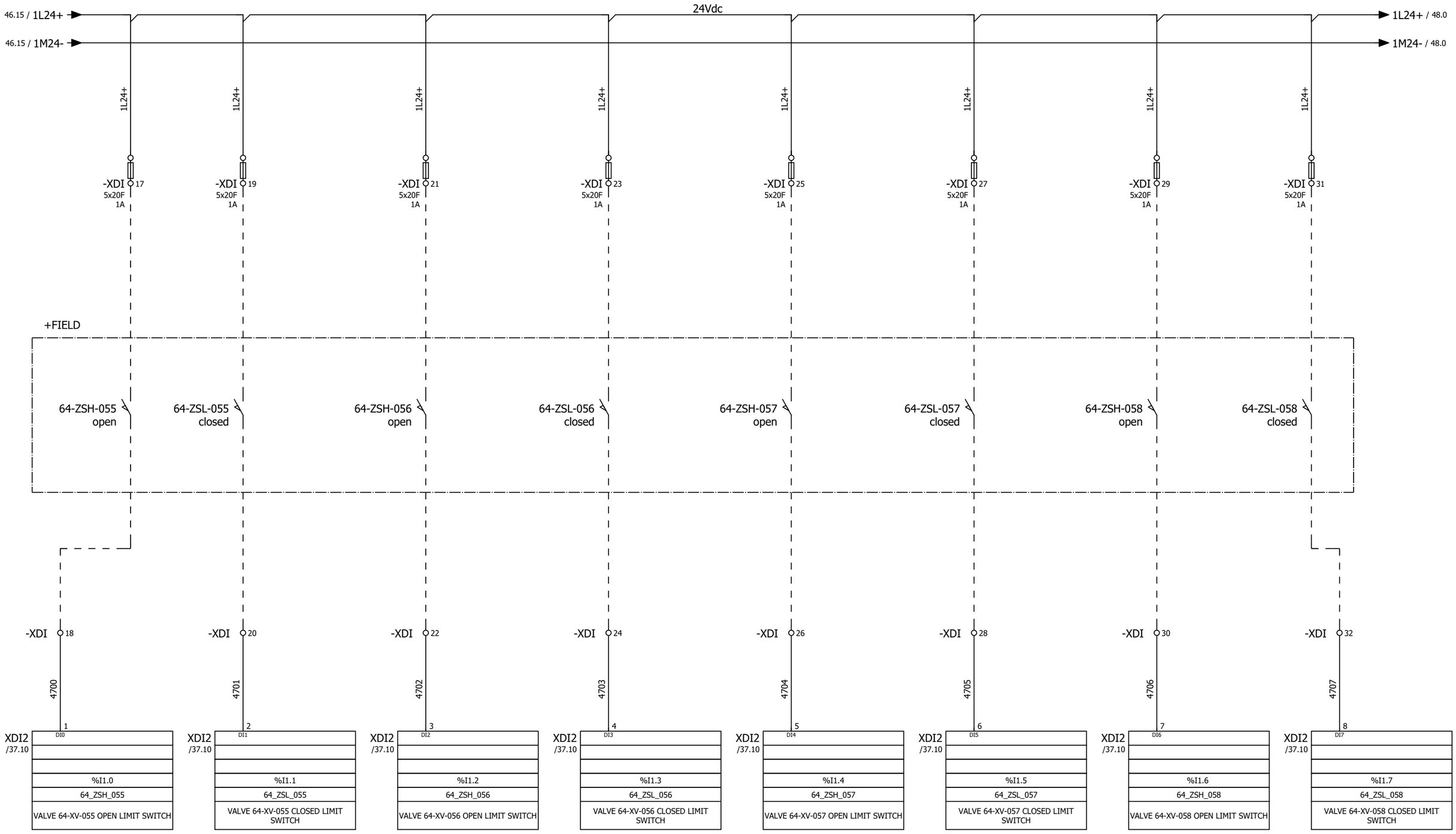
coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 45
DESCRIPTION: POWER SUPPLY PN/PN COUPLER	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 46
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49



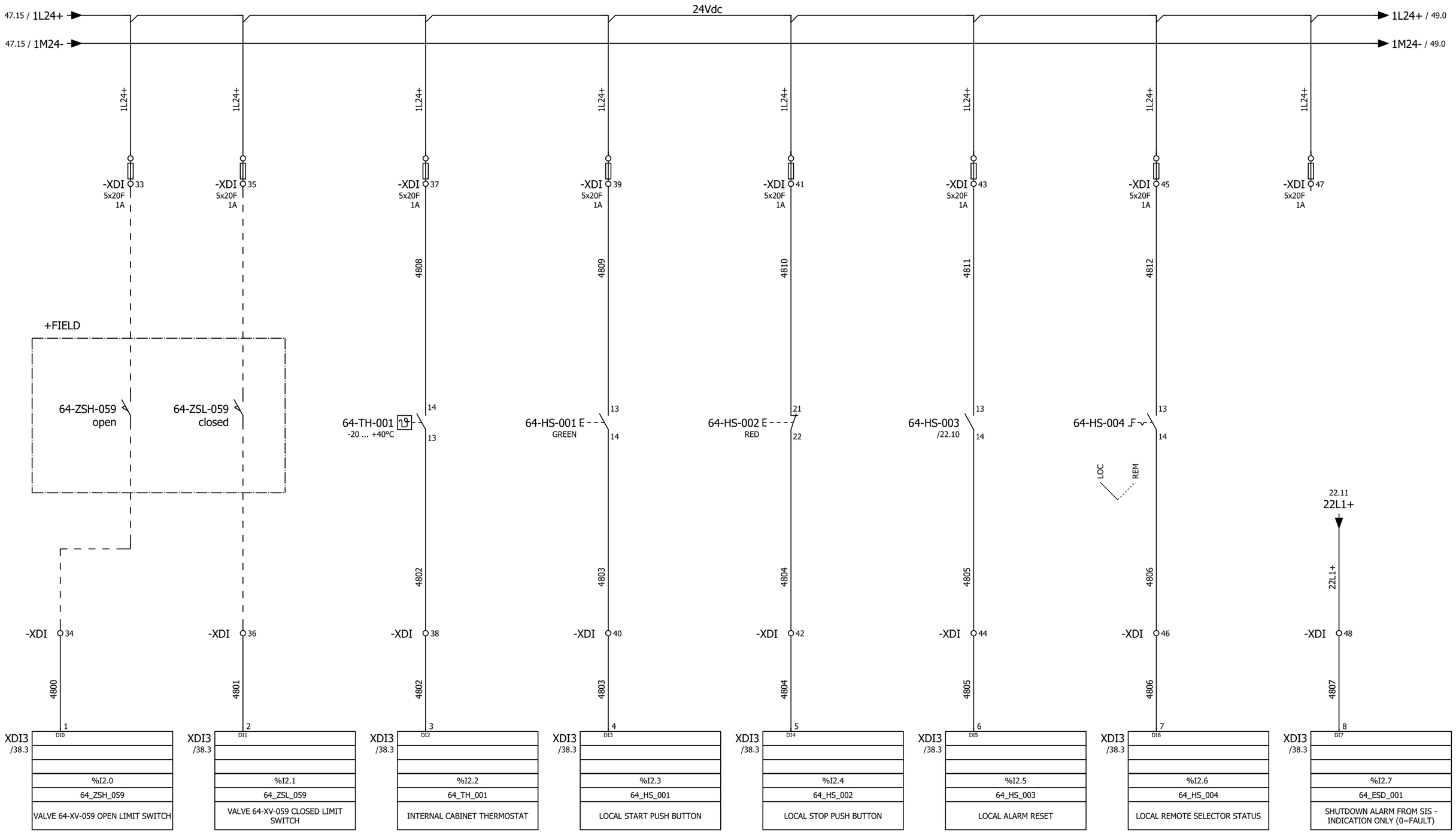
REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
DESCRIPTION: DIGITAL INPUT I/O RACK	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	TOTAL SHEETS: 49
			PAGE: 46
			NEXT: 47



REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 47
DESCRIPTION: DIGITAL INPUT I/O RACK	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 48
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

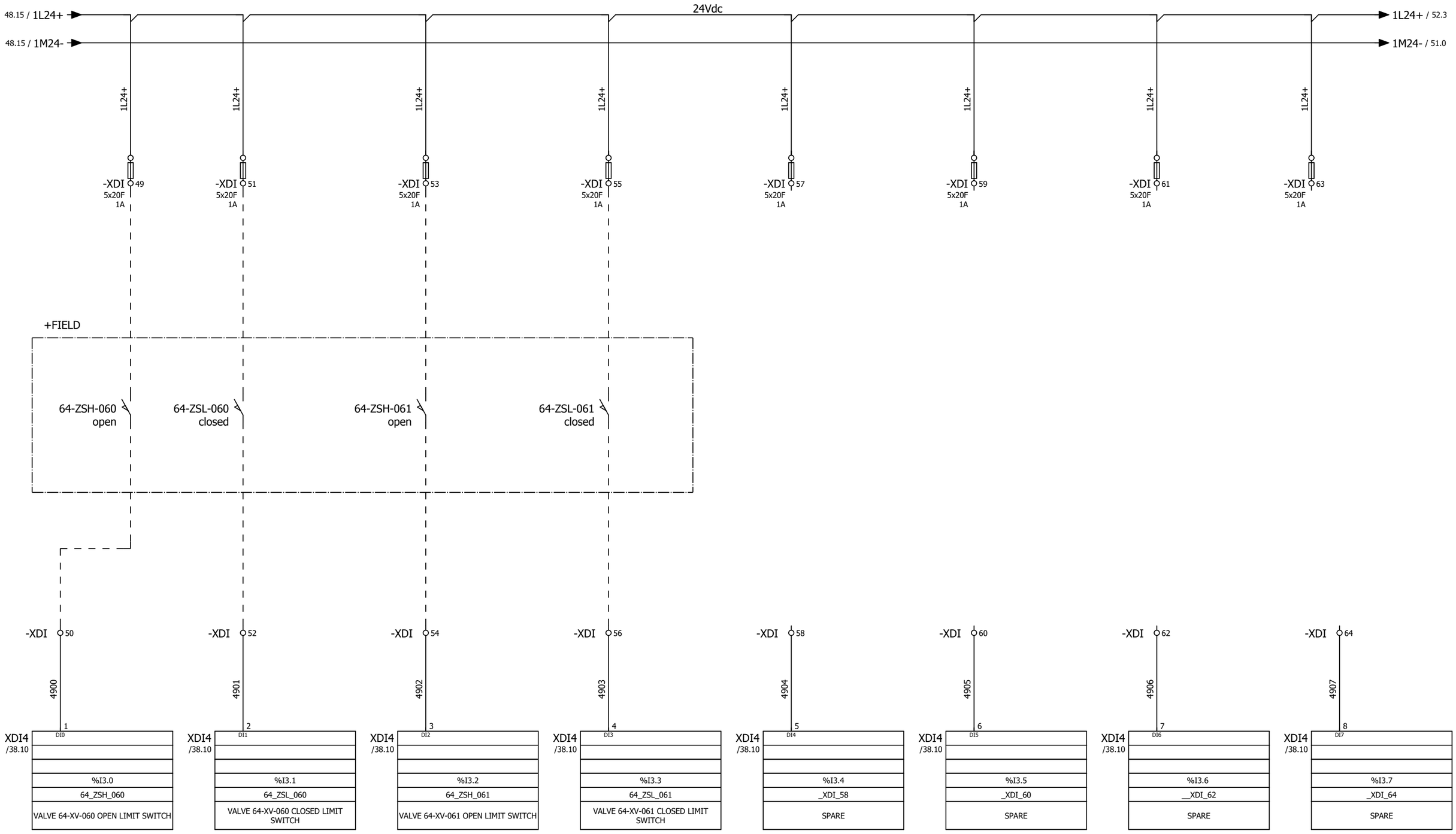


REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

PLANT
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM

DESCRIPTION
DIGITAL INPUT I/O RACK

PREPARED	CHECKED	PLANT	PAGE
ASSOLARI O.	TIRABOSCHI T.	= NITROGEN	48
DATE	APPROVED	LOCATION	NEXT
02.05.2024		+ QE	49
WORK ORDER N	DRAWING N		TOTAL SHEETS
2024.4813_001	d241024-WD		49

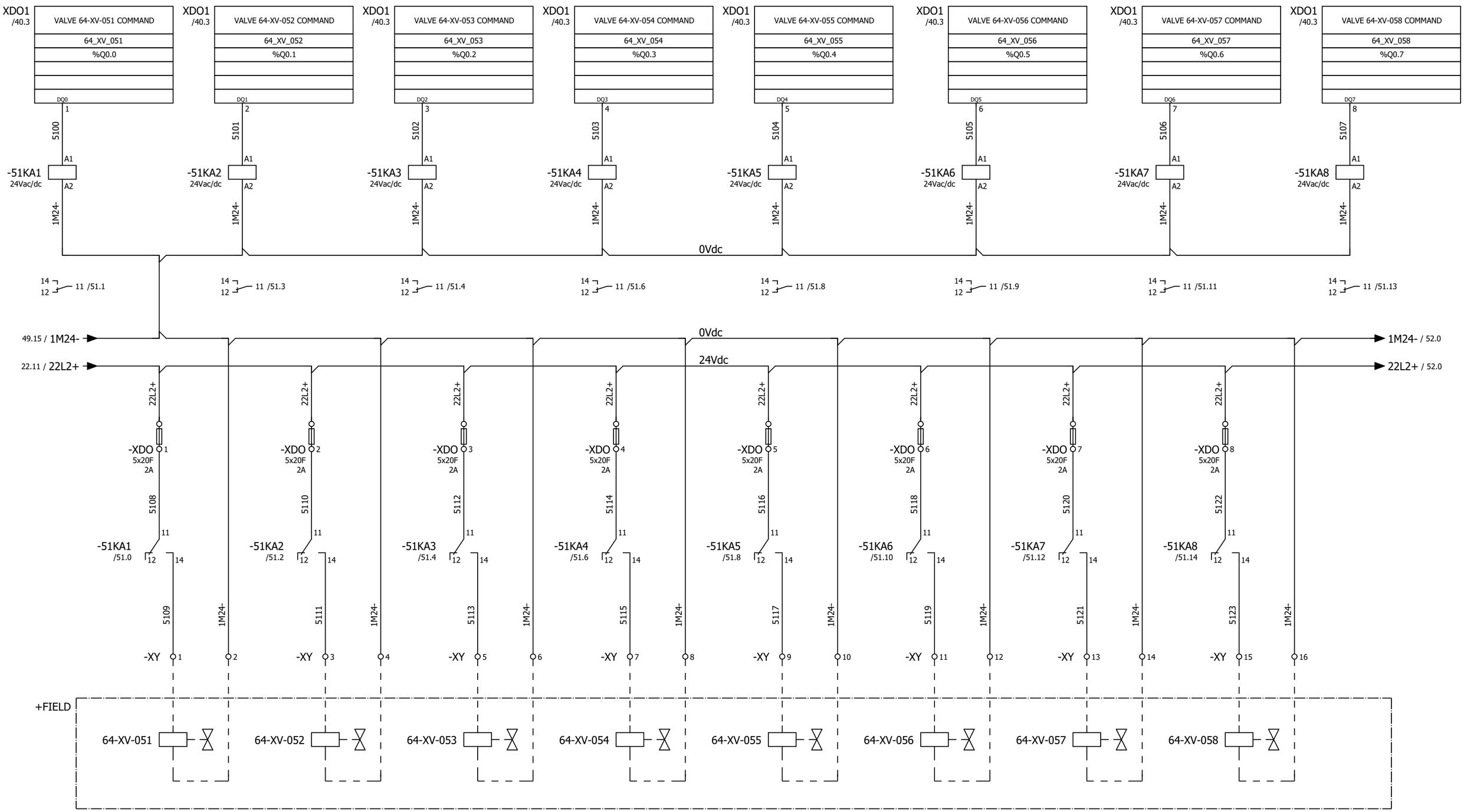


REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: DIGITAL INPUT I/O RACK	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	TOTAL SHEETS: 49

PAGE	NEXT
49	51

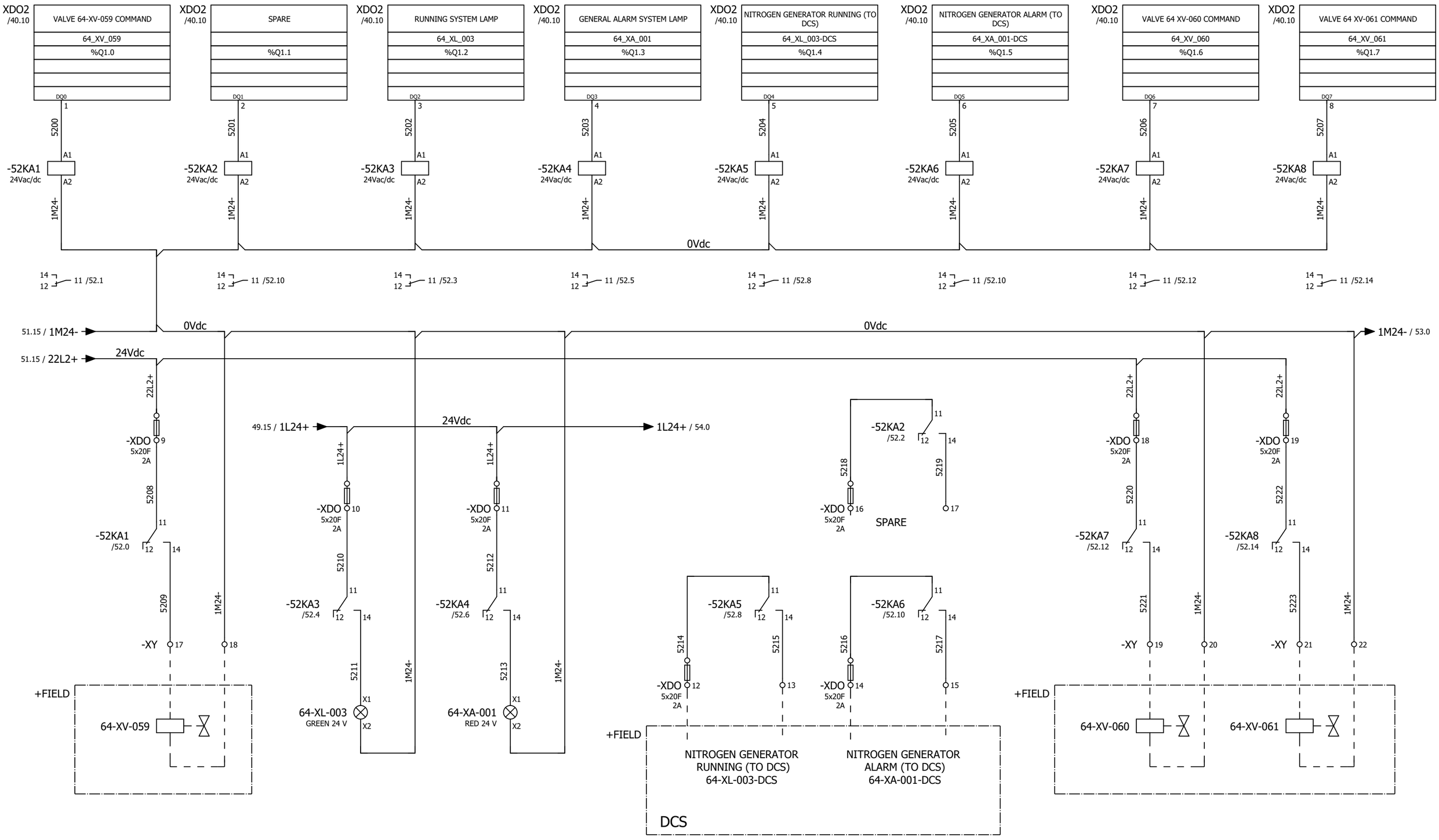
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REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT	PREPARED	CHECKED	PLANT
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= NITROGEN
DESCRIPTION	DATE	APPROVED	LOCATION
DIGITAL OUTPUT I/O RACK	02.05.2024		+ QE
	WORK ORDER N	DRAWING N	
	2024.4813_001	d241024-WD	

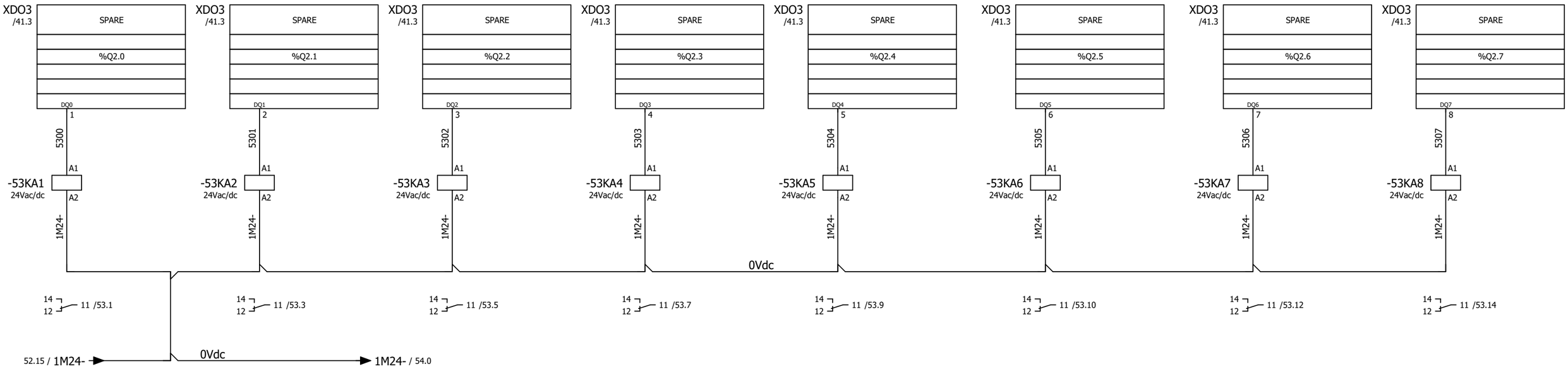
PAGE	NEXT	TOTAL SHEETS
51	52	49

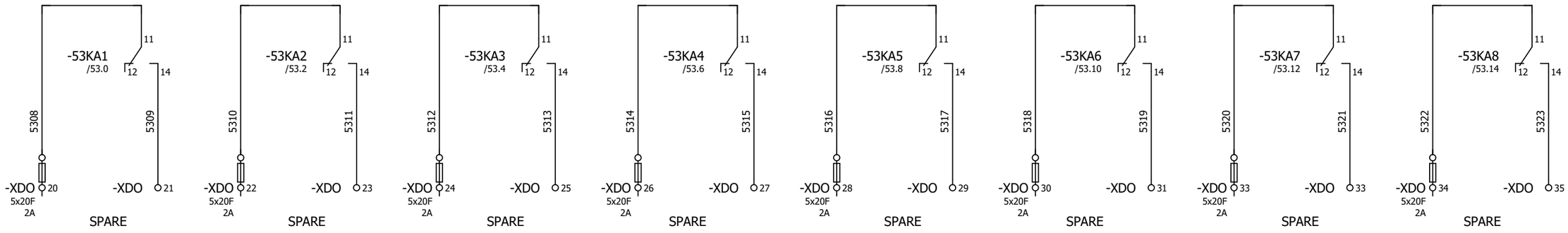


REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

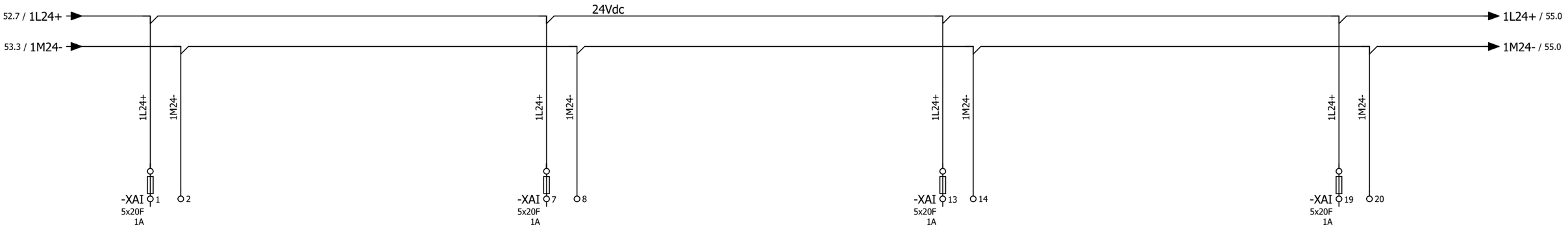
PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: DIGITAL OUTPUT I/O RACK	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	TOTAL SHEETS: 49
			PAGE: 52
			NEXT: 53

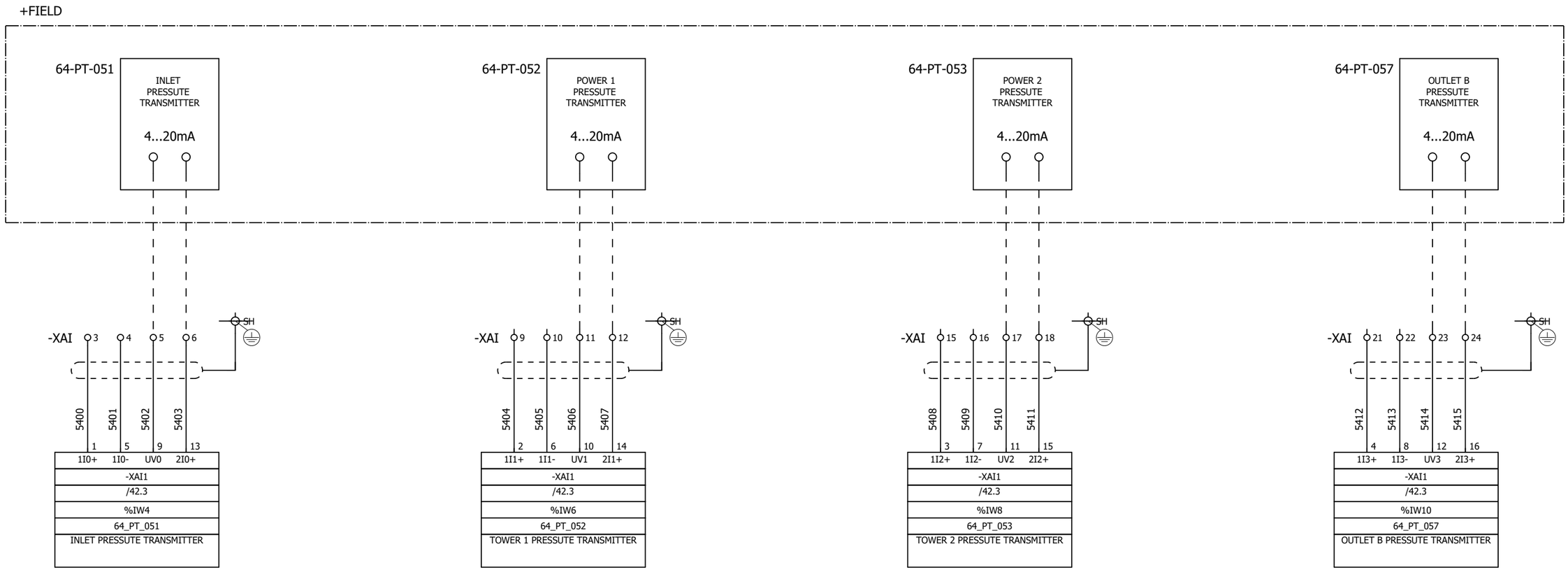
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15





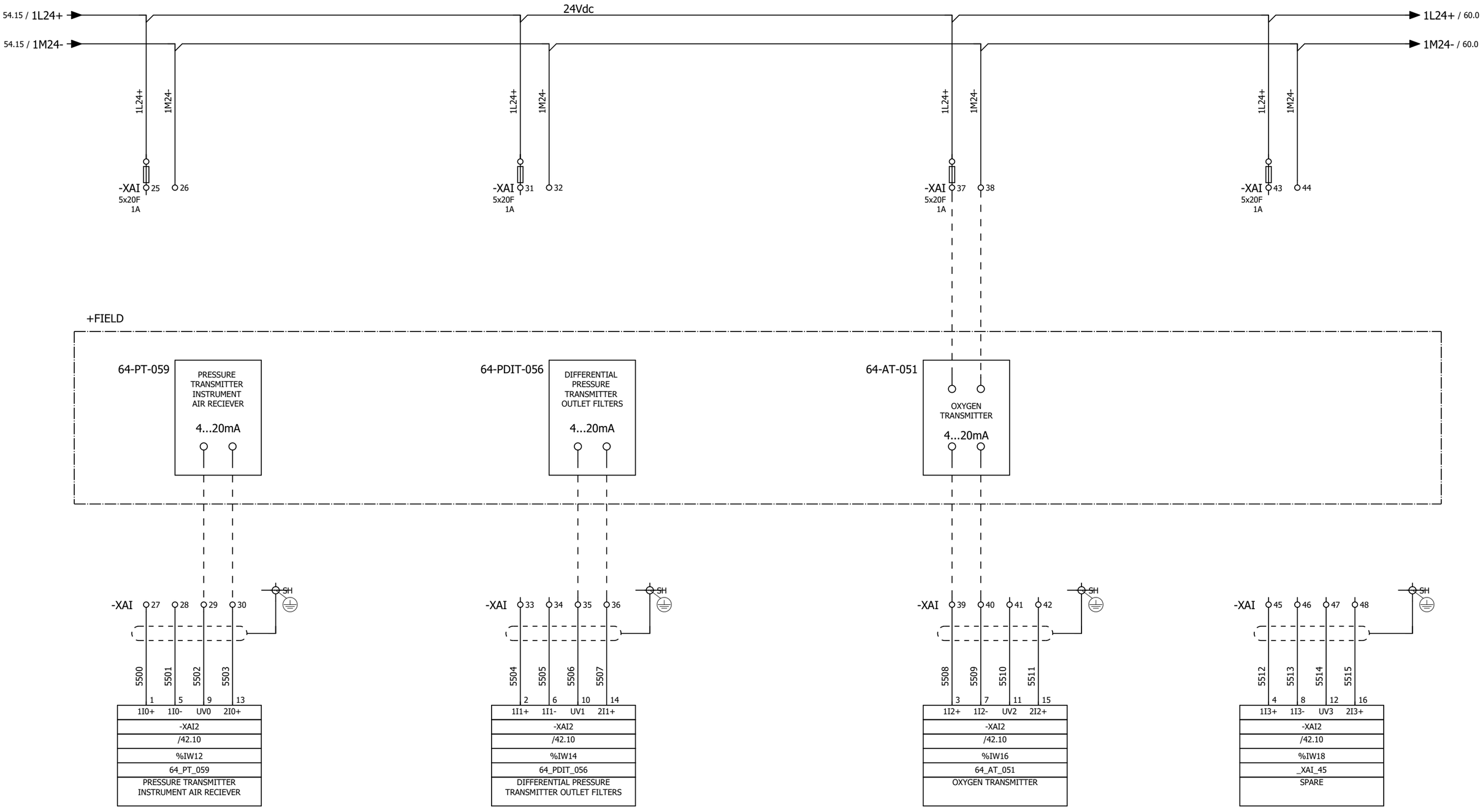
							PLANT	PREPARED	CHECKED	PLANT	PAGE
							COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= NITROGEN	53
							DESCRIPTION	DATE	APPROVED	LOCATION	NEXT
B	01.08.2024	O.A.					DIGITAL OUTPUT I/O RACK	02.05.2024		+ QE	54
								WORK ORDER N	DRAWING N		TOTAL SHEETS
REV.	DATE	PREPARED	REV.	DATE	PREPARED			2024.4813_001	d241024-WD		49





REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

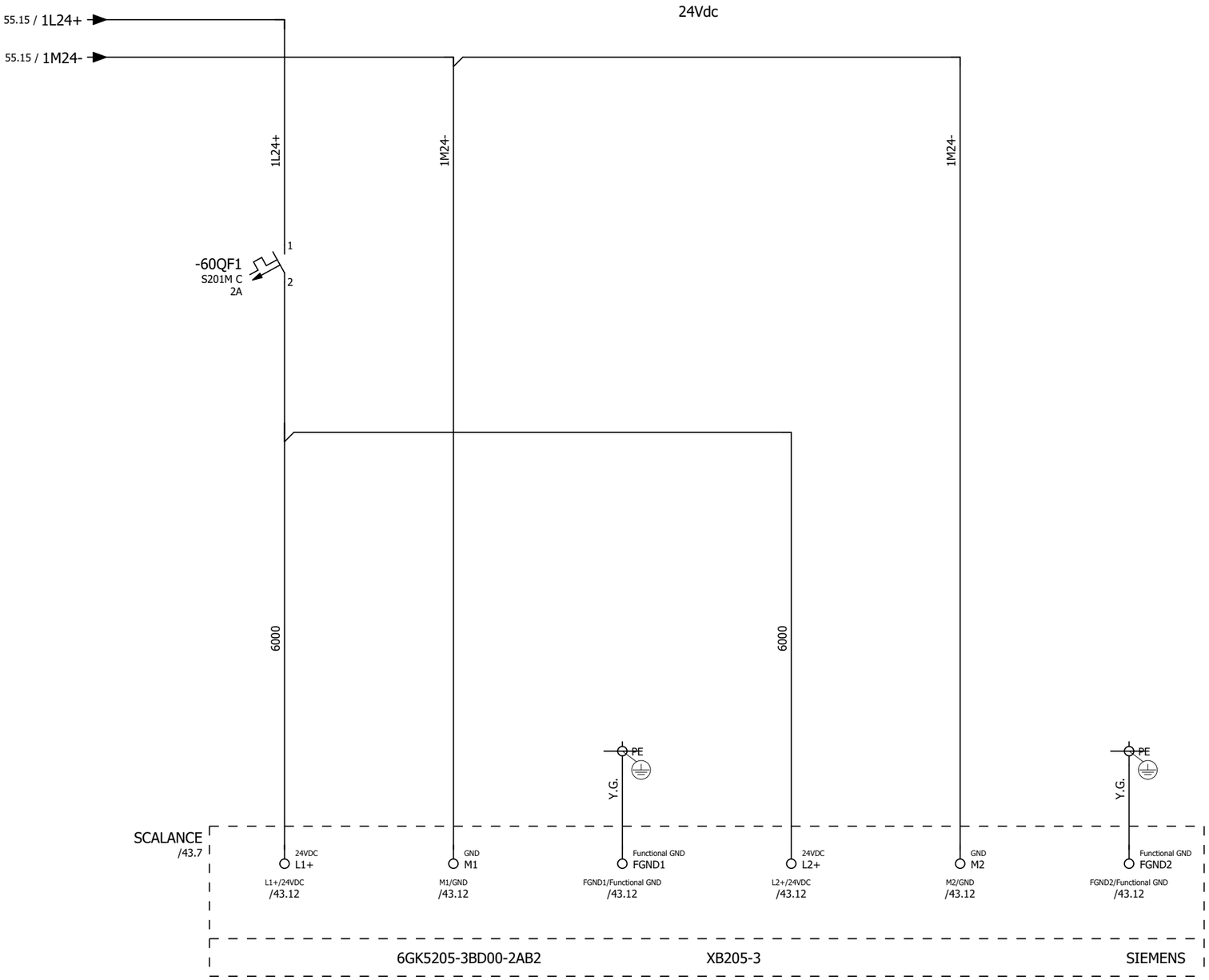
PLANT	COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED	CHECKED	PLANT	PAGE
		ASSOLARI O.	TIRABOSCHI T.	= NITROGEN	54
DESCRIPTION		DATE	APPROVED	LOCATION	NEXT
	ANALOG INPUT I/O RACK	02.05.2024		+ QE	55
		WORK ORDER N	DRAWING N		TOTAL SHEETS
		2024.4813_001	d241024-WD		49

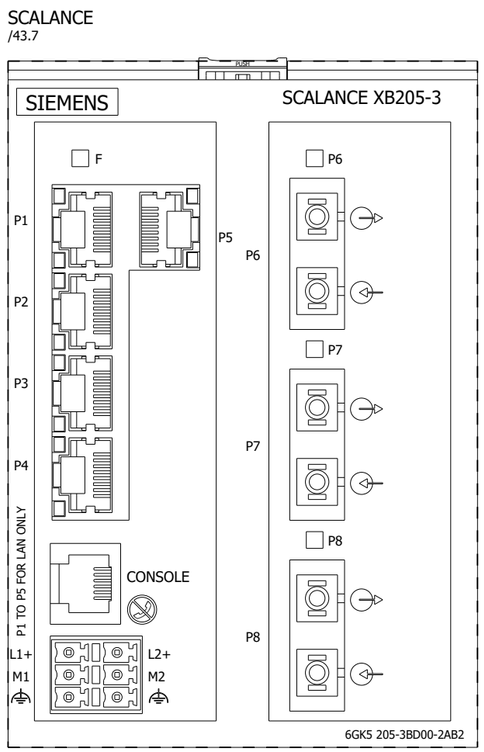


REV.	DATE	PREPARED	REV.	DATE	PREPARED
E	23.01.2025	O.A.			
D	18.11.2024	O.A.			
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: ANALOG INPUT I/O RACK	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	TOTAL SHEETS: 49
			PAGE: 55
			NEXT: 60

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

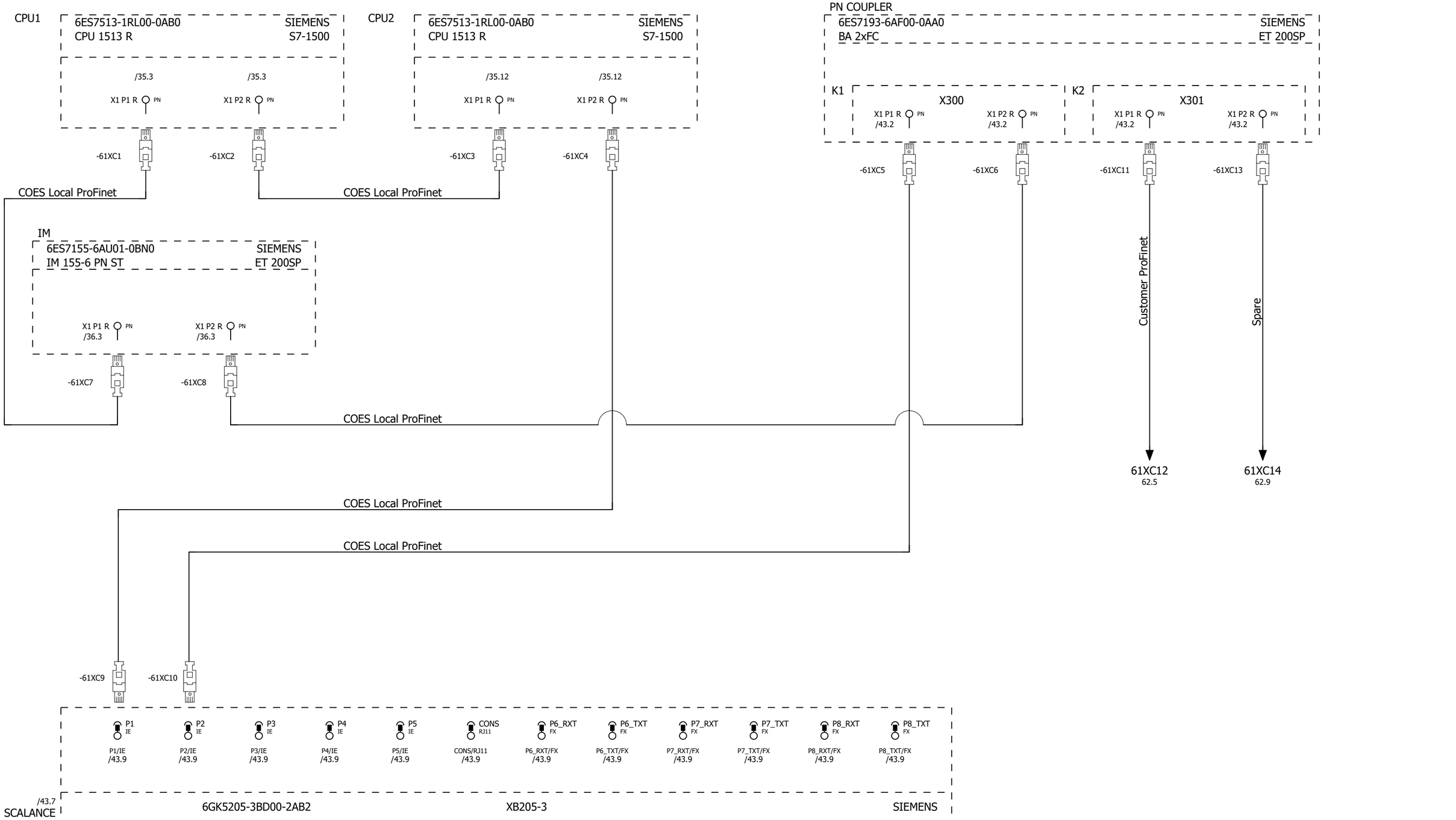




REV.	DATE	PREPARED	REV.	DATE	PREPARED

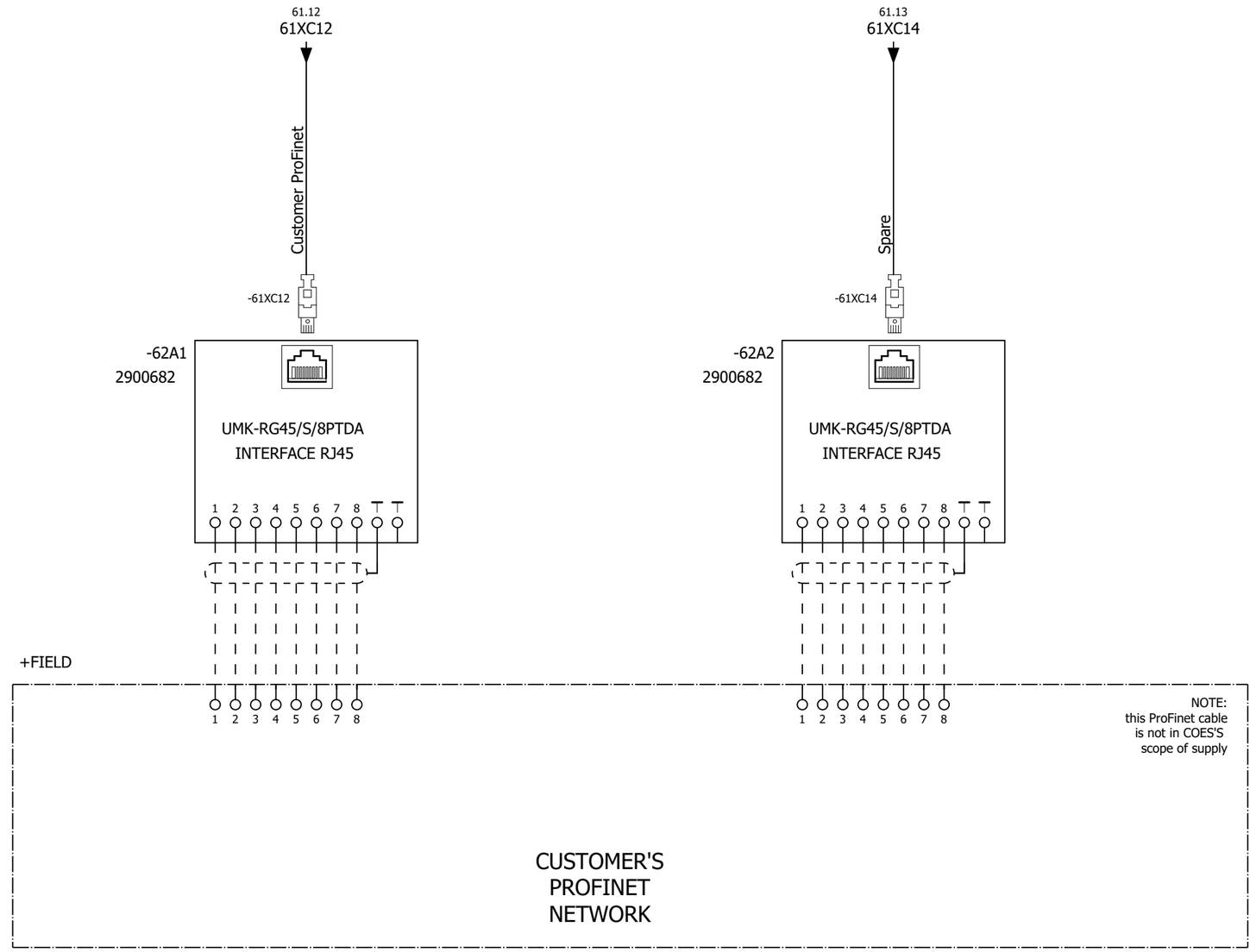
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PLANT COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED ASSOLARI O.	CHECKED TIRABOSCHI T.	PLANT = NITROGEN	PAGE 60
	DATE 02.05.2024	APPROVED	LOCATION + QE	NEXT 61
DESCRIPTION AUXILIARY CIRCUIT SWTCH 5 PORT PROFINET	WORK ORDER N 2024.4813_001	DRAWING N d241024-WD		TOTAL SHEETS 49



REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: CONNECTION ProfiNet INTERNAL SWITCHBOARD	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	TOTAL SHEETS: 49
			PAGE: 61
			NEXT: 62



REV.	DATE	PREPARED	REV.	DATE	PREPARED
A	30.05.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 62
DESCRIPTION: CONNECTION ProfiNet EXTERNAL SWITCHBOARD	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 70
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=NITROGEN+QE-X1

SWITCHBOARD	DESTIN. DEVICE	SHEET AND COLUMN	/20.2	/20.2	/20.3
		CONNECT.	1	3	
		DEVICE IDENT. CODE	-20QF1	-20QF1	-PE
		WIRING	L230	N230	
	TERMINAL JUM	TERM. TYPE	WDU 10	WDU 10	WPE 10
			-	-	-
		TERM. NUM.	1	2	PE
PLANT	DESTIN. DEVICE	CONNECT.			
		DEVICE IDENT. CODE	-L	-N	

REV.	DATE	PREPARED	REV.	DATE	PREPARED

PLANT COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED ASSOLARI O.	CHECKED TIRABOSCHI T.	PLANT = NITROGEN	PAGE 70
DESCRIPTION TERMINAL BOARD -X1	DATE 02.05.2024	APPROVED	LOCATION + QE	NEXT 71
	WORK ORDER N 2024.4813_001	DRAWING N d241024-WD		TOTAL SHEETS 49

TERMINAL STRIP

=NITROGEN+QE-X2

SWITCHBOARD – DESTIN. DEVICE: SHEET AND COLUMN	SWITCHBOARD – DESTIN. DEVICE: CONNECT.	SWITCHBOARD – DESTIN. DEVICE: DEVICE IDENT. CODE	SWITCHBOARD – DESTIN. DEVICE: WIRING	TERMINAL JUM: TERM. TYPE	TERMINAL JUM	TERMINAL JUM: TERM. NUM.	PLANT – DESTIN. DEVICE: CONNECT.	PLANT – DESTIN. DEVICE: DEVICE IDENT. CODE
/21.3	1	-21QF1	L230UPS	WDU 10	-	1		-L
/21.3	3	-21QF1	N230UPS	WDU 10	-	2		-N
/21.4		-PE		WPE 10	-	PE		

REV.	DATE	PREPARED	REV.	DATE	PREPARED

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 71
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 72
DESCRIPTION: TERMINAL BOARD -X2	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

TERMINAL STRIP

=NITROGEN+QE-XA

SWITCHBOARD	DESTIN. DEVICE	SHEET AND COLUMN	/22.1	/22.2	/21.14	/22.10	/22.13	/22.13
		CONNECT.			1	13	15/16	14
		DEVICE IDENT. CODE			-21FU2	-22K1	-22KA2	-22KA2
		WIRING			1L24+	1L24+	2211	2212
	TERMINAL JUM	TERM. TYPE	WSI 6	WDU 2.5	WSI 6		WDU 2.5	WDU 2.5
			-	-	-		-	-
		TERM. NUM.	1	2	3		4	5
PLANT	DESTIN. DEVICE	CONNECT.	1	2	A1			
		DEVICE IDENT. CODE	-22KA1	-22KA1	-22K1			

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			
A	30.05.2024	O.A.			

PLANT COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED ASSOLARI O.	CHECKED TIRABOSCHI T.	PLANT = NITROGEN	PAGE 72
	DATE 02.05.2024	APPROVED	LOCATION + QE	NEXT 73
DESCRIPTION TERMINAL BOARD -XA	WORK ORDER N 2024.4813_001	DRAWING N d241024-WD		TOTAL SHEETS 49

TERMINAL STRIP

=NITROGEN+QE-XDI

TERMINAL JUM TERM. NUM.	TERM. TYPE	WIRING	DEVICE IDENT. CODE	CONNECT.	SHEET AND COLUMN
			DESTIN. DEVICE		
1	KDKS 1/35 DB	4808	-64-TH-001	14	/48.4
2		4802	-64-TH-001	13	/48.4
3	KDKS 1/35 DB	4809	-64-HS-001	13	/48.6
4		4803	-64-HS-001	14	/48.6
5	KDKS 1/35 DB		+FIELD-64-ZSH-059		/48.2
6			+FIELD-64-ZSL-059		/48.2
7	KDKS 1/35 DB		+FIELD-64-ZSH-059		/48.1
8			+FIELD-64-ZSL-058		/47.14
9	KDKS 1/35 DB		+FIELD-64-ZSH-058		/47.14
10			+FIELD-64-ZSL-058		/47.12
11	KDKS 1/35 DB		+FIELD-64-ZSH-058		/47.12
12			+FIELD-64-ZSL-057		/47.10
13	KDKS 1/35 DB		+FIELD-64-ZSH-057		/47.10
14			+FIELD-64-ZSL-056		/47.8
15	KDKS 1/35 DB		+FIELD-64-ZSH-057		/47.8
16			+FIELD-64-ZSL-056		/47.6
17	KDKS 1/35 DB		+FIELD-64-ZSH-056		/47.6
18			+FIELD-64-ZSL-055		/47.4
19	KDKS 1/35 DB		+FIELD-64-ZSH-056		/47.4
20			+FIELD-64-ZSL-055		/47.2
21	KDKS 1/35 DB		+FIELD-64-ZSH-055		/47.2
22			+FIELD-64-ZSL-054		/47.1
23	KDKS 1/35 DB		+FIELD-64-ZSH-054		/47.1
24			+FIELD-64-ZSL-054		/46.14
25	KDKS 1/35 DB		+FIELD-64-ZSH-054		/46.14
26			+FIELD-64-ZSL-053		/46.12
27	KDKS 1/35 DB		+FIELD-64-ZSH-053		/46.12
28			+FIELD-64-ZSL-053		/46.10
29	KDKS 1/35 DB		+FIELD-64-ZSH-053		/46.10
30			+FIELD-64-ZSL-052		/46.8
31	KDKS 1/35 DB		+FIELD-64-ZSH-052		/46.8
32			+FIELD-64-ZSL-052		/46.6
33	KDKS 1/35 DB		+FIELD-64-ZSH-052		/46.6
34			+FIELD-64-ZSL-051		/46.4
35	KDKS 1/35 DB		+FIELD-64-ZSH-051		/46.4
36			+FIELD-64-ZSL-051		/46.2
37	KDKS 1/35 DB		+FIELD-64-ZSH-051		/46.2
38			+FIELD-64-ZSL-051		/46.1
39	KDKS 1/35 DB		+FIELD-64-ZSH-051		/46.1
40			-45QF1		

PLANT	DESTIN. DEVICE	CONNECT.	DEVICE IDENT. CODE
		1	-XDI3
		2	-XDI3
		3	-XDI3
		4	-XDI3
		1	-XDI3
		2	-XDI2
		3	-XDI2
		4	-XDI2
		5	-XDI2
		6	-XDI2
		7	-XDI2
		8	-XDI2
		1	-XDI2
		2	-XDI2
		3	-XDI2
		4	-XDI2
		5	-XDI1
		6	-XDI1
		7	-XDI1
		8	-XDI1
		1	-XDI1
		2	-XDI1
		3	-XDI1
		4	-XDI1
		5	-XDI1
		6	-XDI1
		1	-XDI1
		2	-XDI1
		3	-XDI1
		4	-XDI1

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

coes 20th coes 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: TERMINAL BOARD -XDI	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	

PAGE	NEXT	TOTAL SHEETS
73	74	49

TERMINAL STRIP

=NITROGEN+QE-XDI

TERM. NUM.	SWITCHBOARD – DESTIN. DEVICE: SHEET AND COLUMN	CONNECT.	DEVICE IDENT. CODE	WIRING	TERMINAL JUM: TERM. TYPE		PLANT – DESTIN. DEVICE: CONNECT.	DEVICE IDENT. CODE
41	/48.8	21	-64-HS-002	4810	KDKS 1/35 DB	-		
42	/48.8	22	-64-HS-002	4804		-	5	-XDI3
43	/48.10	13	-64-HS-003	4811	KDKS 1/35 DB	-		
44	/48.10	14	-64-HS-003	4805		-	6	-XDI3
45	/48.12	13	-64-HS-004	4812	KDKS 1/35 DB	-		
46	/48.12	14	-64-HS-004	4806		-	7	-XDI3
47					KDKS 1/35 DB	-		
48	/22.10	14	-22K1	22L1+		-	8	-XDI3
49	/49.1		+FIELD-64-ZSH-060		KDKS 1/35 DB	-		
50	/49.1		+FIELD-64-ZSH-060			-	1	-XDI4
51	/49.2		+FIELD-64-ZSL-060		KDKS 1/35 DB	-		
52	/49.2		+FIELD-64-ZSL-060			-	2	-XDI4
53	/49.4		+FIELD-64-ZSH-061		KDKS 1/35 DB	-		
54	/49.4		+FIELD-64-ZSH-061			-	3	-XDI4
55	/49.6		+FIELD-64-ZSL-061		KDKS 1/35 DB	-		
56	/49.6		+FIELD-64-ZSL-061			-	4	-XDI4
57					KDKS 1/35 DB	-		
58						-	5	-XDI4
59					KDKS 1/35 DB	-		
60						-	6	-XDI4
61					KDKS 1/35 DB	-		
62						-	7	-XDI4
63					KDKS 1/35 DB	-	10	-XDO
64						-	8	-XDI4

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 74
DESCRIPTION: TERMINAL BOARD -XDI	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 75
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=NITROGEN+QE-XDO

TERM. NUM.	SWITCHBOARD – DESTIN. DEVICE: SHEET AND COLUMN	SWITCHBOARD – DESTIN. DEVICE: CONNECT.	SWITCHBOARD – DESTIN. DEVICE: DEVICE IDENT. CODE	SWITCHBOARD – DESTIN. DEVICE: WIRING	TERMINAL JUM: TERM. TYPE	TERMINAL JUM (jumper)	PLANT – DESTIN. DEVICE: CONNECT.	PLANT – DESTIN. DEVICE: DEVICE IDENT. CODE
1	/51.1	11	-51KA1	5108	WSI 6	•	24	-22K1
2	/51.3	11	-51KA2	5110	WSI 6	•		
3	/51.4	11	-51KA3	5112	WSI 6	•		
4	/51.6	11	-51KA4	5114	WSI 6	•		
5	/51.8	11	-51KA5	5116	WSI 6	•		
6	/51.9	11	-51KA6	5118	WSI 6	•		
7	/51.11	11	-51KA7	5120	WSI 6	•		
8	/51.13	11	-51KA8	5122	WSI 6	•		
9	/52.1	11	-52KA1	5208	WSI 6	•		
10	/52.3	11	-52KA3	5210	WSI 6	•	63	-XDI
11	/52.5	11	-52KA4	5212	WSI 6	•	1	-XAI
12	/52.7				WSI 6	-	11	-52KA5
13	/52.8	14	-52KA5	5215	WDU 2.5	-		
14	/52.9				WSI 6	-	11	-52KA6
15	/52.10	14	-52KA6	5217	WDU 2.5	-		
16					WSI 6	-	11	-52KA2
17	/52.10	14	-52KA2	5219	WDU 2.5	-		
18	/52.12	11	-52KA7	5220	WSI 6	•		
19	/52.14	11	-52KA8	5222	WSI 6	•		
20					WSI 6	-	11	-53KA1
21	/53.1	14	-53KA1	5309	WDU 2.5	-		
22					WSI 6	-	11	-53KA2
23	/53.3	14	-53KA2	5311	WDU 2.5	-		
24					WSI 6	-	11	-53KA3
25	/53.5	14	-53KA3	5313	WDU 2.5	-		
26					WSI 6	-	11	-53KA4
27	/53.7	14	-53KA4	5315	WDU 2.5	-		
28					WSI 6	-	11	-53KA5
29	/53.9	14	-53KA5	5317	WDU 2.5	-		
30					WSI 6	-	11	-53KA6
31	/53.10	14	-53KA6	5319	WDU 2.5	-		
33					WSI 6	-	11	-53KA7
33	/53.12	14	-53KA7	5321	WDU 2.5	-		
34					WSI 6	-	11	-53KA8
35	/53.14	14	-53KA8	5323	WDU 2.5	-		

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

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PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 75
DESCRIPTION: TERMINAL BOARD -XDO	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 76
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=NITROGEN+QE-XY

SWITCHBOARD – DESTIN. DEVICE: SHEET AND COLUMN	CONNECT.	DEVICE IDENT. CODE	WIRING	TERMINAL JUM: TERM. TYPE	(jumper)	TERM. NUM.	PLANT – DESTIN. DEVICE: CONNECT.	DEVICE IDENT. CODE
/51.1	14	-51KA1	5109	WDU 2.5	-	1		+FIELD-64-XV-051
/51.0	A2	-51KA1	1M24-	WDU 2.5	•	2		+FIELD-64-XV-051
/51.2	A2	-51KA2	1M24-					
/51.3	14	-51KA2	5111	WDU 2.5	-	3		+FIELD-64-XV-052
				WDU 2.5	•	4		+FIELD-64-XV-052
/51.4	14	-51KA3	5113	WDU 2.5	-	5		+FIELD-64-XV-053
				WDU 2.5	•	6		+FIELD-64-XV-053
/51.6	14	-51KA4	5115	WDU 2.5	-	7		+FIELD-64-XV-054
				WDU 2.5	•	8		+FIELD-64-XV-054
/51.8	14	-51KA5	5117	WDU 2.5	-	9		+FIELD-64-XV-055
				WDU 2.5	•	10		+FIELD-64-XV-055
/51.9	14	-51KA6	5119	WDU 2.5	-	11		+FIELD-64-XV-056
				WDU 2.5	•	12		+FIELD-64-XV-056
/51.11	14	-51KA7	5121	WDU 2.5	-	13		+FIELD-64-XV-057
				WDU 2.5	•	14		+FIELD-64-XV-057
/51.13	14	-51KA8	5123	WDU 2.5	-	15		+FIELD-64-XV-058
/52.0	A2	-52KA1	1M24-	WDU 2.5	•	16		+FIELD-64-XV-058
/52.2	A2	-52KA2	1M24-					
/52.1	14	-52KA1	5209	WDU 2.5		17		+FIELD-64-XV-059
/52.0	A2	-52KA1	1M24-	WDU 2.5	•	18		+FIELD-64-XV-059
/52.2	A2	-52KA2	1M24-					
/52.3	X2	-64-XL-003	1M24-					
/52.12	14	-52KA7	5221	WDU 2.5		19		+FIELD-64-XV-060
/52.5	X2	-64-XA-001	1M24-	WDU 2.5	•	20		+FIELD-64-XV-060
/52.14	14	-52KA8	5223	WDU 2.5	-	21		+FIELD-64-XV-061
/53.0	A2	-53KA1	1M24-	WDU 2.5	•	22		+FIELD-64-XV-061
/53.2	A2	-53KA2	1M24-					

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			

coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 76
DESCRIPTION: TERMINAL BOARD -XY	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 77
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

TERMINAL STRIP

=NITROGEN+QE-XAI

TERM. NUM.	SWITCHBOARD / DESTIN. DEVICE: SHEET AND COLUMN	SWITCHBOARD / DESTIN. DEVICE: CONNECT.	SWITCHBOARD / DESTIN. DEVICE: DEVICE IDENT. CODE	WIRING	TERMINAL JUM: TERM. TYPE	PLANT / DESTIN. DEVICE: CONNECT.	PLANT / DESTIN. DEVICE: DEVICE IDENT. CODE
1					KDKS 1/35 DB	11	-XDO
2	/52.5	X2	-64-XA-001	1M24-			
3	/54.1	1	-XAI1	5400	WDU 2.5		
4	/54.1	5	-XAI1	5401	WDU 2.5		
5	/54.2	9	-XAI1	5402	WDU 2.5		+FIELD-64-PT-051
6	/54.2	13	-XAI1	5403	WDU 2.5		+FIELD-64-PT-051
7					KDKS 1/35 DB		
8							
9					WDU 2.5	2	-XAI1
10					WDU 2.5	6	-XAI1
11	/54.6		+FIELD-64-PT-052	0Vdc	WDU 2.5	10	-XAI1
12	/54.6		+FIELD-64-PT-052	0Vdc	WDU 2.5	14	-XAI1
13					KDKS 1/35 DB		
14							
15					WDU 2.5	3	-XAI1
16					WDU 2.5	7	-XAI1
17	/54.10		+FIELD-64-PT-053	0Vdc	WDU 2.5	11	-XAI1
18	/54.10		+FIELD-64-PT-053	0Vdc	WDU 2.5	15	-XAI1
19					KDKS 1/35 DB		
20							
21					WDU 2.5	4	-XAI1
22					WDU 2.5	8	-XAI1
23	/54.14		+FIELD-64-PT-057	0Vdc	WDU 2.5	12	-XAI1
24	/54.14		+FIELD-64-PT-057	0Vdc	WDU 2.5	16	-XAI1
25					KDKS 1/35 DB		
26							
27	/55.1	1	-XAI2	5500	WDU 2.5		
28	/55.1	5	-XAI2	5501	WDU 2.5		
29	/55.2	9	-XAI2	5502	WDU 2.5		+FIELD-64-PT-059
30	/55.2	13	-XAI2	5503	WDU 2.5		+FIELD-64-PT-059
31					KDKS 1/35 DB		
32							
33					WDU 2.5	2	-XAI2
34					WDU 2.5	6	-XAI2
35	/55.6		+FIELD-64-PDIT-056	0Vdc	WDU 2.5	10	-XAI2
36	/55.6		+FIELD-64-PDIT-056	0Vdc	WDU 2.5	14	-XAI2
37					KDKS 1/35 DB		
38							
39					WDU 2.5	3	-XAI2
40					WDU 2.5	7	-XAI2

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 77
DESCRIPTION: TERMINAL BOARD -XAI	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 78
	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=NITROGEN+QE-XAI

SWITCHBOARD	DESTIN. DEVICE	SHEET AND COLUMN	/55.10	/55.10		/60.3				
		CONNECT.				M1				
		DEVICE IDENT. CODE	+FIELD-64-AT-051	+FIELD-64-AT-051		-SCALANCE				
		WIRING	0Vdc	0Vdc		1M24-				
	TERMINAL JUM	TERM. TYPE	WDU 2.5	WDU 2.5	KDKS 1/35 DB		WDU 2.5	WDU 2.5	WDU 2.5	WDU 2.5
			-	-		-	-	-	-	-
		TERM. NUM.	41	42	43	44	45	46	47	48
PLANT	DESTIN. DEVICE	CONNECT.	11	15	1		4	8	12	16
		DEVICE IDENT. CODE	-XAI2	-XAI2	-60QF1		-XAI2	-XAI2	-XAI2	-XAI2

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 78
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 79
DESCRIPTION: TERMINAL BOARD -XAI	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TERMINAL STRIP

=NITROGEN+QE-XCOM

			1	2	3	4	5	6	7	8	9	10
SWITCHBOARD	DESTIN. DEVICE	SHEET AND COLUMN	/21.9					/21.10				
		CONNECT.	2					-				
		DEVICE IDENT. CODE	-21QF3					-21GS1				
		WIRING	1L24+					1M24-				
	TERMINAL JUM	TERM. TYPE	ZDK 4-2 V	ZDK 4-2 V	ZDK 4-2 V	ZDK 4-2 V	ZDK 4-2 V	ZDK 4-2 V	ZDK 4-2 V	ZDK 4-2 V	ZDK 4-2 V	ZDK 4-2 V
			•	•	•	•	•	•	•	•	•	•
		TERM. NUM.	1	2	3	4	5	6	7	8	9	10
PLANT	DESTIN. DEVICE	CONNECT.					1					X2
		DEVICE IDENT. CODE					-21FU2					-64-XL-004

REV.	DATE	PREPARED	REV.	DATE	PREPARED
C	04.09.2024	O.A.			

PLANT	PREPARED	CHECKED	PLANT	PAGE
COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	ASSOLARI O.	TIRABOSCHI T.	= NITROGEN	79
DESCRIPTION	DATE	APPROVED	LOCATION	NEXT
TERMINAL BOARD -XCOM	02.05.2024		+ QE	85
	WORK ORDER N	DRAWING N		TOTAL SHEETS
	2024.4813_001	d241024-WD		49

COMPONENT LIST

COMPONENT TAG	QUANTITY	DESCRIPTION	ARTICLE CODE	CONSTRUCTOR	SHEET
-64-HS-001	1	Green flush complete pushbutton Ø22 spring return 1NO "unmarked"	SE.XB4BA31	SCHNEIDER	48
-64-HS-002	1	Red flush complete pushbutton Ø22 spring return 1NC "unmarked"	SE.XB4BA42	SCHNEIDER	48
-64-HS-003	1	Blue flush complete pushbutton Ø22 spring return 1NO	SE.XB4BA61	SCHNEIDER	22
-64-HS-003	1	Harmony XB4/XB5 1NO contact	SE.ZBE101	SCHNEIDER	22
-64-HS-004	1	Black selector switch Ø22 2-position stay put 1NO+1NC 600V	SE.XB4BD25	SCHNEIDER	48
-64-SBM-001	1	Red Ø40 Emergency stop, switching off Ø22 latching turn release 2NC+1NO	SE.XB4BS84441	SCHNEIDER	22
-64-SBM-001	1	Round guard for Ø 40 Emergency stop, plastic, yellow, 63.5 mm	SE.ZB4BZ1905	SCHNEIDER	22
-64-TH-001	1	Panel thermostat, 1 contacts NO (-20...+40)°C	FIN.7T.81.0.000.2301	FINDER	48
-64-XA-001	1	Red complete pilot light Ø22 plain lens with integral LED 24V	SE.XB4BVB4	SCHNEIDER	52
-64-XL-001	1	White complete pilot light Ø22 plain lens with integral LED 230...240V	SE.XB4BVM1	SCHNEIDER	20
-64-XL-002	1	White complete pilot light Ø22 plain lens with integral LED 230...240V	SE.XB4BVM1	SCHNEIDER	21
-64-XL-003	1	Green complete pilot light Ø22 plain lens with integral LED 24V	SE.XB4BVB3	SCHNEIDER	52
-64-XL-004	1	White complete pilot light Ø22 plain lens with integral LED 24V	SE.XB4BVB1	SCHNEIDER	21
-62A1	1	UMK-RJ45/S/8PTDA - VARIOFACE module for connecting a RJ45 socket with spring-cage double connection terminal blocks in direct plug-in method.	PXC.2900682	PHOENIX CONTACT	62
-62A2	1	UMK-RJ45/S/8PTDA - VARIOFACE module for connecting a RJ45 socket with spring-cage double connection terminal blocks in direct plug-in method.	PXC.2900682	PHOENIX CONTACT	62
-CPU1	1	SIMATIC S7-1500R CPU 1513R-1 PN, 300KB program/1,5MB data	SIE.6ES7513-1RL00-0AB0	SIEMENS	35
-CPU1	1	SIMATIC S7 MEMORY CARD, 24 MB	SIE.6ES7954-8LF03-0AA0	SIEMENS	35
-CPU2	1	SIMATIC S7-1500R CPU 1513R-1 PN, 300KB program/1,5MB data	SIE.6ES7513-1RL00-0AB0	SIEMENS	35
-CPU2	1	SIMATIC S7 MEMORY CARD, 24 MB	SIE.6ES7954-8LF03-0AA0	SIEMENS	35
-20E1	1	HEATER 100W 230VAC 90X80X110	HJSHT100	ALFA PLASTIC	20
-20FA4	1	Residual current device DDA202 type AC 25A 30mA - 2P	ABB.2CSB202001R1250	ABB	20
-20FU1	1	FUSE HOLDER 2P 10X38 , 32A 690V	LOV.FB01F2P	LOVATO	20
-20FU1	2	CYLINDRICAL FUSE C10G2 10x38, GG, 2A, 500V AC	KMC10G2	EATON BUSSMAN	20
-21FU1	1	FUSE HOLDER 2P 10X38 , 32A 690V	LOV.FB01F2P	LOVATO	21
-21FU1	2	CYLINDRICAL FUSE C10G2 10x38, GG, 2A, 500V AC	KMC10G2	EATON BUSSMAN	21
-21FU2	1	FUSE HOLDER 1P 10X38 , 32A 690V	LOV.FB01F1P	LOVATO	21
-21FU2	1	CYLINDRICAL FUSE C10G2 10x38, GG, 2A, 500V AC	KMC10G2	EATON BUSSMAN	21
-21GS1	1	TRIO-PS-2G/1AC/24DC/20 Primary-switched TRIO POWER power supply input: 100VAC...240VAC single-phase, output: 24 V DC/20 A	PXC.2903151	PHOENIX CONTACT	21

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE
DESCRIPTION: COMPONENT LIST	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD	TOTAL SHEETS: 49
			PAGE: 85
			NEXT: 86

COMPONENT LIST

COMPONENT TAG	QUANTITY	DESCRIPTION	ARTICLE CODE	CONSTRUCTOR	SHEET
-20H1	1	Plafoniera lineare a led, 110÷240V AC, 50/60HZ,600 lm, 368mm	050PEL3C	NEW ELFIN	20
-IM	1	ET 200SP PROFINET INTERFACE MODULE IM155-6PN/2 HF , INCLUDING SERVER MODULE (6ES7193-6PA00-0AA0	SIE.6ES7155-6AU01-0CN0	SIEMENS	36
-IM	1	SIMATIC ET 200SP, BUSADAPTER BA 2X RJ45, 2 RJ45 SOCKETS FOR PROFINET	SIE.6ES7193-6AR00-0AA0	SIEMENS	36
-22K1	1	SIRIUS safety relay Basic unit Standard series Relay enabling circuits 3 NO contacts plus Relay signaling circuit 1 NC contact Us = 24 V AC/DC screw terminal	SIE.3SK1111-1AB30	SIEMENS	22
-22KA1	1	SIL 2 - SIL 3 Digital Relay Output Loop Powered DIN-Rail and terminal board Models D5244D - 2 channels relay output ,provides 2 port isolation (input/output) Supply 24Vdc	GMI.D5244D	gmi	22
-22KA2	1	SIL 2 - SIL 3 Digital Relay Output Loop Powered DIN-Rail and terminal board Models D5244D - 2 channels relay output ,provides 2 port isolation (input/output) Supply 24Vdc	GMI.D5244D	gmi	22
-51KA1	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA2	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA3	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA4	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA5	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA6	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA7	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-51KA8	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	51
-52KA1	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA2	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA3	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA4	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA5	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA6	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA7	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-52KA8	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	52
-53KA1	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA2	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA3	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA4	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA5	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA6	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53

COMPONENT LIST

COMPONENT TAG	QUANTITY	DESCRIPTION	ARTICLE CODE	CONSTRUCTOR	SHEET
-53KA7	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-53KA8	1	PLC-RSC- 24UC/21 PLC-INTERFACE, consisting of basic terminal block PLC-BSC.../21 with screw connection and plug-in miniature relay with power contact, for assembly on DIN rail NS 35/7,5, 1 changeover contact, input voltage 24 V AC/DC	PXC.2966184	PHOENIX CONTACT	53
-PN COUPLER	1	SIMATIC PN/PN Coupler for deterministic data exchange between max.4 PN-Controller per subnet, , PROFIsafe data exchange, I/O-, MSI-, MSO- and data record communication, redundant power supply, PN-connection via SIMATIC BusAdapter (BA)	SIE.6ES7158-3AD10-0XA0	SIEMENS	43
-PN COUPLER	1	5 pcs. strain relief for PROFINET cable at SIMATIC BusAdapter	SIE.6ES7193-6RA00-1AN0	SIEMENS	43
-20QF1	1	Miniature Circuit Breaker - S202M - 2P - C - 32 A	ABB.2CDS272001R0324	ABB	20
-20QF2	1	Miniature Circuit Breaker - S202M - 2P - C - 2 A	ABB.2CDS272001R0024	ABB	20
-20QF3	1	Miniature Circuit Breaker - S202M - 2P - C - 2 A	ABB.2CDS272001R0024	ABB	20
-20QF4	1	Miniature Circuit Breaker - S202M - 2P - C - 16 A	ABB.2CDS272001R0164	ABB	20
-21QF1	1	Miniature Circuit Breaker - S202M - 2P - C - 32 A	ABB.2CDS272001R0324	ABB	21
-21QF2	1	Miniature Circuit Breaker - S202M - 2P - C - 4 A	ABB.2CDS272001R0044	ABB	21
-21QF3	1	Miniature Circuit Breaker - S201M - 1P - C - 20 A	ABB.2CDS271001R0204	ABB	21
-30QF3	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	30
-44QF1	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-44QF2	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-44QF3	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-44QF4	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-44QF5	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	44
-45QF1	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	45
-60QF1	1	Miniature Circuit Breaker - S201M - 1P - C - 2 A	ABB.2CDS271001R0024	ABB	60
-20S1	1	Limit switch ausiliary contacts 1NO+1NC	PIZ.FR505	PIZZATO	20
-SCALANCE	1	SCALANCE XB205-3	SIE.6GK5205-3BD00-2AB2	SIEMENS	43
-20T1	1	Panel thernostat/hygrostat, 1 pole, 10 A - NO - (+10...+60)°C / (50...90)% - Nominal voltage 110...230 VAC/DC	FIN.7T.51.0.230.4360	FINDER	20
-20X1	1	Shuko/Italian std. socket 2P+T 16A (two module white system series)	GW20246	GEWISS	20
-20X1	1	Wall mounting modular box IP40 (2 modules)	GW27002	GEWISS	20
-XAI1	1	ET 200SP, AI 4XI 2-/4-WIRE ST, PU 1	SIE.6ES7134-6GD01-0BA1	SIEMENS	42
-XAI1	1	BASEUNIT TYPE A0, BU15-P16+A0+2D	SIE.6ES7193-6BP00-0DA0	SIEMENS	42
-XAI2	1	ET 200SP, AI 4XI 2-/4-WIRE ST, PU 1	SIE.6ES7134-6GD01-0BA1	SIEMENS	42
-XAI2	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	42

REV.	DATE	PREPARED	REV.	DATE	PREPARED
B	01.08.2024	O.A.			
A	30.05.2024	O.A.			

coes 20th 1997 - 2017

PLANT: COMMAND AND CONTROL SWITCHBOARDS NITROGEN - WIRING DIAGRAM	PREPARED: ASSOLARI O.	CHECKED: TIRABOSCHI T.	PLANT: = NITROGEN	PAGE: 87
	DATE: 02.05.2024	APPROVED:	LOCATION: + QE	NEXT: 88
DESCRIPTION: COMPONENT LIST	WORK ORDER N: 2024.4813_001	DRAWING N: d241024-WD		TOTAL SHEETS: 49

COMPONENT LIST

COMPONENT TAG	QUANTITY	DESCRIPTION	ARTICLE CODE	CONSTRUCTOR	SHEET
-61XC1	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC2	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC3	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC4	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC5	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC6	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC7	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC8	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC9	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC10	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC11	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC12	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	62
-61XC13	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	61
-61XC14	1	RJ45 connector	PXC.1419001	PHOENIX CONTACT	62
-XDI1	1	SIMATIC ET 200SP DI 8x 24V DC Basic ,sink input	SIE.6ES7131-6BF01-0AA0	SIEMENS	37
-XDI1	1	BASEUNIT TYPE A0, BU15-P16+A0+2D	SIE.6ES7193-6BP00-0DA0	SIEMENS	37
-XDI2	1	SIMATIC ET 200SP DI 8x 24V DC Basic ,sink input	SIE.6ES7131-6BF01-0AA0	SIEMENS	37
-XDI2	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	37
-XDI3	1	SIMATIC ET 200SP DI 8x 24V DC Basic ,sink input	SIE.6ES7131-6BF01-0AA0	SIEMENS	38
-XDI3	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	38
-XDI4	1	SIMATIC ET 200SP DI 8x 24V DC Basic ,sink input	SIE.6ES7131-6BF01-0AA0	SIEMENS	38
-XDI4	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	38
-XDO1	1	SIMATIC ET 200SP, DQ 8x 24V DC/0,5A Basic, Source output	SIE.6ES7132-6BF01-0AA0	SIEMENS	40
-XDO1	1	BASEUNIT TYPE A0, BU15-P16+A0+2D	SIE.6ES7193-6BP00-0DA0	SIEMENS	40
-XDO2	1	SIMATIC ET 200SP, DQ 8x 24V DC/0,5A Basic, Source output	SIE.6ES7132-6BF01-0AA0	SIEMENS	40
-XDO2	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	40
-XDO3	1	SIMATIC ET 200SP, DQ 8x 24V DC/0,5A Basic, Source output	SIE.6ES7132-6BF01-0AA0	SIEMENS	41
-XDO3	1	BASEUNIT TYPE A0, BU15-P16+A0+2B	SIE.6ES7193-6BP00-0BA0	SIEMENS	41