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Zacchiroli Giampaolo <sup>[1]</sup>, Contavalle Corrado <sup>[2]</sup>, Nocita Carlo <sup>[2]</sup>

**Aggiornamento del sistema di controllo e di posizionamento  
del subriflettore e del ricevitore in fuoco primario**

**Parabola VLBI di Noto (SR) 2021**

**Vol.2 – schemi elettrici e *wire list***

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## 1 Introduzione

Questo volume è un completamento dei volumi 1 e 3 del rapporto tecnico “Aggiornamento del sistema di controllo e di posizionamento del subriflettore e del ricevitore in fuoco primario”. In particolare questo volume (2) è la raccolta degli schemi elettrici, di collegamento e *wire list* della nuova apparecchiatura sviluppata. I *file* editabili e i singoli PDF, così come per i *software* applicativi del PLC e degli azionamenti elettrici, sono reperibili presso gli autori del presente rapporto. In particolare, un primo schema era stato sviluppato in OrCAD già per la prima movimentazione gemella di Medicina e, in questo caso, oltre ad essere stato aggiornato è stato rifatto anche in versione SPAC Automazione (dwg) per ulteriori possibilità di utilizzo e compatibilità con il “mondo esterno” dell’automazione industriale.

### 1.1 Riferimenti

Rapporto\_movimentazione\_Noto – vol.1 – Descrizione

Rapporto\_movimentazione\_Noto – vol.3 – interventi a Noto (SR) – agosto e settembre 2021

### 1.2 Elenco documenti

- 1) Schema elettrico OrCAD (pag. 3-28)
- 2) Schema collegamento cavi (pag. 29-30)
- 3) Schema elettrico SPAC Automazione (pag. 31 – 94)
- 4) *Wire list* (pag. 95 – 138)

MOVIMENTAZIONE  
SUBRIFFETTORE E RICEVITTORE IN FUOCO PRIMARIO

NOTO 2021

Title	
MOVIMENTAZIONE SR e PFR ( NOTO2021 )	
Size	Document Number
A	00 - Copertina
Date:	Tuesday, June 22, 2021
Sheet	0 of 1
Rev	A

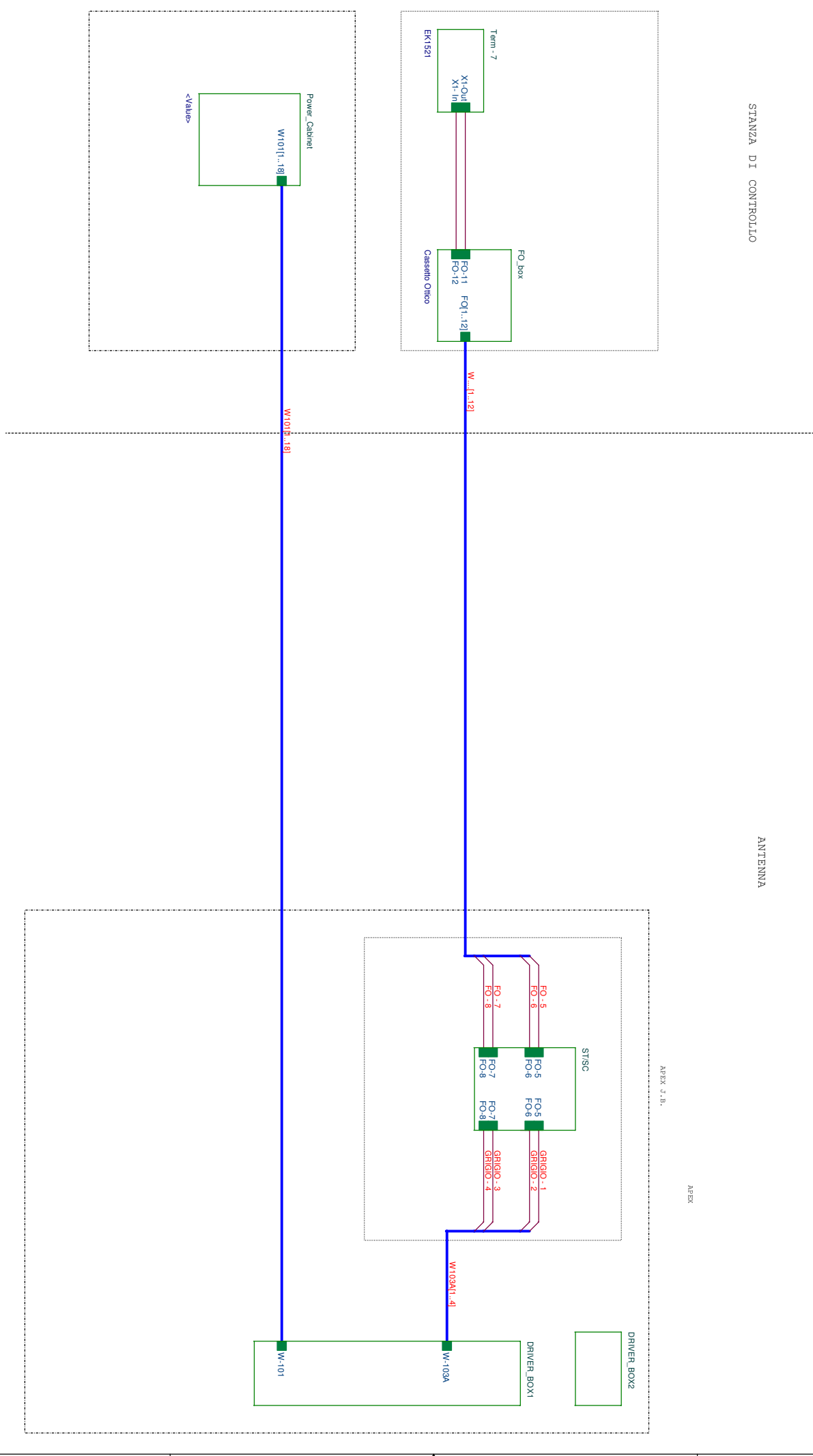
NewSub\_2021 Elenco disegni

01 - Elenco disegni

02 - Wiring_Antenna	04 - DrvBox1-Pwr	13 - DrvBox2_Pwr	22 - SCUBox_Pwr-PC
03 - Wiring_Apex	05 - DrvBox1-PwrSup	14 - DrvBox2-PwrSup-Dist	23 - SCUBox_Ctrl
	06 - DrvBox1-PwrSup-Dist	15 - DrvBox2-Fan	24 - SCUBox_I/O
	07 - DrvBox1-Fan	16 - DrvBox2-Asse Z1sr	
	08 - DrvBox1-Asse Ysr	17 - DrvBox2-Asse Z2sr	
	09 - DrvBox1-Asse Ypfr	18 - DrvBox2-Asse Z3sr	
	10 - DrvBox1-Asse Zpfr	19 - DrvBox2-Asse Xsr	
	11 - DrvBox1 - I/O	20 - DrvBox2 - I/O	
	12 - DrvBox1 - Serial-Serv	21 - DrvBox2-Serial-Serv	

Title	
MOVIMENTAZIONE SRE e PFR (NOTO 2021)	
Size	Document Number
A4	01 - Elenco Disegni
Date:	Tuesday, June 22, 2021
Sheet	1 of 1
Rev	A

WIRING - ANTENNA



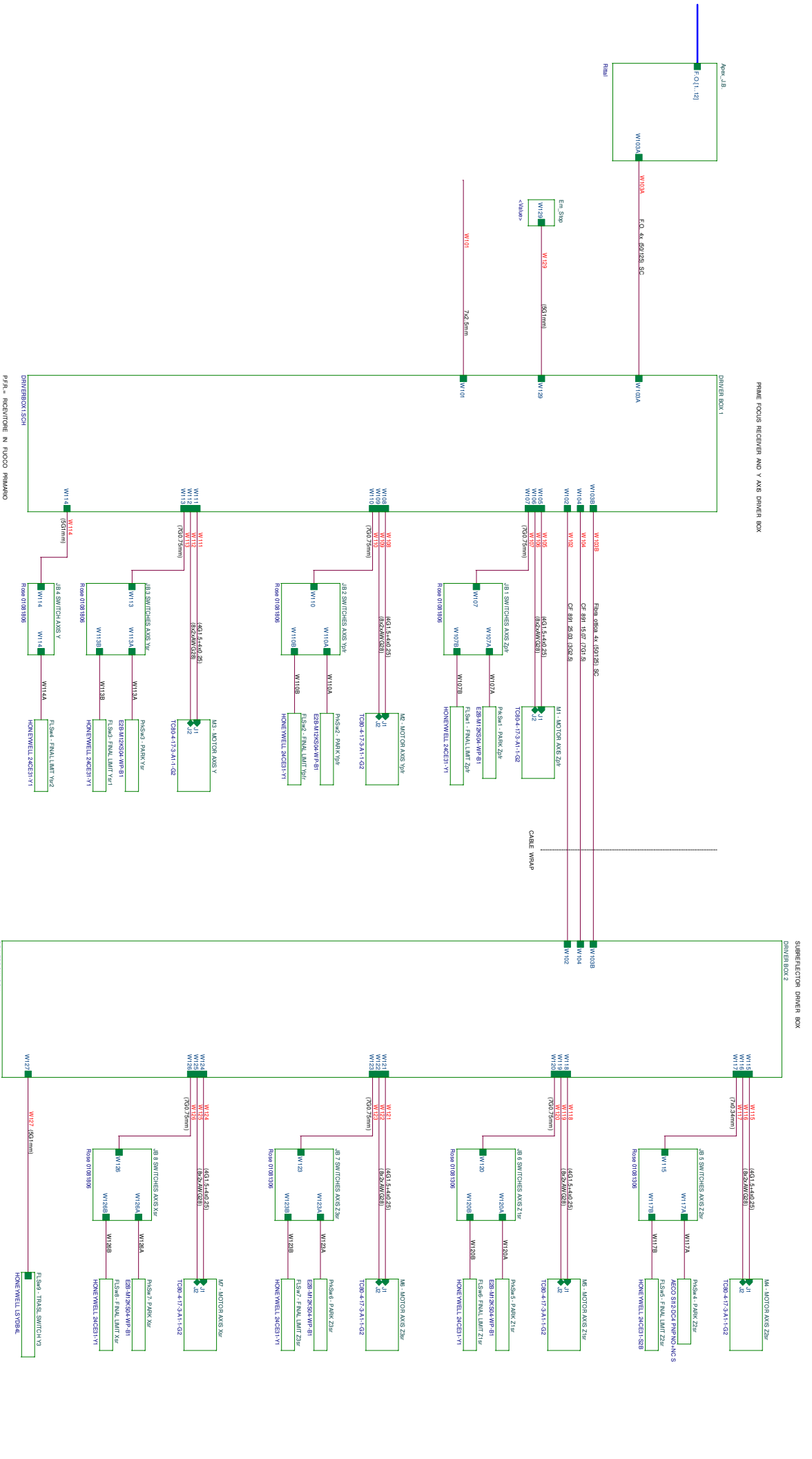
STANZA DI CONTROLLO

ANTENNA

APEX J.B.

APEX

Title	MOVIMENTAZIONE SR e PFR (NOTO 2021)	
Size	Document Number	Rev
A3	02 - Wiring Antenna	A
Date:	Monday, December 13, 2021	Sheet 2 of 01



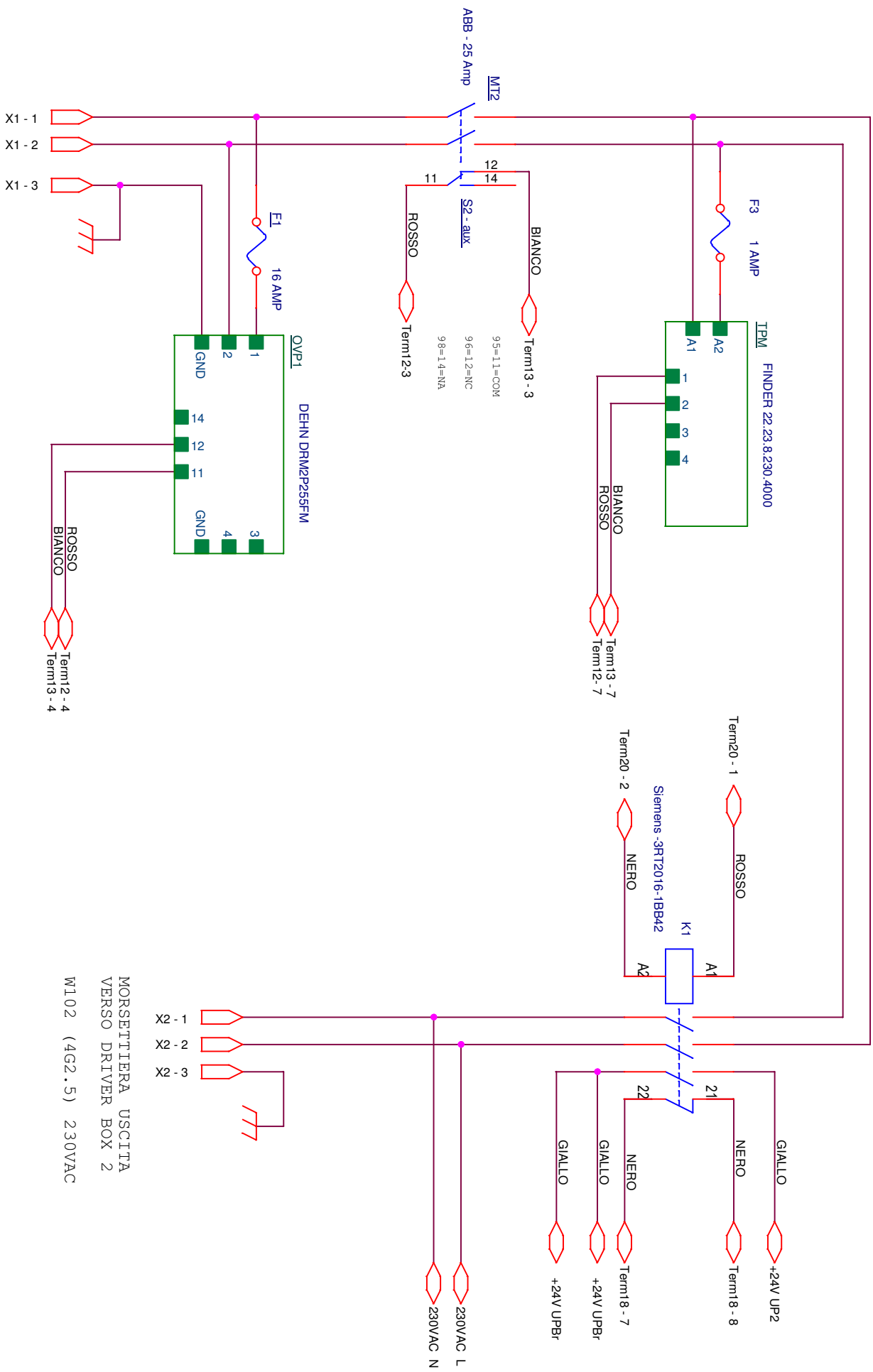
DRIVERBOX1.SCH

DRIVERBOX2.SCH

PRIME FOCUS RECEIVER AND Y AXIS DRIVER BOX

File	MONITOR/DRIVER BOX PFR (NOTO 2021)
Size	10,457,432 bytes
Document Number	10,457,432
Rev	1
Date	1/13/2021
Drawn	1/13/2021
Checked	1/13/2021
Scale	1:1
Sheet	3 of 6

DRIVER BOX 1 - ALIMENTAZIONE DI POTENZA 230VAC

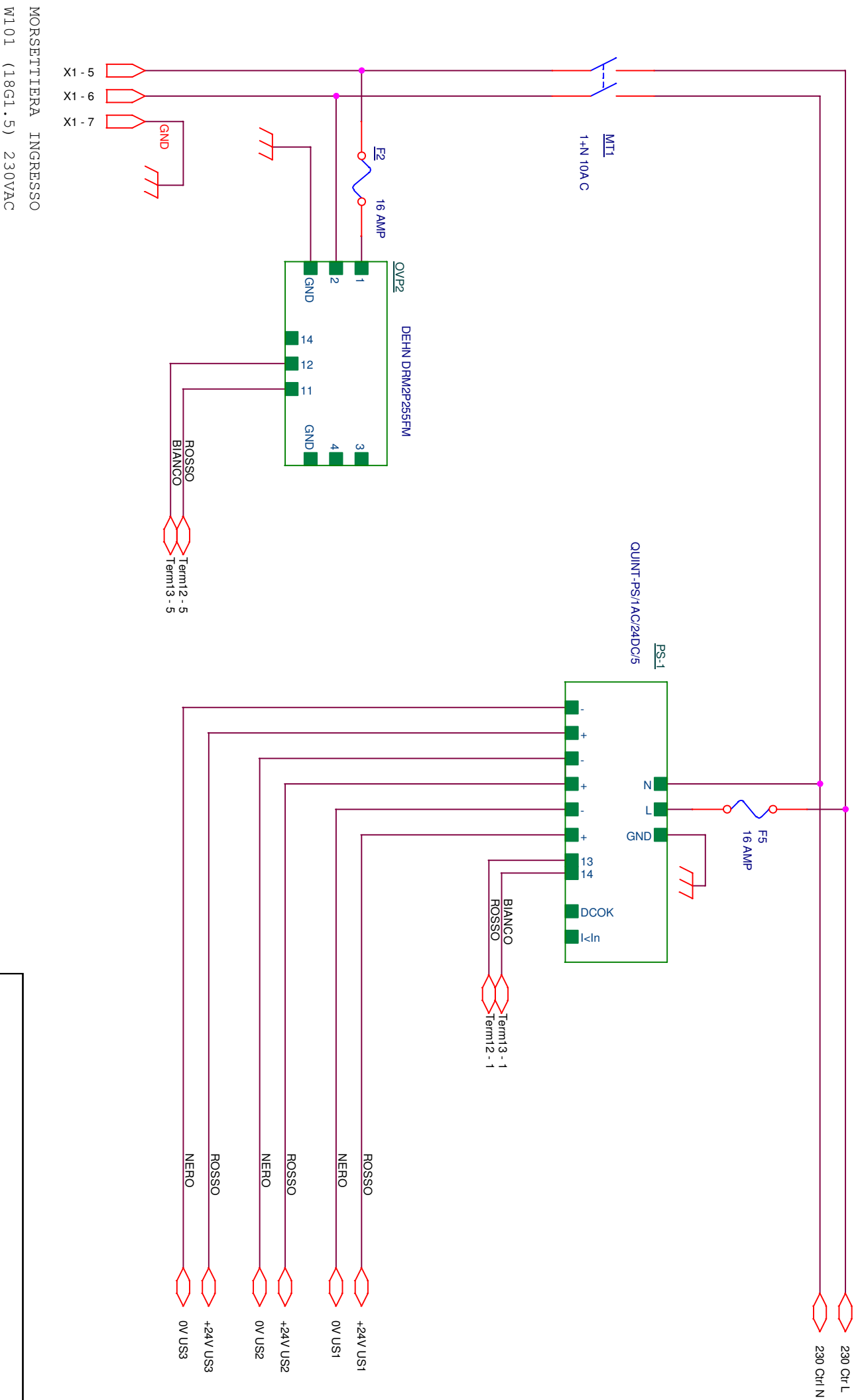


MORSETTIERA INGRESSO  
W101 (18G1.5) 230VAC

MORSETTIERA USCITA  
VERSO DRIVER BOX 2  
W102 (4G2.5) 230VAC

Title	
MOVIMENTAZIONE SR e PFR (NOTO 2021)	
Size	Document Number
A4	04 - DvbBox1-Pwr
Date:	Monday, December 13, 2021
Sheet	4 of 4
Rev	A

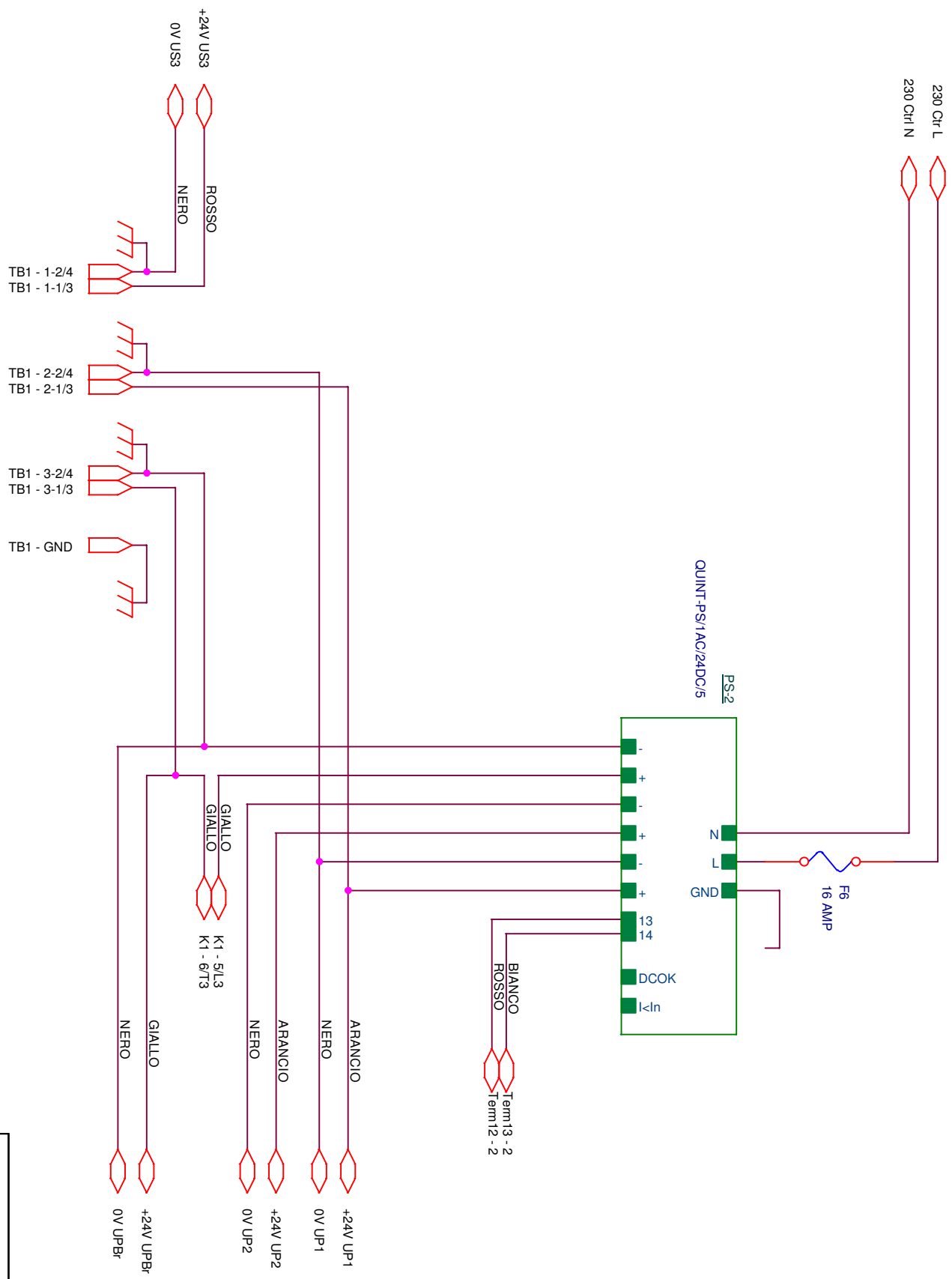
DRIVER BOX 1 - ALIMENTAZIONE DI CONTROLLO 230VAC (UPS)



MORSETTIERA INGRESSO  
W101 (18G1.5) 230VAC

Title		MOVIMENTAZIONE SR e PFR (NOTO 2021)	
Size		A4	
Document Number		05 - DvbBox1-PwrSup	
Date:	Monday, December 13, 2021	Sheet	5 of 5
Rev	A		

DRIVER BOX 1 - ALIMENTAZIONE DI CONTROLLO 230VAC (UPS)

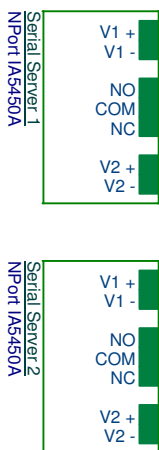
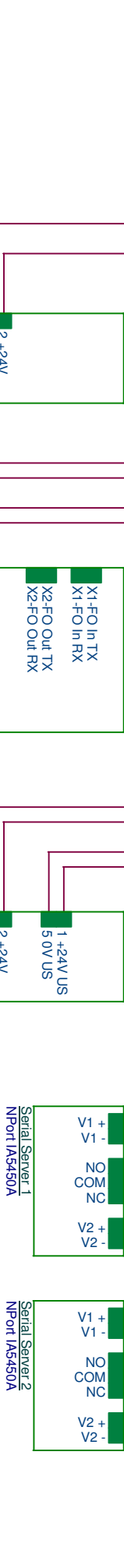
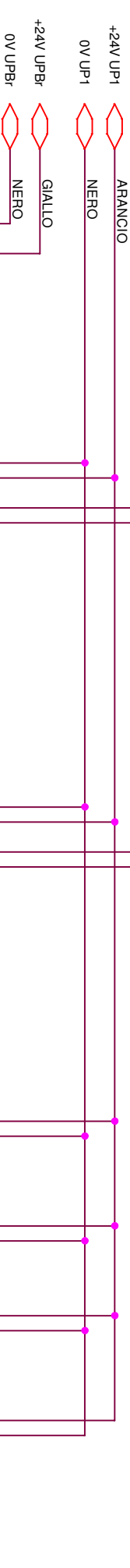
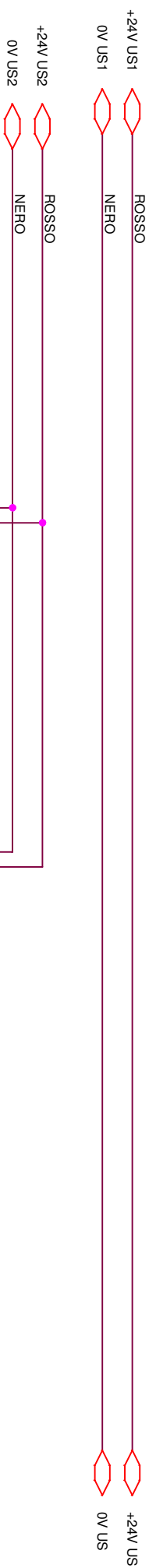


MORSETTIERA USCITA  
W104 (7G1.5)

Title	
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Size	Document Number
A4	06 - DvbBox1-PwrSup
Date:	Thursday, August 19, 2021
Sheet	6 of 24
Rev	A

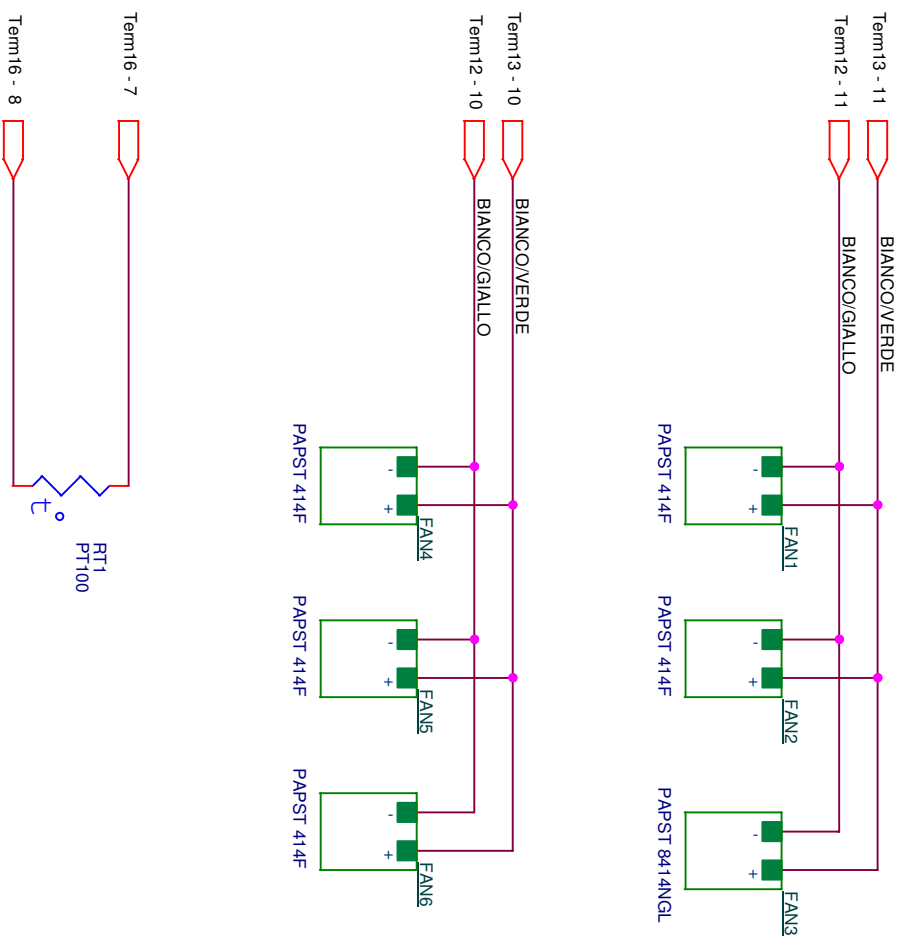
# DRIVER BOX 1 - ALIMENTAZIONI 24V DC

Alimentazione Ctrl Driver: Zpfr, Ypfr, Ysr



Title		MOVIMENTAZIONE SR e PFR (NOTO 2021)	
Size	Document Number	07 - DvbBox1-PwrSup-Dist	
A4	Date:	Tuesday, June 22, 2021	Sheet 7 of 7
Rev		A	

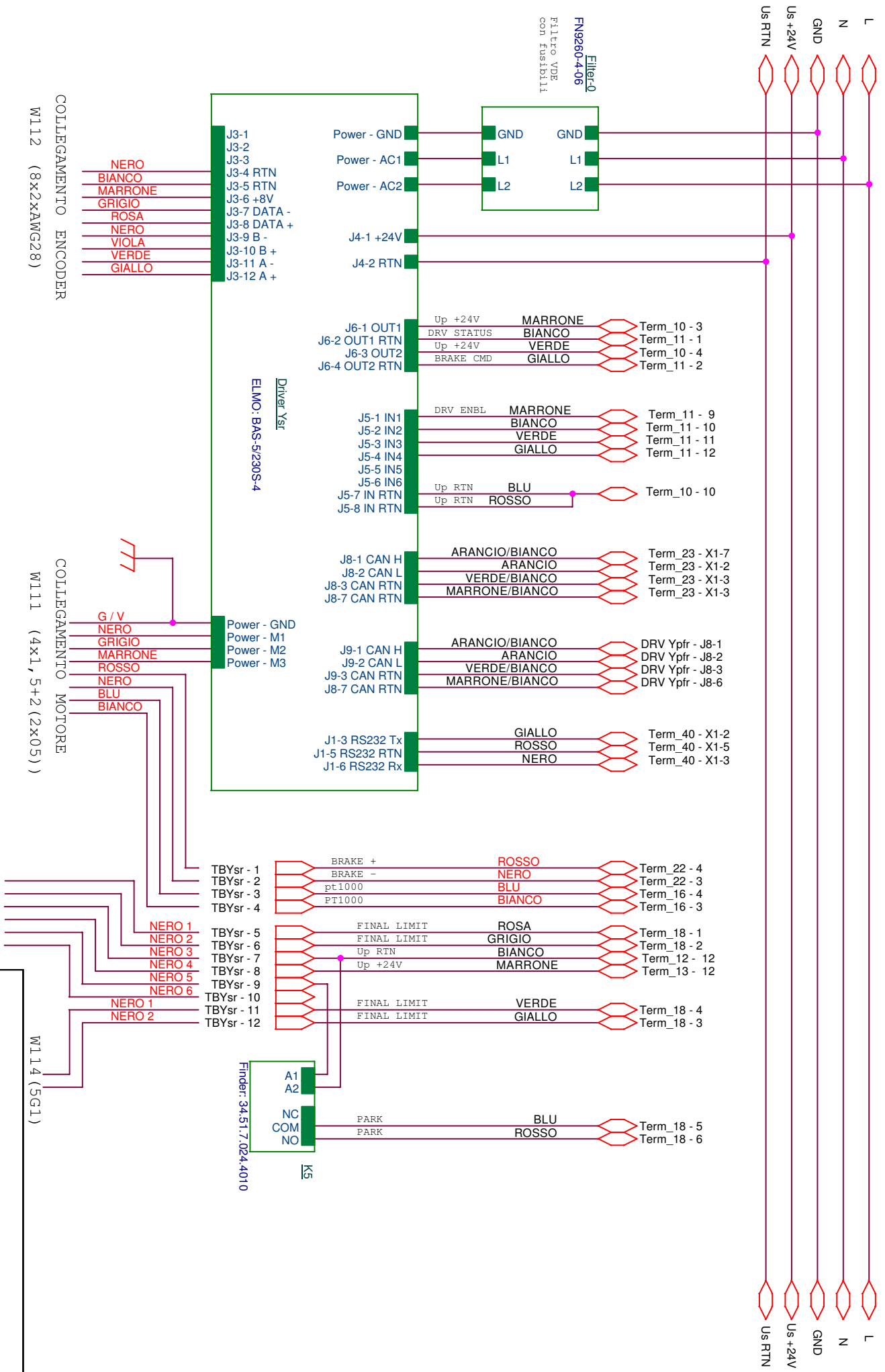
DRIVER BOX 1 - VENTILAZIONE



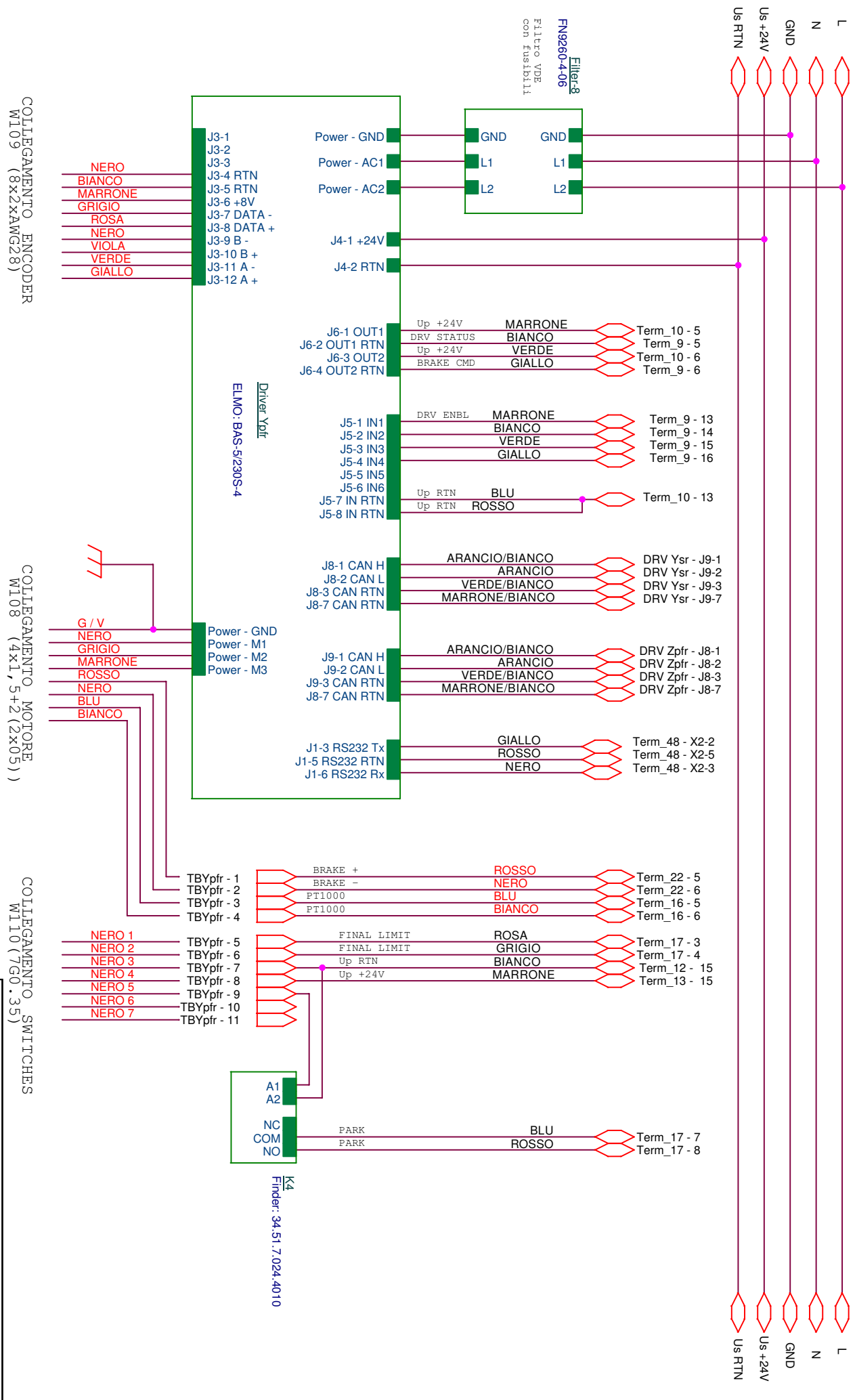
Title	
MOVIMENTAZIONE SR e PFR (NOTO 2021)	

Size	Document Number	Rev
A4	08 - DvbBox1-Fan	A

Date: Tuesday, June 22, 2021 Sheet 8 of



Title		MOVIMENTAZIONE S R e PFR (NOTO 2021)	
Size	Document Number		
A4	09 - Dn/Box1-Asse Ysr		
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		Rev	A



COLLEGAMENTO ENCODER  
M109 (8x2xAMG28)

COLLEGAMENTO MOTORE  
M108 (4x1,5+2(2x05))

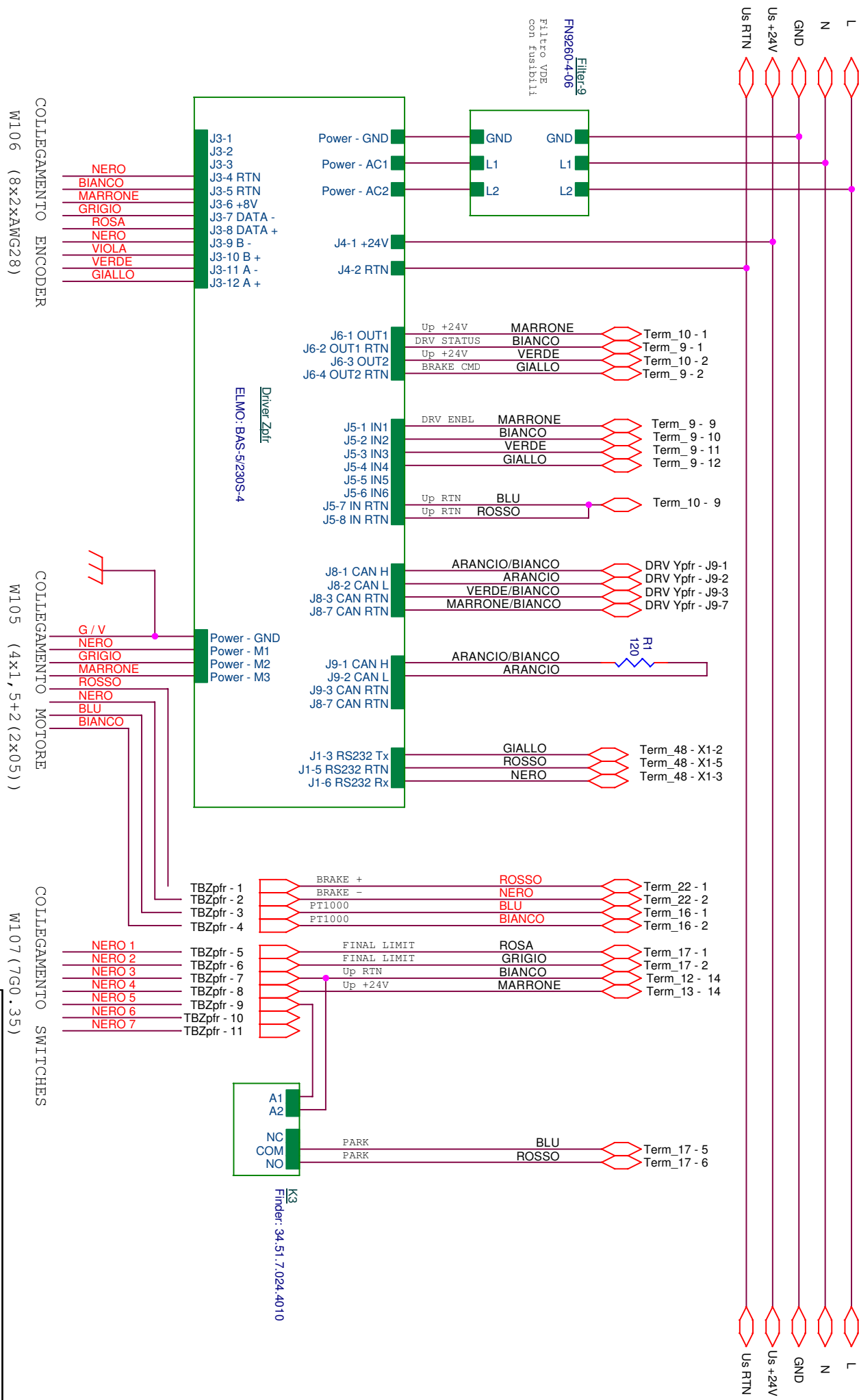
COLLEGAMENTO SWITCHES  
M110(7G0.35)

Filter-8  
FN9260-4-06  
Filtro YDF  
con Fusibili

Driver Ypfr  
ELMO BAS-F/290S-4

K4  
Finder: 34.51.7.024.4010

Title		MOVIMENTAZIONE SRA e PFR (NOTO 2021)
Size	Document Number	
A4	10 - Dn/Box1 - Asse Ypfr	
Date:	Thursday, August 19, 2021	Sheet 10 of
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Title		MOVIMENTAZIONE S R e PFR (NOTO 2021)	
Size	Document Number	11 - Dn/Box1-Asse Zpfr	
A4	11 - Dn/Box1-Asse Zpfr	Date:	Thursday, August 19, 2021
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DRIVER BOX1 - BECKHOFF I/O

Term8	Term9	Term10	Term11	Term12	Term13	Term14	Term15	Term16	Term17	Term18	Term19	Term20	Term21	Term22	Term23	Term40	Term48
X1-FO In TX X1-FO In RX X2-FO Out TX X2-FO Out RX +24V US 0V US +24V +24V 0V 0V PE PE	1 IN1 2 IN2 3 IN3 4 IN4 5 IN5 6 IN6 7 IN7 8 IN8	1 +24V 2 +24V 3 +24V 4 +24V 5 +24V 6 +24V 7 +24V 8 +24V	1 IN1 2 IN2 3 IN3 4 IN4 5 IN5 6 IN6 7 IN7 8 IN8	1 +24V 2 +24V 3 +24V 4 +24V 5 +24V 6 +24V 7 +24V 8 +24V	1 IN1 2 IN2 3 IN3 4 IN4 5 IN5 6 IN6 7 IN7 8 IN8	2 +24V 6 +24V 5 D1- 1 D1+	1 +24V US 5 0V US	1 R1+ 2 R1-	1 IN1+ 2 IN1-	1 IN1+ 2 IN1-	1 IN1+ 2 IN1-	1 OUT1 2 OUT1 1 0V 2 0V 5 OUT2 6 OUT2 5 0V 6 0V 3 OUT3 4 OUT3 4 0V 7 OUT4 8 OUT4 7 0V 8 0V	2 +24V 6 +24V 6 +24V 5 OUT2 6 0V 4 OUT3 3 0V 7 0V 4 PE 8 PE	1 OUT1 2 0V	X1-7 CANN H X1-2 CANN L X1-3 RTN X1-6 RTN	X1-2 Rx X1-3 Tx X1-RTN	X1-2 Rx X1-3 Tx X1-RTN
EK1501	EL1859	EL9184	EL1859	EL9184	EL1859	EL5001	EL9400	EL3204	EL1904	EL1904	EL1904	EL2904	EL9100	EL2024	EL6751	EL6002	EL6002

- Term8 - Estensione
- Term9 - I/O driver Zpfr Ypfr
- Term10 - distribuzione 24V
- Term11 - I/O driver Ysr
- Term12 - distribuzione 24V
- Term13 - I/O vari
- Term14 - Enc. SSI asse Ysr
- Term15 - Power supply
- Term16 - Temperatura Motori e Box
- Term17 - SAFE - Final e Park Zpfr Ypfr
- Term18 - SAFE - Final e Park Ysr - K1 EDM
- Term19 - SAFE - EmStop PB
- Term20 - SAFE - Teleuttore
- Term21 - Distribuzione 24V freni
- Term22 - Freni Ypfr, Zpfr, Ysr
- Term23 - CAN Bus
- Term40 - RS232 Ysr
- Term48 - RS232 Zpfr, Ypfr

- Term19 - SAFE - EmStop PB
- Term20 - SAFE - Teleuttore

Title		MOVIMENTAZIONE SR e PFR (NOTO 2021)
Size	Document Number	A4
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DRIVER BOX1 - SERIAL SERVER



EL6002

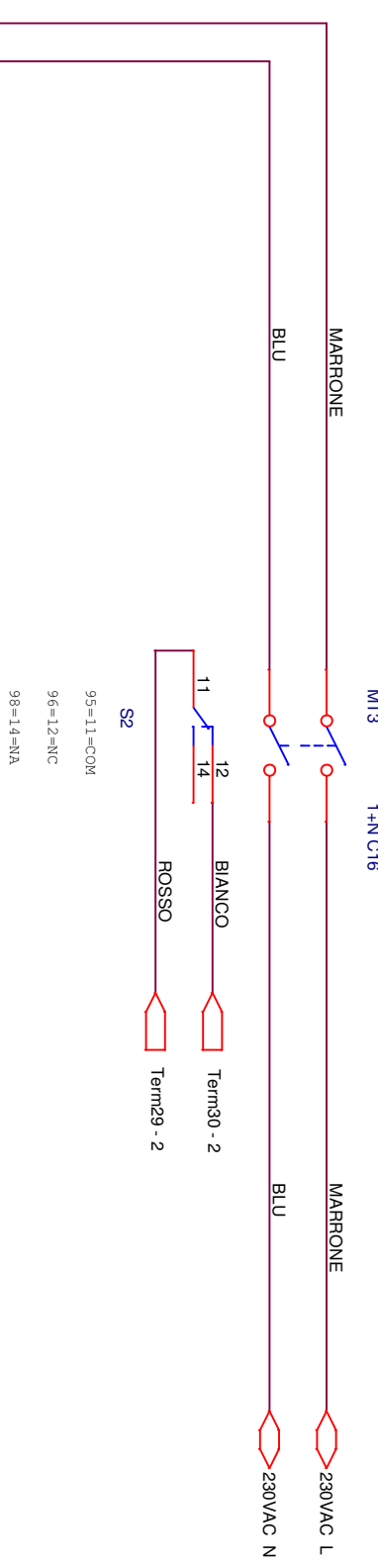


EL6002

Title		MOVIMENTAZIONE SR e PFR ( NOTO 2019 )	
Size	Document Number	Rev	
A	13 - DivBox1 - Serial Serv	A	
Date:	Tuesday, June 22, 2021	Sheet	13 of 1

DRIVER BOX2 - ALIMENTAZIONI 230 VAC

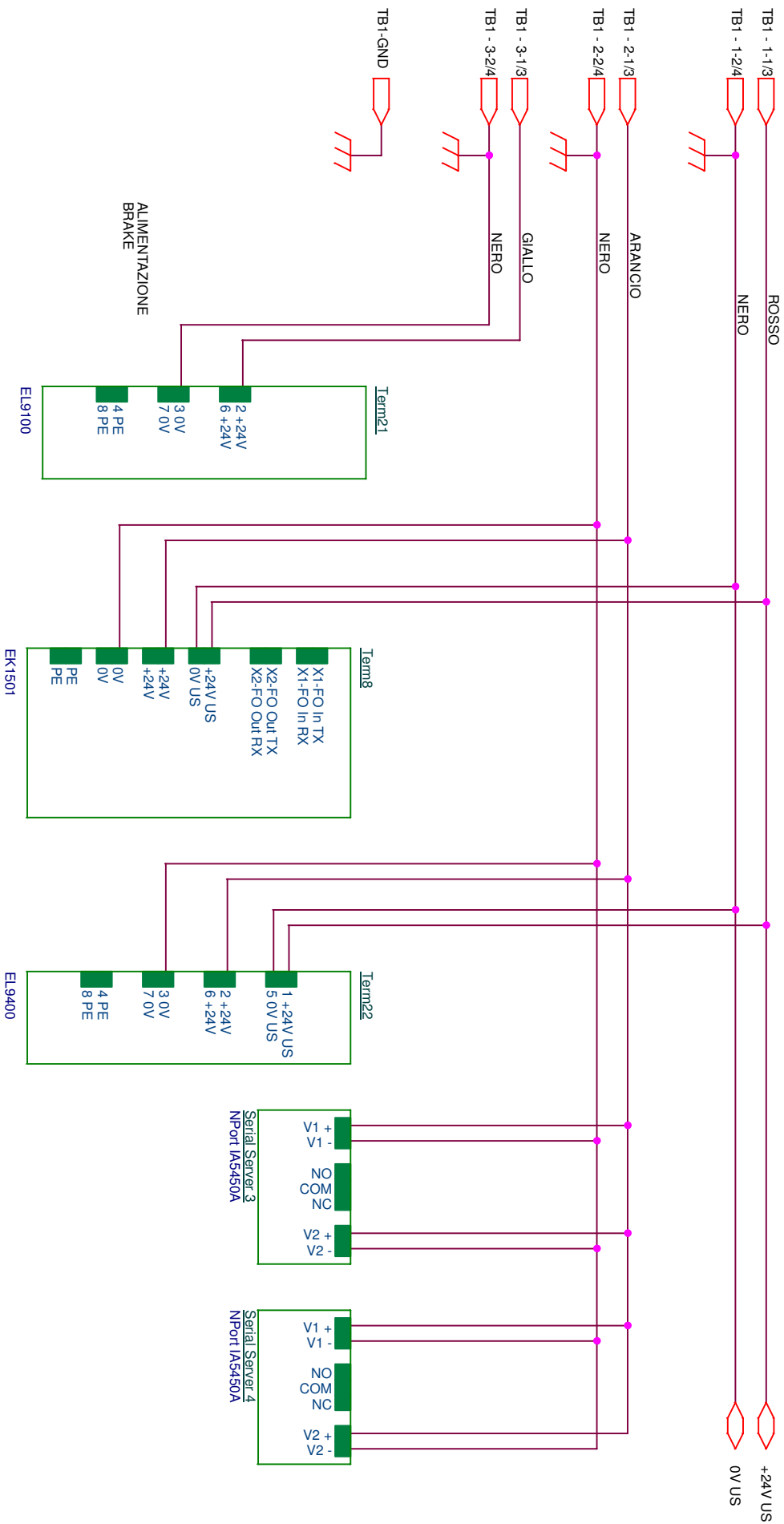
Alimentazione Potenza Driver: Z1sr, Z2sr, Z3sr, Xsr



MORSETTIERA INGRESSO  
W102 (4G2.5) 230VAC

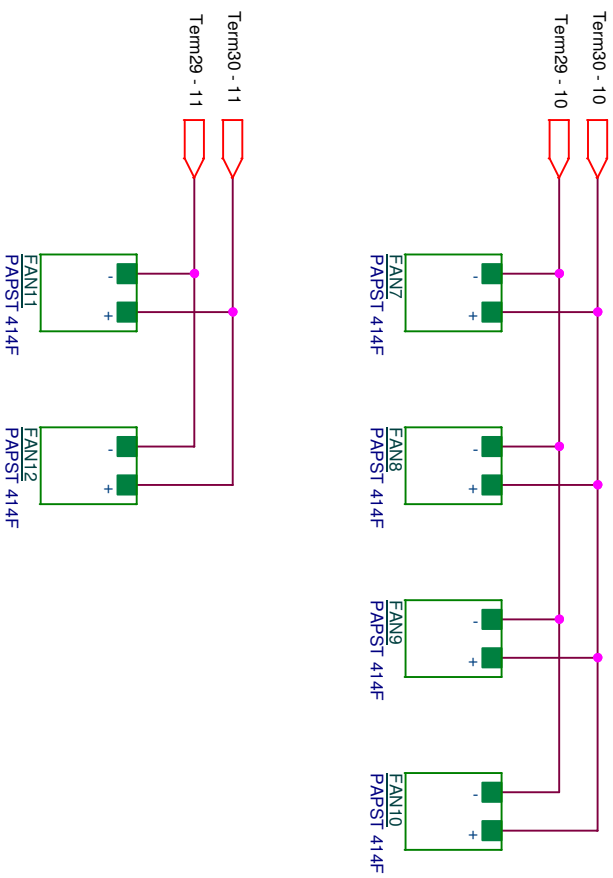
Title	
MOVIMENTAZIONE SR e PFR (NOTO 2021)	
Size	Document Number
A4	14 - DnVBox2_Pwr
Date:	Tuesday, June 22, 2021
Sheet	14 of 2
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DRIVER BOX2 - ALIMENTAZIONI 24 VDC

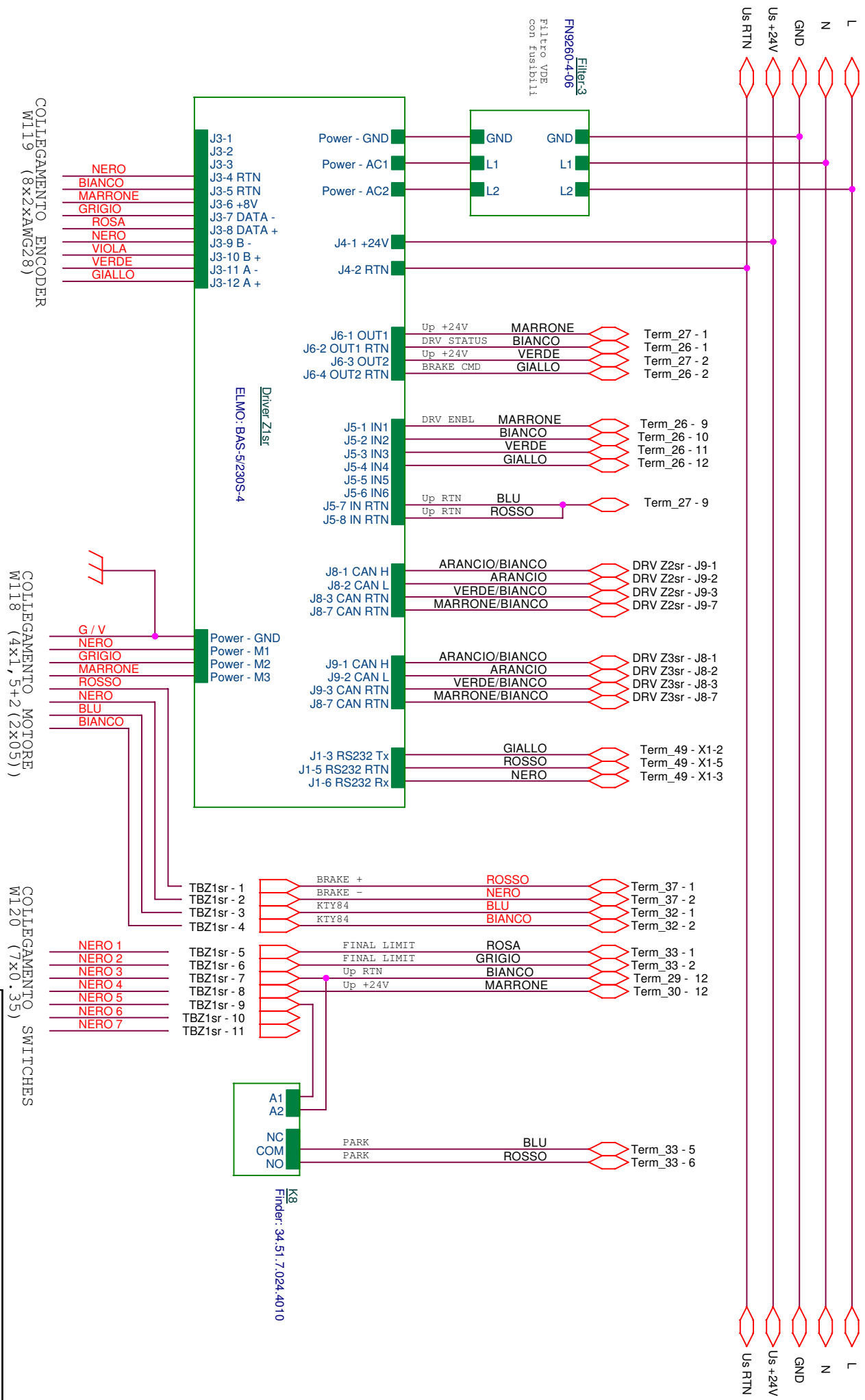


Title		MOVIMENTAZIONE SR e PFR (NOTO 2021)	
Size	Document Number		
A4	15 - DnVBox2-PwrSup-Dist		
Date:	Thursday, August 19, 2021	Sheet	15 of 2
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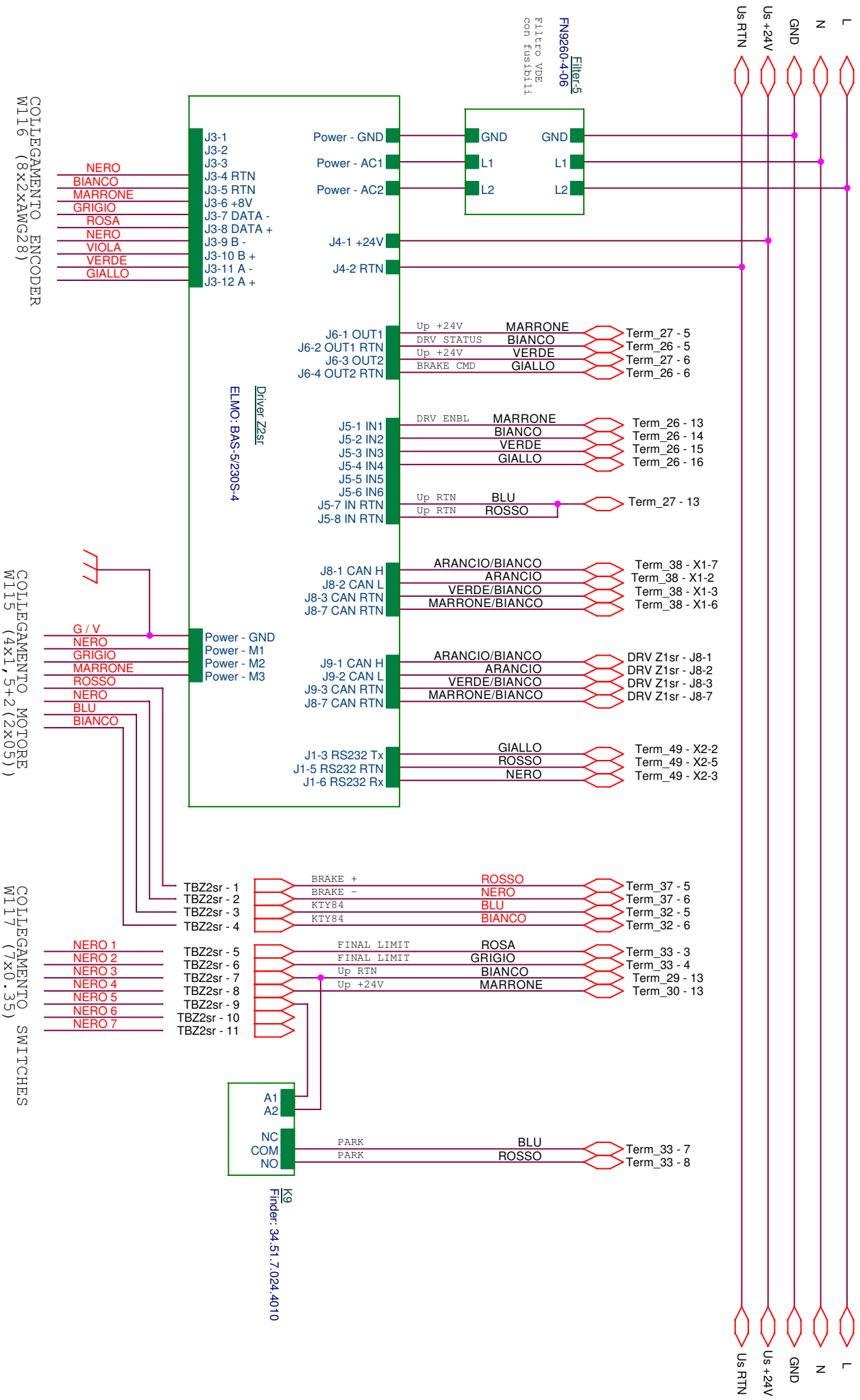
DRIVER BOX2 - VENTILAZIONE



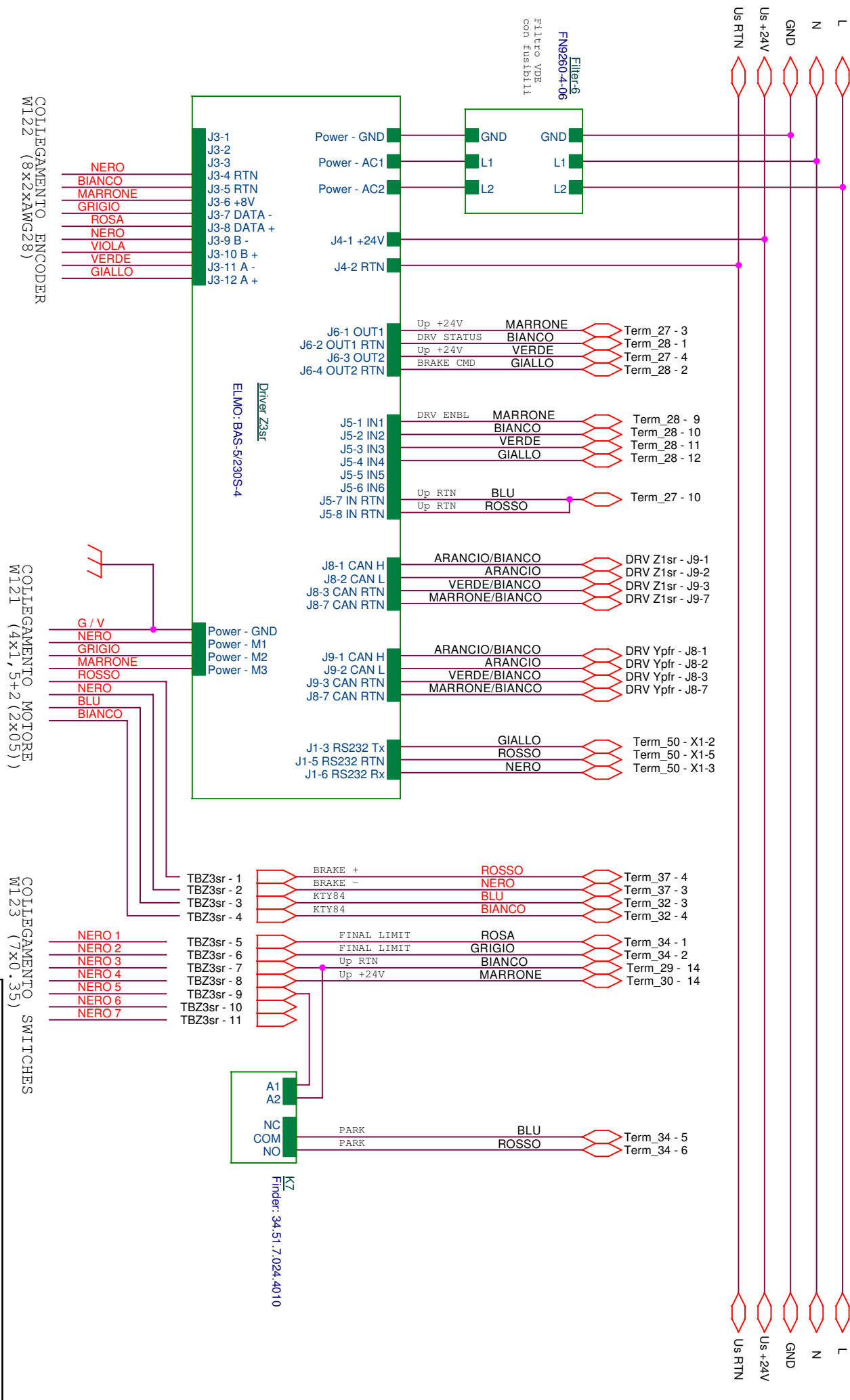
Title	
MOVIMENTAZIONE SR e PFR (NOTO 2021)	
Size	Document Number
A4	16 - DnVBox2-Fan
Date:	Tuesday, June 22, 2021
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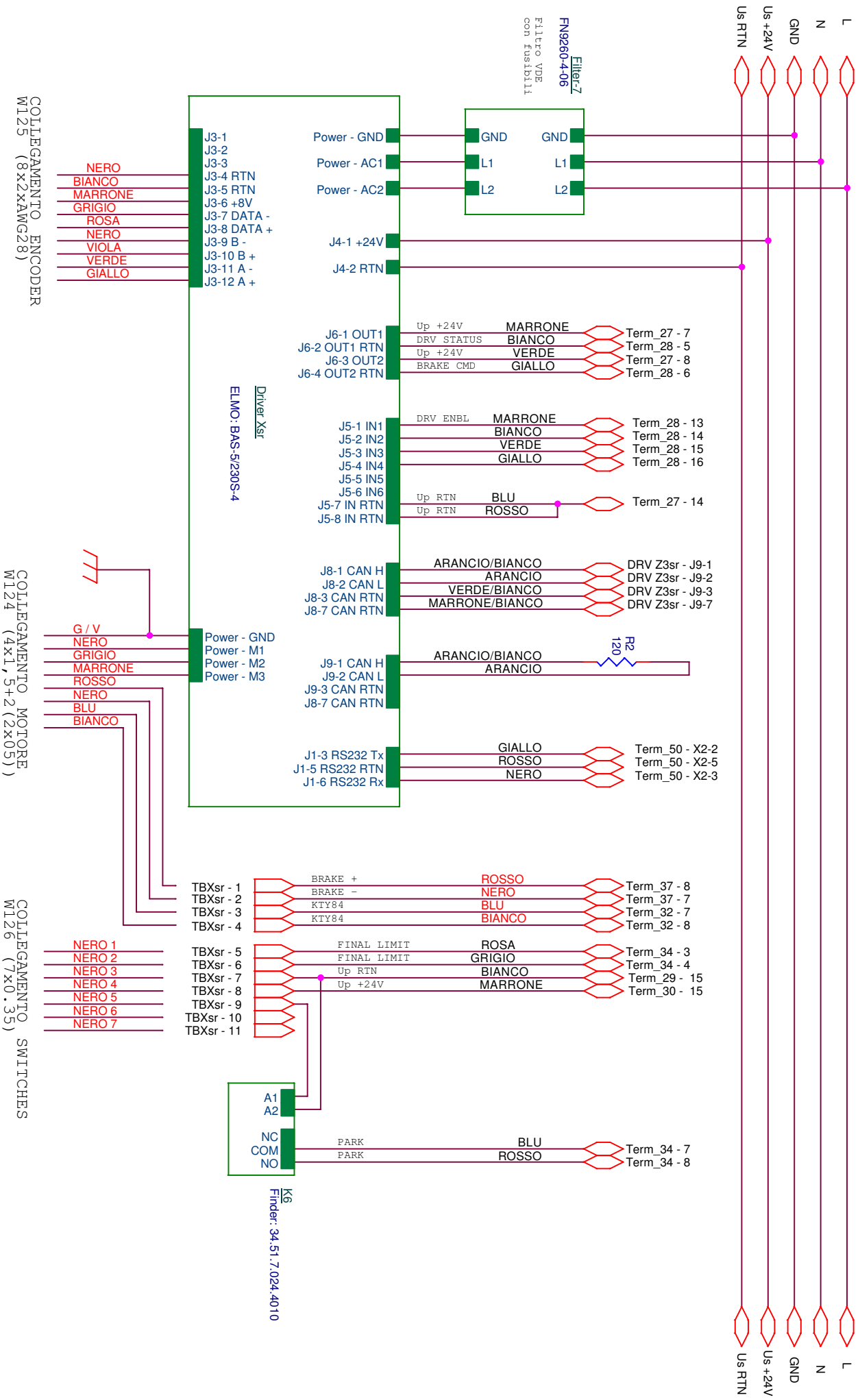
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Size	Document Number	
A4	17 - Dn/Box2-Asse Z1sr	
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Title		MOVIMENTAZIONE SR e PFR (NOTO 2021)
Size	Document Number	18 - Dn/Box2-Asse Z2sr
A4	Date:	Thursday, August 19, 2021
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Title		MOVIMENTAZIONE S R e PFR (NOTO 2021)	
Size	Document Number	19 - Dn/Box2-Asse Z3sr	
A4	Date:	Thursday, August 19, 2021	Sheet 19 of 21
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Title		MOVIMENTAZIONE SRA e PFR (NOTO 2021)
Size	Document Number	20 - Dn/Box2-Asse Xsr
A4	Date:	Thursday, August 19, 2021
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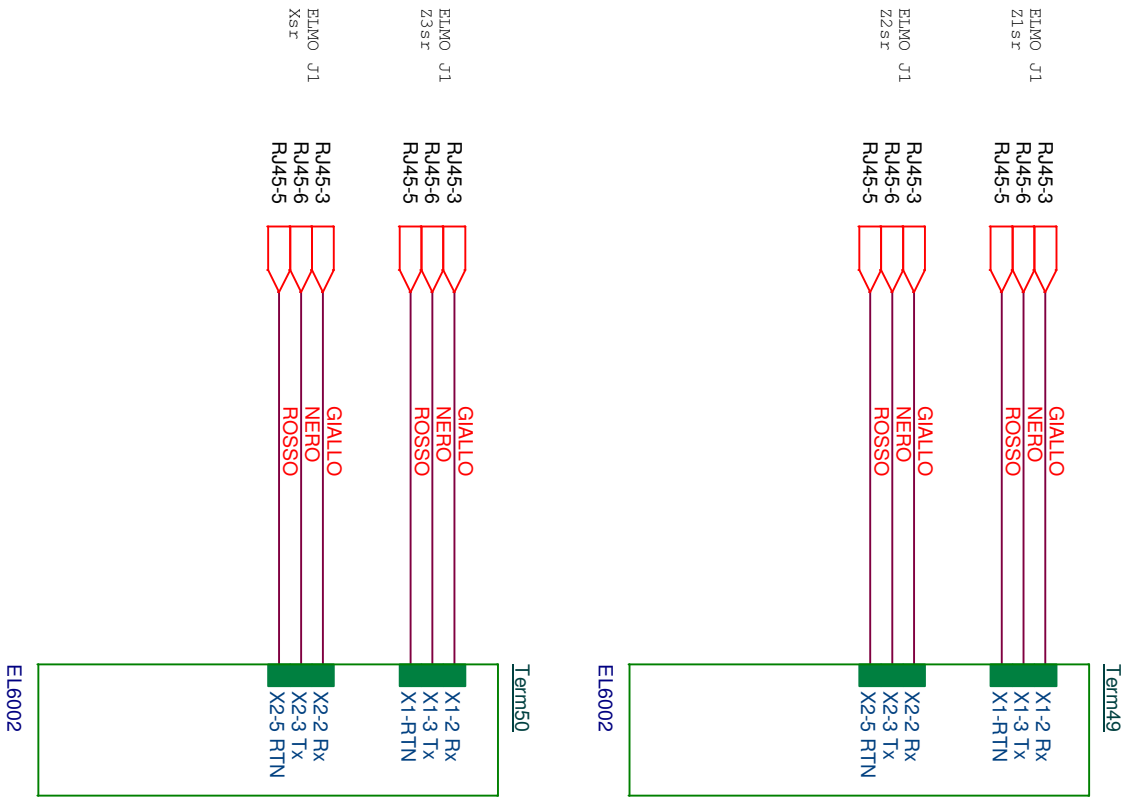
DRIVER BOX2 - BECKHOFF I/O

Term25	Term26	Term27	Term28	Term29	Term30	Term31	Term32	Term33	Term34	Term35	Term36	Term37	Term38	Term49	Term50
X1-FO In TX X1-FO In FX X2-FO Out TX X2-FO Out FX +24V US 0V US +24V +24V 0V 0V PE	1 IN1 2 IN2 3 IN3 4 IN4 5 IN5 6 IN6 7 IN7 8 IN8 9 OUT1 10 OUT2 11 OUT3 12 OUT4 13 OUT5 14 OUT6 15 OUT7 16 OUT8	1 +24V 2 +24V 3 +24V 4 +24V 5 +24V 6 +24V 7 +24V 8 +24V 9 0V 10 0V 11 0V 12 0V 13 0V 14 0V 15 0V 16 0V	1 IN1 2 IN2 3 IN3 4 IN4 5 IN5 6 IN6 7 IN7 8 IN8 9 OUT1 10 OUT2 11 OUT3 12 OUT4 13 OUT5 14 OUT6 15 OUT7 16 OUT8	1 +24V 2 +24V 3 +24V 4 +24V 5 +24V 6 +24V 7 +24V 8 +24V 9 0V 10 0V 11 0V 12 0V 13 0V 14 0V 15 0V 16 0V	1 IN1 2 IN2 3 IN3 4 IN4 5 IN5 6 IN6 7 IN7 8 IN8 9 OUT1 10 OUT2 11 OUT3 12 OUT4 13 OUT5 14 OUT6 15 OUT7 16 OUT8	1 +24V US 5 0V US 3 0V 7 0V	1 R1+ 2 R1- 3 R3+ 4 R3- 7 R4+ 8 R4-	1 IN1+ 2 IN1- 3 IN3+ 4 IN3- 5 IN2+ 6 IN2- 7 IN4+ 8 IN4-	1 IN1+ 2 IN1- 3 IN3+ 4 IN3- 5 IN2+ 6 IN2- 7 IN4+ 8 IN4-	1 IN1+ 2 IN1- 3 IN3+ 4 IN3- 5 IN2+ 6 IN2- 7 IN4+ 8 IN4-	2 +24V 6 +24V 3 0V 7 0V 4 PE 8 PE	1 OUT1 2 0V 3 OUT3 4 OUT3 5 OUT2 6 0V 7 OUT4 8 OUT4	X1-7 CAN H X1-2 CAN L X1-3 GND	X1-2 Rx X1-3 Tx X1-RTN X2-2 Rx X2-3 Tx X2-5 RTN	X1-2 Rx X1-3 Tx X1-RTN X2-2 Rx X2-3 Tx X2-5 RTN

EK1501	EL1859	EL9184	EL1859	EL9184	EL1859	EL9400	EL3204	EL1904	EL1904	EL1904	EL9100	EL2024	EL6751	EL6002	EL6002
Term25 - Estensione	Term26 - I/O driver Z1 e Z2	Term27 - distribuzione 24V	Term28 - I/O driver Z3 e X	Term29 - distribuzione 24V	Term30 - I/O vari	Term31 - Power supply	Term32 - Temperatura Motori	Term33 - SAFE - Final e Park Z1 e Z3	Term34 - SAFE - Final e Park Z3 e X	Term35 - SAFE - Ysr Transfer Switch	Term36 - Distribuzione 24V freni	Term37 - Freni Z1, Z2, Z3, X	Term38 - CAN Bus	Term49 - RS232 Z1sr, Z2sr	Term50 - RS232 Z3sr, Xsr

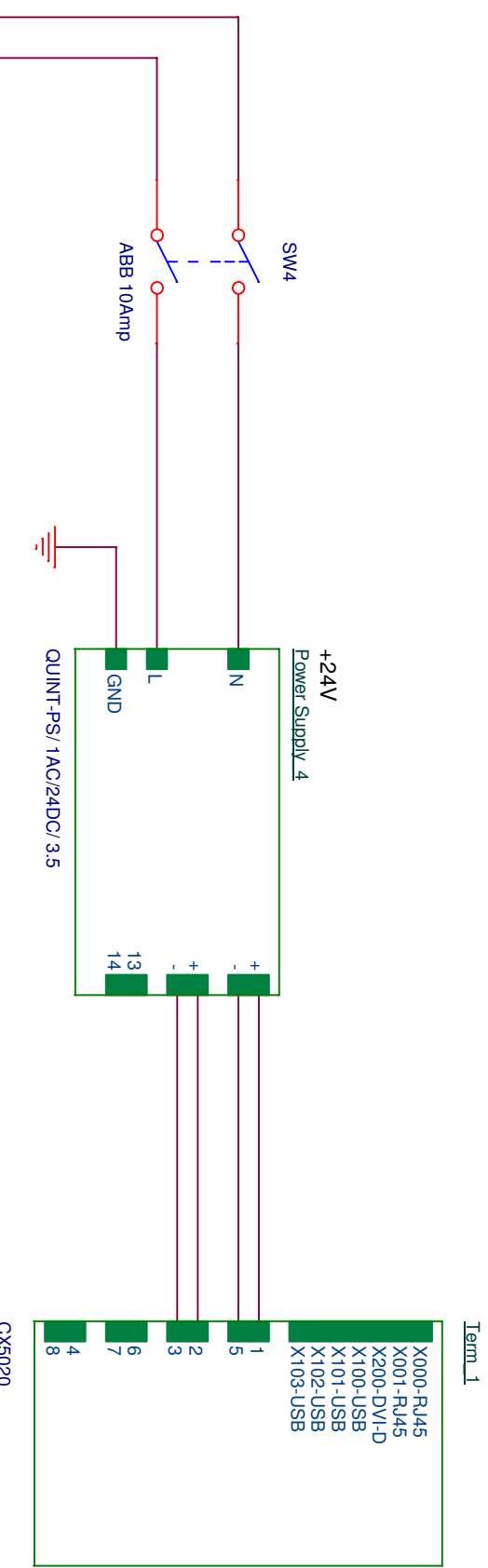
Title		MOVIMENTAZIONE SR e PFR (NOTO 2021)	
Size	Document Number	Rev	
A4	21 - DvbBox2 - IO	A	
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DRIVER BOX2 - SERIAL SERVER



Title		MOVIMENTAZIONE SR e PFR ( NOTO 2021 )	
Size	Document Number	Rev	
A	22 - DivBox2-Serial-Serv	A	
Date:	Tuesday, June 22, 2021	Sheet	22 of 1

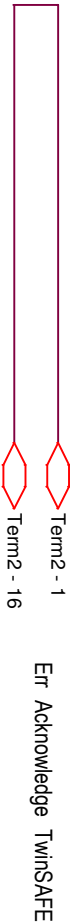
SCU BOX - PWR e PC SUBREFLECTOR CONTROL UNIT



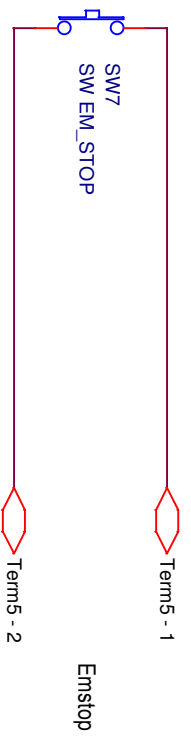
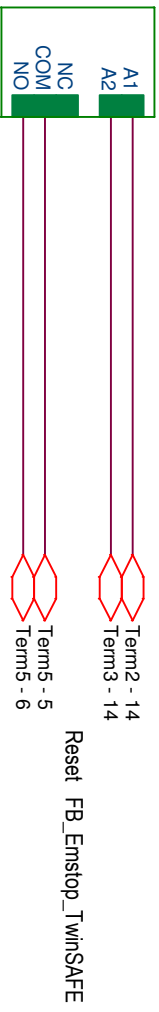
MORSETTIERA INGRESSO  
 W102 (4G2.5) 230VAC

Title		MOVIMENTAZIONE SR e PFR ( NOTO 2021 )	
Size	Document Number	Rev	
A	23 - SCUBox_Pwr-PC	A	
Date:	Tuesday, June 22, 2021	Sheet	23 of 1

SCU BOX - CONTROLLO

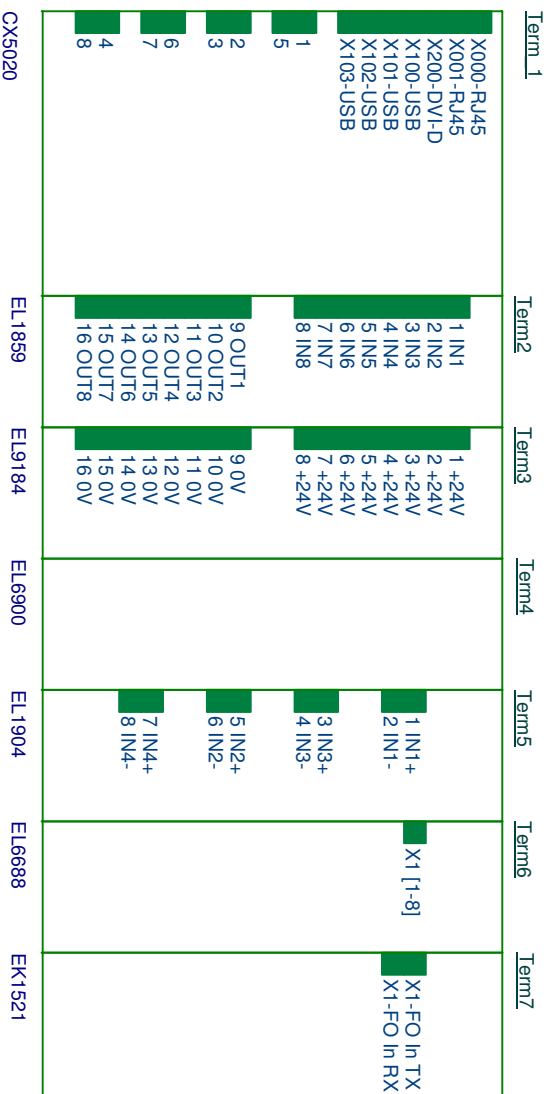


Finder: 34.51.7.024.4010



Title	
MOVIMENTAZIONE SR e PFR ( NOTO 2021 )	
Size	Document Number
A	24 - SCUBox_Ctrl
Date:	Tuesday, June 22, 2021
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SCU BOX - BECKHOFF I/O

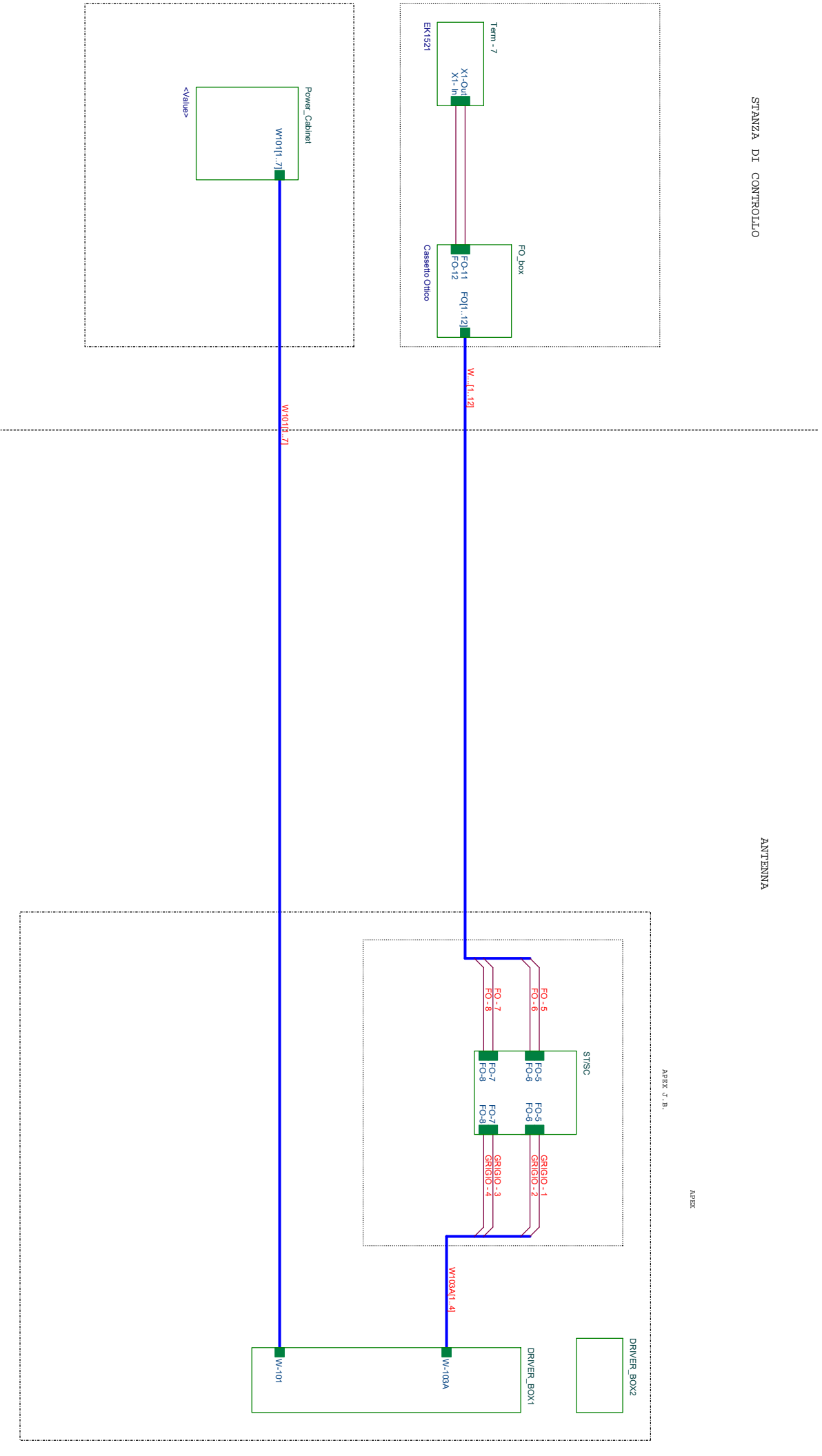


- Term1 - CPU
- Term2 - I/O vari
- Term3 - distribuzione 24V
- Term4 - SAFE - safe plc
- Term5 - SAFE - EmStop PB
- Term6 - Precision Time Protocol
- Term7 - estensione fibra Ottica

- Term2
- in 1- Err Acknowledge TwinSAFE
- in 2 - Power Supply status
- in 3- SR Enable
- in 4- PFR Enable
- out 1,2,3,4 TwinSAFE errors
- out 5 Stato del FB\_Emstop\_TwinSAFE
- out 6 Reset FB\_Emstop\_TwinSAFE

Title		MOVIMENTAZIONE SR e PFR ( NOTO 2021 )	
Size	Document Number	Rev	
A	25 - SCUBox_I/O	A	
Date:	Tuesday, June 22, 2021	Sheet	25 of 1

WIRING - ANTENNA



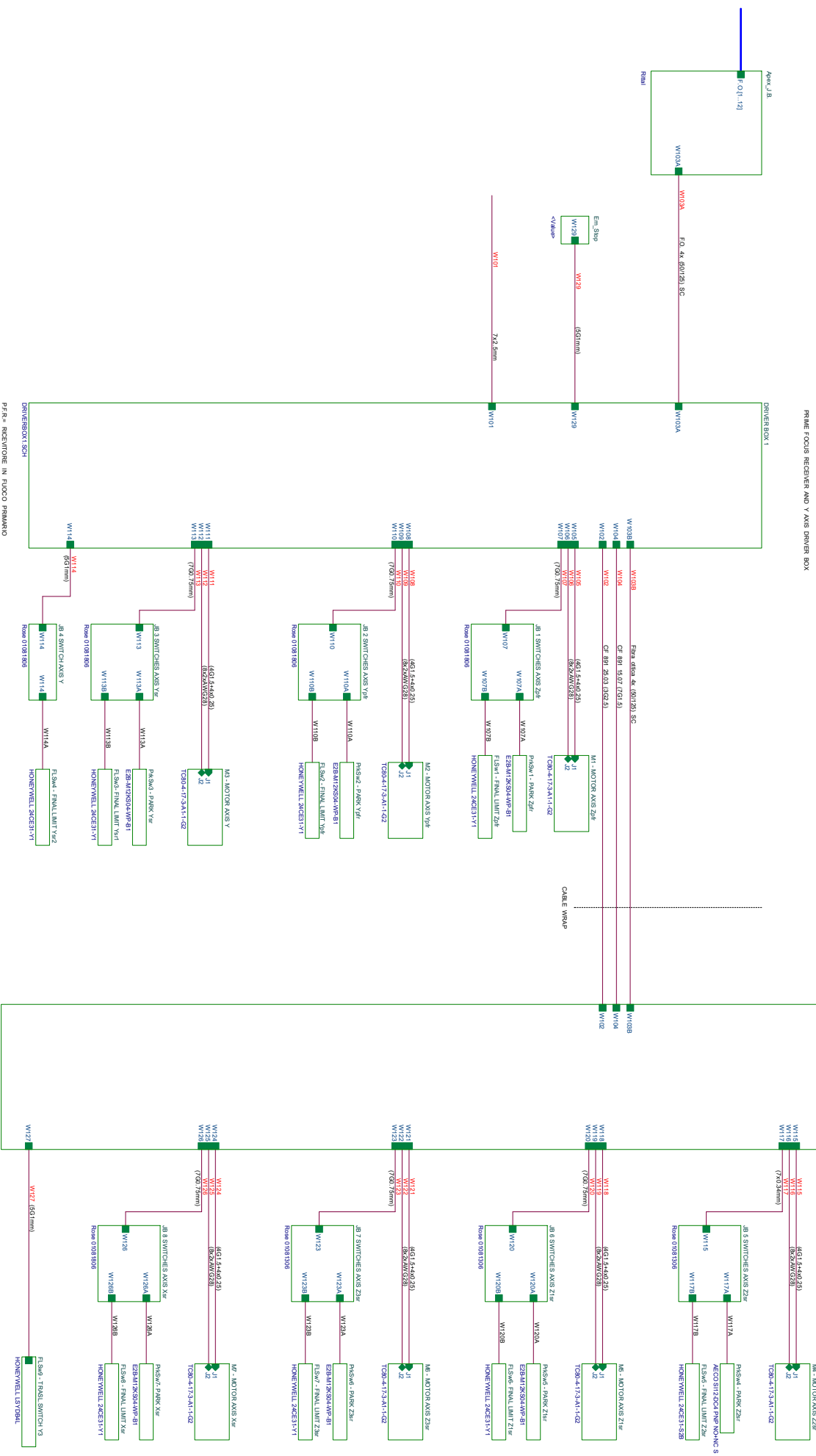
STANZA DI CONTROLLO

ANTENNA

APPX J.B.

APPX

Title	MOVIMENTAZIONE SR e PFR (NOTO 2021)
Size	Document Number
A3	02 - Wiring Antenna
Date:	Thursday, August 19, 2021
Sheet	2 of
Rev	A



DRIVERBOX 1 SCH

DRIVERBOX 2 SCH

DRIVERBOX 1 SCH


DRIVERBOX 2 SCH

MOMENTANZUSTAND SIEHE PPR (MOTO 2021)		
DR	3	01
DR	3	01




## LISTA FOGLI \ INDEX

Foglio Sheet	Descrizione Description	Foglio Sheet	Descrizione Description
1	Intestazione	59	Ypfr - SEGNALI PLC
2	Legenda Fogli	60	Ypfr - SEGNALI PLC
3	Legenda Fogli	61	Zpfr - AZIONAMENTO
4	Legenda Fogli	62	Zpfr - SEGNALI PLC
5		63	Zpfr - SEGNALI PLC
20	DISPOSIZIONE INTERNA DB1	64	Zpfr - SEGNALI PLC
21	DISPOSIZIONE INTERNA DB2	65	MODULI SERIALI
22	PLC S.C.U. BOX	66	Z1sr - AZIONAMENTO
30	ALIMENTAZIONE DI POTENZA D.B. 1	67	Z1sr - SEGNALI PLC
31	ALIMENTAZIONE DI POTENZA 2 D.B. 1	68	Z1sr - SEGNALI PLC
32	ALIMENTAZIONE DI CONTROLLO D.B. 1	69	Z1sr - SEGNALI PLC
33	ALIMENTAZIONE DI CONTROLLO 2 D.B. 1	70	Z2sr - AZIONAMENTO
34	ALIMENTAZIONI 24Vdc	71	Z2sr - SEGNALI PLC
35	VENTILAZIONE BOX D.B.1	72	Z2sr - SEGNALI PLC
36	SENSORE DI TEMPERATURA BOX D.B.1	73	Z2sr - SEGNALI PLC
37	ALIMENTAZIONE DI POTENZA D.B. 2	74	Z3sr - AZIONAMENTO
38	ALIMENTAZIONE DI CONTROLLO D.B. 2	75	Z3sr - SEGNALI PLC
39	VENTILAZIONE BOX D.B.2	76	Z3sr - SEGNALI PLC
50	EMERGENCY STOP	77	Z3sr - SEGNALI PLC
52	Ysr - AZIONAMENTO	78	Xsr - AZIONAMENTO
53	Ysr - SEGNALI PLC	79	Xsr - SEGNALI PLC
54	Ysr - SEGNALI PLC	80	Xsr - SEGNALI PLC
55	Ysr - SEGNALI PLC	81	Xsr - SEGNALI PLC
56	Ysr - SEGNALI PLC	100	Morseggiere e Connettori
57	Ypfr - AZIONAMENTO	101	Morseggiere e Connettori
58	Ypfr - SEGNALI PLC	102	Morseggiere e Connettori

1	Prima Emissione	23/09/21	DATA	23/09/2021	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)		SOST. IL :	SOST. DA :	FILE :	 <b>Antenna VLBI Noto (SR)</b> Movimentazione Subriflettore 2021 Legenda Fogli		FG. 2	F.S. 3
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	Morsiani/Poli			SOST. IL :	SOST. DA :	FILE :			FG. 2	F.S. 3



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)		Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021 Legenda Fogli		
			DISEGN. VISTO	Alessandro Poli Morsiani/Poli					
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :	F.S. 5

0

1

2

3

4

5

6

7

8

9

0

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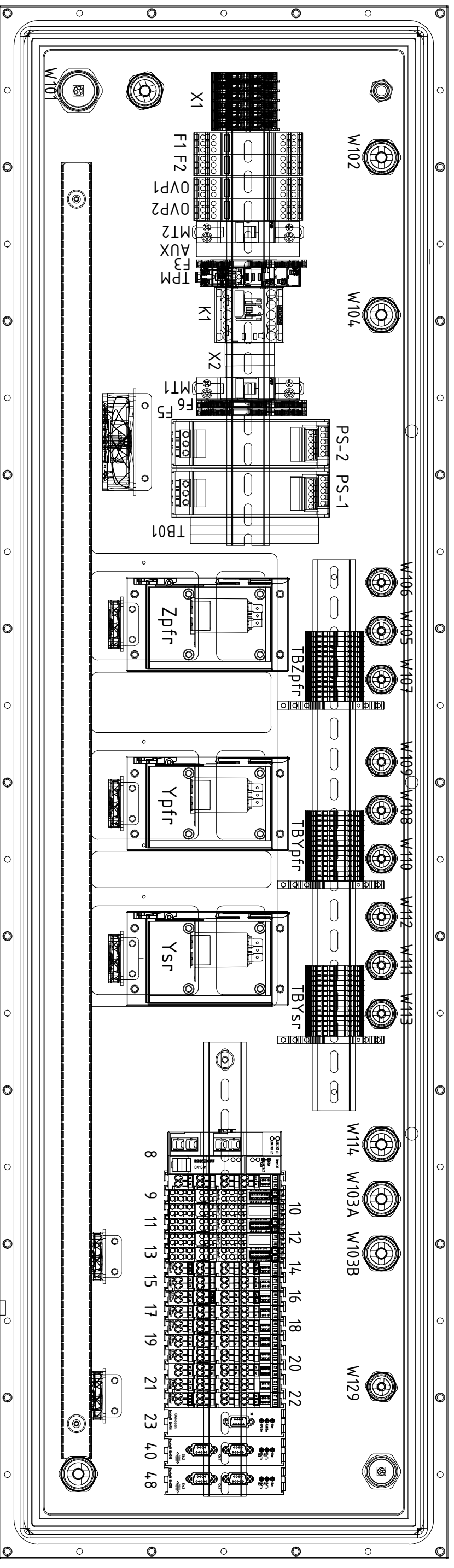
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7

8

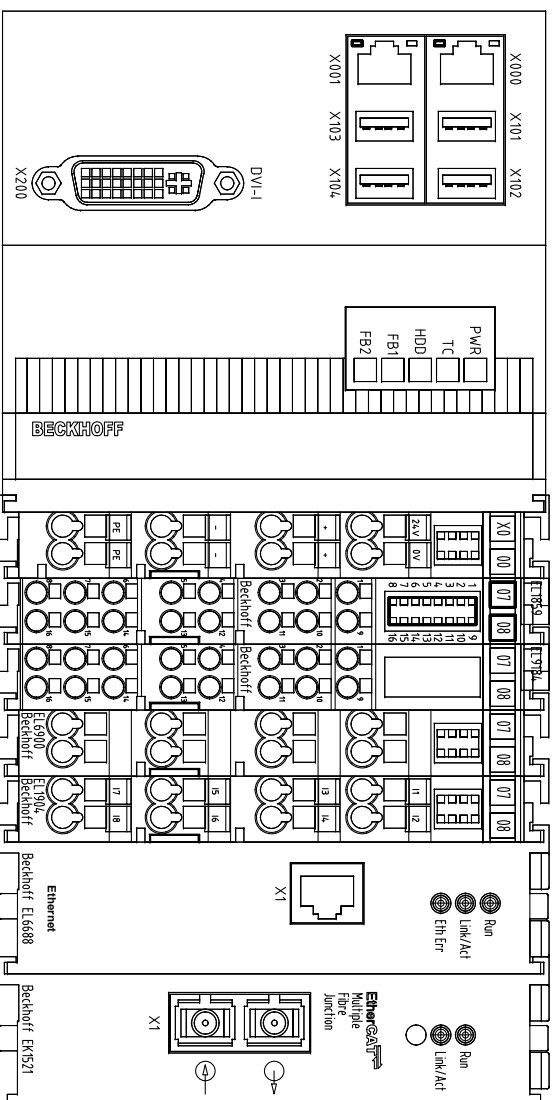
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1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)		Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021		
			DISEGN. VISTO	Alessandro Poli Morsiani/Poli					
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :	
0									
1									
2									
3									
4									
5									
6									
7									
8									
9									FG. <b>5</b> F.S. <b>10</b>




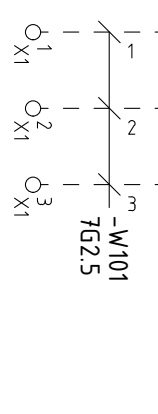
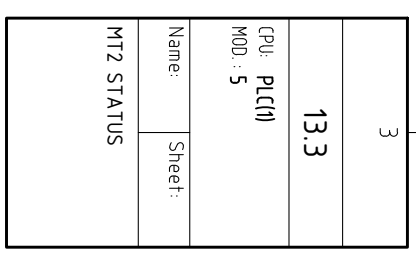
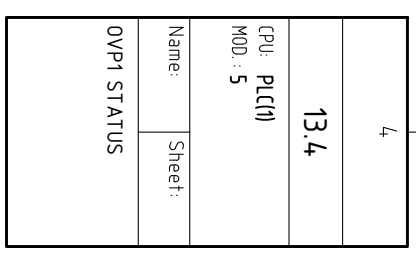
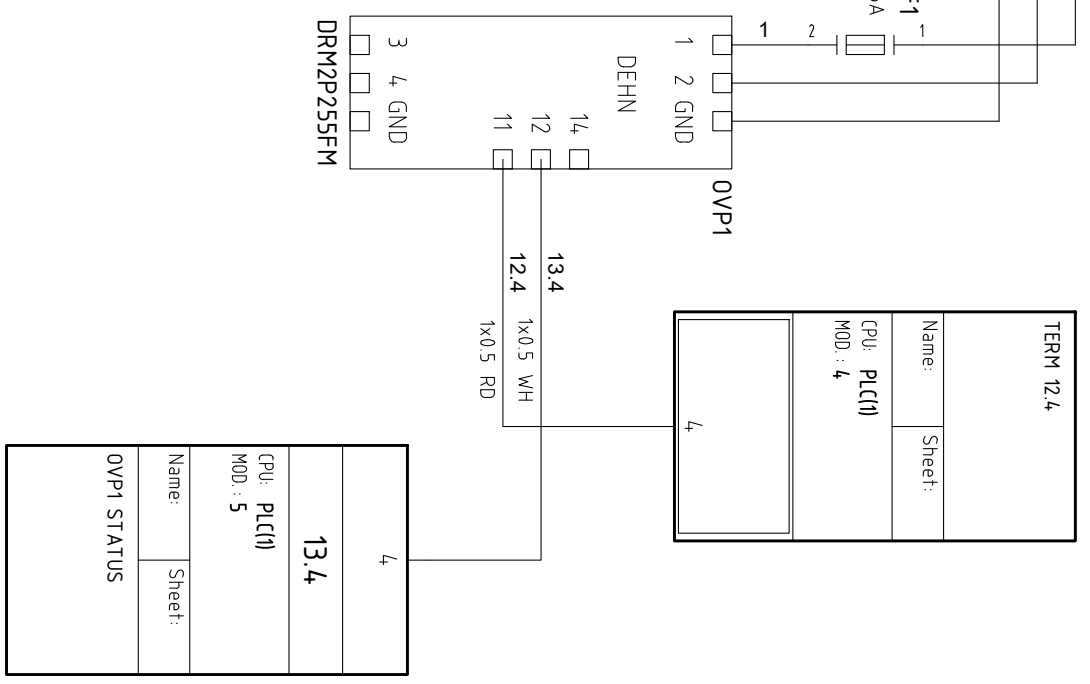
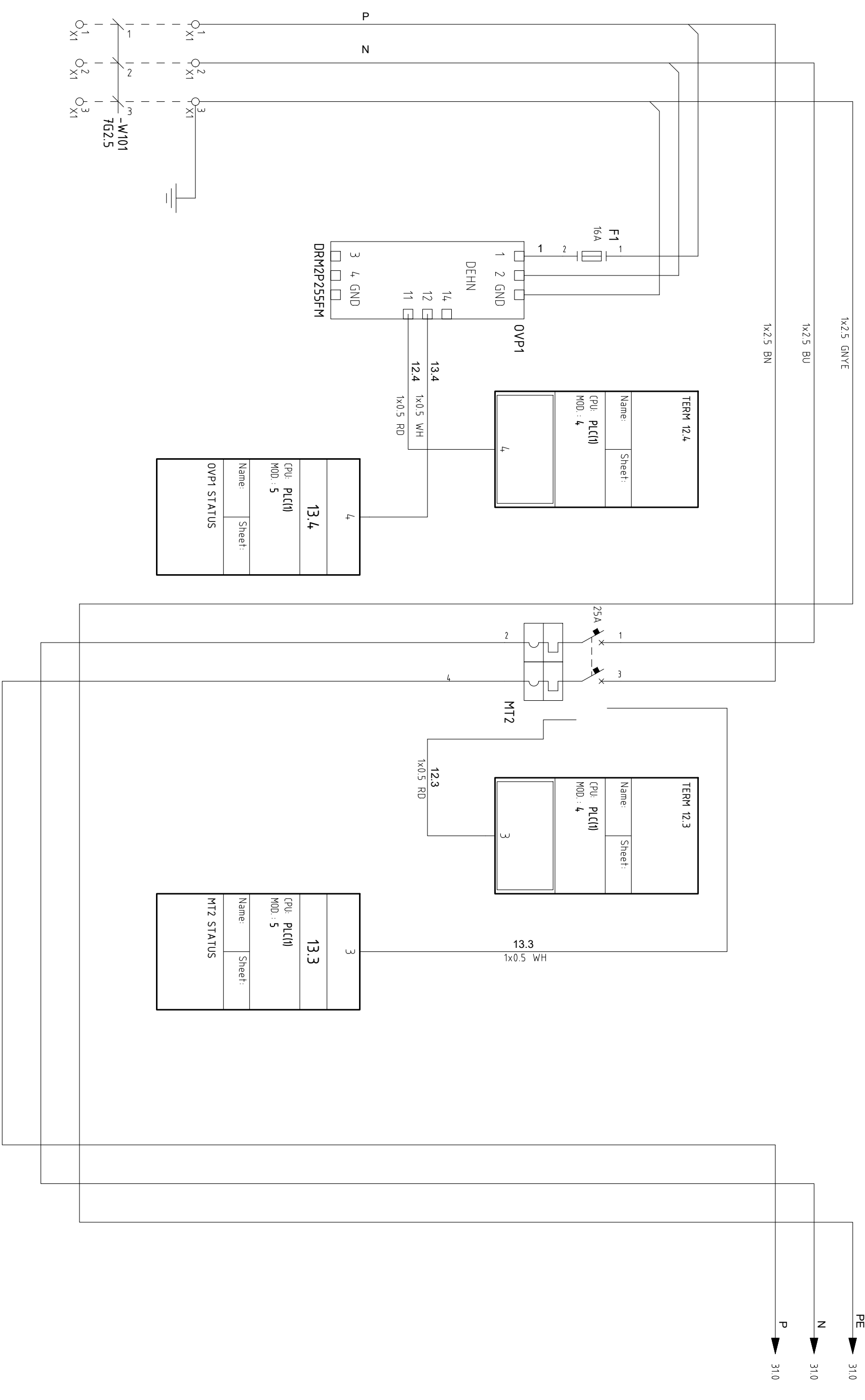
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			DISEGN.	Alessandro Poli					
			VISTO	Morsiani/Poli	SOST. IL :		FILE :		
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. DA :		F.S. 20	
		0						F.S. 21	





1 2 3 4 5 6 7

1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)			<b>Antenna VLBI Noto (SR)</b> Movimentazione Subriflettore 2021 PLC S.C.U. BOX	
			DISEGN.	Alessandro Poli					
			VISTO	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :		
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli				FG. 22 F.S. 30



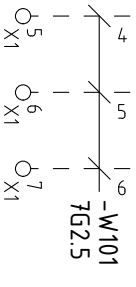
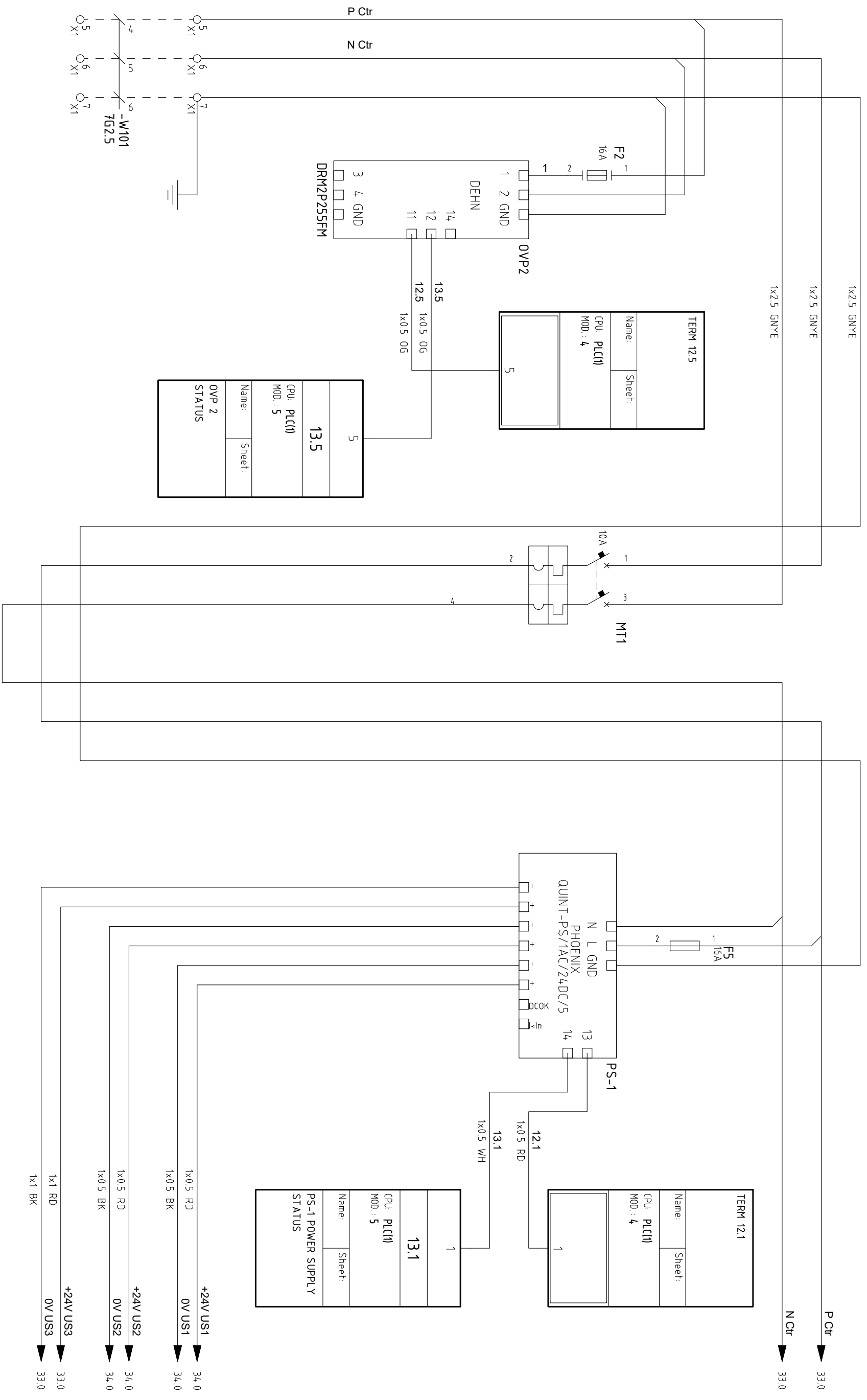
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REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL :	SOST. DA :	FILE :											

**IRA - Noto**  
 Contrada Renna Bassa  
 Noto (SR)



Antenna VLBI Noto (SR)  
 Movimentazione Subriflettore 2021  
 ALIMENTAZIONE DI POTENZA D.B. 1





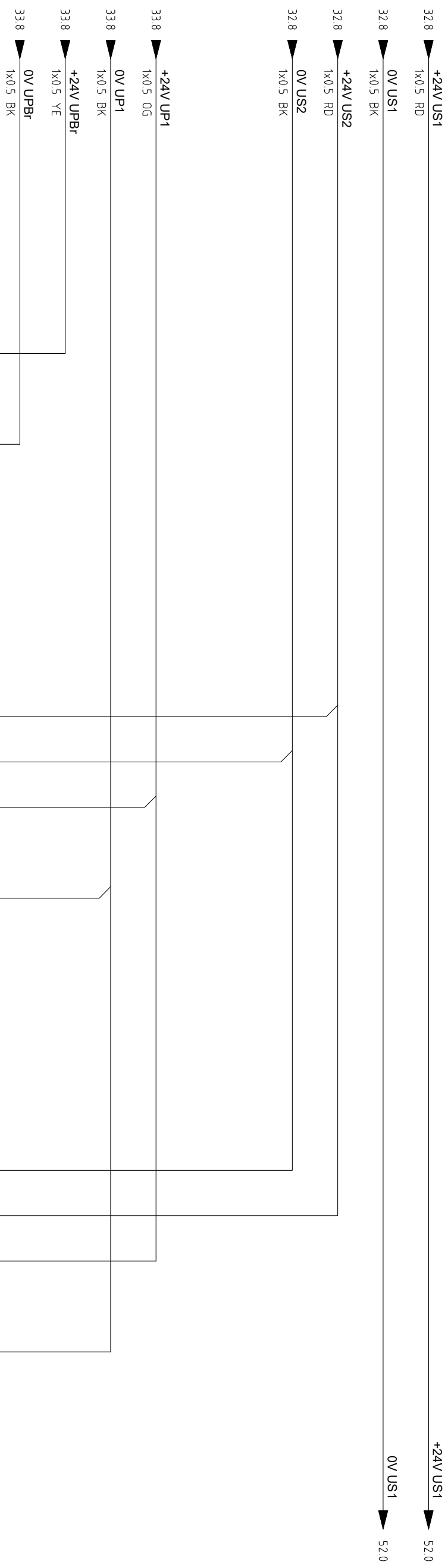
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :	Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021 ALIMENTAZIONE DI CONTROLLO D.B. 1	FG. 32 F.S. 33
1	Prima Emissione	23/09/21								

**IRA - Noto**  
 Contrada Renna Bassa  
 Noto (SR)



**Antenna VLBI Noto (SR)**  
 Movimentazione Subriflettore 2021  
 ALIMENTAZIONE DI CONTROLLO D.B. 1




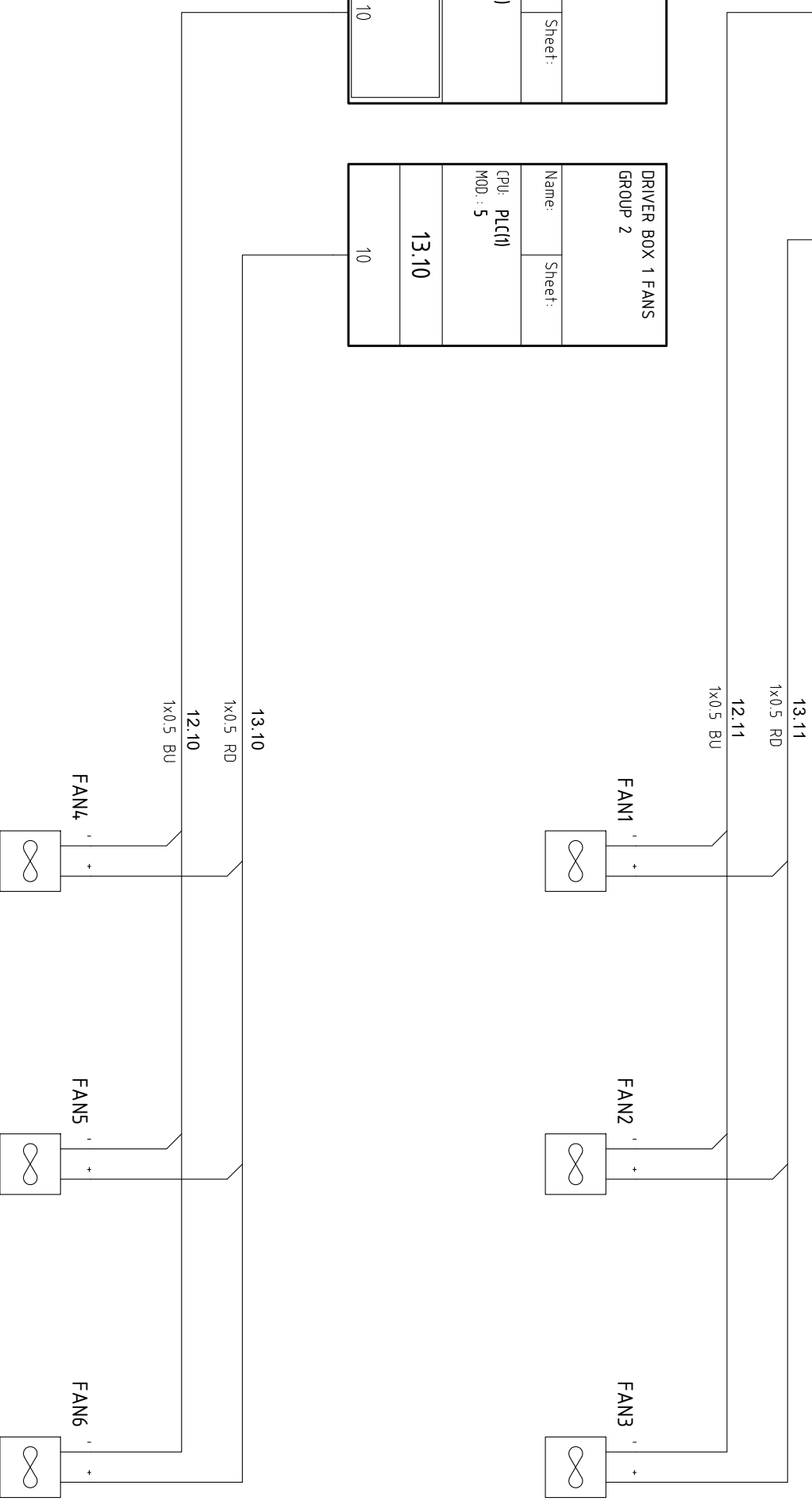
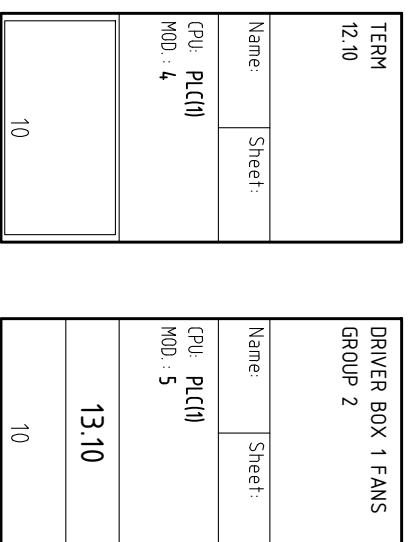
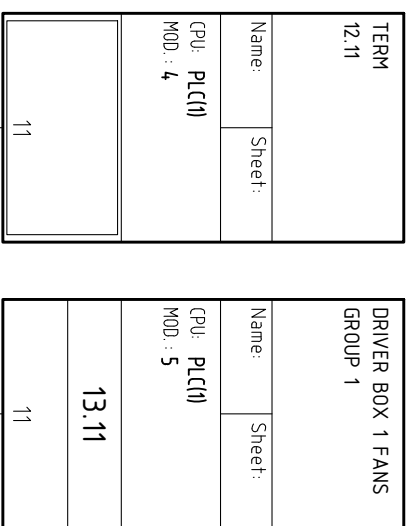


CPU: **PLC(1)**  
 MOD.: **13**  
 Name: \_\_\_\_\_ Sheet: \_\_\_\_\_  
 TERM 21  
 EL9100

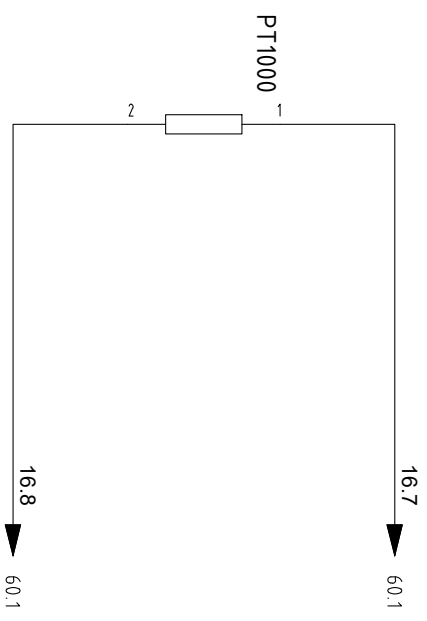
CPU: **PLC(1)**  
 MOD.: **0**  
 Name: \_\_\_\_\_ Sheet: \_\_\_\_\_  
 24VUS 0VUS +24V +24V 0V 0V PE PE  
 TERM 8  
 EK1501

CPU: **PLC(1)**  
 MOD.: **7**  
 Name: \_\_\_\_\_ Sheet: \_\_\_\_\_  
 TERM 15  
 EL9400


1	Prima Emissione	23/09/21	DATA	23/09/2021	DATA	Alessandro Poli	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)			<b>Antenna VLBI Noto (SR)</b> Alimentazione Subrilettore 2021 ALIMENTAZIONI 24Vdc	F.G. <b>34</b> F.S. <b>35</b>
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :			



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)		FILE:	<b>Antenna VLBI Noto (SR)</b> Movimentazione Subriflettore 2021 VENTILAZIONE BOX D.B.1		
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL:	SOST. DA:			FG. 35 F.S. 36

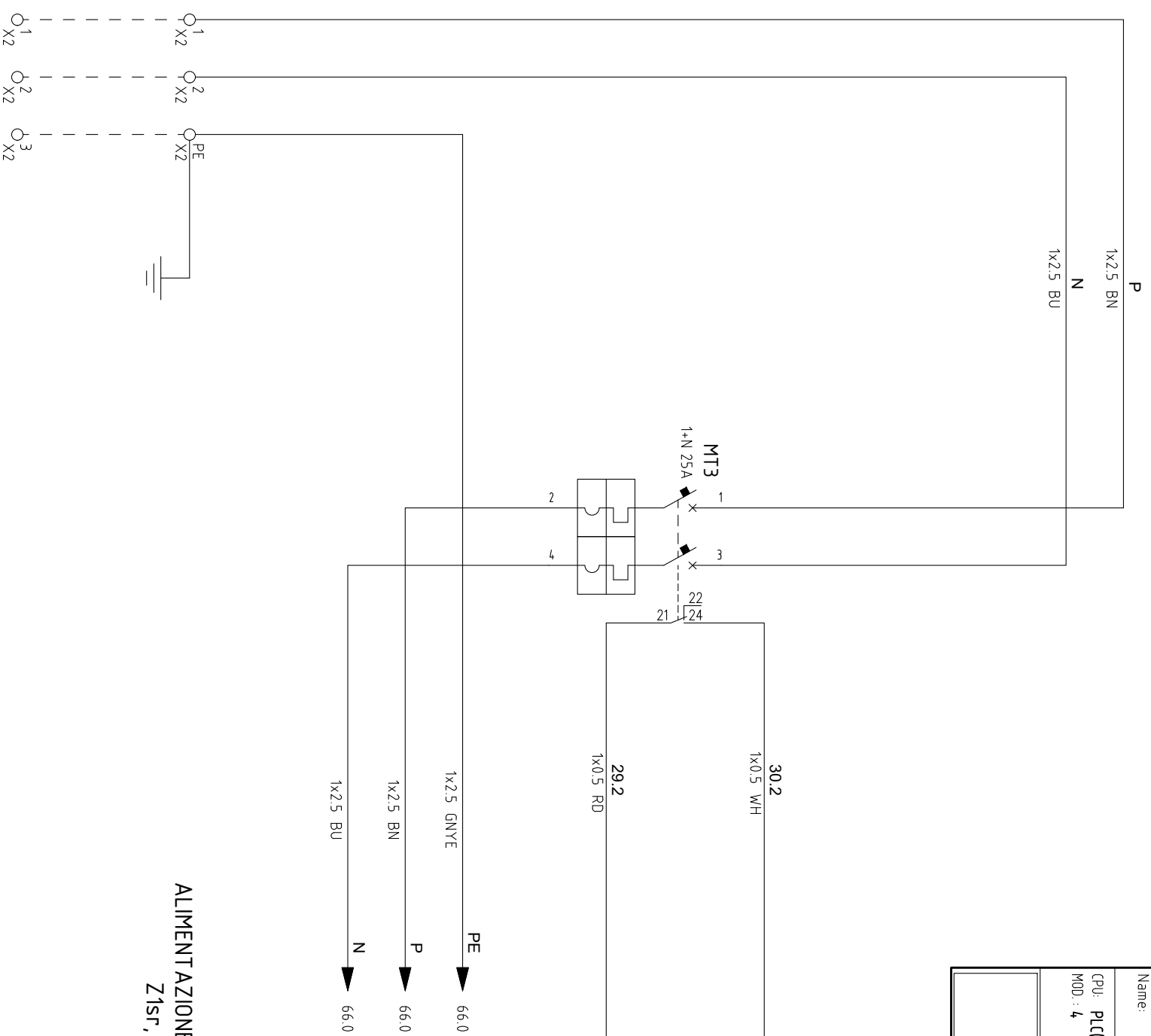


SENSORE DI TEMPERATURA DRIVER BOX 1

1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)			Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021 SENSORE DI TEMPERATURA BOX D.B.1		
			DISEGN. VISTO	Alessandro Poli Morsiani/Poli	SOST. IL :	SOST. DA :			FILE :	
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli					FG. <b>36</b> F.S. <b>37</b>

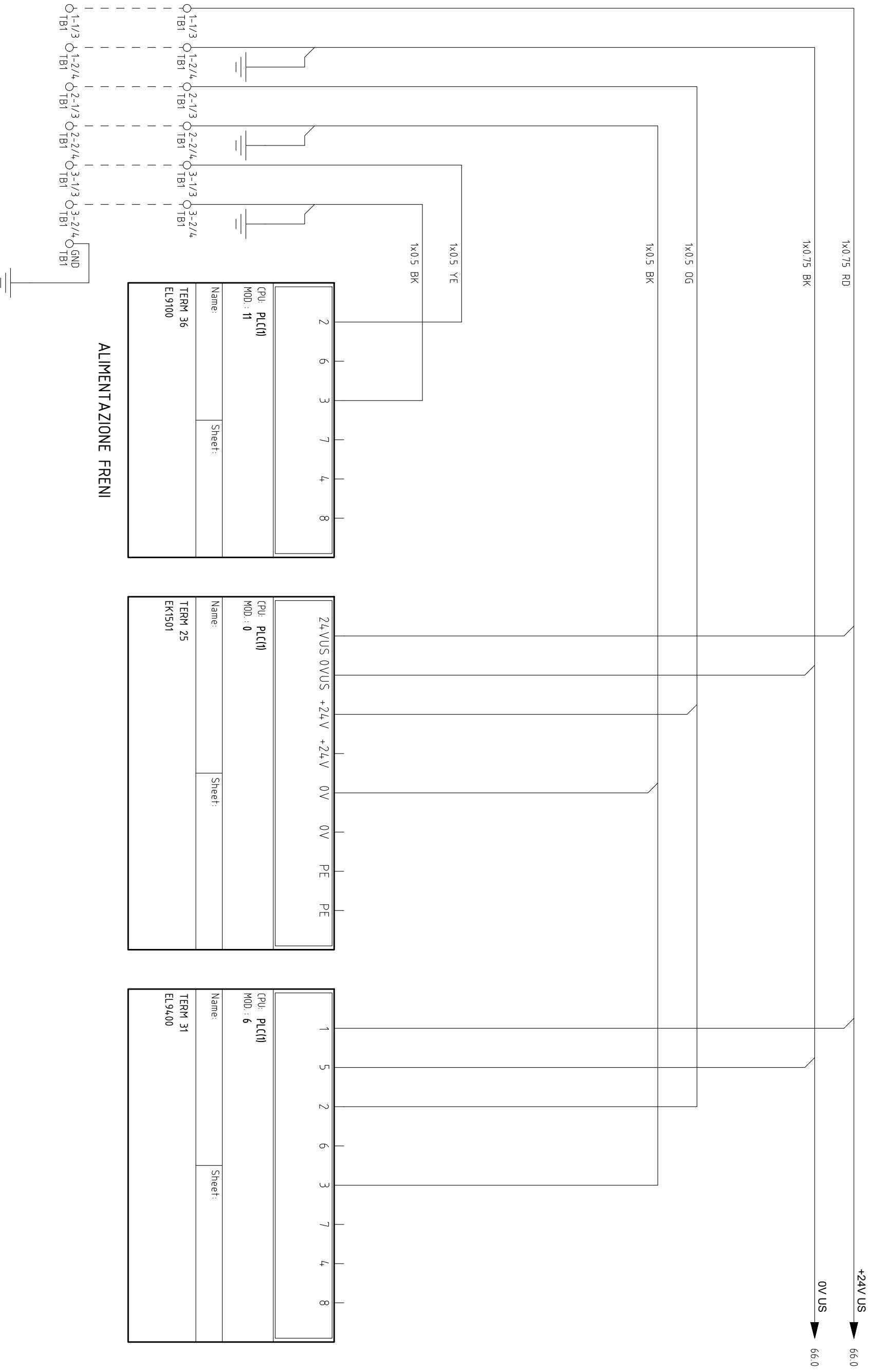
TERM 29.2	
Name:	Sheet:
CPU: PLC(1)	
MOD: 4	
2	

2	
30.2	
CPU: PLC(1)	
MOD: 5	
Name:	Sheet:
MT3	
STATUS	



ALIMENTAZIONE DI POTENZA AZIONAMENTI  
Z1sr, Z2sr, Z3sr, Xsr

1	Prima Emissione	23/09/21	DATA	23/09/2021	DATA	Alessandro Poli	DISEGN.	Morsiani/Poli	VISTO	Morsiani/Poli	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :	Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021 ALIMENTAZIONE DI POTENZA D.B. 2	FG. 37	F.S. 38
REV.	MODIFICA	DATA	FIRMA	APPR.														



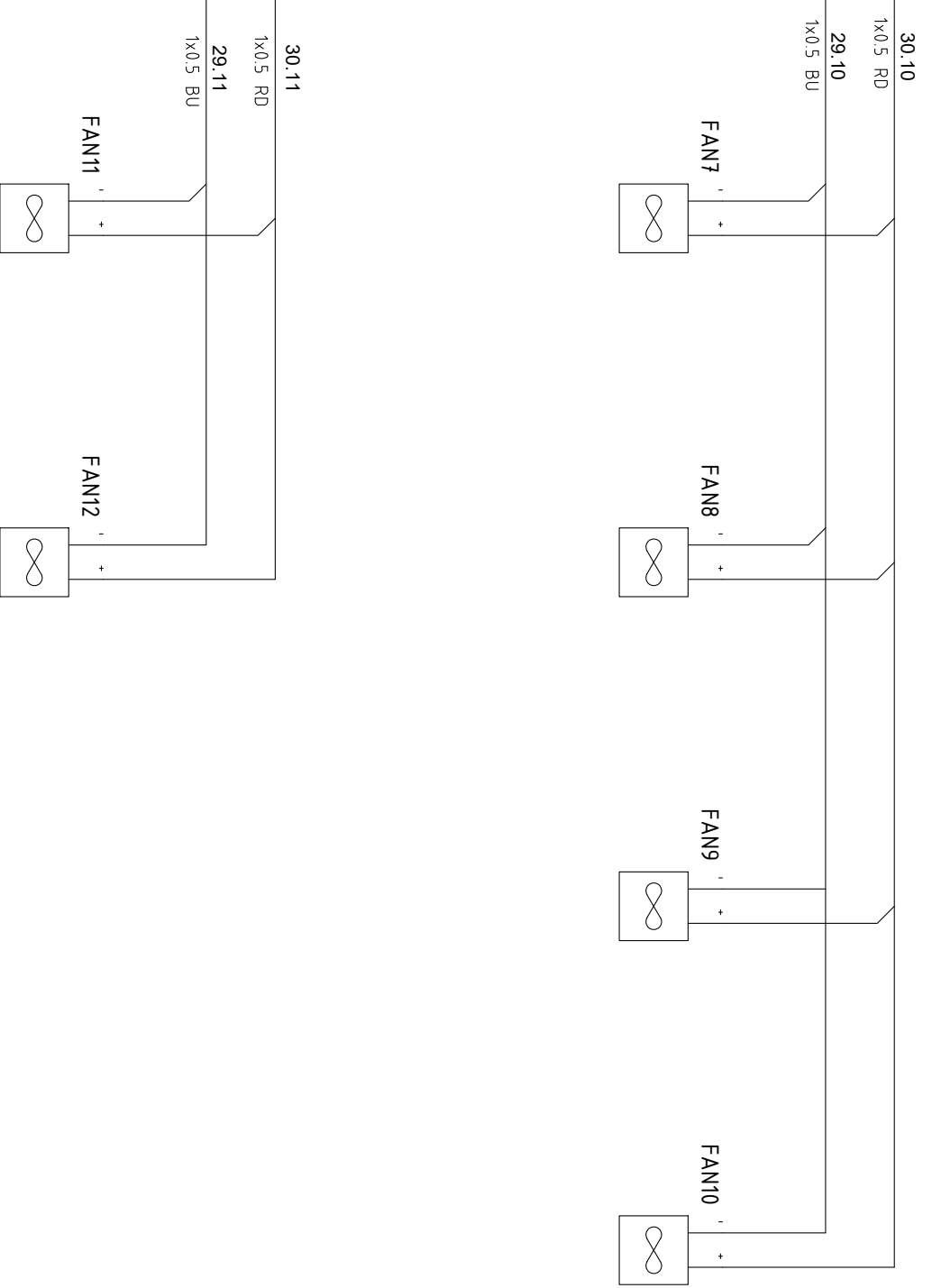
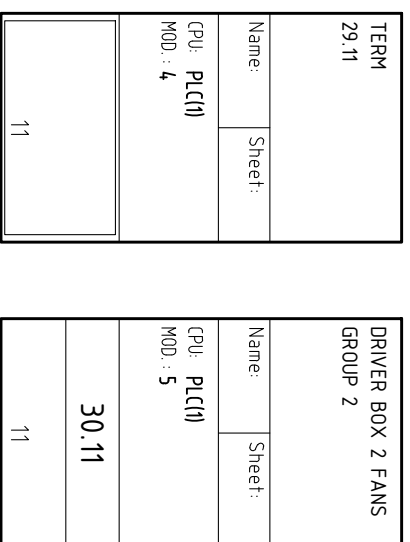
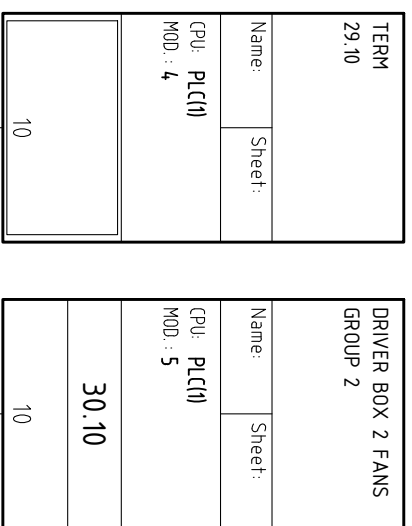
**ALIMENTAZIONE FRENI**


CPU: <b>PLC(1)</b>	
MOD: <b>11</b>	
Name:	Sheet:
TERM <b>36</b>	EL <b>9100</b>

CPU: <b>PLC(1)</b>	
MOD: <b>0</b>	
Name:	Sheet:
TERM <b>25</b>	EK <b>1501</b>


CPU: <b>PLC(1)</b>	
MOD: <b>6</b>	
Name:	Sheet:
TERM <b>31</b>	EL <b>9400</b>

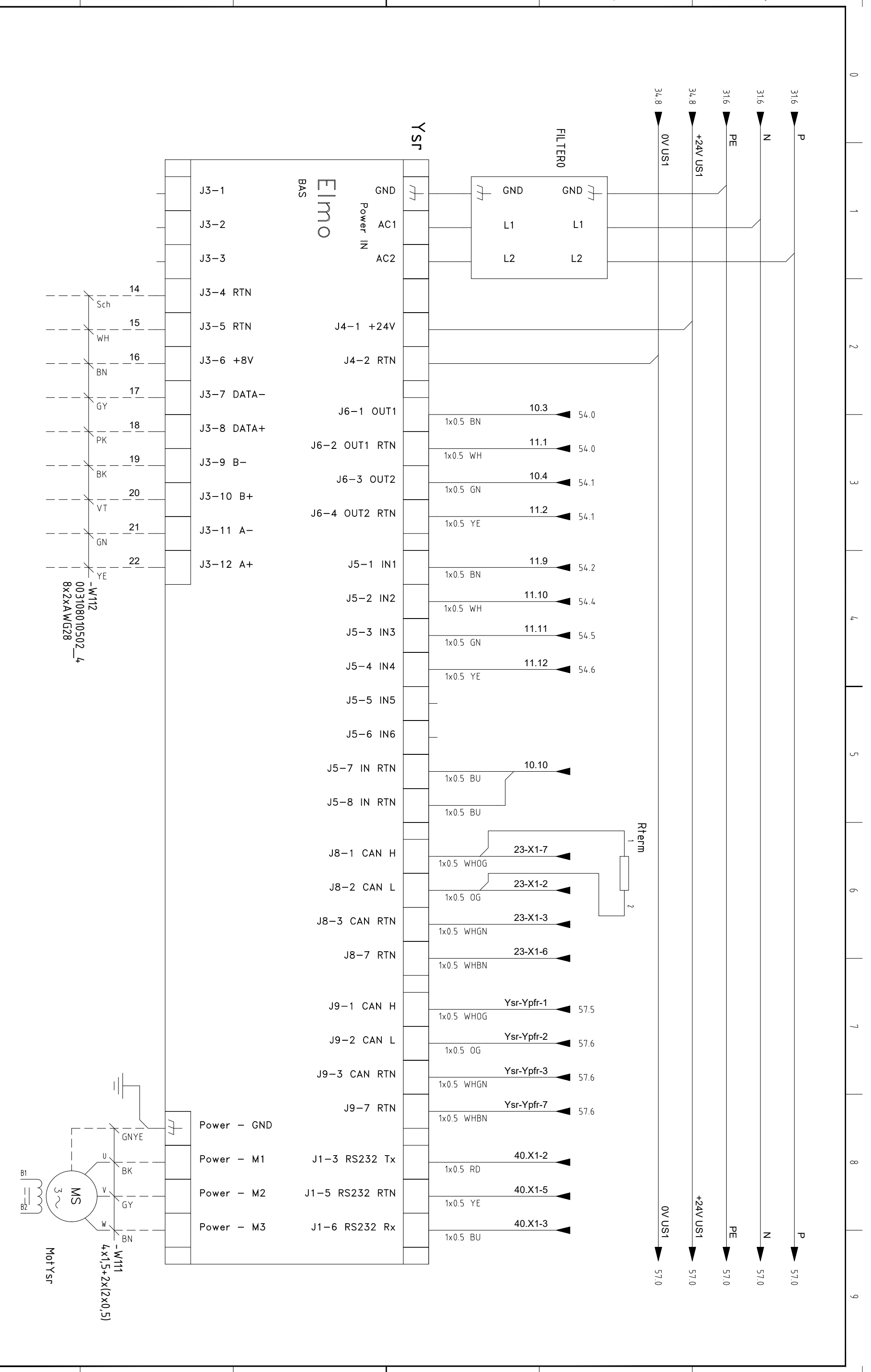
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REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL:	SOST. DA:		FILE:	FG. <b>38</b>	F.S. <b>39</b>



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)			Antenna VLBI Noto (SR) Ventilazione Subriflettore 2021 VENTILAZIONE BOX D.B.2	
REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL :	SOST. DA :	FILE :		FG. <b>39</b> F.S. <b>50</b>



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)			<b>Antenna VLBI Noto (SR)</b> Movimento Subrilettore 2021 Ysr - AZIONAMENTO	
			DISEGN.	Alessandro Poli					
			VISTO	Morsiani/Poli					
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :	F.S. <b>53</b>







22.4 BRAKE+	
22.3 BRAKE-	
Name:	Sheet:
CPU: PLC(1)	
MOD.: 14	
22.3_4	
4	3

53.0 22.4  
1x0.5 RD  
53.0 22.3  
1x0.5 BK

53.1 16.4  
1x0.5 BU  
53.1 16.3  
1x0.5 WH  
62.1 16.2  
1x0.5 WH  
62.1 16.1  
1x0.5 WH  
62.1 16.1  
1x0.5 BU

1	2	3	4
16a			
CPU: PLC(1)			
MOD.: 8			
Name:	Sheet:		
16.3_4 PT1000 Ysr			
16.1_2 PT1000 Zpfr			

53.2 18.2  
1x0.5 GY  
53.2 18.1  
1x0.5 PK

1	2
18.1_2	
CPU: PLC(1)	
MOD.: 10	
Name:	Sheet:
FINAL LIMIT	
Ysr	

53.3 12.12  
1x0.5 WH

Up RTN	
TERM 12.12	
Name:	Sheet:
CPU: PLC(1)	
MOD.: 4	
12	

53.3 13.12  
1x0.5 BN

Up +24V	
Name:	Sheet:
CPU: PLC(1)	
MOD.: 5	
13.12	

53.5 18.4  
1x0.5 GN  
53.5 18.3  
1x0.5 YE

3	4
18.3_4	
CPU: PLC(1)	
MOD.: 10	
Name:	Sheet:
FINAL LIMIT	
Ysr	

53.7 18.6  
1x0.5 RD  
53.8 18.5  
1x0.5 BU

5	6
18.5_6	
CPU: PLC(1)	
MOD.: 10	
Name:	Sheet:
PARK	
Ysr	

1	Prima Emissione	23/09/21	DATA	23/09/2021	DATA	Alessandro Poli	DISEGN.	Morsiani/Poli	VISTO	Morsiani/Poli	APPR.	Morsiani/Poli	SOST. IL:	SOST. DA:	FILE:	Antenna VLBI Noto (SR)	Movimentazione Subriflettore 2021	Ysr - SEGNALI PLC	FG. 55	F.S. 56	
REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL:	SOST. DA:	FILE:														

**IRA - Noto**  
Contrada Renna Bassa  
Noto (SR)

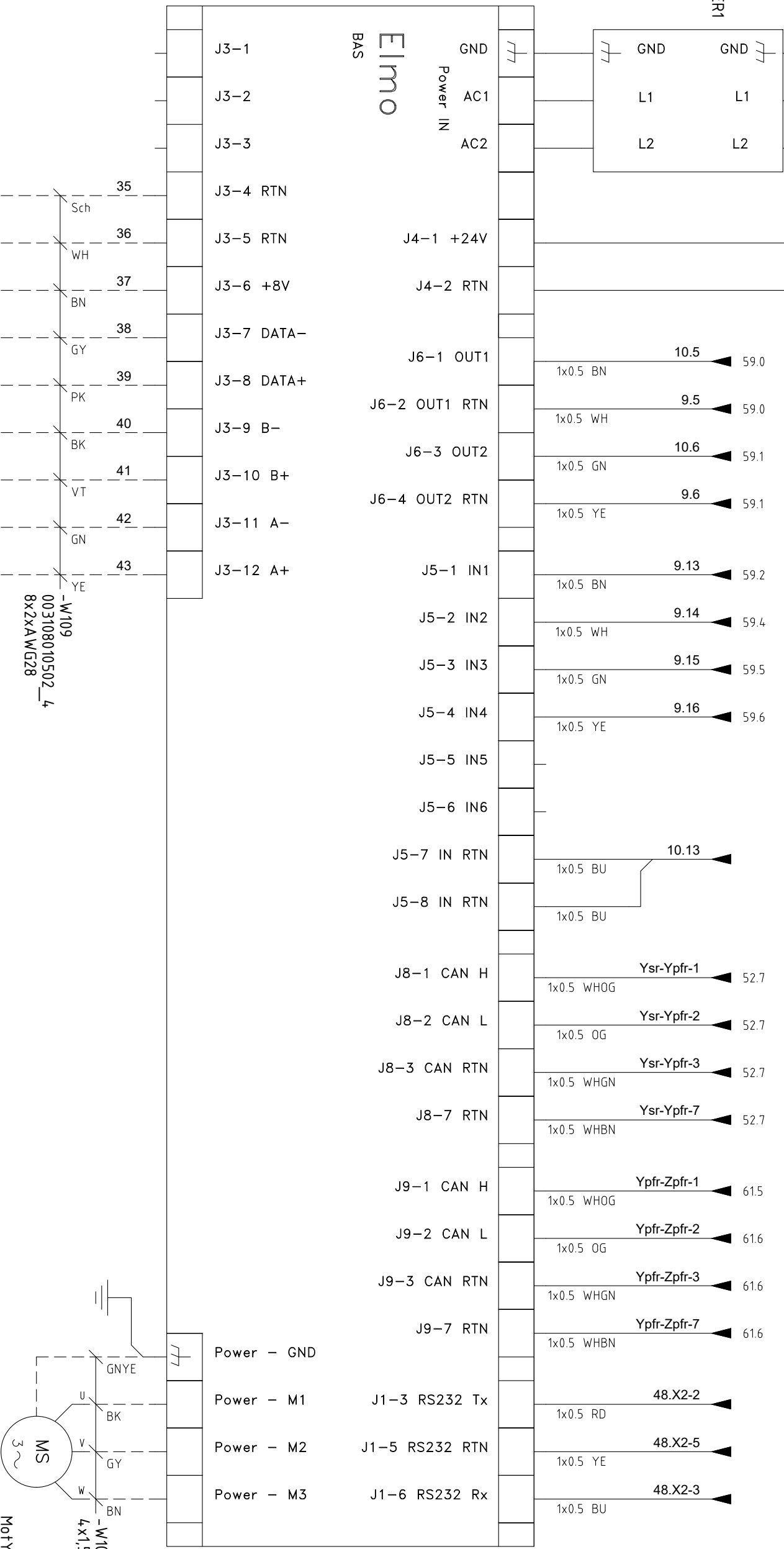
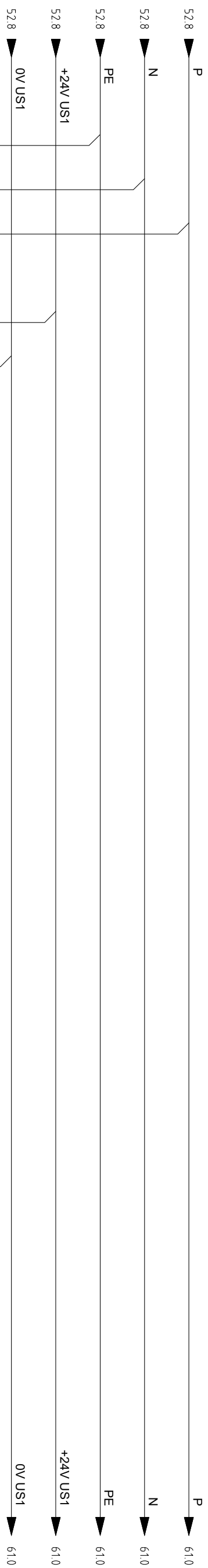


**Antenna VLBI Noto (SR)**  
Movimentazione Subriflettore 2021  
Ysr - SEGNALI PLC

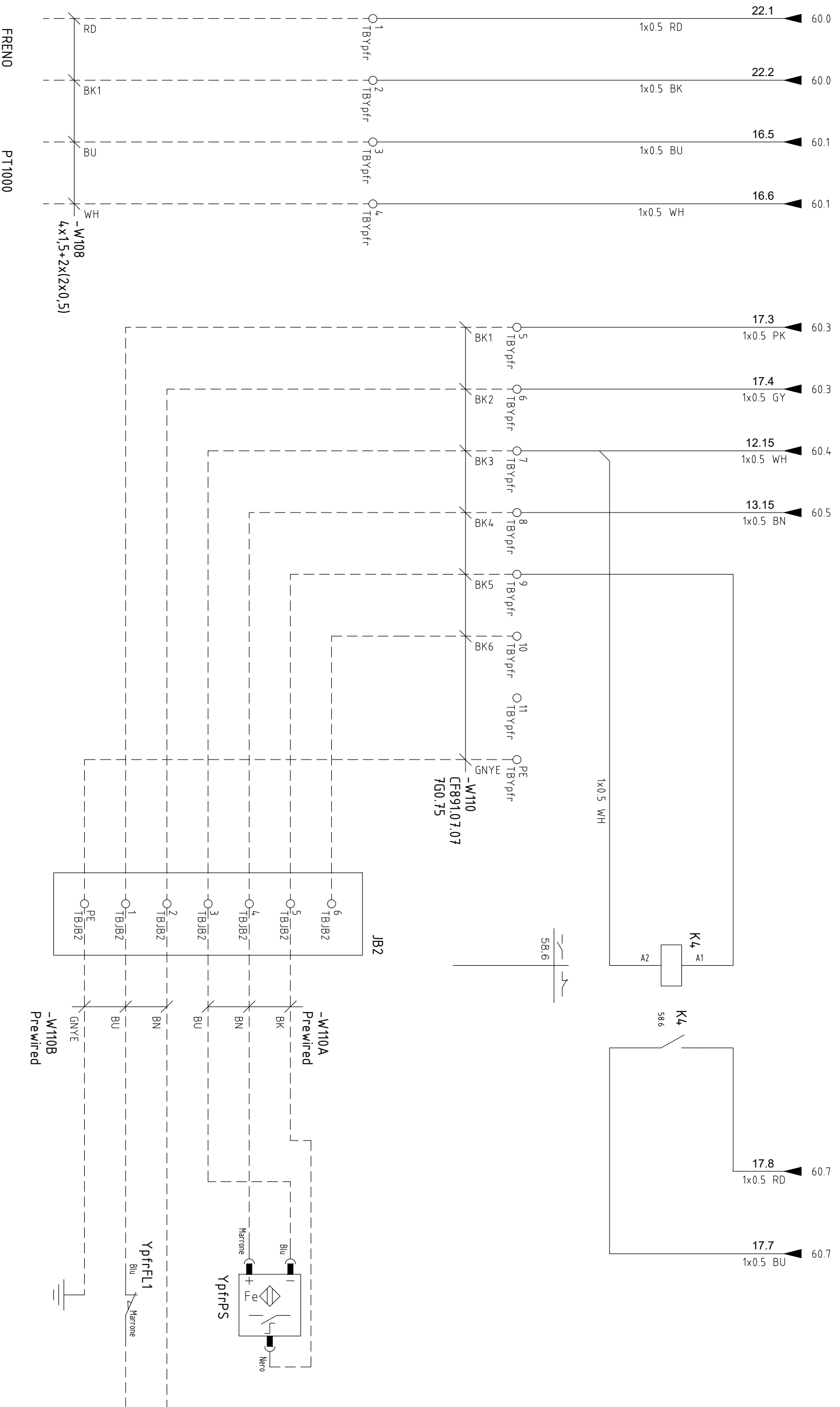
FG. 55

F.S. 56





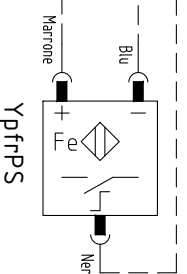
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REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Polì	SOST. IL :		FILE :	FG. 57



FRENO  
PT1000  
RD  
BK1  
BU  
WH  
-W108  
4x1,5+2x(2x0,5)

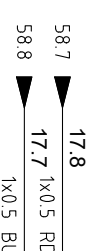
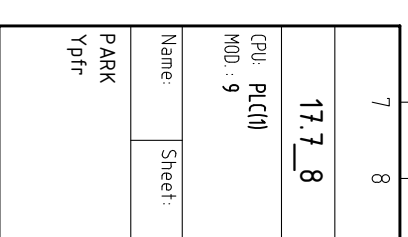
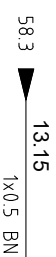
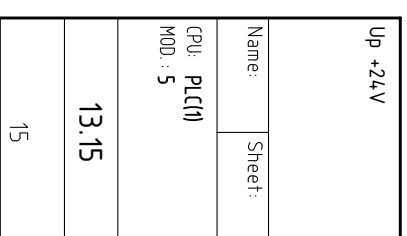
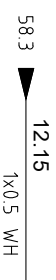
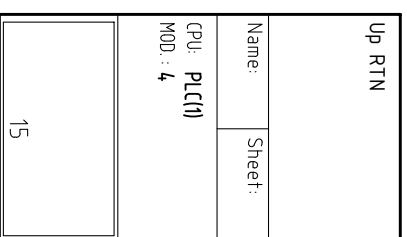
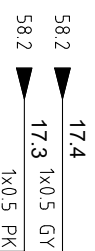
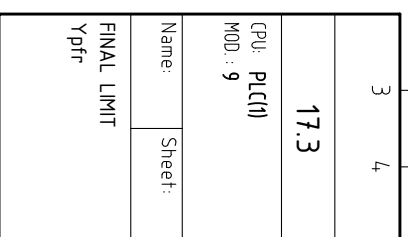
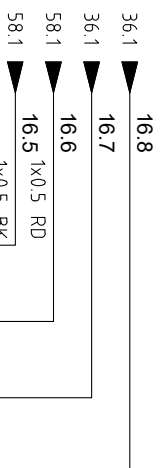
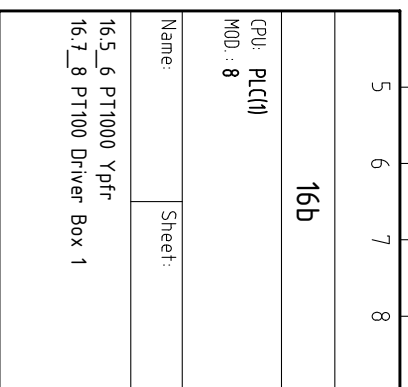
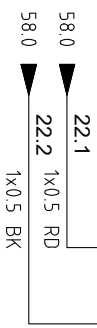
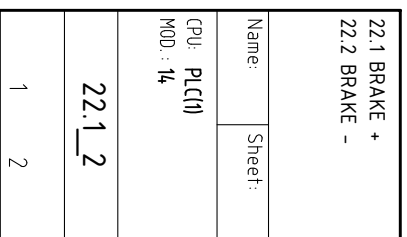
-W110A  
Prewired  
BK  
BN  
BU  
-W110B  
Prewired  
GNYE

YpfrFL1  
Blu  
Marrone



1	Prima Emissione	23/09/21	DATA	23/09/2021	DATA	Alessandro Poli	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)		<b>Antenna VLBI Noto (SR)</b> Movimentazione Subrilettore 2021 Ypfr - SEGNALI PLC			
			DISEGN.		VISTO	Morsiani/Poli						
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli					SOST. IL :	SOST. DA :	FILE :





1	Prima Emissione	23/09/21	DATA	23/09/2021	DATA	Alessandro Poli	DISEGN.	Morsiani/Poli	VISTO	Morsiani/Poli	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :
REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL :											

**IRA - Noto**  
 Contrada Renna Bassa  
 Noto (SR)



**Antenna VLBI Noto (SR)**  
 Movimento Subrilettore 2021  
 Ypfr - SEGNALI PLC

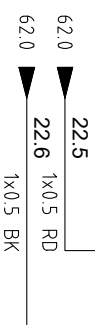
F.G. 60	
F.S. 61	



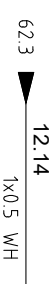




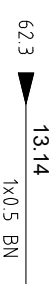
22.5 BRAKE +	
22.6 BRAKE -	
Name:	Sheet:
CPU: PLC(1)	
MOD.: 14	
22.5_6	
5	6



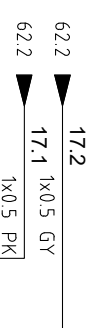
Up RTN TERM 12.14	
Name:	Sheet:
CPU: PLC(1)	
MOD.: 4	
14	



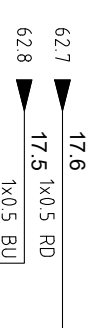
Up +24V	
Name:	Sheet:
CPU: PLC(1)	
MOD.: 5	
13.14	
14	



17.1_2	
CPU: PLC(1)	
MOD.: 9	
Name:	Sheet:
FINAL LIMIT Zpfr	
1	2



17.5_6	
CPU: PLC(1)	
MOD.: 9	
Name:	Sheet:
PARK Zpfr	
5	6




1	Prima Emissione	23/09/21	DATA	23/09/2021	DATA	Alessandro Poli
					DISEGN.	Morsiani/ Poli
					VISTO	Morsiani/ Poli
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/ Poli	
0						

SOST. IL :		SOST. DA :	
<b>IRA - Noto</b>			
Contrada Renna Bassa			
Noto (SR)			



Antenna VLBI Noto (SR)	
Movimentazione Subrilettore 2021	
Zpfr - SEGNALI PLC	

F.G. 64	
F.S. 65	

1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)		Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021 MODULI SERIALI		
			DATA	Alessandro Poli					
			VISTO	Morsiani/Poli					
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli				F.G. <b>65</b> F.S. <b>66</b>

0

1

2

3

4

5

6

7

8

9

0

1

2

3

4

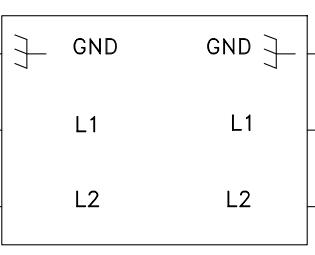
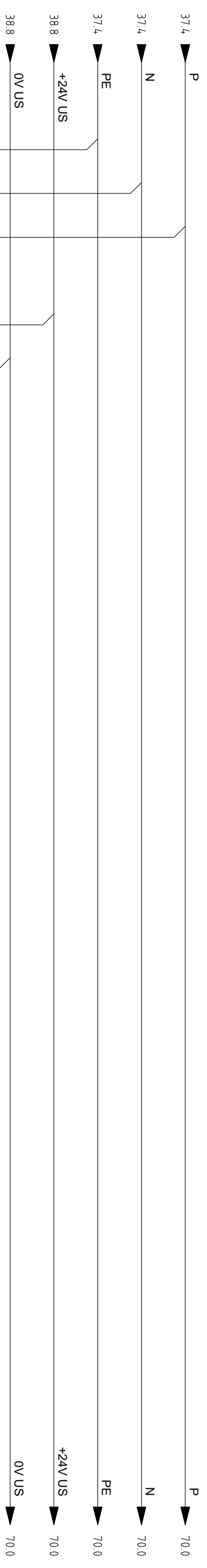
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6

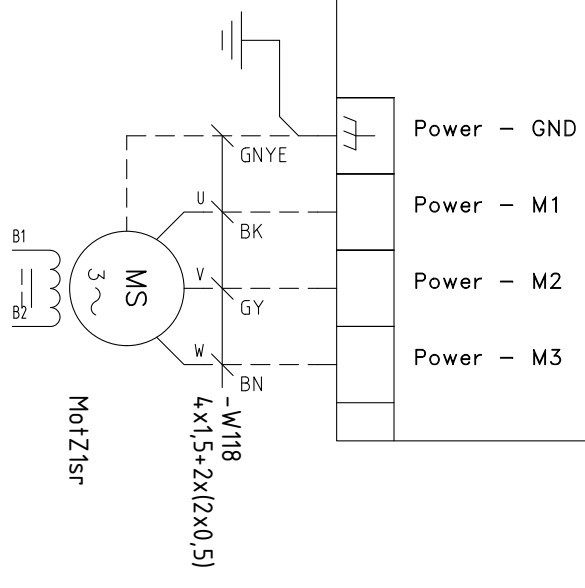
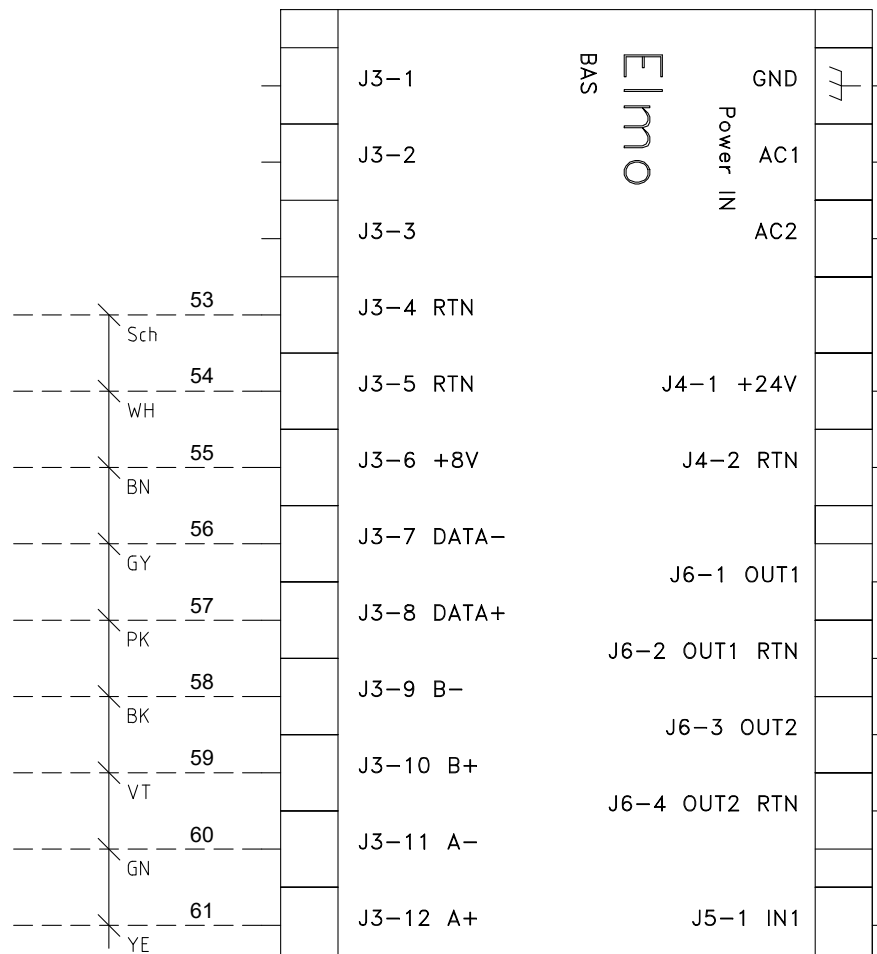
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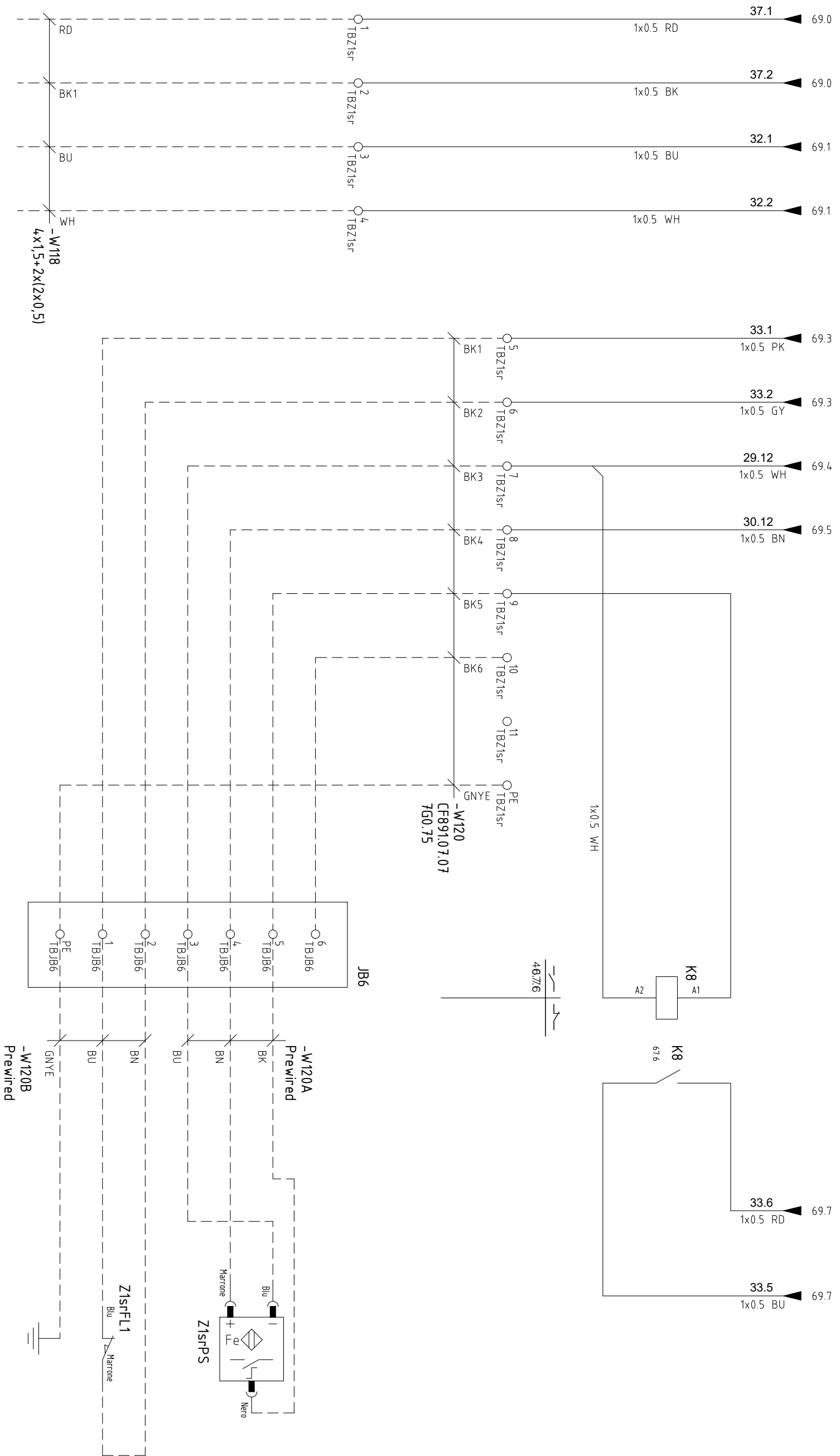
9



**Elmo**  
BAS



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)				<b>Antenna VLBI Noto (SR)</b> Movimentazione Subriflettore 2021 Z1sr - AZIONAMENTO				
			DISEGN.	Alessandro Poli							DATA		FG. <b>66</b>
			VISTO	Morsiani/Poli							DATA		F.S. <b>67</b>
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :					



FRENO

PT1000

-W118  
4x1,5+2x(2x0,5)

-W120  
CF891.07.07  
760.75

-W120A  
Prewired

-W120B  
Prewired

Z1srPS

Z1srFL1

**IRA - Noto**  
Contrada Renna Bassa  
Noto (SR)

**Antenna VLBI Noto (SR)**  
Movimentazione Subrilettore 2021  
Z1sr - SEGNALI PLC

1	Prima Emissione	23/09/21	DATA	23/09/2021	DATA	Alessandro Poli
			DISEGN.			Morsiani/Poli
			VISTO			Morsiani/Poli
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	

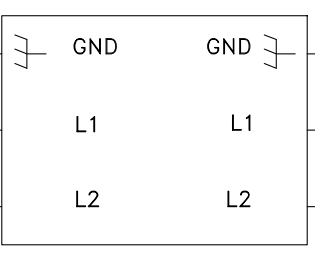
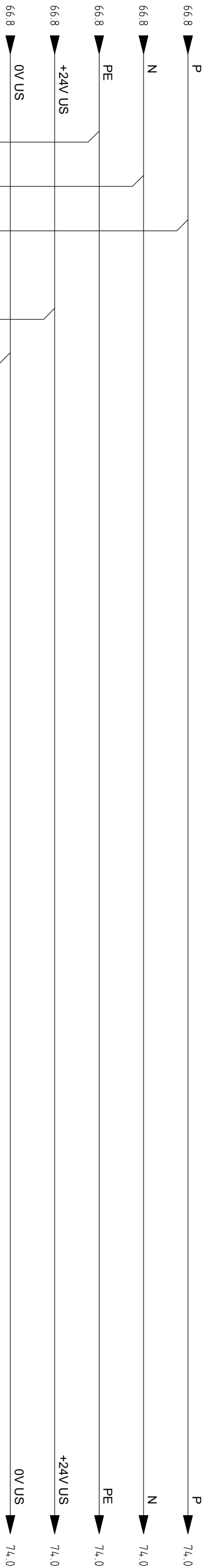
SOST. IL :	SOST. DA :
------------	------------

FILE :
--------

FG. 67
F.S. 68

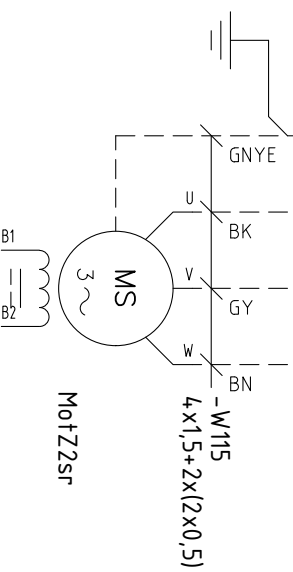
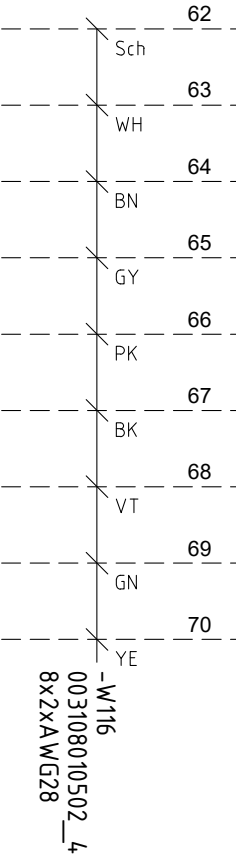
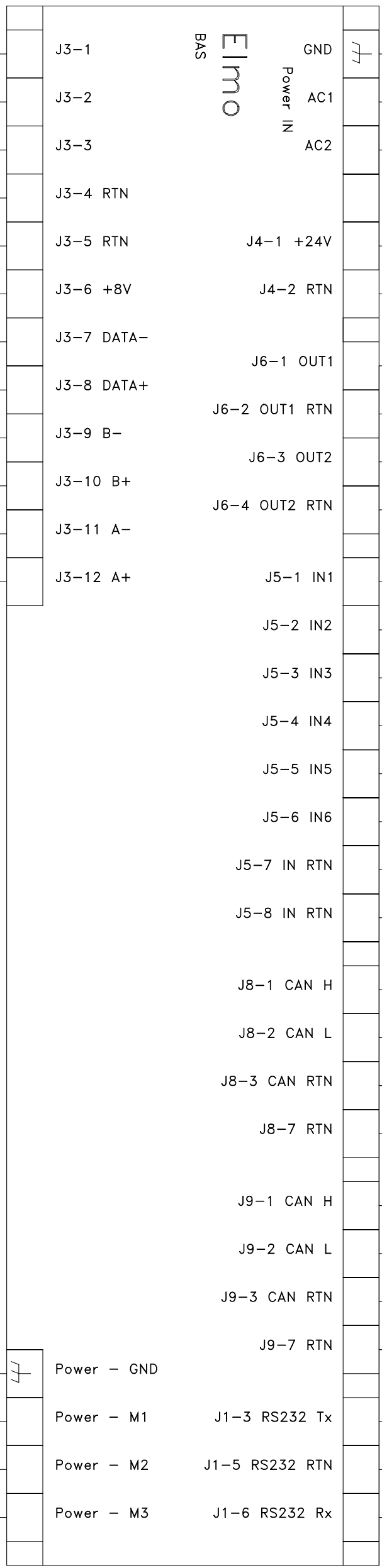




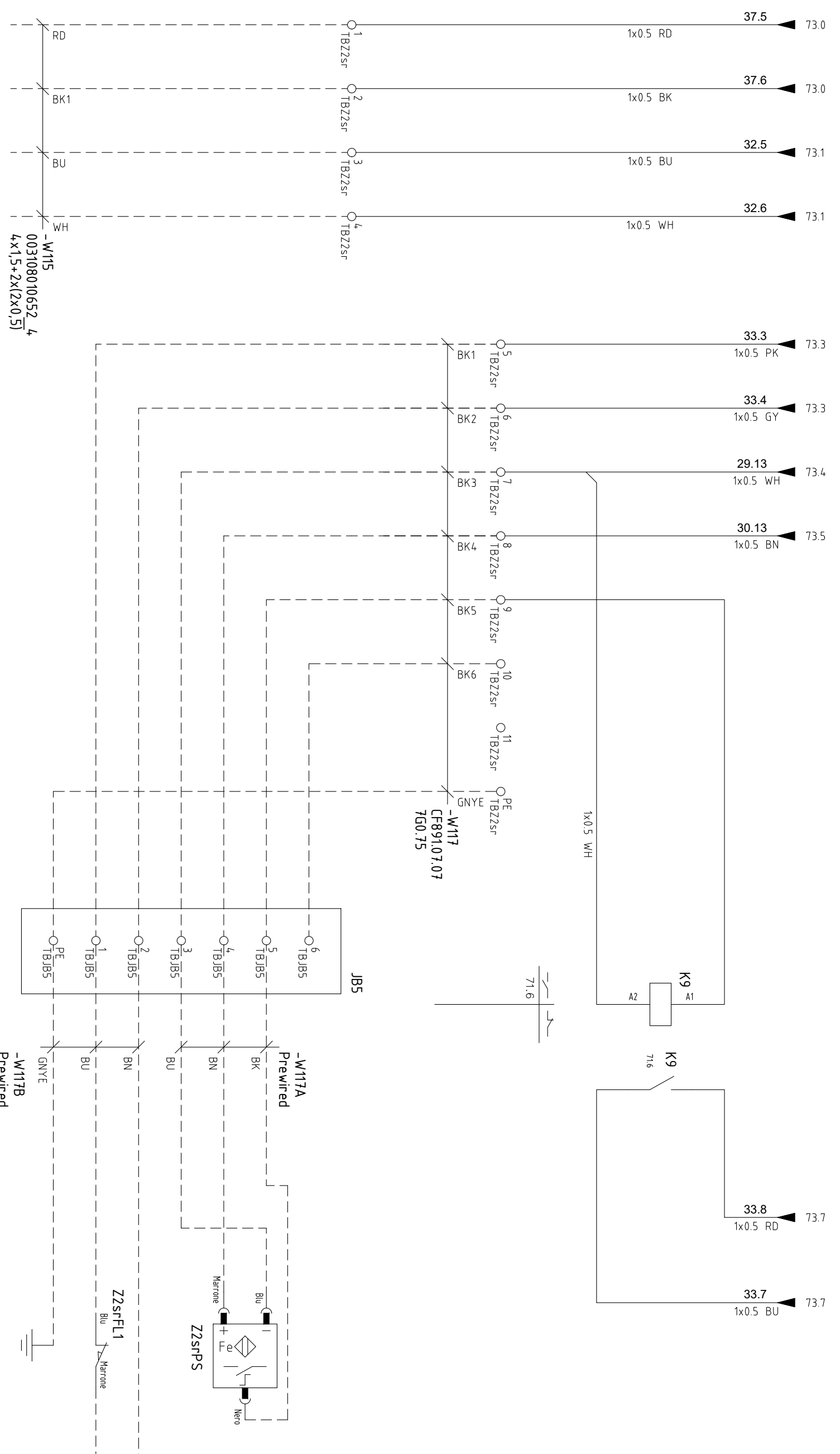


Z2sr

**Elmo**  
BAS



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)					<b>Antenna VLBI Noto (SR)</b> Movimentazione Subriflettore 2021 Z2sr - AZIONAMENTO		FG. 70
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :				F.S. 71



FRENO  
PT1000

-W115  
003108010652\_4  
4x1,5+2x(2x0,5)

-W117  
CF891.07.07  
7G0.75

JB5

-W117A  
Prewired

Z2srPS


Z2srFL1

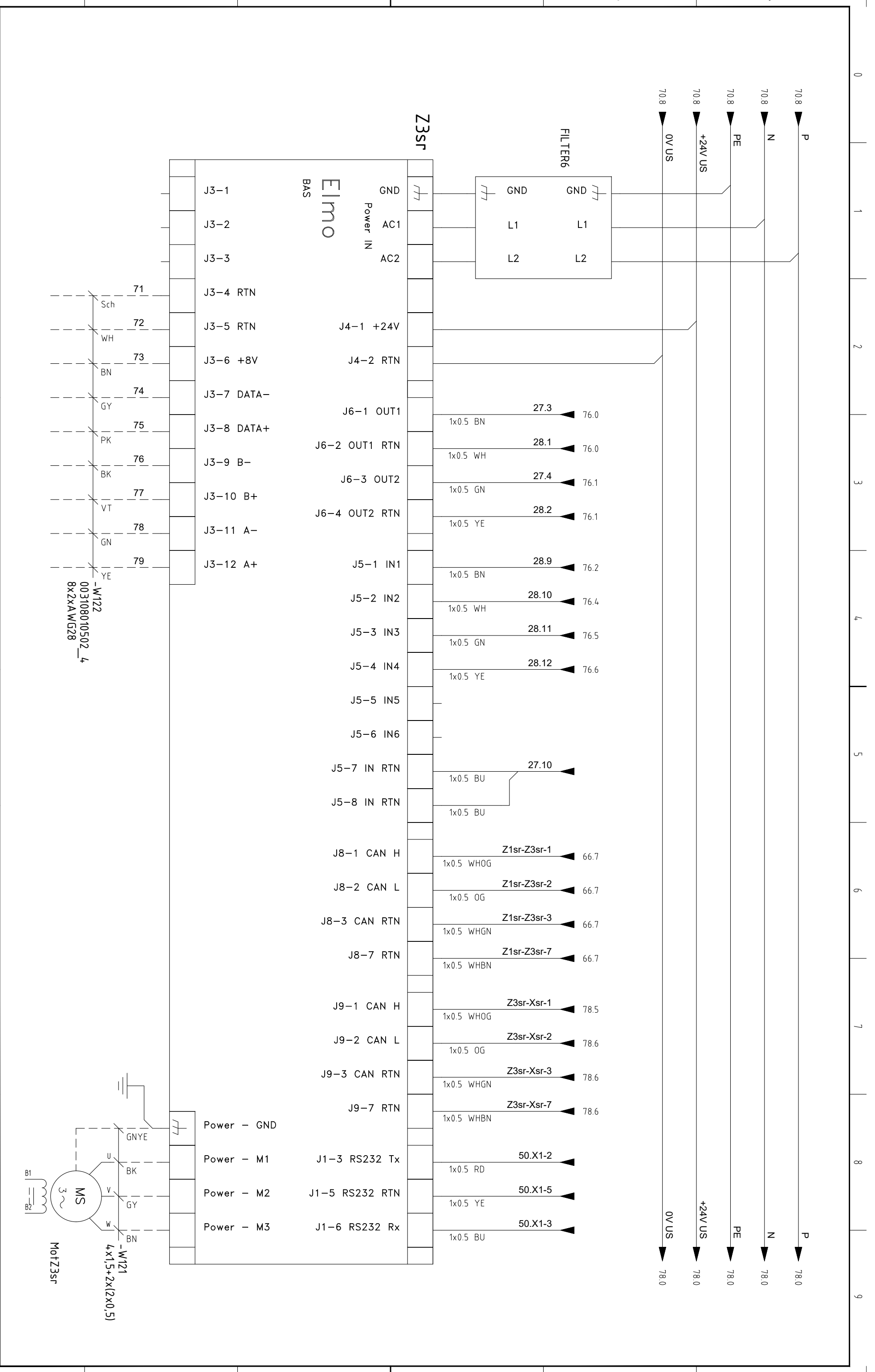
-W117B  
Prewired

1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)			<b>Antenna VLBI Noto (SR)</b> Movimentazione Subrilettore 2021 Z2sr - SEGNALI PLC	
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	FILE :		FG. 71 F.S. 72

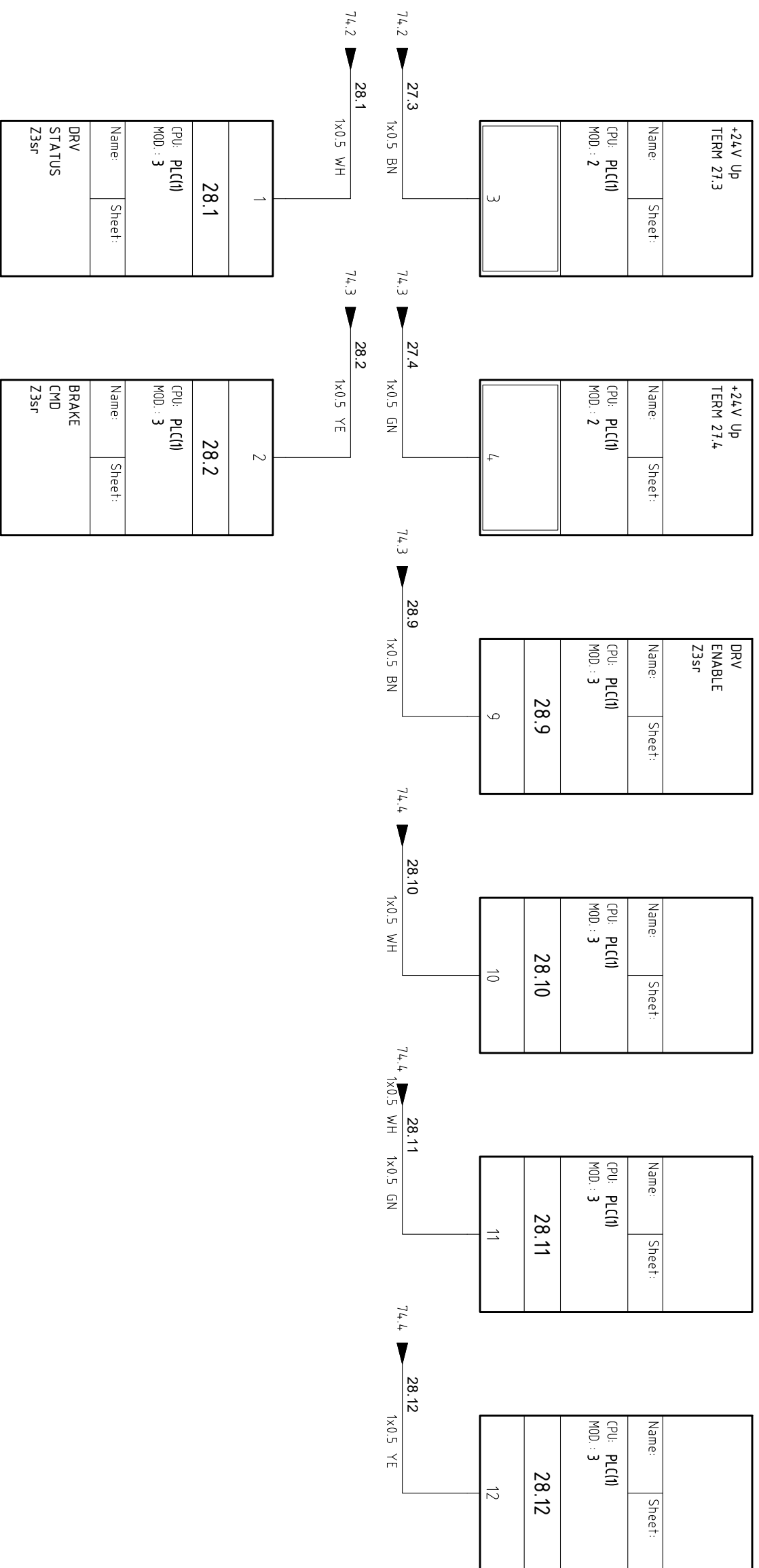





1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)			<b>Antenna VLBI Noto (SR)</b> Movimentazione Subriflettore 2021 Z3sr - AZIONAMENTO	FG. 74
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :			SOST. DA :

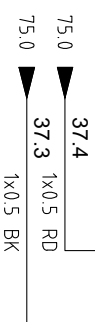




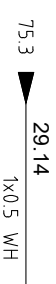


1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)			Antenna VLBI Noto (SR) Movimentazione Subrilettore 2021 Z3sr - SEGNALI PLC		
REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL :	SOST. DA :		FILE :		

37.4 BRAKE +	
37.3 BRAKE -	
Name:	Sheet:
CPU: PLC(1)	
MOD.: 12	
37.3_4	
4	3



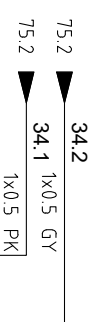
Up RTN TERM 29.14	
Name:	Sheet:
CPU: PLC(1)	
MOD.: 4	
14	



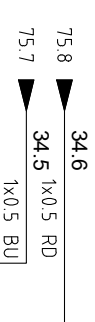
Up +24V	
Name:	Sheet:
CPU: PLC(1)	
MOD.: 5	
30.14	
14	



1	2
34.1_2	
CPU: PLC(1)	
MOD.: 9	
Name: Sheet:	
FINAL LIMIT Z3sr	



5	6
34.5_6	
CPU: PLC(1)	
MOD.: 9	
Name: Sheet:	
PARK Z3sr	



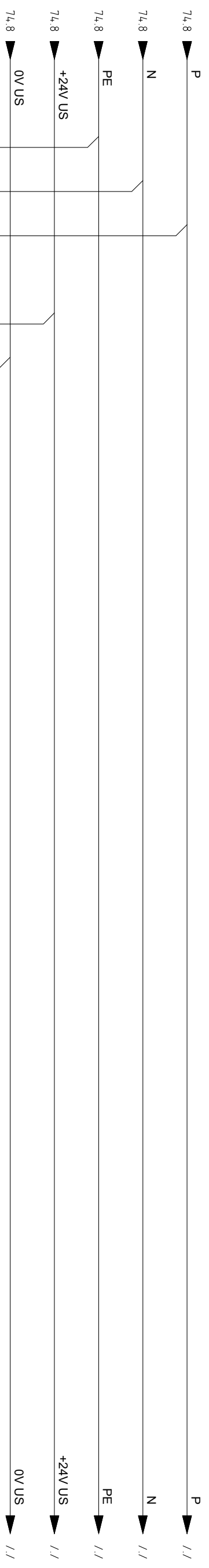
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			DISEGN.	Alessandro Poli	
			VISTO	Morsiani/Poli	
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli

**IRA - Noto**  
 Contrada Renna Bassa  
 Noto (SR)

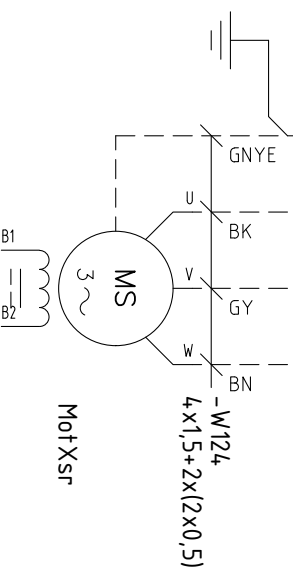
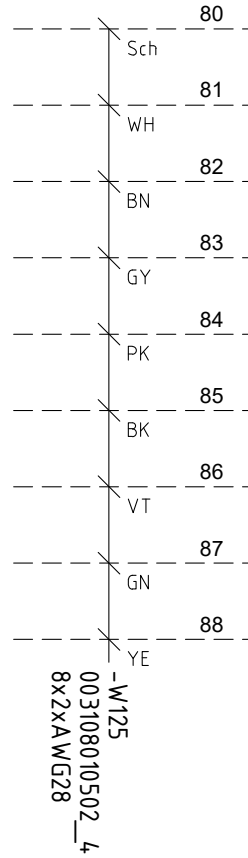
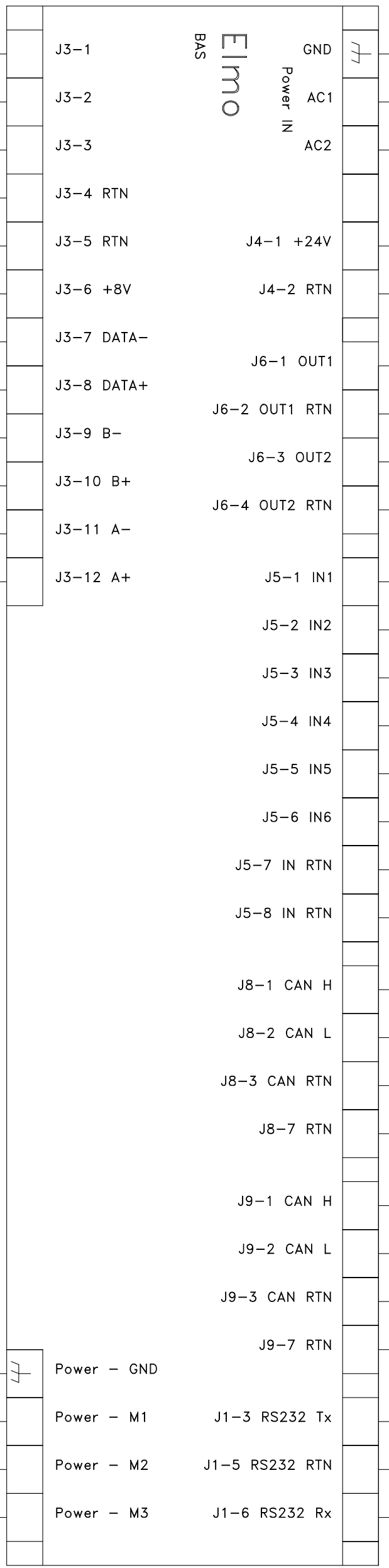


**Antenna VLBI Noto (SR)**  
 Movimentazione Subrilettore 2021  
 Z3sr - SEGNALI PLC

SOST. IL :		SOST. DA :		FILE :	
FG. 77		F.S. 78			



**Elmo**  
BAS



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)				<b>Antenna VLBI Noto (SR)</b> Movimentazione Subrilettore 2021 Xsr - AZIONAMENTO	
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :	FG. 78	F.S. 79



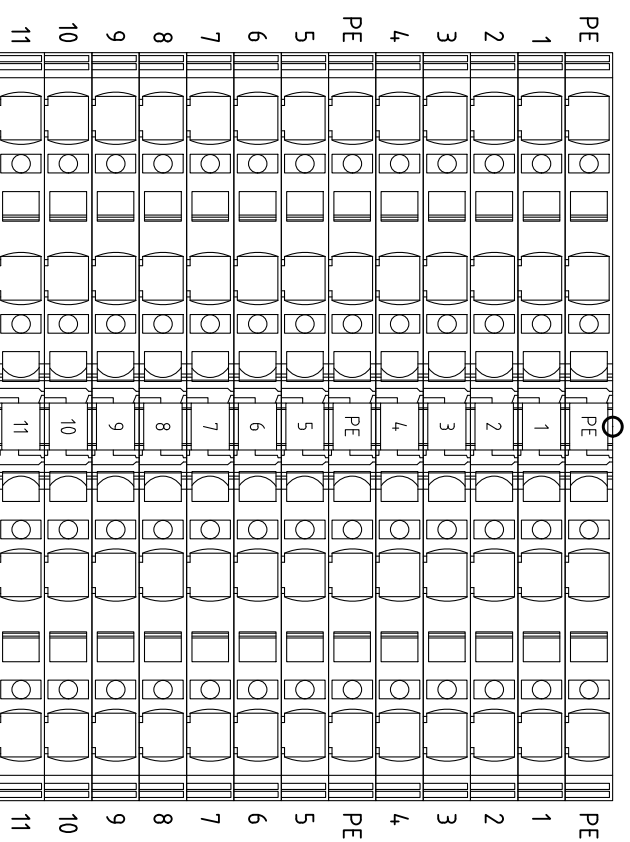









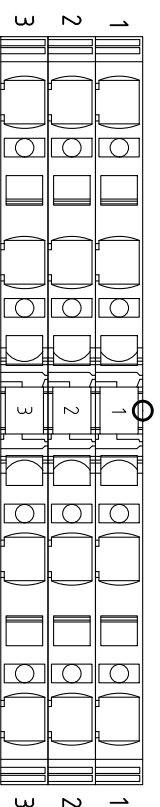
# +DB1 - TBZpfr



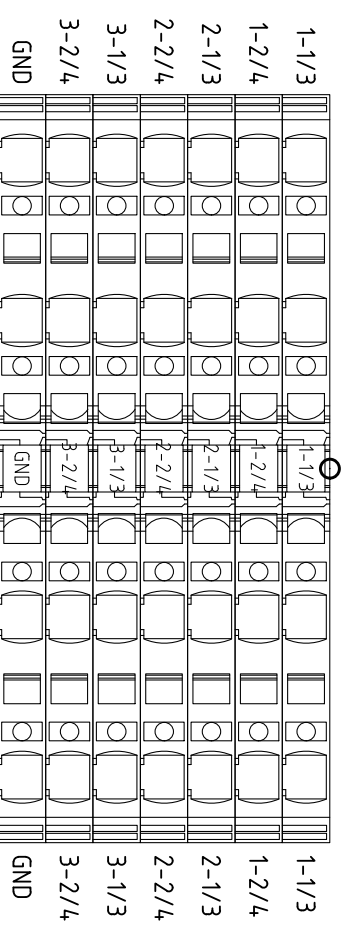
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			DISEGN.	Alessandro Poli	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)		Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021 Morsettiere e Connettori		
			VISTO	Morsiani/Poli					
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :	
0									
									F.G. 102 F.S. 103

DRIVER BOX 2

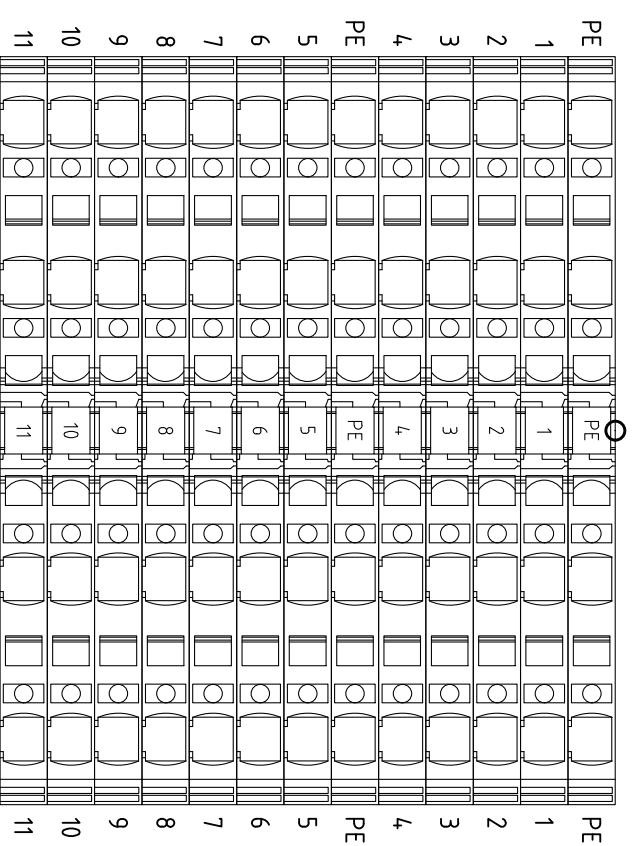
+DB2 - X2




+DB2 - TB1



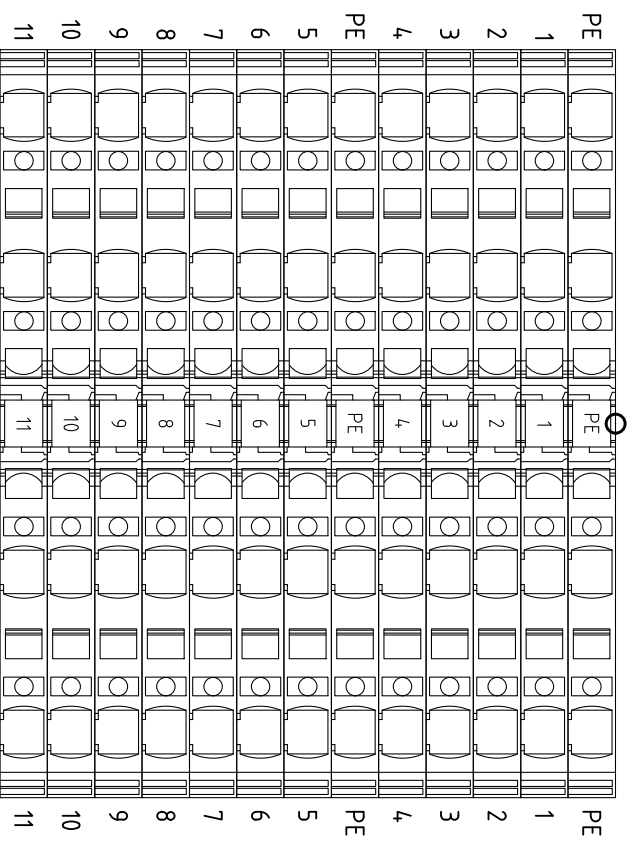
+DB2 - TBZ1sr



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)			Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021 Morsettiere e Connettori	
			DATA	Alessandro Poli					
			DISEGN.	Morsiani/ Poli					
			VISTO	Morsiani/ Poli					
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/ Poli	SOST. IL :	SOST. DA :	FILE :	
0									



### +DB2 - TBXsr

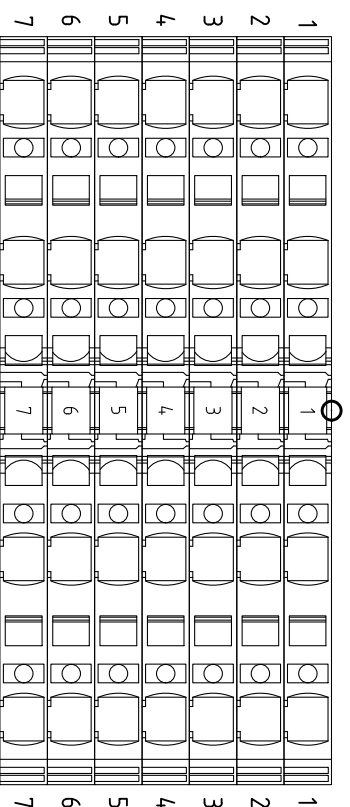



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Rennà Bassa Noto (SR)			Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021 Morsettiere e Connettori	
			DISEGN. VISTO	Alessandro Poli Morsiani/Poli					
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL. :	SOST. DA. :	FILE. :	
0						3	4	5	6 7 8 9

FG. 105  
F.S. 106

JBEM

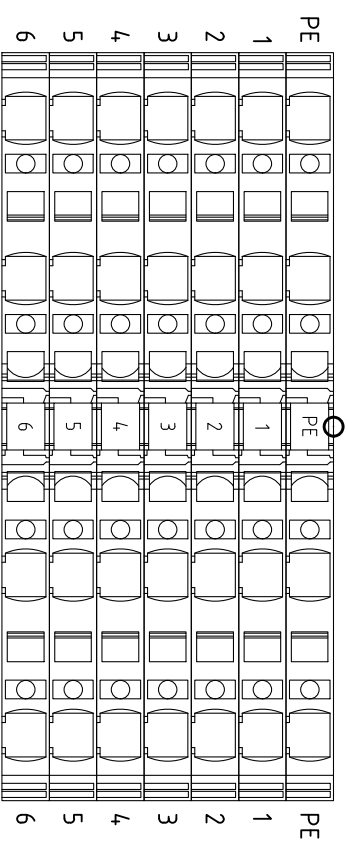
JBEM - TB1




1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)		<b>Antenna VLBI Noto (SR)</b> Movimentazione Subriflettore 2021 Morsettiere e Connettori						
			DISEGN. VISTO	Alessandro Poli Morsiani/Poli				FILE :					
REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL :	SOST. DA :			FG. 106 F.S. 107				
	0				1	2	3	4	5	6	7	8	9

JB1

JB1 - TBJB1



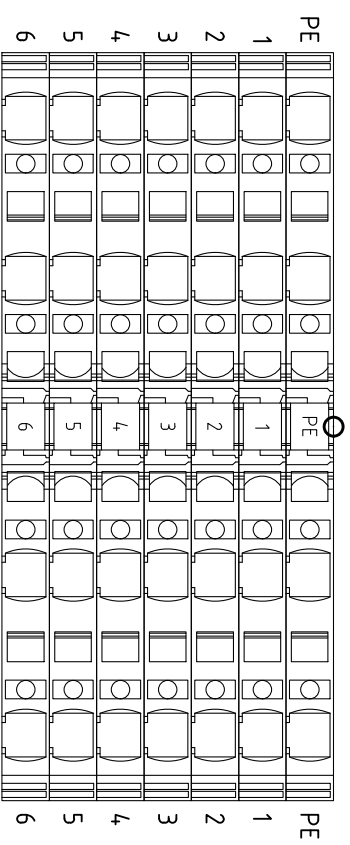
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			DATA	Alessandro Poli					
			VISTO	Morsiani/Poli	FILE :				
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :		
	0		1		2	3	4	5	6
						7	8		9


F.G. 107

F.S. 108

JB2

JB2 - TBJB2



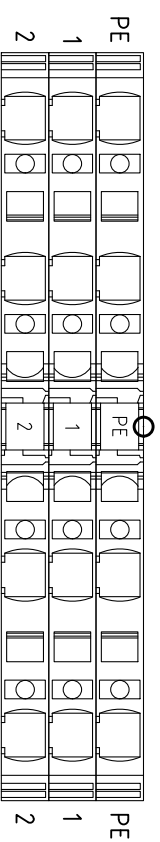
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			DATA	Alessandro Poli				FILE :				
			VISTO	Morsiani/Poli								
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :					
	0		1		2	3	4	5	6	7	8	9

FG. 108  
F.S. 109



JB4

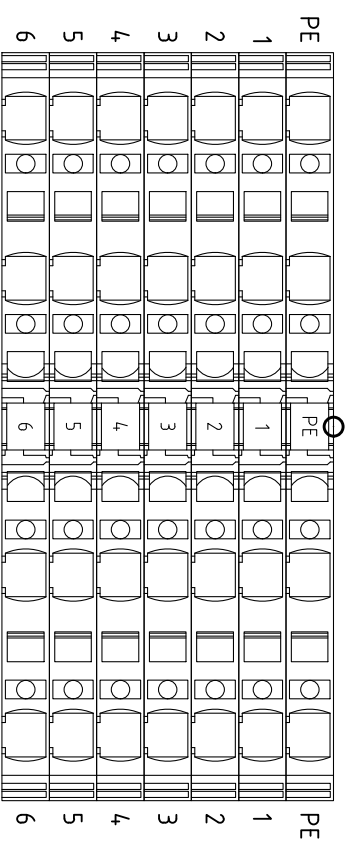
JB4 - TBJB4




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			DISEGN.	Alessandro Poli								
			VISTO	Morsiani/Poli								
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :			FG. 110 F.S. 111		
	0				2	3	4	5	6	7	8	9

JB5

JB5 - TBJB5



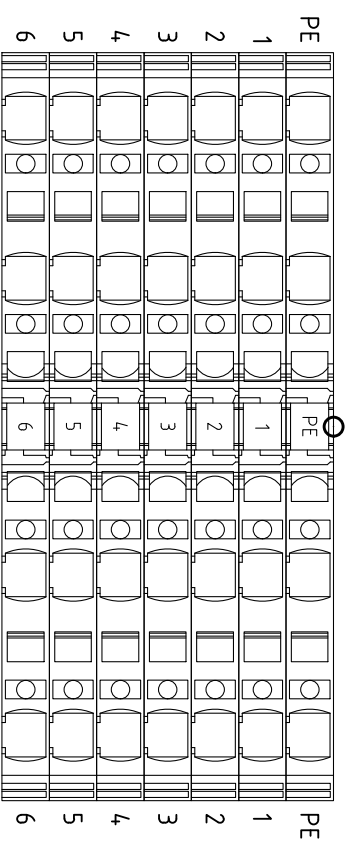
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			DATA	Alessandro Poli					
			DISEGN.	Morsiani/Poli	FILE:				
			VISTO	Morsiani/Poli					
REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL:	SOST. DA:			F.S. 112
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		1			3				
					4				
					5				
					6				
					7				
					8				
					9				






JB8

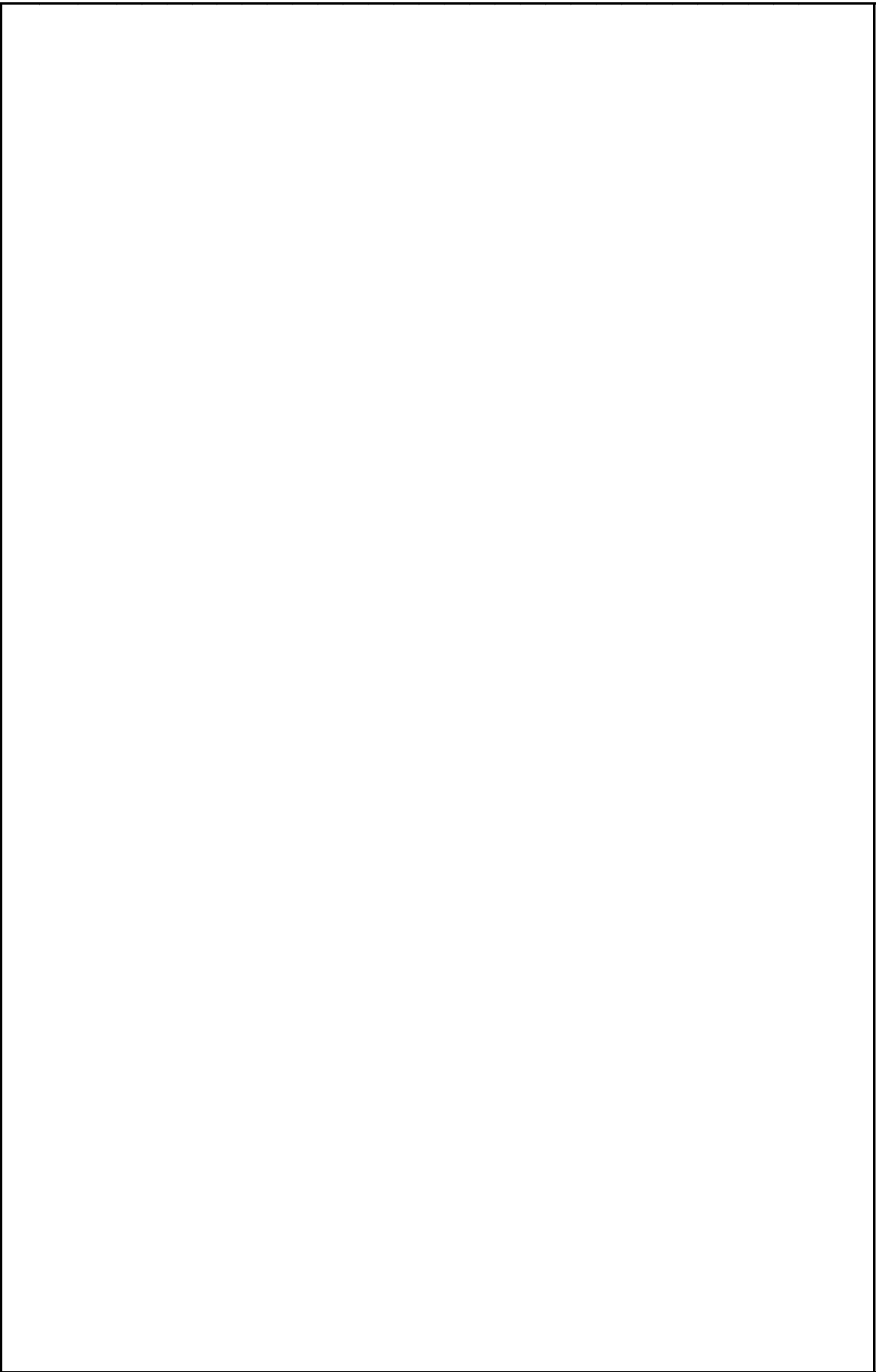
JB8 - TBJB8



1	Prima Emissione	23/09/21	DATA	23/09/2021	<b>IRA - Noto</b> Contrada Renna Bassa Noto (SR)		Antenna VLBI Noto (SR) Movimentazione Subriflettore 2021 Morsettiere e Connettori		FG. 114 F.S. 115			
			DATA	Alessandro Poli								
			VISTO	Morsiani/Poli								
REV.	MODIFICA	DATA	FIRMA	APPR.	Morsiani/Poli	SOST. IL :	SOST. DA :	FILE :				
	0		1		2	3	4	5	6	7	8	9

Istituto Radioastronomia

Wire List New Subreflector V. 2021\_NOTO



# CAVO	TIPO DI CAVO	Asse	FUNZIONE	DATA	DATA
W101	17G1,5		230VAC	Gewiss Box	Drive Box 1
W102	3G2,5		230VAC	Driver Box1	Driver Box 2
W103A	F.O. 50/125	Comune	EtherCat	F.O. Apex J.B.	Driver Box 1
W103B	F.O. 50/125		EtherCat	Driver Box1	Driver Box 2
W104	7G1,5		24VDC	Driver Box1	Driver Box 2
W105	4G1,5 +4x0,25		Motor	Driver Box1	J1 Motor M1 (Zpfr)
W106	8x2xAW/G28	Zpfr	Encoder	Driver Box1	J2 Motor M1 (Zpfr)
W107	7G0,75		Switches	Driver Box1	JB1 (Zpfr)
W107A			Park	JB1 (Zpfr)	PrkSw1 (Zpfr)
W107B			Final limit	JB1 (Zpfr)	FLSw1 (Zpfr)
W108	4G1,5 +4x0,25		Motor	Driver Box1	J1 Motor M2 (Ypfr)
W109	8x2xAW/G28	Ypfr	Encoder	Driver Box1	J2 Motor M2 (Ypfr)
W110	7G0,75		Switches	Driver Box1	JB2 (Ypfr)
W110A			Park	JB2 (Ypfr)	PrkSw2 (Ypfr)
W110B			Final limit	JB2 (Ypfr)	FLSw2 (Ypfr)
W111	4G1,5 +4x0,25		Motor	Driver Box1	J1 Motor M3 (Ysr)
W112	8x2xAW/G28	Ysr	Encoder	Driver Box1	J2 Motor M3 (Ysr)
W113	7G0,75		Switches	Driver Box1	JB3 (Ysr)
W113A			Park	JB3 (Ysr)	PrkSw3 (Ysr)
W113B			Final limit	JB3 (Ysr)	FLSw3
W114			Final limit	Driver Box1	JB4 (Ysr)
W114A			Final limit	JB4 (Ysr)	FLSw4 (Ysr)
W115	4G1,5 +4x0,25		Motor	Driver Box 2	J1 Motor M4 (Z2sr)
W116	8x2xAW/G28	Z2sr	Encoder	Driver Box 2	J2 Motor M4 (Z2sr)
W117	7G0,75		Switches	Driver Box 2	JB5 (Z2sr)
W117A			Park	JB5 (Z2sr)	PrkSw4 (Z2sr)
W117B			Final limit	JB5 (Z2sr)	FLSw5 (Z2sr)
W118	4G1,5 +4x0,25		Motor	Driver Box 2	J1 Motor M5 (Z1sr)
W119	8x2xAW/G28	Z1sr	Encoder	Driver Box 2	J2 Motor M5 (Z1sr)
W120	7G0,75		Switches	Driver Box 2	JB6 (Z1sr)
W120A			Park	JB6 (Z1sr)	PrkSw5 (Z1sr)
W120B			Final limit	JB6 (Z1sr)	FLSw6 (Z1sr)

# CAVO	TIPO DI CAVO	Asse	FUNZIONE	DATA	DATA
W121	4G1,5 +4x0,25	Z3sr	Motor	Driver Box 2	J1 Motor M6 (Z3sr)
W122	8x2xAW/G28		Encoder	Driver Box 2	J2 Motor M6 (Z3sr)
W123	7G0,75		Switches	Driver Box 2	JB7 (Z3sr))
W123A			Park	JB7 (Z3sr))	PkSw6 (Z3sr)
W13B			Final limit	JB7 (Z3sr))	FLSw7 (Z3sr)
W124	4G1,5 +4x0,25	Xsr	Motor	Driver Box 2	J1 Motor M7 (Xsr)
W125	8x2xAW/G28		Encoder	Driver Box 2	J2 Motor M7 (Xsr)
W126	7G0,75		Switches	Driver Box 2	JB8 (Xsr)
W126A			Park	JB8 (Xsr)	PkSw7 (Xsr)
W126B			Final limit	JB8 (Xsr)	FLSw8 (Xsr)
W127	5G1	Ysr	Trasl. Sw FL	Driver Box 2	FLSw9 (Ysr)
W128					
W129	5G1	Comune	Emer. Stop	Driver Box1	Em. Stop1
W130					
W131					

<i>IDENTIFICAZIONE FILO colore o numero</i>	<i>DIRETTO A : driver box 1</i>	<i>PROVENIENTE DA: Cabina elettrica</i>	<i>NOTE</i>
Marrone 7+ Nero 8	X1 - 1	Magneto termico Potenza	230VAC U.P.S Potenza L
Blu + Nero17	X1 - 2		230VAC U.P.S Potenza N
Marrone 0 + Nero 1	X1 - 3	Magneto termico Controllo	230VAC U.P.S Controllo L
Nero 2+ Nero 3	X1 - 4		230VAC U.P.S Controllo N
Nero 9 + Nero 10	X1 - GND	GND	GND
Nero 4 + Nero 5	X1 - GND	GND	GND
DIRETTO A: Driver box 1 Driverbox1.sch			
PROVENIENTE DA: Quadro Elettrico Sezione UPS			
CAVO NUMERO: W 101		TIPO CAVO:H07RNF 17X1.5	



IDENTIFICAZIONE FILO <i>colore o numero</i>	DIRETTO A : <i>driver box1</i>	PROVENIENTE DA: <i>J.B. Apex</i>	NOTE
Grigio 1	EK1501 Term 8 - X1 in	SC F.O. - 5	link EtherCat
Grigio 2	EK1501 Term 8 - X1 out	SC F.O. - 6	link EtherCat
Grigio 3		SC F.O. - 7	spare
Grigio 4		SC F.O. - 8	spare
<b>DIRETTO A: Driver box1</b>			
<b>PROVENIENTE DA: J.B. Apex</b>			
<b>CAVO NUMERO: W 103A</b>		TIPO CAVO: Fibra Ottica	4 x OM3 - SC



IDENTIFICAZIONE FILO colore o numero	DIRETTO A : driver box2	PROVENIENTE DA: driver box1	NOTE
Nero 1	TB01 -- 1-3	TB01 -- 1-3	Us_24VDC+      Ctrl / Driver
Nero 2	TB01 -- 1-4	TB01 -- 1-4	Us_RTN            Ctrl / Driver
Nero 3	TB01 -- 2-3	TB01 -- 2-3	Up_24VDC+      I/O
Nero 4	TB01 -- 2-4	TB01 -- 2-4	Up_RTN            I/O
Nero 5	TB01 -- 3-3	TB01 -- 3-3	UPbk_24VDC+    Brake
Nero 6	TB01 -- 3-4	TB01 -- 3-4	UPbk_RTN        Brake
GNV	TB01 - GND	TB01 - GND	GND
DIRETTO A: Driver box2			
PROVENIENTE DA: Driver box1			
CAVO NUMERO: W 104		TIPO CAVO: 7G1,5	

<i>IDENTIFICAZIONE FILO colore o numero</i>	<i>DIRETTO A : Motor Power Conn. J1</i>	<i>PROVENIENTE DA: Zpfr Driver - TB Zpfr</i>	<i>NOTE</i>		
Grigio	Pin 1	Driver Power - M2	Fase Motore U		
Giallo / Verde	Pin 2	Driver Power - GND	PE		
Marrone	Pin 3	Driver Power - M3	Fase Motore W		
Nero	Pin 4	Driver Power - M1	Fase Motore V		
Rosso	Pin A	TB Morsetto - 1	Brake +24 Vdc		
Nero	Pin B	TB Morsetto - 2	Brake RTN		
Bianco	Pin C	TB Morsetto - 4	PT1000+		
Blu	Pin D	TB Morsetto - 3	PT1000-		
schermo	Corpo connettore	Corpo pressacavo	GND/PE		
<b>DIRETTO A: Motore brushless asse Z (ricevitore fuoco primario)</b>			<b>Power Conn. J1</b>		
<b>PROVENIENTE DA: Driver box 1 - Driver Power Connector - TB Zpfr</b>					
<b>CAVO NUMERO: W105</b>			<b>TIPO CAVO: Motor Power Control (4G1.5+4x0.25)</b>		

<i>IDENTIFICAZIONE FILO colore o numero</i>	<i>DIRETTO A : Motor Encoder Conn. J2</i>	<i>PROVENIENTE DA: Zpfr Driver - J3</i>	<i>NOTE</i>
Bianco	Pin 3	Pin 5	RTN
Marrone	Pin 4	Pin 6	+5 Vdc
Giallo	Pin 5	Pin 12	Sen -
Verde	Pin 6	Pin 11	Sen +
Grigio	Pin 7	Pin 7	Data -
Rosa	Pin 8	Pin 8	Data +
Nero	Pin 11	Pin 9	Cos -
Viola	Pin 12	Pin 10	Cos +
Treccia	Pin 10	Pin 4 / CorpoPressacavo	schermo PE
<b>DIRETTO A: Motore bruschless asse Z (ricevitore fuoco primario) Encoder Conn. J2</b>			
<b>PROVENIENTE DA: Driver box 1 - Z pfr Driver Encoder Conn. J3</b>			
<b>CAVO NUMERO: W106</b>		<b>TIPO CAVO: Motor Power Control (8x2x0.25)</b>	

IDENTIFICAZIONE FILO colore o numero	DIRETTO A : J.B. 1 switch asse Z (pfr)	PROVENIENTE DA: Driver box 1 TB-Zpfr	NOTE
Nero 1	Morsetto 1	Morsetto 5	FINAL LIMIT Sw. N.C.
Nero 2	Morsetto 2	Morsetto 6	FINAL LIMIT Sw. N.C.
Nero 3	Morsetto 3	Morsetto 7	PARK Switch RTN
Nero 4	Morsetto 4	Morsetto 8	PARK Switch +24Vdc
Nero 5	Morsetto 5	Morsetto 9	PARK Switch N.A.
Nero 6	Morsetto 6	Morsetto 10	
GV	Morsetto GV	Morsetto GV	GND/PE
schermo	Corpo connettore	Corpo pressacavo	GND/PE
DIRETTO A: junction box 1 switch asse Zpfr			
PROVENIENTE DA: Driver box 1 TB-Zpfr			
CAVO NUMERO: W107		TIPO CAVO: IGUS 7G075	





<i>IDENTIFICAZIONE FILO colore o numero</i>	<i>DIRETTO A : Motor Power Conn. J1</i>	<i>PROVENIENTE DA: Ypfr Driver - J3</i>	<i>NOTE</i>	
Bianco	Pin 3	Pin 5	RTN	
Marrone	Pin 4	Pin 6	+5 Vdc	
Giallo	Pin 5	Pin 12	Sen -	
Verde	Pin 6	Pin 11	Sen +	
Grigio	Pin 7	Pin 7	Data -	
Rosa	Pin 8	Pin 8	Data +	
Nero	Pin 11	Pin 9	Cos -	
Viola	Pin 12	Pin 10	Cos +	
Treccia	Pin 10	Pin 4 / CorpofPressacavo	schermo PE	
<b>DIRETTO A: Motore bruschless asse Y (ricevitore fuoco primario)</b>				<b>Encoder Conn. J2</b>
<b>PROVENIENTE DA: Driver box 1 - Y pfr Driver Encoder Conn. J3</b>				
<b>CAVO NUMERO: W109</b>				
<b>TIPO CAVO: Motor Power Control (8x2x0.25)</b>				

<i>IDENTIFICAZIONE FILO colore o numero</i>	<i>DIRETTO A : J.B. 2 switch asse Y (pfr)</i>	<i>PROVENIENTE DA: Driver box 1 TB-Ypfr</i>	<i>NOTE</i>
Nero 1	Morsetto 1	Morsetto 5	FINAL LIMIT Sw. N.C.
Nero 2	Morsetto 2	Morsetto 6	FINAL LIMIT Sw. N.C.
Nero 3	Morsetto 3	Morsetto 7	PARK Switch RTN
Nero 4	Morsetto 4	Morsetto 8	PARK Switch +24Vdc
Nero 5	Morsetto 5	Morsetto 9	PARK Switch N.A.
Nero 6	Morsetto 6	Morsetto 10	
GV	Morsetto GV	Morsetto GV	GND/PE
schermo	Corpo connettore	Corpo pressacavo	GND/PE
DIRETTO A: junction box 2 switch asse Ypfr			
PROVENIENTE DA: Driver box 1 TB-Ypfr			
CAVO NUMERO: W110		TIPO CAVO: IGUS 7G075	

IDENTIFICAZIONE FILO colore o numero	DIRETTO A : Switches asse	PROVENIENTE DA: J.B. asse	NOTE
W110 B			
Blu	FINAL LIMIT Safety switch	Morsetto 1	FINAL LIMIT SW . N.C.
Marrone	FINAL LIMIT Safety switch	Morsetto 2	FINAL LIMIT SW . N.C.
Giallo/Verde	FINAL LIMIT Safety switch	PE	GND
W110 A			
Blu	prelimit proximity switch	Morsetto 3	Alimentazione switch RTN
Marrone	prelimit proximity switch	Morsetto 4	Alimentazione switch +24Vdc
Nero	prelimit proximity switch	Morsetto 5	Park Sw N.A.
DIRETTO A: PrkSw2-Park Sw , FLsw2-Final Limit Sw Asse Ypfr			
PROVENIENTE DA: junction box 2 switch asse Ypfr			
CAVO NUMERO: W110A-B TIPO CAVO:			





IDENTIFICAZIONE FILO colore o numero	DIRETTO A : J.B. 3 switch asse Y (sr)	PROVENIENTE DA: Driver box 1 TB-Ysr	NOTE
Nero 1	Morsetto 1	Morsetto 5	FINAL LIMIT Ysr1 N.C.
Nero 2	Morsetto 2	Morsetto 6	FINAL LIMIT Ysr1 N.C.
Nero 3	Morsetto 3	Morsetto 7	PARK Switch RTN
Nero 4	Morsetto 4	Morsetto 8	PARK Switch +24Vdc
Nero 5	Morsetto 5	Morsetto 9	PARK Switch N.A.
Nero 6	Morsetto 6	Morsetto 10	
GV	Morsetto GV	Morsetto GV	GND/PE
schermo	Corpo connettore	Corpo pressacavo	GND/PE
DIRETTO A: junction box 3 switch asse Ysr			
PROVENIENTE DA: Driver box 1 TB-Ysr			
CAVO NUMERO: W113		TIPO CAVO: IGUS 7G075	



IDENTIFICAZIONE FILO colore o numero	DIRETTO A : Driver box 1 TB-Ysr	PROVENIENTE DA: J.B. 4 switch asse Y (sr)	NOTE
Nero 1	Morsetto 11	Morsetto 1	FINAL LIMIT Ysr2 N.C.
Nero 2	Morsetto 12	Morsetto 2	FINAL LIMIT Ysr2 N.C.
Nero 3			
Nero 4			
GV	Morsetto GV	Morsetto GV	GND/PE
schermo	Corpo connettore	Corpo pressacavo	GND/PE
CAVO NUMERO: W114		TIPO CAVO: IGUS 5G1	



IDENTIFICAZIONE FILO colore o numero	DIRETTO A : Motor Power Conn. J1	PROVENIENTE DA: Z2sr Driver - TB Z2sr	NOTE
Grigio	Pin 1	Driver Power - M2	Fase Motore U
Giallo / Verde	Pin 2	Driver Power - GND	PE
Marrone	Pin 3	Driver Power - M3	Fase Motore W
Nero	Pin 4	Driver Power - M1	Fase Motore V
Rosso	Pin A	TB Morsetto - 1	Brake +24 Vdc
Nero	Pin B	TB Morsetto - 2	Brake RTN
Bianco	Pin C	TB Morsetto - 4	PT1000 +
Blu	Pin D	TB Morsetto - 3	PT1000 -
CAVO NUMERO: W115		TIPO CAVO: Motor Power Control (4G1.5+4x0.25)	
DIRETTO A: Motore bruschless asse Z2 (subriflettore)		Power Conn. J1	
PROVENIENTE DA: Driver box 2 - Driver Power Connector - TB Z2sr			



<i>IDENTIFICAZIONE FILO colore o numero</i>	<i>DIRETTO A : J.B. 5 switch asse Z2 (sr)</i>	<i>PROVENIENTE DA: Driver box 2 TB-Z2sr</i>	<i>NOTE</i>
Nero 1	Morsetto 1	Morsetto 5	FINAL LIMIT Sw. N.C.
Nero 2	Morsetto 2	Morsetto 6	FINAL LIMIT Sw. N.C.
Nero 3	Morsetto 3	Morsetto 7	PARK Switch RTN
Nero 4	Morsetto 4	Morsetto 8	PARK Switch +24Vdc
Nero 5	Morsetto 5	Morsetto 9	PARK Switch N.A.
Nero 6	Morsetto 6	Morsetto 10	
GV	Morsetto GV	Morsetto GV	GND/PE
schermo	Corpo connettore	Corpo pressacavo	GND/PE
DIRETTO A: junction box 5 switch asse Z2sr			
PROVENIENTE DA: Driver box 2 TB-Z2sr			
CAVO NUMERO: W117		TIPO CAVO: IGUS 7G075	









IDENTIFICAZIONE FILO colore o numero	DIRETTO A : Switches asse	PROVENIENTE DA: J.B. asse	NOTE
W120 B			
Blu	FINAL LIMIT Safety switch Y1	Morsetto 1	FINAL LIMIT SW . N.C.
Marrone	FINAL LIMIT Safety switch Y1	Morsetto 2	FINAL LIMIT SW . N.C.
Giallo/Verde	FINAL LIMIT Safety switch Y1	PE	GND
W120 A			
Blu	prelimit proximity switch	Morsetto 3	Alimentazione switch RTN
Marrone	prelimit proximity switch	Morsetto 4	Alimentazione switch +24Vdc
Nero	prelimit proximity switch	Morsetto 5	Park Sw N.A.
DIRETTO A: PrkSw5 - Park Sw , FLsw6 - Final Limit Sw Asse Z1sr			
PROVENIENTE DA: Juntion box 6 switch asse Z1sr			
CAVO NUMERO: W120A-B		TIPO CAVO:	





IDENTIFICAZIONE FILO colore o numero	DIRETTO A : J.B. 7 switch asse Z3 (sr)	PROVENIENTE DA: Driver box 2 TB-Z3sr	NOTE
Nero 1	Morsetto 1	Morsetto 5	FINAL LIMIT Sw. N.C.
Nero 2	Morsetto 2	Morsetto 6	FINAL LIMIT Sw. N.C.
Nero 3	Morsetto 3	Morsetto 7	PARK Switch RTN
Nero 4	Morsetto 4	Morsetto 8	PARK Switch +24Vdc
Nero 5	Morsetto 5	Morsetto 9	PARK Switch N.A.
Nero 6	Morsetto 6	Morsetto 10	
GV	Morsetto GV	Morsetto GV	GND/PE
schermo	Corpo connettore	Corpo pressacavo	GND/PE
DIRETTO A: junction box 7 switch asse Z3			
PROVENIENTE DA: Driver box 2 TB-Z3sr			
CAVO NUMERO: W123		TIPO CAVO: IGUS 7G075	



<b>IDENTIFICAZIONE FILO</b> <i>colore o numero</i>	<b>DIRETTO A :</b> <i>Motor Power Conn. J1</i>	<b>PROVENIENTE DA:</b> <i>Xsr Driver - TB Xsr</i>	<b>NOTE</b>
Grigio	Pin 1	Driver Power - M2	Fase Motore U
Giallo / Verde	Pin 2	Driver Power - GND	PE
Marrone	Pin 3	Driver Power - M3	Fase Motore W
Nero	Pin 4	Driver Power - M1	Fase Motore V
Rosso	Pin A	TB Morsetto - 1	Brake +24 Vdc
Nero	Pin B	TB Morsetto - 2	Brake RTN
Bianco	Pin C	TB Morsetto - 4	PT1000 +
Blu	Pin D	TB Morsetto - 3	PT1000 -
schermo	Corpo connettore	Corpo pressacavo	GND/PE
<b>DIRETTO A:</b> Motore bruschless asse X (subriflettore) Power Conn. J1			
<b>PROVENIENTE DA:</b> Driver box 2 - Driver Power Connector - TB Xsr			
<b>CAVO NUMERO:</b> W124		<b>TIPO CAVO:</b> Motor Power Control (4G1.5+4x0.25)	



IDENTIFICAZIONE FILO colore o numero	DIRETTO A : J.B. 8 switch asse X (sr)	PROVENIENTE DA: Driver box 2 TB-Xsr	NOTE
Nero 1	Morsetto 1	Morsetto 5	FINAL LIMIT Sw. N.C.
Nero 2	Morsetto 2	Morsetto 6	FINAL LIMIT Sw. N.C.
Nero 3	Morsetto 3	Morsetto 7	PARK Switch RTN
Nero 4	Morsetto 4	Morsetto 8	PARK Switch +24Vdc
Nero 5	Morsetto 5	Morsetto 9	PARK Switch N.A.
Nero 6	Morsetto 6	Morsetto 10	
GV	Morsetto GV	Morsetto GV	GND/PE
schermo	Corpo connettore	Corpo pressacavo	GND/PE
DIRETTO A: junction box 8 switch asse X			
PROVENIENTE DA: Driver box 2 TB-Xsr			
CAVO NUMERO: W126		TIPO CAVO: IGUS 7G075	



IDENTIFICAZIONE FILO colore o numero	DIRETTO A : DriverBox2 term 35	PROVENIENTE DA: Sw16	NOTE
Nero 1	EL1904 Term35 - 1	Morsetto -1	FINAL LIMIT Sw1 N.C.
Nero 2	EL1904 Term35 - 2	Morsetto -2	FINAL LIMIT Sw1 N.C.
Nero 3	EL1904 Term35 - 5	Morsetto -5	FINAL LIMIT Sw2 N.C.
Nero 4	EL1904 Term35 - 6	Morsetto -6	FINAL LIMIT Sw2 N.C.
Nero 5			
Nero 6			
GV/ ricoperto Nero			GND/PE
schermo	Corpo connettore	Corpo pressacavo	GND/PE
DIRETTO A: Driver box 2 - Beckhoff EL1904 Term35			
PROVENIENTE DA: FLSw9 Switch di traslazione asse Ysr			
CAVO NUMERO: W127		TIPO CAVO: IGUS 5G1	







