

FROMM

**ELS FS360 FROMM
TURNTABLE STRETCH MACHINE
ELS.1124 Mechanical Carriage
Version 01 machines
Rev02**

Print date _Monday 12 November 2018/ © 11/18

PROGETTO
BANCA DIS.
TIPICO

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MODEL : FROMM FS360 Mechanical Carriage

KIND OF CIRCUIT		COLORS CONDUCTORS	MINIMUM SECTION
POWER CONDUCTORS AC		BLACK	N07V-K/1,5mm ²
NEUTRAL CONDUCTORS		LIGHT BLUE	N07V-K/1,5mm ²
POWER CONDUCTORS DC		GRAY	N07V-K/0,75mm ²
CONTROLS / SIGNALS DIRECTING CURRENT	24V DC	BLUE	N07V-K/0,75mm ²
GROUND CONDUCTORS		YELLOW-GREEN	N07V-K/1,5mm ²

TENSIONE POWER SUPPLY	230V ac
POTENZA INSTALLATA INSTALLED POWER	1kW
CORRENTE CURRENT	5,5A
FROMM	
FROMM ITALIANA s.r.l. Caprino Veronese (VR) ITALY	ELS.1124
FILE :ELS.1124.dwg	
=	
+	
FG. 01	
F.T. 11	
F.T. 16	

FROMM	
SOST. IL :	SOST. DA :
FILE :ELS.1124.dwg	FILE :ELS.1124.dwg

FS360 mechanical carriage

ELS.1124

ELS.1124

FG. 01

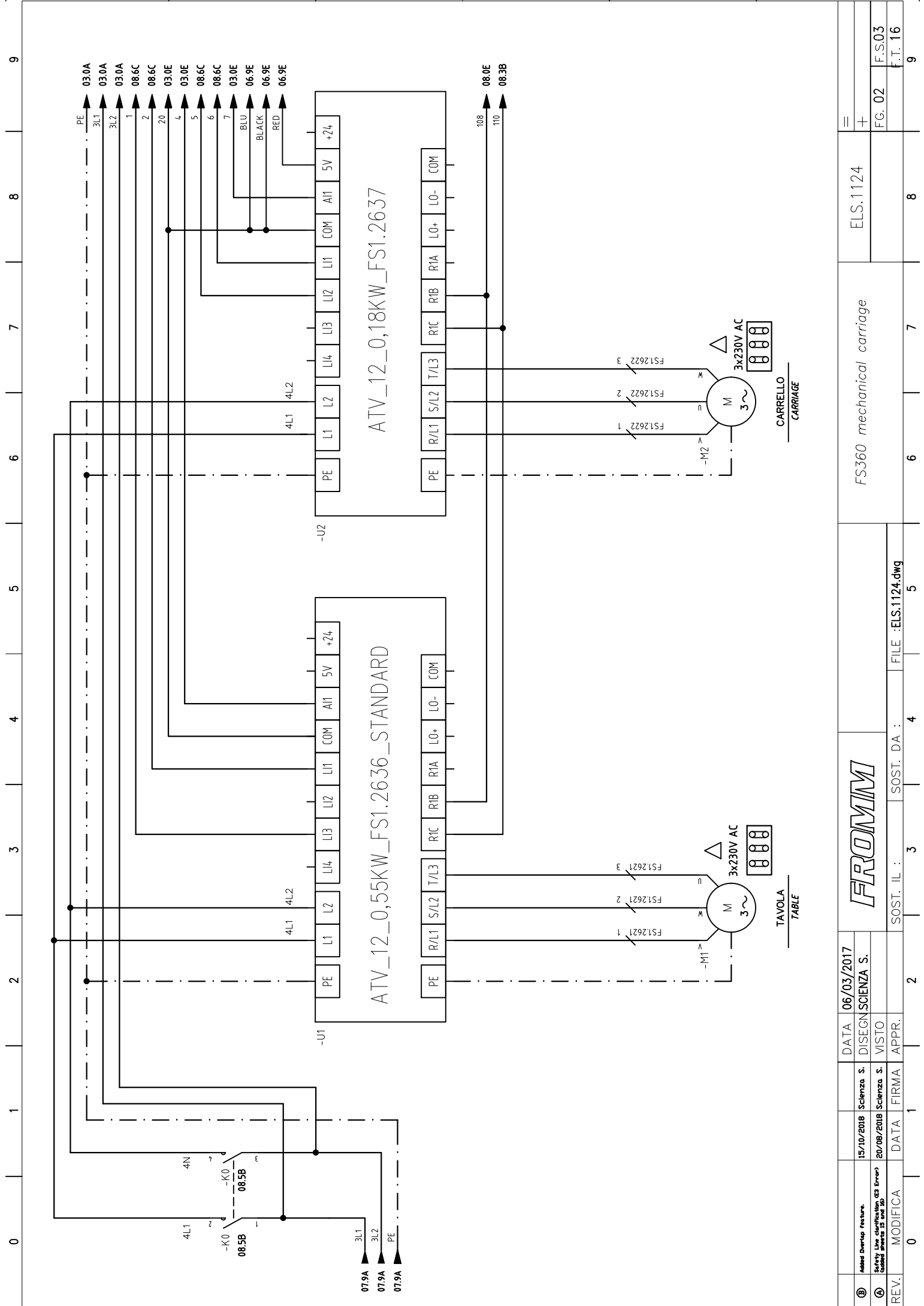
F.S.02

F.T. 16

F.T. 11

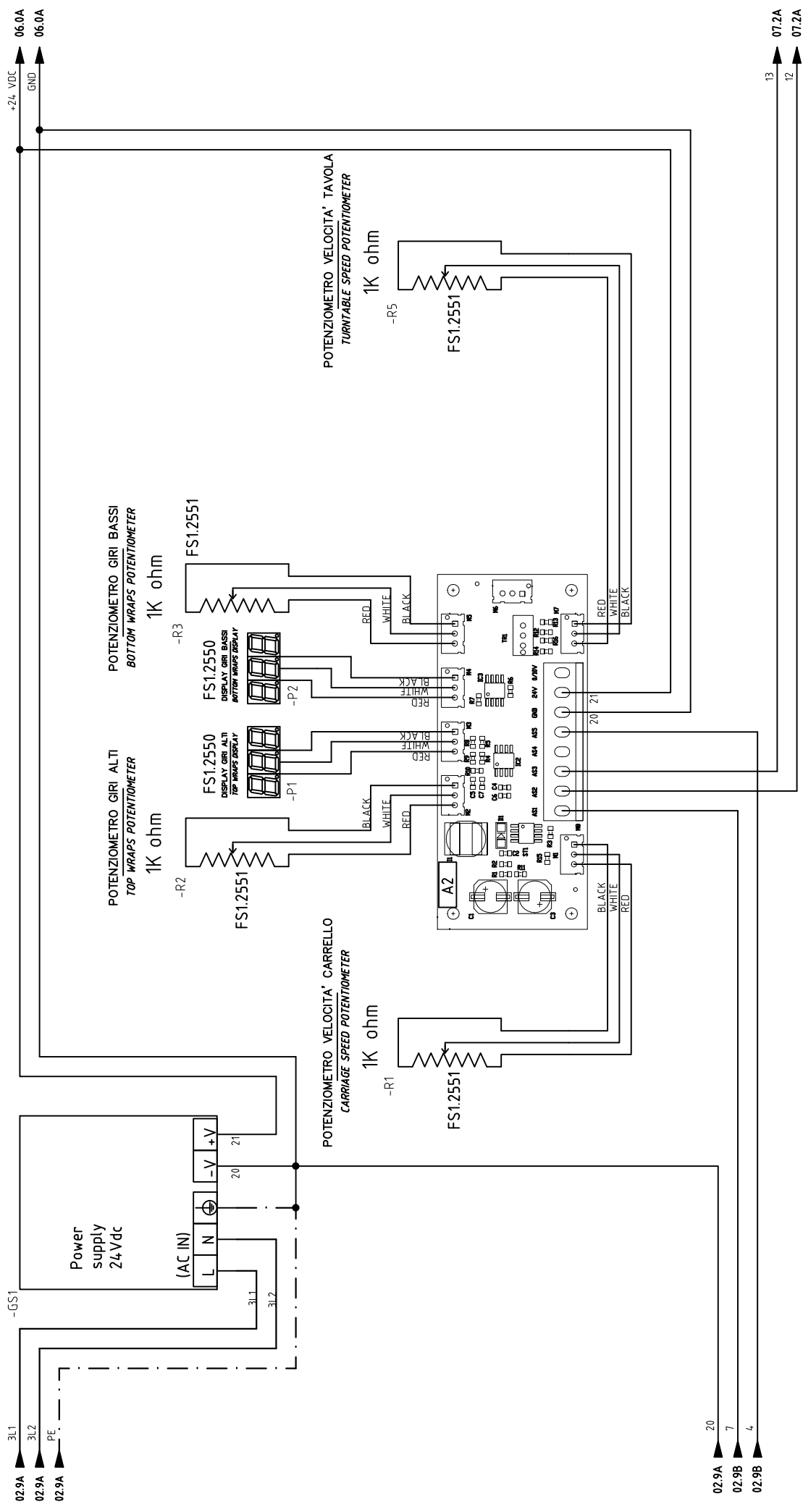
F.T. 16

F.T. 16



REV.	MODIFICA	DATA	FIRMA	VISTO	DESIGN	DATA	06/03/2017
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2		20/08/2018	Scienza S.	VISTO			
3							
4							
5							
6							
7							
8							
9							

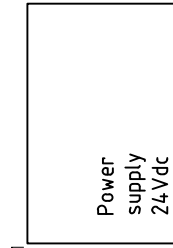
FG. 02	ELS.1124	FS360 mechanical carriage
F.T. 16		



02.9A
02.9A
02.9A

02.9A
02.9B
02.9B

+24 VDC
GND



POTENZIOMETRO GIRI ALTI
TOP WRAPS POTENTIOMETER
1k ohm
-R2

POTENZIOMETRO GIRI BASSI
BOTTOM WRAPS POTENTIOMETER
1k ohm
-R3

POTENZIOMETRO VELOCITA' CARRELLO
CARRIAGE SPEED POTENTIOMETER
1k ohm
-R1

POTENZIOMETRO VELOCITA' TAVOLA
TURNABLE SPEED POTENTIOMETER
1k ohm
-R5

FS12551
DISPLAY GIRI ALTI
TOP WRAPS DISPLAY
-P1

FS12551
DISPLAY GIRI BASSI
BOTTOM WRAPS DISPLAY
-P2

FS12551

FROMM

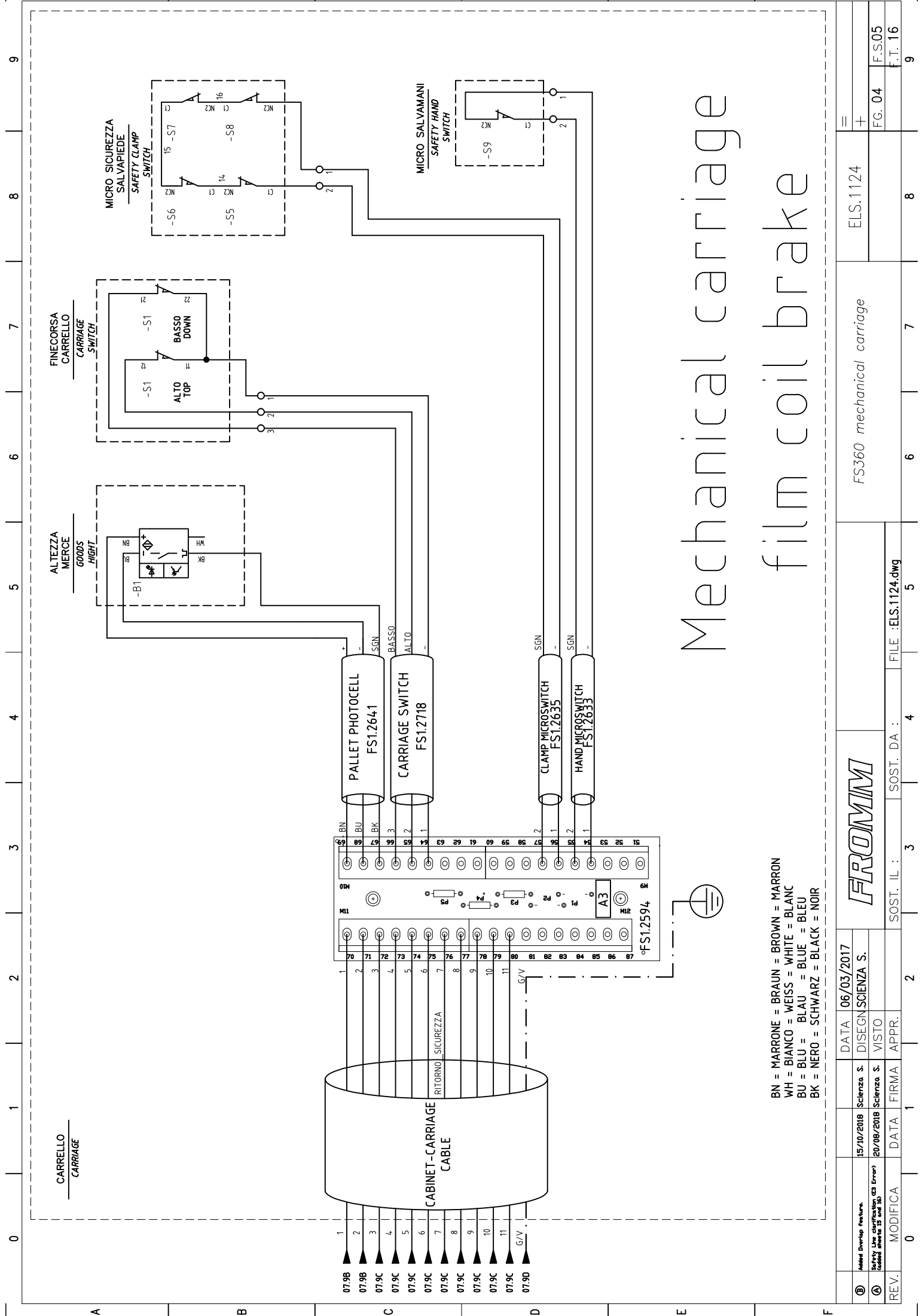
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0					2	3

FILE ELS.1124.dwg

FS360 mechanical carriage

ELS.1124

+	
FG. 03	F.S.04
	F.T. 16



Mechanical carriage film coil brake

BN = MARRONE = BROWN = MARRON
 WH = BIANCO = WHITE = BLANC
 BU = BLU = BLUE = BLEU
 BK = NERO = SCHWARZ = BLACK = NOIR

REV.	MODIFICA	DATA	FIRMA	APPR.	2	SOST. IL :	3	SOST. DA :	4	FILE :ELS.1124.dwg	5	FS360 mechanical carriage	ELS.1124	8	FG. 04	F.S.05	9



DATA 06/03/2017

DISEGN SOENZA S.

VISTO

MODIFICA

DATA 20/08/2018

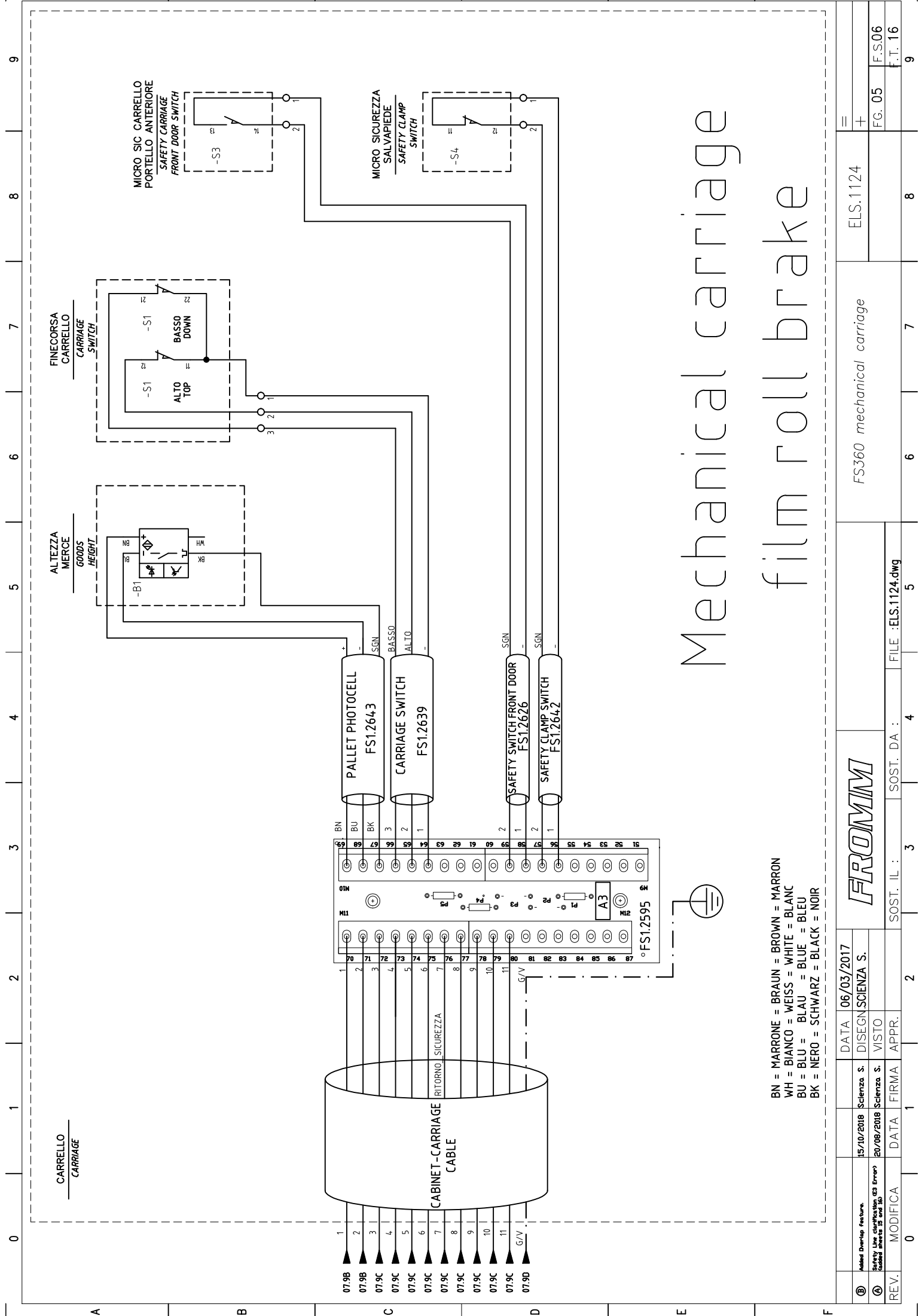
FIRMA

APPR.

SOST. IL :

SOST. DA :

FILE :ELS.1124.dwg



Mechanical carriage

film roll brake

BN = MARRONE = BROWN = MARRON
 WH = BIANCO = WHITE = BLANC
 BU = BLU = BLUE = BLEU
 BK = NERO = SCHWARZ = BLACK = NOIR

REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL :	3	SOST. DA :	4	FILE :ELS.1124.dwg	5	6	7	8	9
										FS360 mechanical carriage		ELS.1124		
												FG. 05		F.S.06
														F.T. 16



DATA 06/03/2017

DISEGN SOENZA S.

VISTO

DATA 20/08/2018

FIRMA

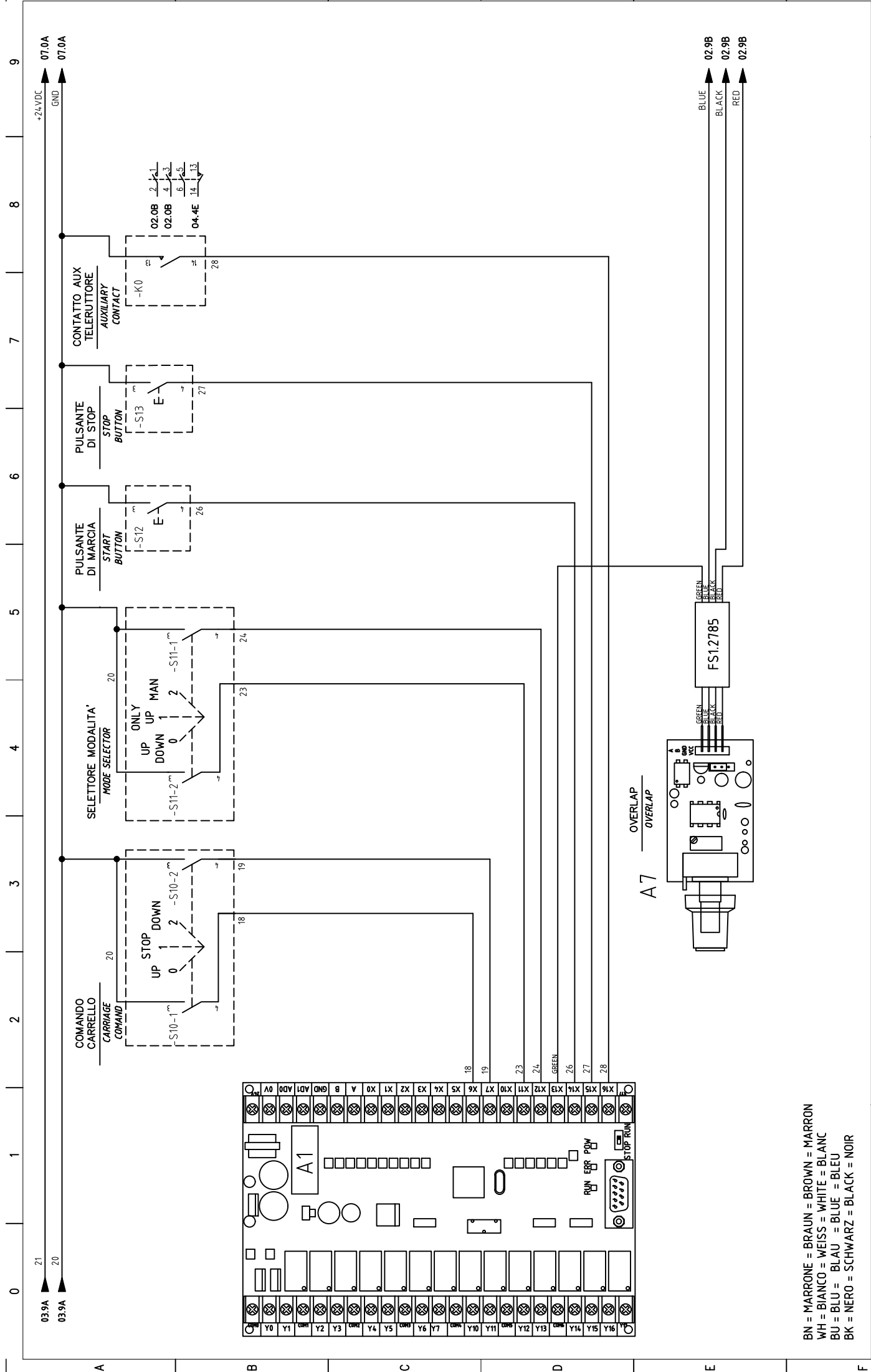
APPR.

Scienza S.

Scienza S.

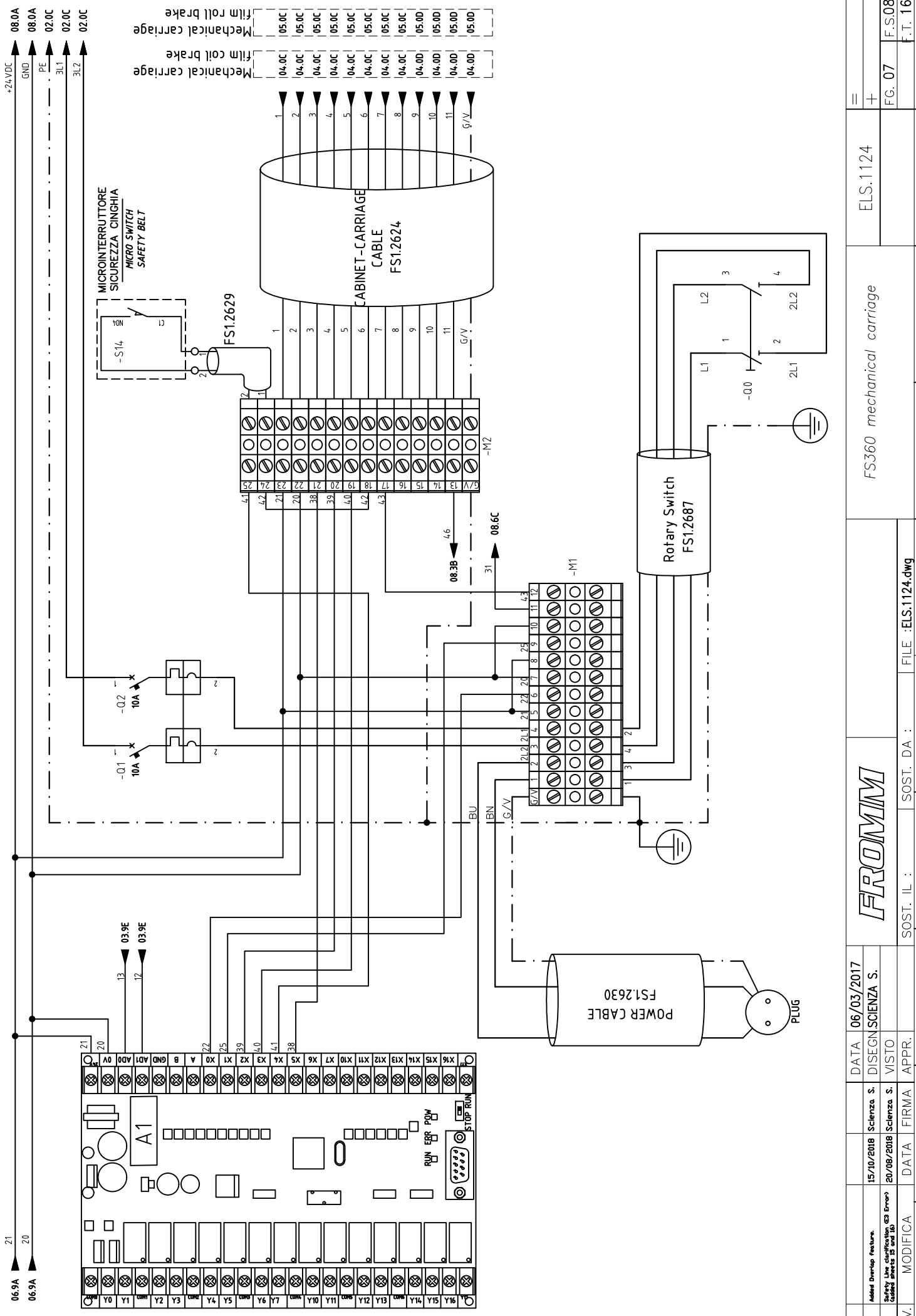
Scienza S.

Scienza S.



BN = MARRONE = BROWN = BROWN
 WH = BIANCO = WEISS = WHITE = BLANC
 BU = BLU = BLAU = BLUE = BLEU
 BK = NERO = SCHWARZ = BLACK = NOIR

REV.	MODIFICA	DATA	FIRMA	APPR.	0	1	2	3	4	5	6	7	8	9				
	Modifica Overlap Feature. Safety Line clarification: CS Error? (consult articles 15 and 30)	15/10/2018 20/08/2018	Scienza S. Scienza S.															
DATA 06/03/2017 DISEGN SOENZA S. VISTO SOST. IL : SOST. DA : FILE :ELS.1124.dwg													FS360 mechanical carriage		ELS.1124		= + FG. 06 F.S.07 F.T. 16	



REV.	MODIFICA	DATA	FIRMA	APPR.	0					
		15/10/2018	Scienza. S.		1					
		20/08/2018	Scienza. S.		2					
		06/03/2017	SOENZA S.		3					
					4					
					5					
					6					
					7					
					8					
					9					

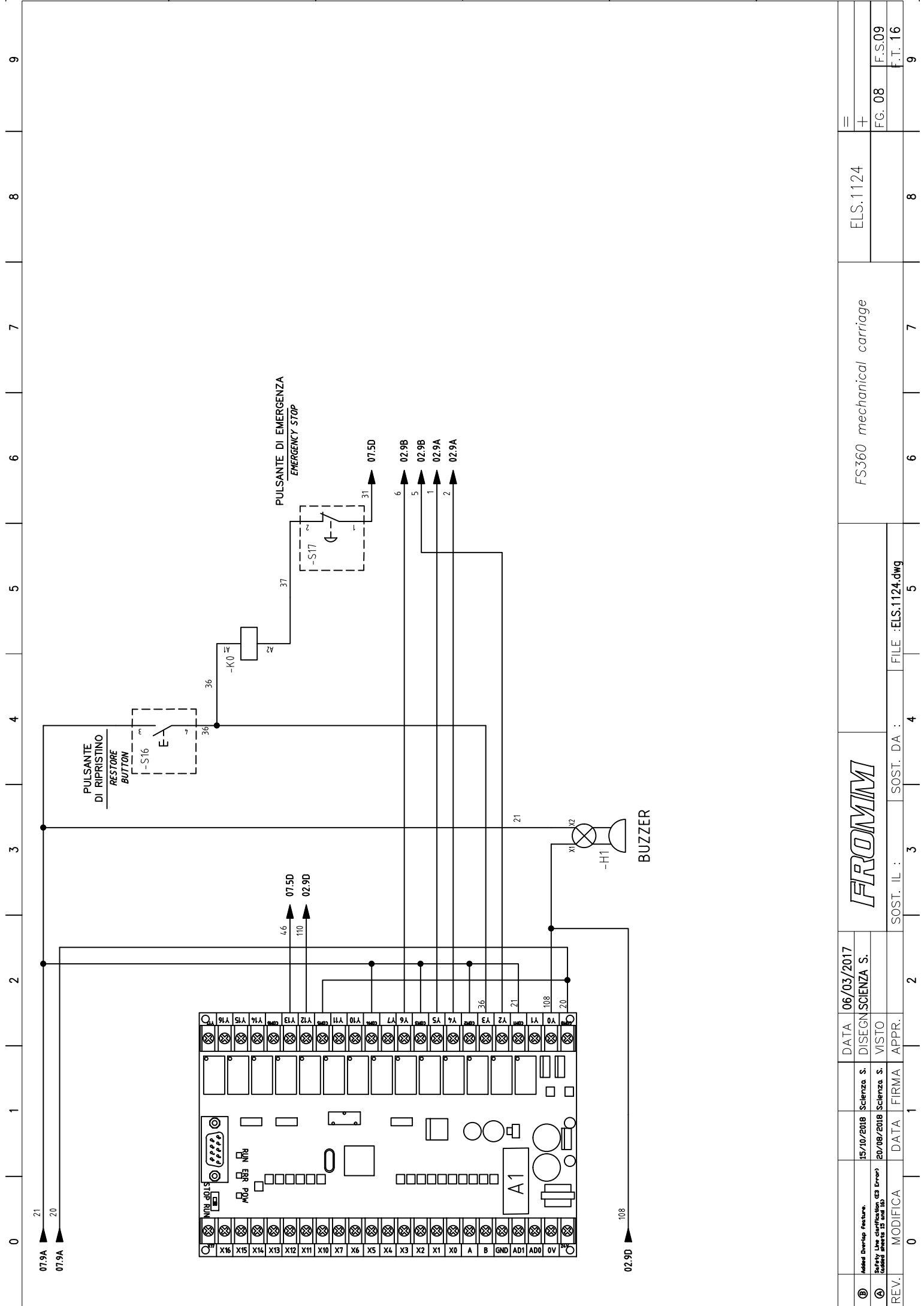


ELS.1124

FS360 mechanical carriage

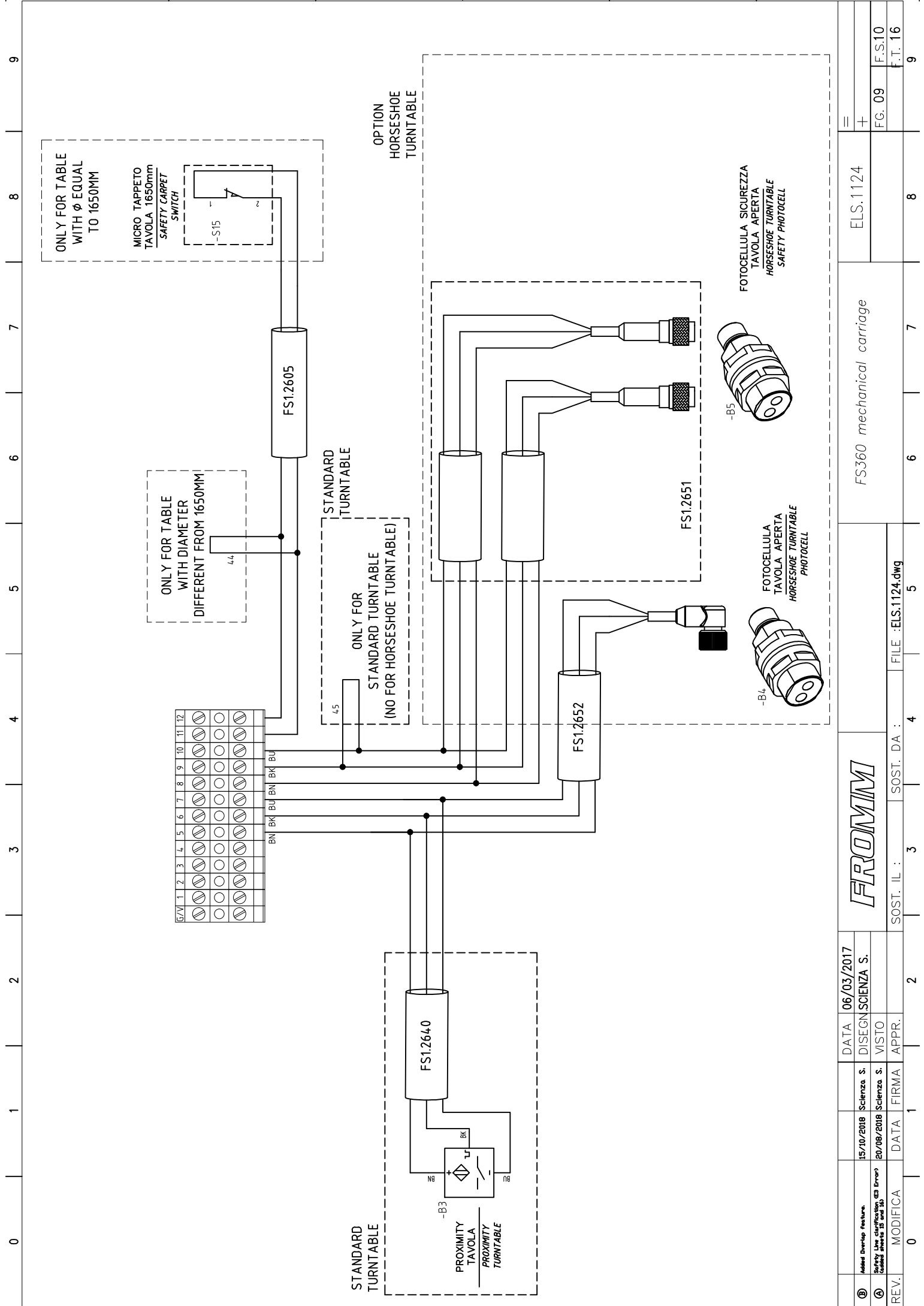
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FG. 07 F.S.08
F.T. 16



REV.	MODIFICA	DATA	FIRMA	APPR.	0	1	2	3	4	5	6	7	8	9
③	Address Overlap feature.	15/10/2018	Scienza S.										ELS.1124	=
④	Safety Line classification: CS Error? (added wires 15 and 18)	20/08/2018	Scienza S.										FG. 08	F.S.09
														F.T. 16

FROMM											FS360 mechanical carriage			
DATA 06/03/2017											ELS.1124			
DISEGN SOENZA S.											FG. 08			
VISTO											F.S.09			
SOST. IL :											SOST. DA :			
FILE :ELS.1124.dwg											F.T. 16			



REV.	0	1	2	3	4	5	6	7	8	9
MODIFICA	DATA	FIRMA	APPR.	SOST. IL :	SOST. DA :	FILE :ELS.1124.dwg	FS360 mechanical carriage	ELS.1124	FG. 09	F.S.10
										F.T. 16



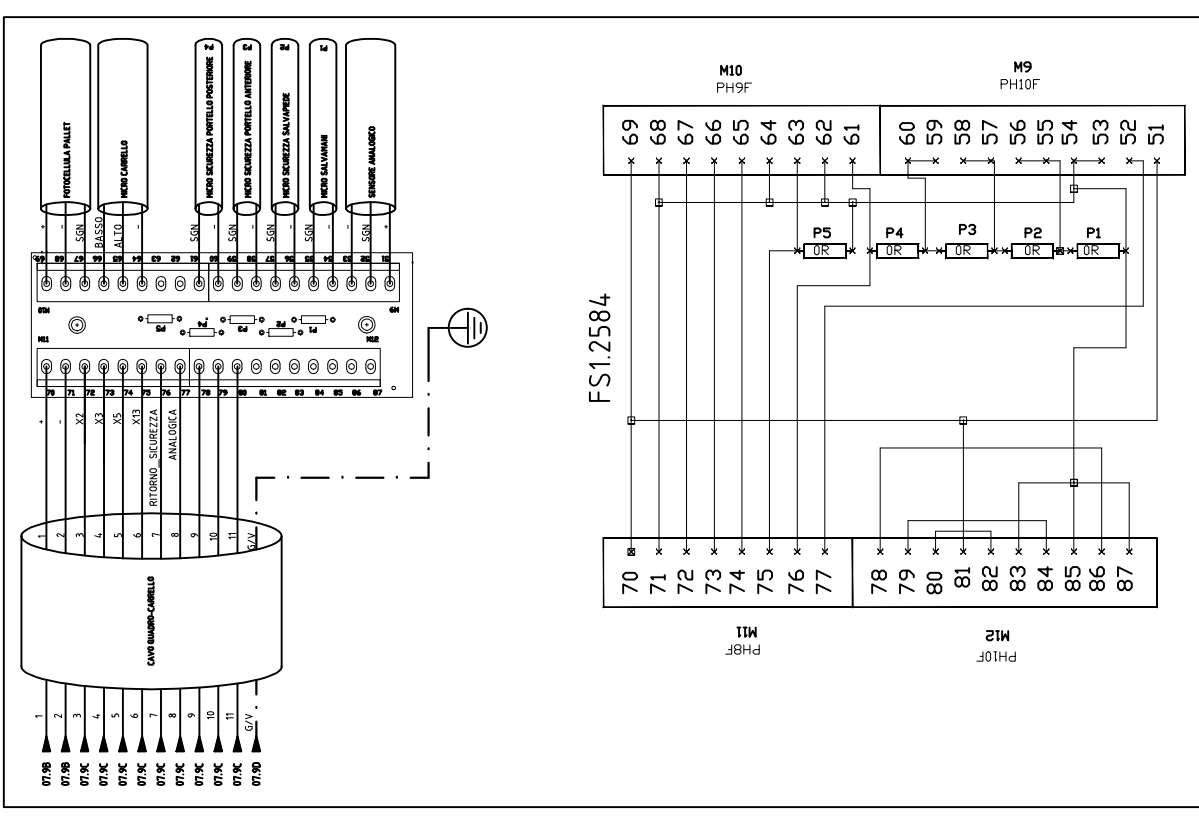
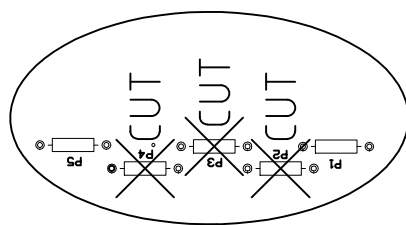
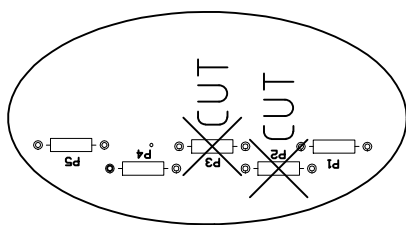
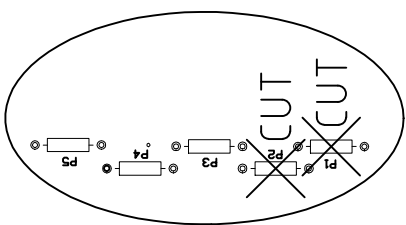
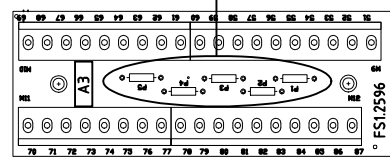
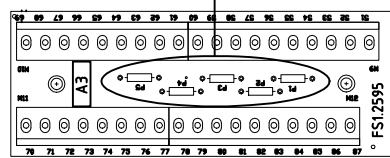
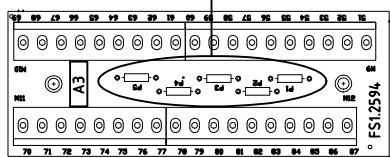
DATA	06/03/2017
DISEGN	SOENZA S.
VISTO	

15/10/2018	Scienza S.
20/08/2018	Scienza S.
DATA	FIRMA
APPR.	

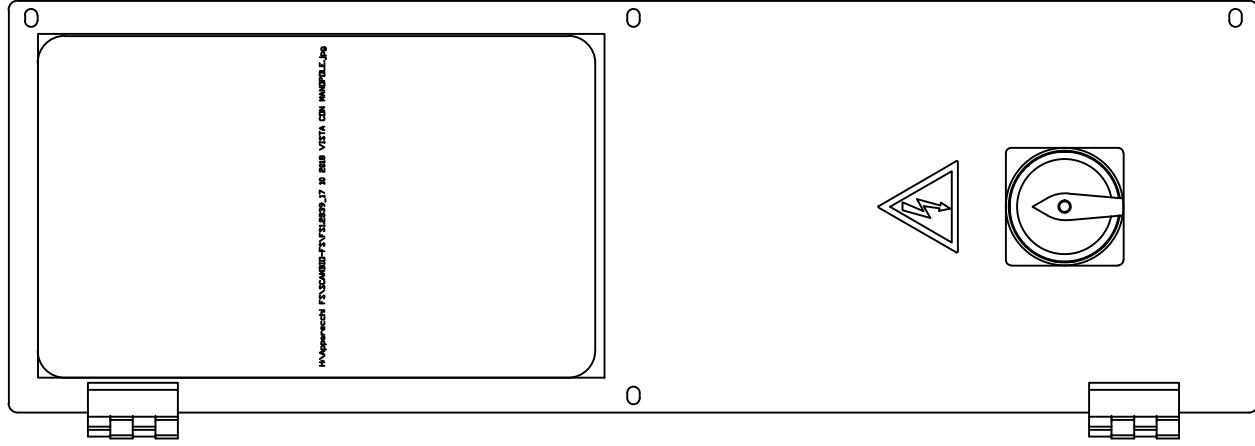
Mechanical carriage
film coil brake

Mechanical carriage
film roll brake

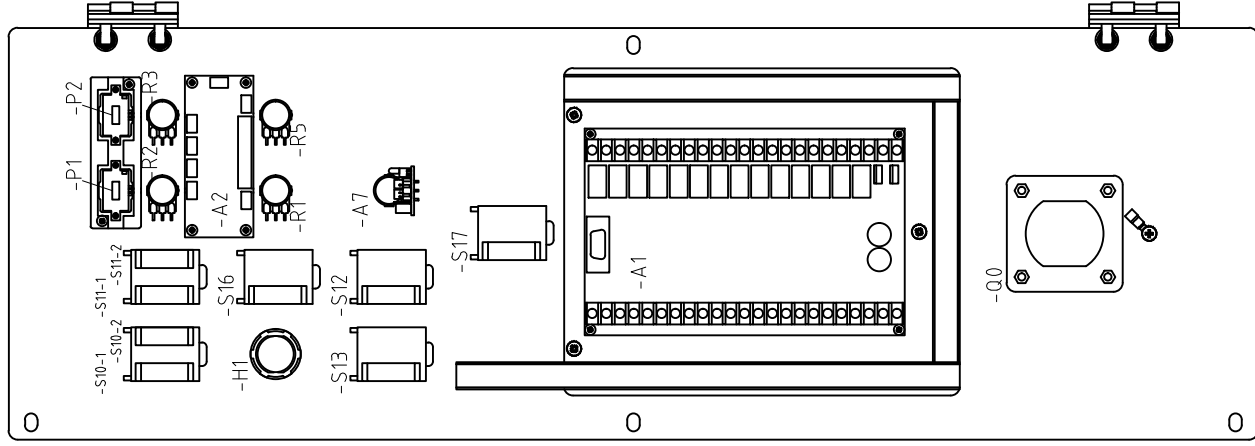
Motorized carriage



REV.	MODIFICA	DATA	FIRMA	APPR.	2	SOST. IL :			3	SOST. DA :			4	FILE :EL.S.1124.dwg			5
	0					DATA			06/03/2017	DISEGN			SOENZA S.	VISTO			
Adda Overlap Feature. Safety Line clarification (CS Error) (Global Areas 15 and 30)		15/10/2018	Scienza S.			DATA			06/03/2017	DISEGN			SOENZA S.	VISTO			
		EL.S.1124			FS360 mechanical carriage			ELS.1124			+			=			
		FG. 12			F.S.13									F.T. 16			
														9			



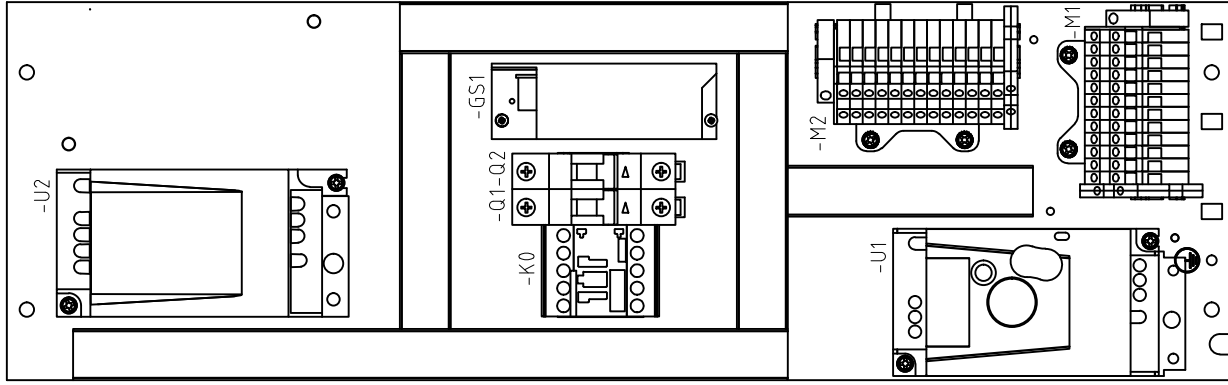
CONTROL PANEL-FRONT VIEW



CONTROL PANEL-REAR VIEW

ITEM	DESCRIPTION	CODE
A1	Plc	FS1.2644
A2	Interface board	FS1.2583
A7	Overlap board	FS1.2783
H1	Buzzer	N53.2221
P1	Top Wraps Display	FS1.2550
P2	Bottom Wraps Display	FS1.2550
Q0	Rotary Switch	N53.2222
R1	Carriage Speed Potentiometer	FS1.2551
R2	Top Wraps Potentiometer	FS1.2551
R3	Bottom Wraps Potentiometer	FS1.2551
R5	Turntable Speed Potentiometer	FS1.2551
S10-1	Carriage Command - UP	N53.2227
S10-2	Carriage Command - DOWN	N53.2226
S11-1	Mode Selector - MAN	N53.2223
S11-2	Mode Selector - UP_DOWN	N53.2224
S12	Start Button	N53.2225
S13	Stop Button	N53.2225
S16	Restore Button	N53.2228
S17	Emergency Button	N53.2228

REV.	MODIFICA	DATA	FIRMA	APPR.	SOST. IL :	SOST. DA :	FILE
0							FILE :ELS.1124.dwg
		15/10/2018	Scienza S.				
		20/08/2018	Scienza S.	VISTO			
		06/03/2017	SOENGA S.				
FROMM							
FS360 mechanical carriage							
ELS.1124							
+							
=							
FG. 13 F.S.14							
F.T. 16							
9							



ELECTRIC CABINET

ELECTRIC CABINET


ITEM	DESCRIPTION	CODE
GS1	Power Supply	N5.1484
K0	Contacto	N53.5210
M1	Terminal	
M2	Terminal	
Q1	Circuit Breaker	N53.5209
Q2	Circuit Breaker	N53.5209
U1	Turntable Inverter	FS12636
U2	Carriage Inverter	FS12637

ON THE MACHINE WITH MECHANICAL CARRIAGE FILM COIL BRAKE

ITEM	DESCRIPTION	CODE
A3	Mechanical Carriage Terminal Board	FS12594
B1	Good Height Photocell	FS12641
B3	Proximity Turntable	FS12640
B4	Horseshoe Turntable Photocell	N512619
B5	Horseshoe Turntable Safety Photocell	N512619
S1	Carriage Limit Switch	N5.2387
S5	Safety Clamp Micro Switch	N5.2390
S6	Safety Clamp Micro Switch	N5.2390
S7	Safety Clamp Micro Switch	N5.2390
S8	Safety Clamp Micro Switch	N5.2390
S9	Safety Hand Micro Switch	N5.2390
S14	Safety Belt Micro Switch	N5.2390
S15	Safety Carpet Limit Switch	N5.2377

ON THE MACHINE WITH MECHANICAL CARRIAGE FILM ROLL BRAKE

ITEM	DESCRIPTION	CODE
A3	Mechanical Carriage Terminal Board	FS12595
B1	Good Height Photocell	FS12643
B3	Proximity Turntable	FS12640
B4	Horseshoe Turntable Photocell	N512619
B5	Horseshoe Turntable Safety Photocell	N512619
S1	Carriage Limit Switch	N5.2387
S3	Safety Carriage Front Door Limit Switch	N5.2391
S4	Safety Clamp Limit Switch	N5.2388
S14	Safety Belt Limit Switch	N5.2390
S15	Safety Carpet Limit Switch	N5.2377

REV.	0	MODIFICA	DATA	FIRMA	APPR.	2	3	4	5	6	7	8	9
	15/10/2018	Scienza S.	06/03/2017	SOENZA S.									
													
	SOST. IL : SOST. DA : FILE : ELS.1124.dwg												
	FS360 mechanical carriage												
	ELS.1124												
	FG. 14 F.S.15												
	F.T. 16												

