TECHNICAL DOCUMENTATION

- TECHNOPLAT CS-CW (SERIES 8)

Date	Revisions	Revision Reasons	Issue	Chechek by	Approved by
18/02/2015	00	First Issue	Gavoli G.	Gavoli G.	Gavoli G.
03/11/2016	01	General Revision	Gavoli G.	Gavoli G.	Gavoli G.
21/04/2017	02	New carriages / Stretch control / Dip switches	Baldinini F.	Baldinini F.	Baldinini F.
28/02/2018	03	New black phot., Rconect, mechanical roping (new Parameters)	Baldinini F.	Baldinini F.	Baldinini F.
13/07/2018	04	Index realization and new radio control	Baldinini F.	Baldinini F.	Baldinini F.
17/06/2019	05	Cut and blow working parameters, configuration parameters update (r-connect)	Baldinini F.	Baldinini F.	Baldinini F.
22/04/2021	06	New Kinko panel and insertion of E68/E69 alarms	Baldinini F.	Baldinini F.	Baldinini F.
24/05/2021	07	Mechanical roping device calibration	Baldinini F.	Baldinini F.	Baldinini F.

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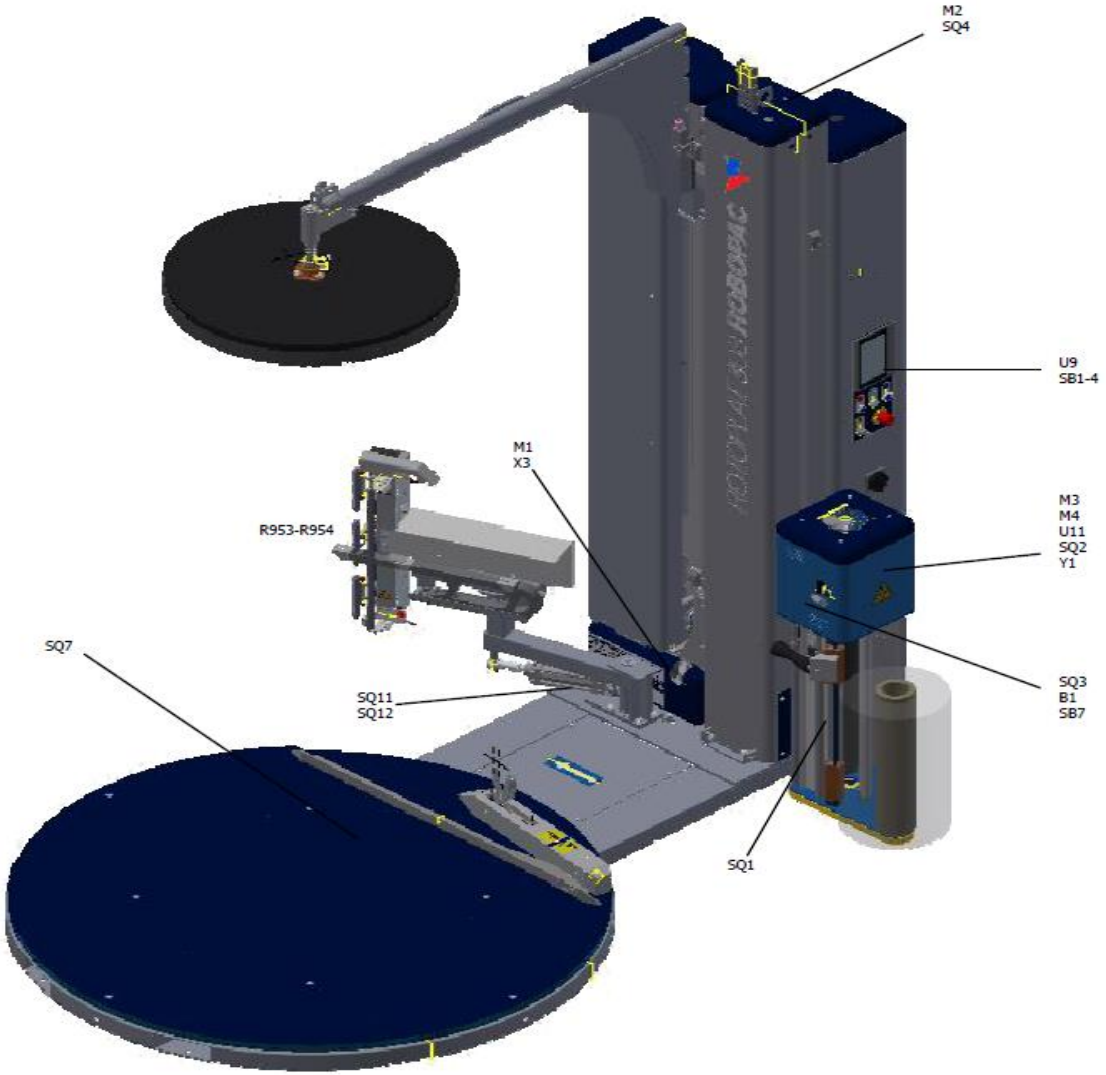
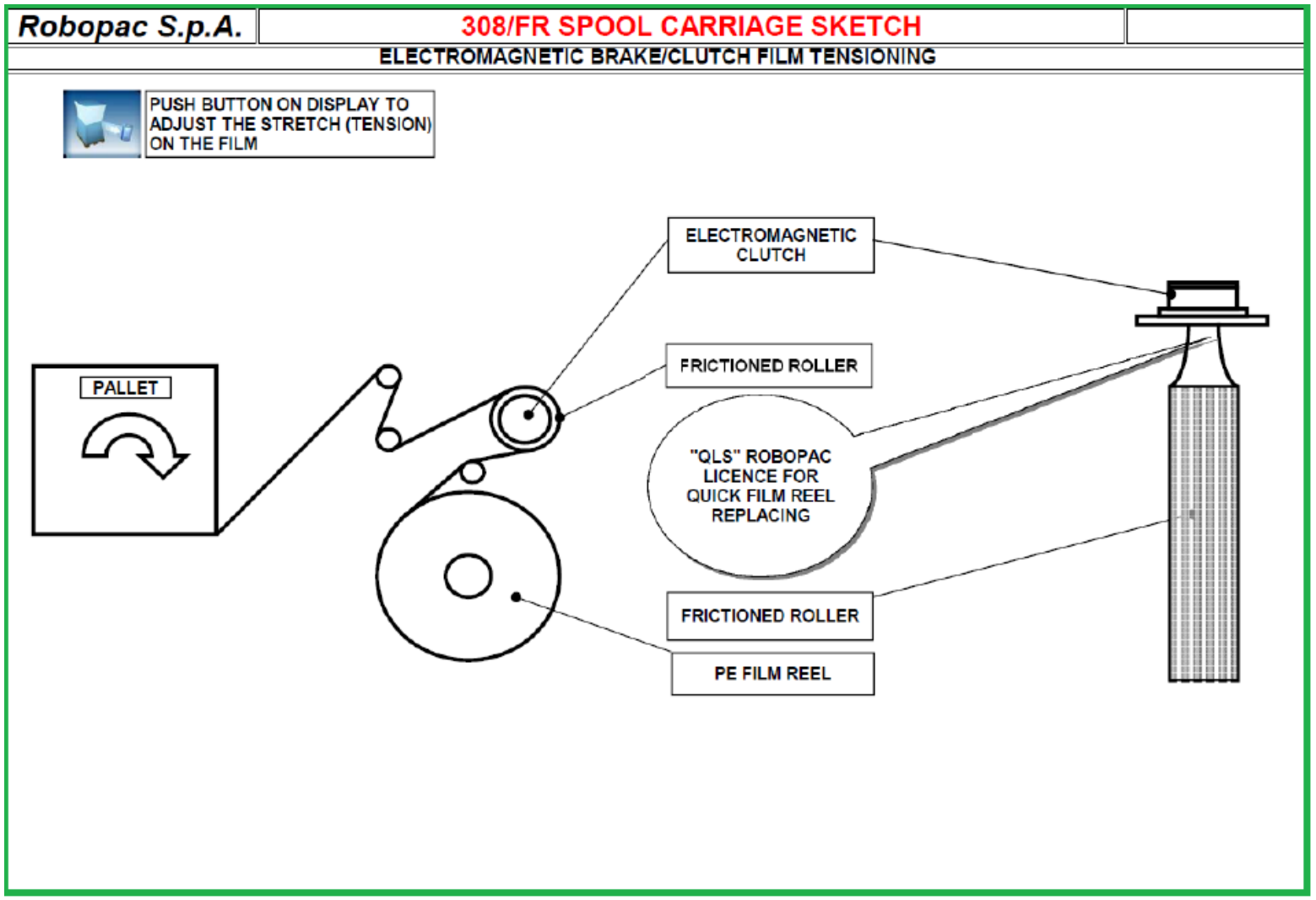
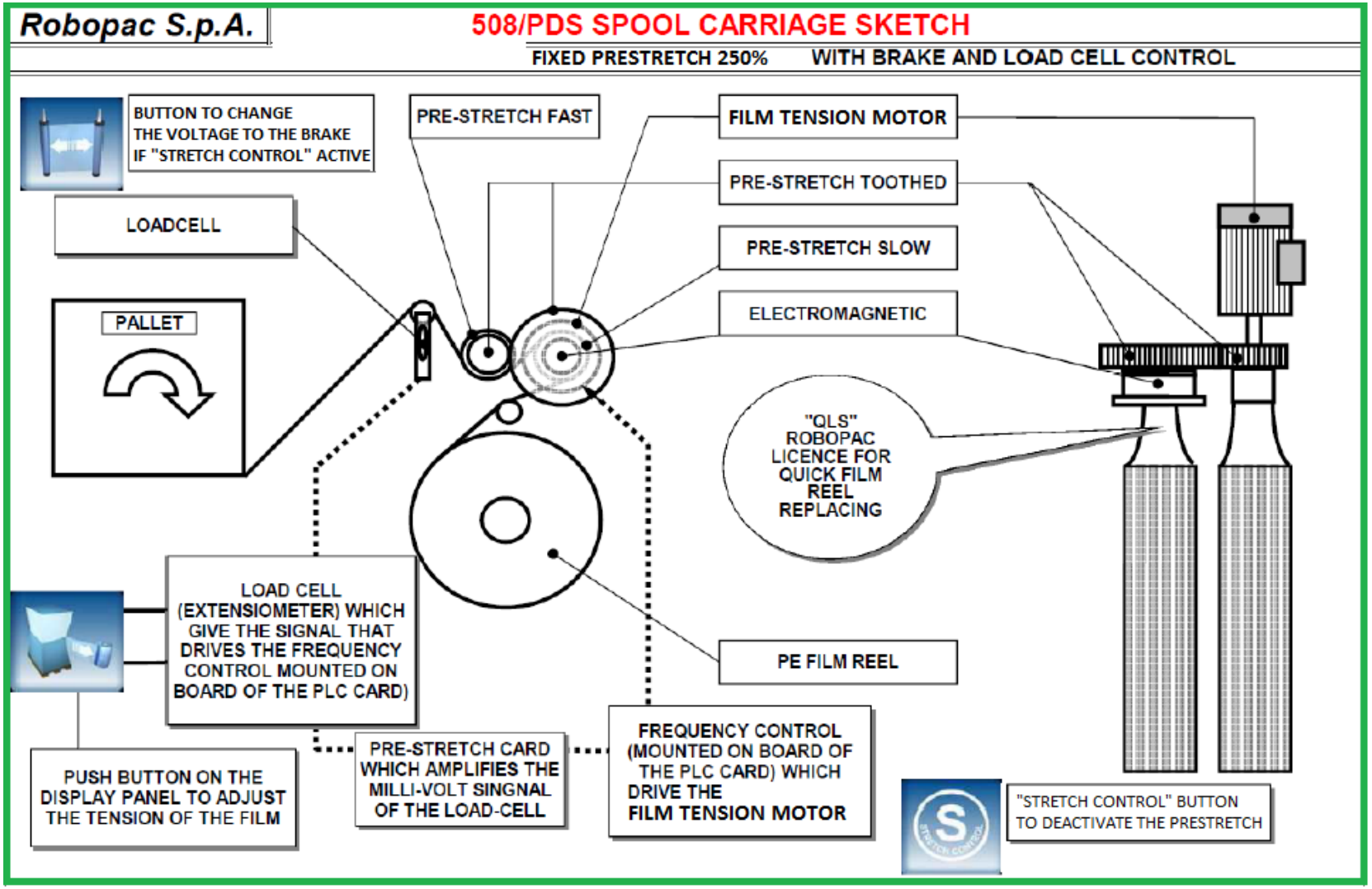
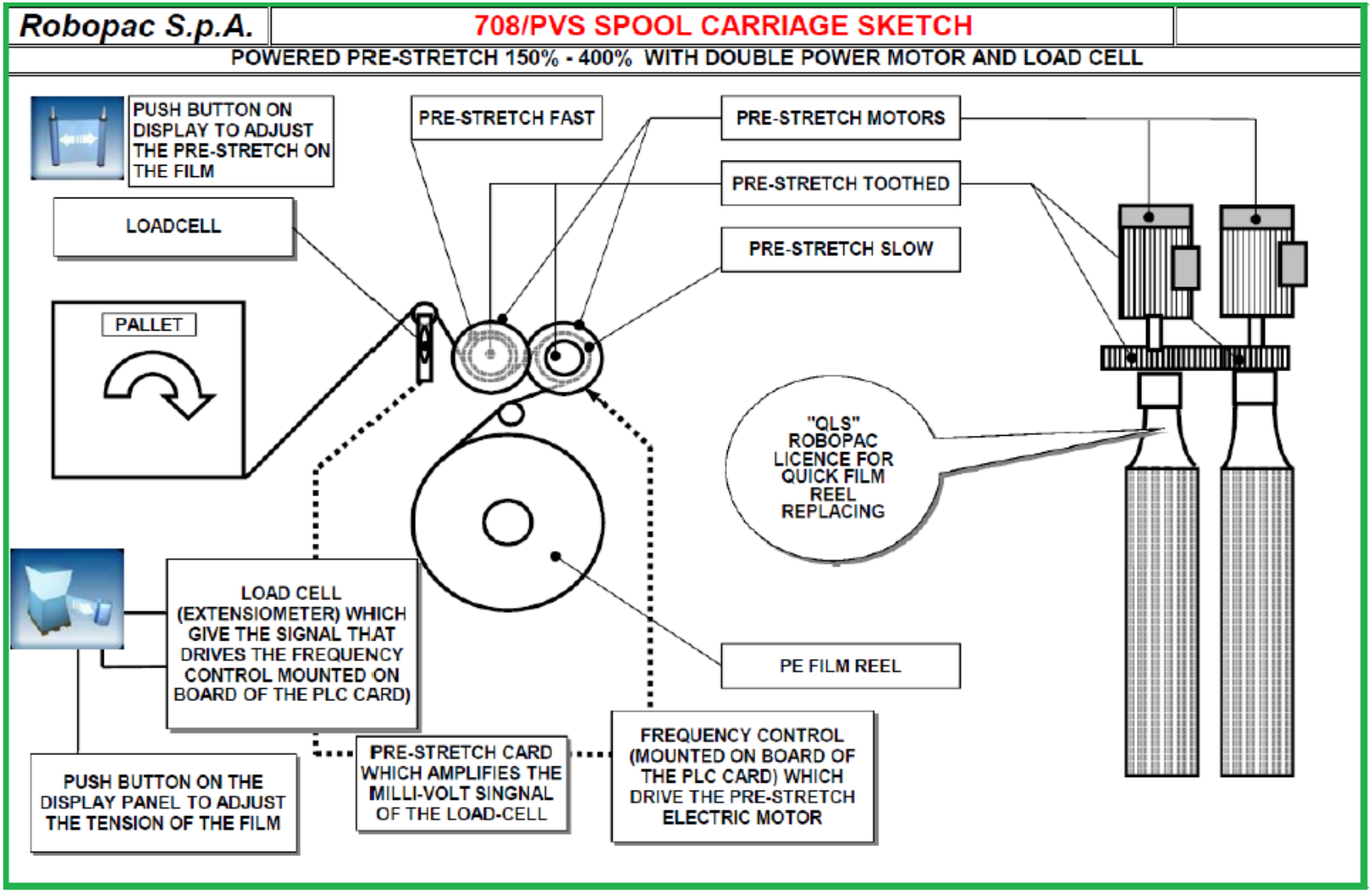
MACHINE LAY-OUT



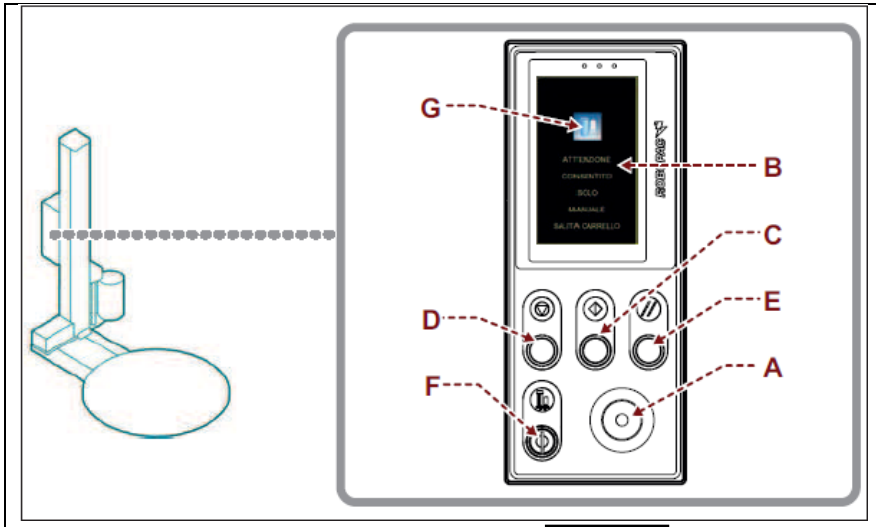
TECHNOPLAT CS-CW SERIES 8 CARRIAGE DESCRIPTION



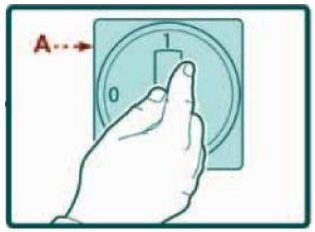

Robopac S.p.A.
508/PDS SPOOL CARRIAGE SKETCH
FIXED PRESTRETCH 250% WITH BRAKE AND LOAD CELL CONTROL
BUTTON TO CHANGE THE VOLTAGE TO THE BRAKE IF "STRETCH CONTROL" ACTIVE
LOADCELL
PALLET
PRE-STRETCH FAST
FILM TENSION MOTOR
PRE-STRETCH TOOTHED
PRE-STRETCH SLOW
ELECTROMAGNETIC
"QLS" ROBOPAC LICENCE FOR QUICK FILM REEL REPLACING
LOAD CELL (EXTENSIOMETER) WHICH GIVE THE SIGNAL THAT DRIVES THE FREQUENCY CONTROL MOUNTED ON BOARD OF THE PLC CARD)
PE FILM REEL
PUSH BUTTON ON THE DISPLAY PANEL TO ADJUST THE TENSION OF THE FILM
PRE-STRETCH CARD WHICH AMPLIFIES THE MILLI-VOLT SINGNAL OF THE LOAD-CELL
FREQUENCY CONTROL (MOUNTED ON BOARD OF THE PLC CARD) WHICH DRIVE THE FILM TENSION MOTOR
"STRETCH CONTROL" BUTTON TO DEACTIVATE THE PRESTRETCH


Robopac S.p.A.
708/PVS SPOOL CARRIAGE SKETCH
POWERED PRE-STRETCH 150% - 400% WITH DOUBLE POWER MOTOR AND LOAD CELL
PUSH BUTTON ON DISPLAY TO ADJUST THE PRE-STRETCH ON THE FILM
LOADCELL
PALLET
PRE-STRETCH FAST
PRE-STRETCH MOTORS
PRE-STRETCH TOOTHED
PRE-STRETCH SLOW
"QLS" ROBOPAC LICENCE FOR QUICK FILM REEL REPLACING
PE FILM REEL
LOAD CELL (EXTENSIOMETER) WHICH GIVE THE SIGNAL THAT DRIVES THE FREQUENCY CONTROL MOUNTED ON BOARD OF THE PLC CARD)
PUSH BUTTON ON THE DISPLAY PANEL TO ADJUST THE TENSION OF THE FILM
PRE-STRETCH CARD WHICH AMPLIFIES THE MILLI-VOLT SINGNAL OF THE LOAD-CELL
FREQUENCY CONTROL (MOUNTED ON BOARD OF THE PLC CARD) WHICH DRIVE THE PRE-STRETCH ELECTRIC MOTOR

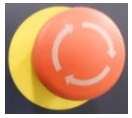
OPERATOR PANEL DESCRIPTION



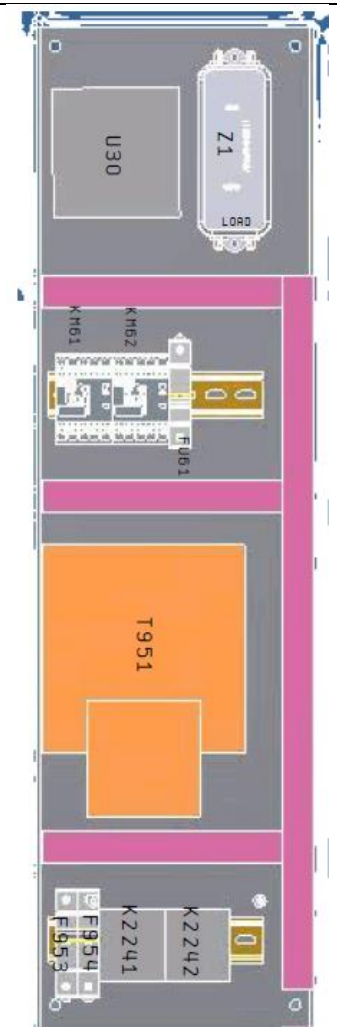
Pic.1



Pic.1a

	**“Stop cycle” button** It is used to stop the automatic wrapping Cycle
	**“Start cycle” push-button** It is used to start the automatic wrapping cycle
	**“Reset” push-button** It is used to reset the machine before restarting after an emergency stop or to restart it after stopping with power supply cut-off.
	**Key selector for emergency interruption** It is used to momentarily interrupt the emergency of the carriage. Turn the key to the position I (JOG), the user interface shows the page on “Safety interrupted” which allows, by pressing the pushbutton **(G)**, to lift the trolley only
	**Emergency stop push-button** It is used to stop with a voluntary action, in case of imminent risk, the organs of the machine that may pose a rick. For further details consult the paragraph “Description of safety devices”
	**Main switch for machine’s ON / OFF** Turn main switch **(A)) (Pic. 1a)** on **I** (ON) to turn on electric power supply.
	**Buzzer**

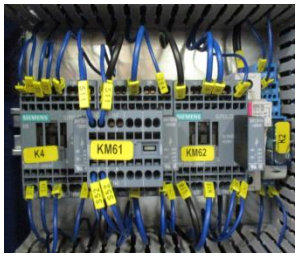
DESCRIPTION AND MAIN ELECTRICAL PANEL LAYOUT



The part numbers are for information only.
Always check and verify the codes on the wiring diagram supplied with the machine

Radio Remote Receiver **U30**
code 1430300157

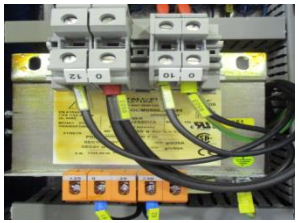
Main filter- **Z1**
code 00L0202680



Transformer-Enable **KM61** - code 00L0116063
Filter **KM61 -** code 00L0116090

Cutting Fuse- **FU61**
code 0001304143

Timed out **KM62** - code 00L0116063
Filter **KM62 -** code 00L0116090



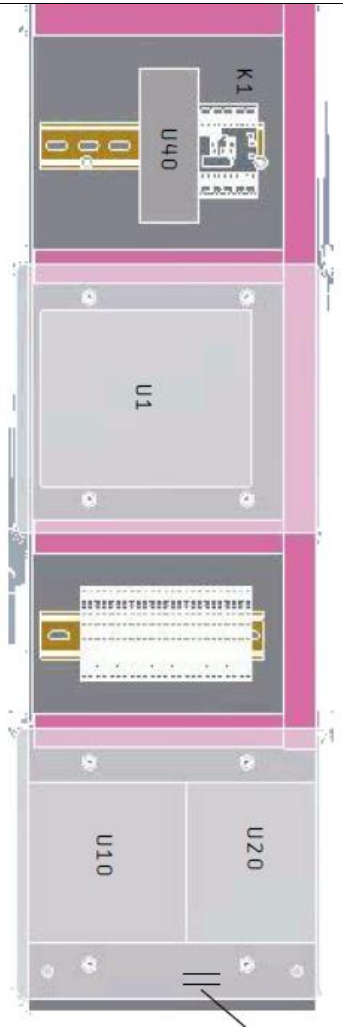
Transformer **T951**
code 0001356957

Cutting Fuse **F953**
code 0001304198

Cutting Relay **K2241**
code 00L0214603

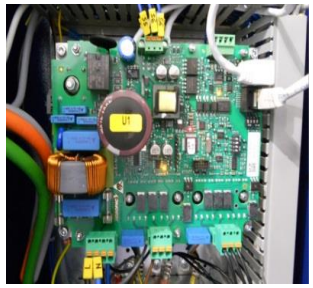
Welder Fuse **F954**
code 0001304238

Welder Relay **K2242**
code 00L0214603



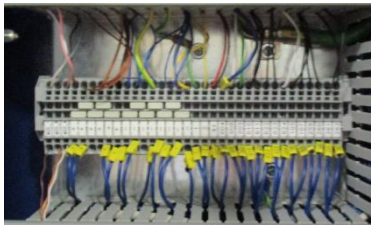
Safety Module **U40**
code 00L0230421

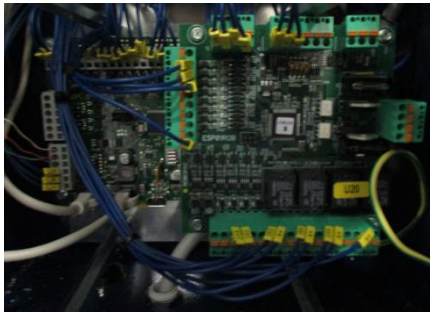
Inverters Enable **K1** - code 00L0116056
Filter **K1 -** code 00L0116090

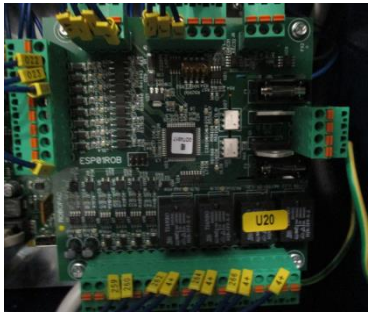


Inverter Card INV01ROB_2 **U1**
code 1430300271

Inverter Card INV01ROB_2 **U2**
code 1430300271





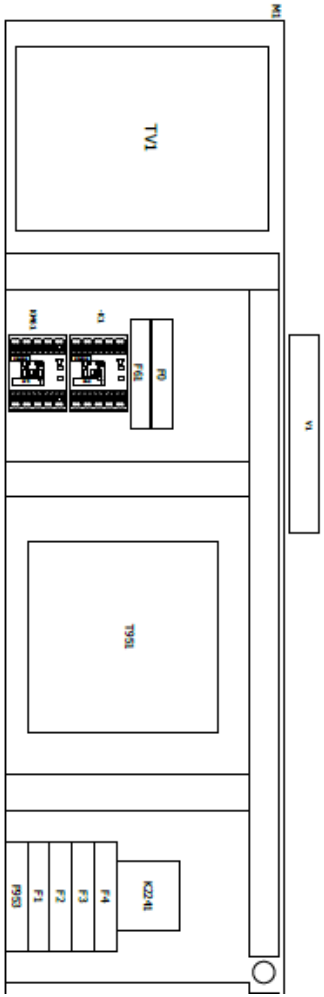


PLC Main board PLC01ROB_1 **U10**
code 1430300238

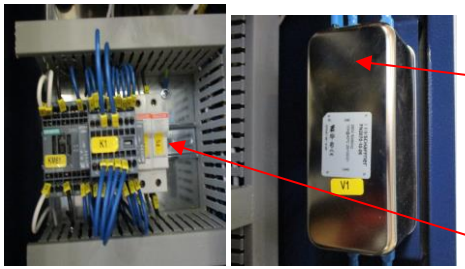
Expansion Card ESP01ROB I/O **U20**
code 1430300232

DESCRIPTION AND MAIN ELECTRICAL PANEL LAYOUT (Usa Version only)

The part numbers are for information only. Always check and verify the codes on the wiring diagram supplied with the machine



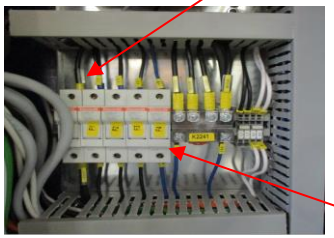
TV1 - Power Auto-Transformer 2500VA 120/240
code 00L0198704



V1 Main Filter
code 00L0202680

Not provide 00L0287639 code because no UL

F0 – Power fuse (10,3X38 RIT 10A 600V CC UL/CSA)
code 0001304313



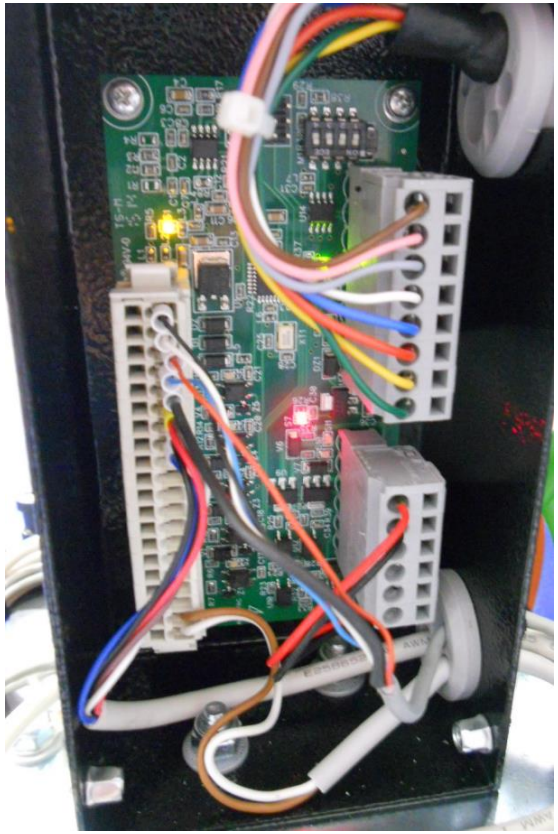
F1 - Inverter U1 Fuse (10,3X38 RIT 8A 600V CC UL/CSA)
code 0001304312

F2 - Inverter U2 Fuse (10,3X38 RIT 8A 600V CC UL/CSA)
code 0001304312

F3 - PLC U10 Fuse (10,3X38 RIT 1A 600V CC UL/CSA)
code 0001304300

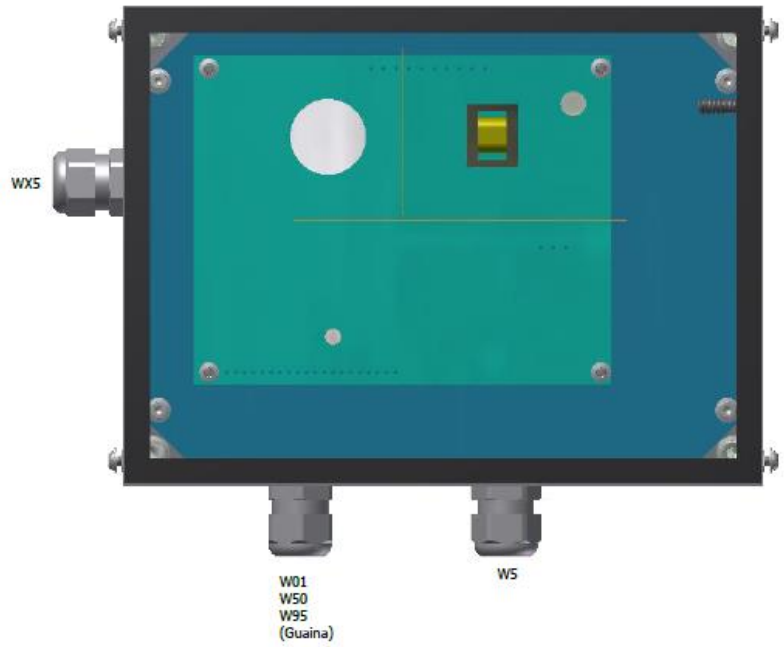
F4 - 24VDC Fuse (10,3X38 RIT 4A 600V CC UL/CSA)
code 0001304307

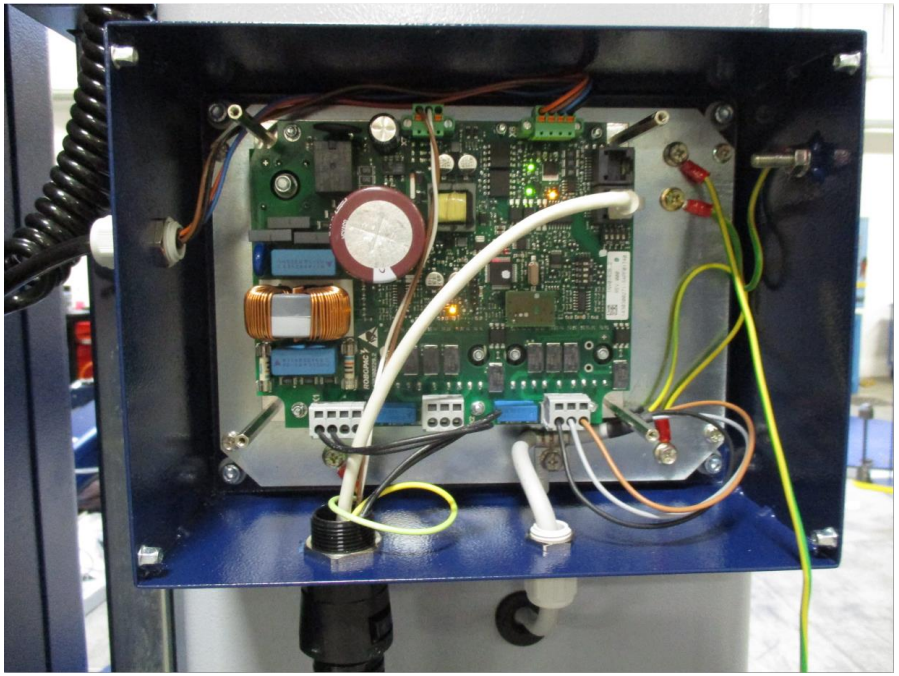
ELECTRICAL PANEL ON CARRIAGE DESCRIPTION



Expansion Card PRES03ROB **U11**
code 1430300220

ELECTRICAL PANEL ON MECHANICAL PRESSURE DESCRIPTION

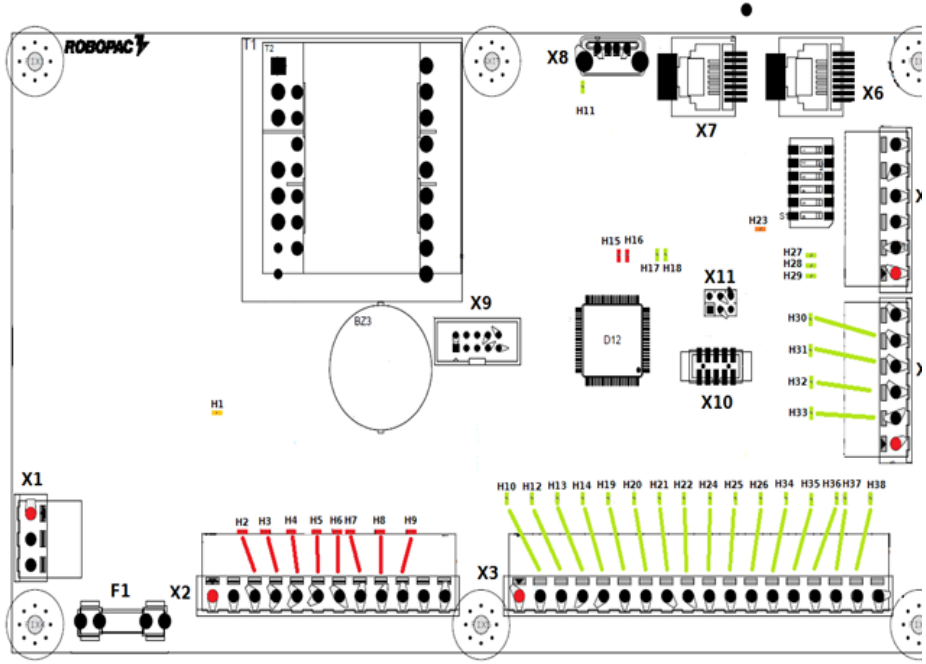




Inverter Card INV01ROB_2 **U5**
code 1430300271

ELECTRONIC CARDS DESCRIPTION

PLC Main Board (U10) - – CODE 1430300238



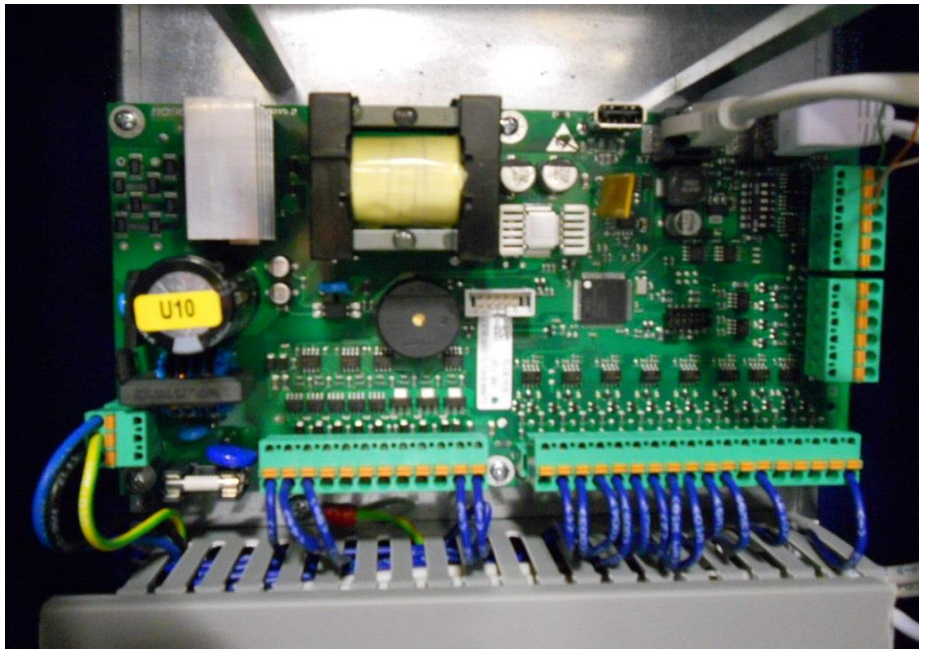


Table description U10 - Connectors and leds

X1	220Vac Power Supply
X2	Digital output terminal board (1-8)
X3	Digital input terminal board (1-16)
X4	Fast input terminal board (1-4)
X5	MB1 Communications
X6	MB2 + CAN Communications
X7	MB2 + CAN Communications
X8	USB for SW update
X9	RDMS Connector
X10	Debug
X11	ISP
H1	24V Led
H2..9	Output LED (see arrows)
H11	USB LED (blinking during programming)
H15	Start Status
H16	Error LED
H17	SUP status LED
H18	Microcontroller LED
H23	3,3V Led
H27	MB1 Led
H28	MB2 Led
H29	CAN Led
H30..33	Fast input LED (see arrows)
Hxx	Digital input LED (see arrows)

(FR Carriage)

Table description status inputs – X3 Connector

INPUT Number	Input Description	Led Status	Contact Type
H10	Emergency	ON	N.C.
H12	RESET	OFF	N.O.
H13	START	ON	N.O.
H14	STOP	ON	N.C.
H19	Carriage Safety Exception	ON	N.C.
H20	Carriage Emergency	ON	N.C.
H21	Turtanble phase	ON	N.O.
H22	ForkLift Safety	ON	N.O.
H24	High Endstroke Carriage	ON	N.C.
H25	Low Endstroke Carriage	ON	N.C.
H26	Product Height Photocell	OFF	N.O.
H34	Emergency FeedBack	OFF	N.O.
H35	Film Welder Control	ON	N.C.
H36	Free	OFF	N.O.
H37	Free	OFF	N.O.
H38	Remote Control Stop (Optional)	ON	N.O.

Table description status ouputs – X2 Connector

Output Number	Output Description
H2	FeedBack Control
H3	Free
H4	Pressure Fall (Optional)
H5	Pressure Rise (Optional)
H6	Roping Device Fall (Optional)
H7	Roping Device Rise (Optional)
H8	Free
H9	Clutch (FR Carriage Only)

(PDS-PVS Carriage)

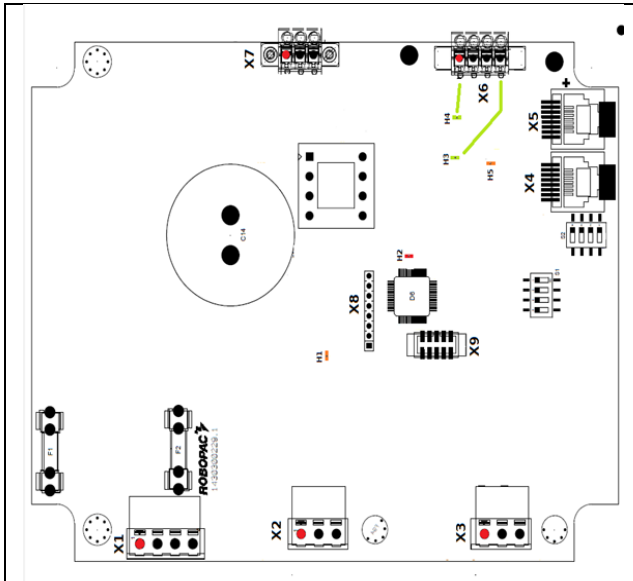
Table description status inputs – X3 Connector

INPUT Number	Input Description	Led Status	Contact Type
H10	Emergency	ON	N.C.
H12	RESET	OFF	N.O.
H13	START	ON	N.O.
H14	STOP	ON	N.C.
H19	Carriage Safety Exception	ON	N.C.
H20	Carriage Emergency	ON	N.C.
H21	Turtanble phase	ON	N.O.
H22	ForkLift Safety	ON	N.O.
H24	High Endstroke Carriage	ON	N.C.
H25	Low Endstroke Carriage	ON	N.C.
H26	Free	OFF	N.O.
H34	Emergency FeedBack	OFF	N.O.
H35	Film Welder Control	ON	N.C.
H36	Free	OFF	N.O.
H37	Free	OFF	N.O.
H38	Remote Control Stop (Optional)	ON	N.O.

Table description status ouputs – X2 Connector

Output Number	Output Description
H2	FeedBack Control
H3	Free
H4	Pressure Fall (Optional)
H5	Pressure Rise (Optional)
H6	Roping Device Fall (Optional)
H7	Roping Device Rise (Optional)
H8	Free
H9	Free

Inverter Card INV01ROB_2 (U1) – CODE 1430300271



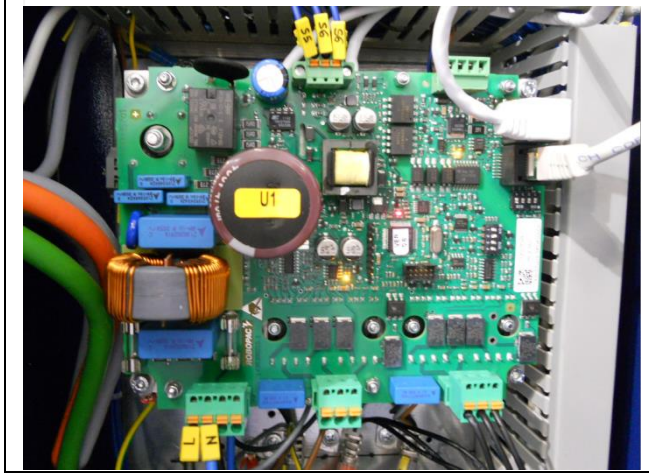
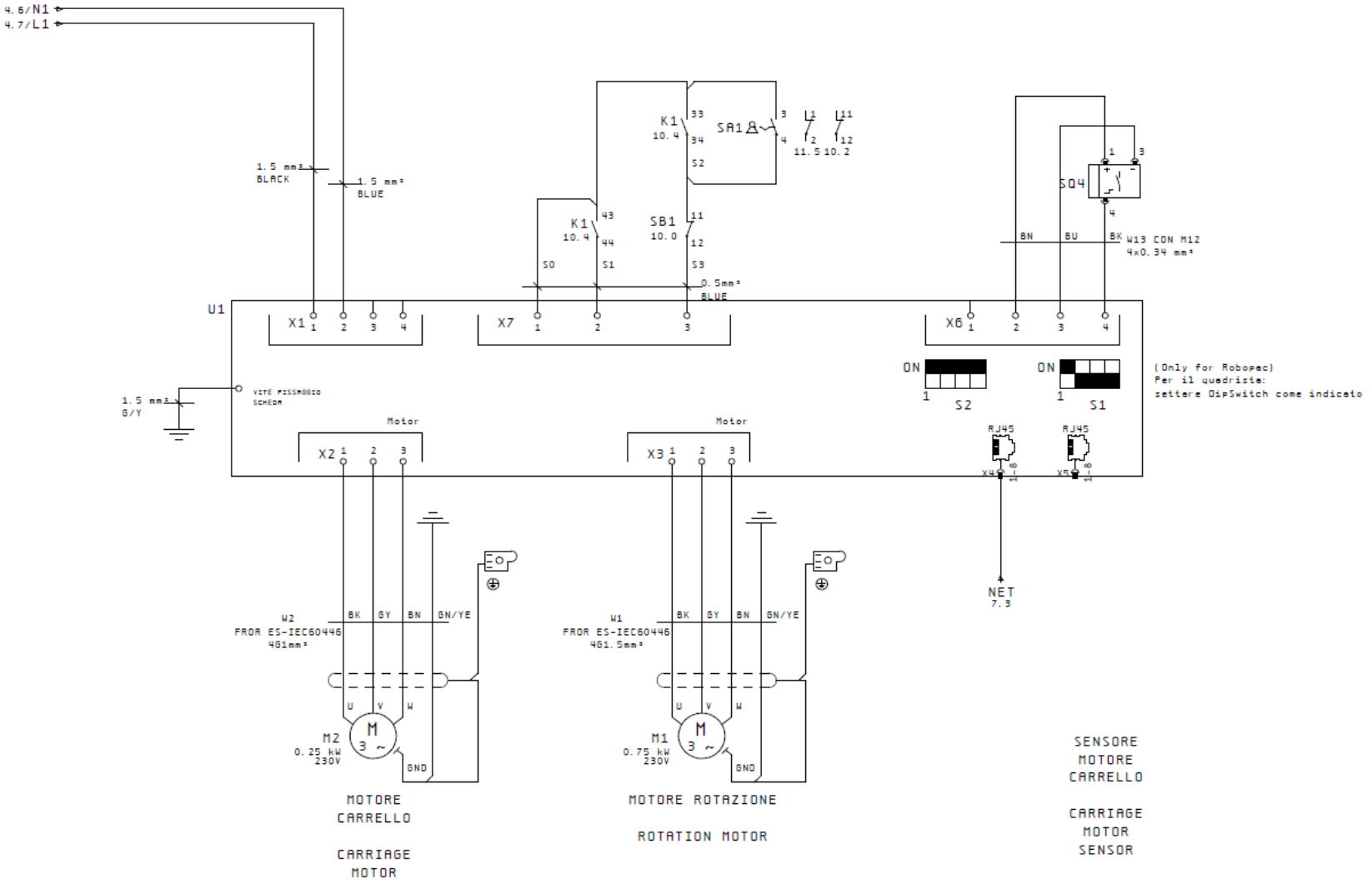


Table description: status input (U1) Table Rotation Motor and Carriage Lift Motor

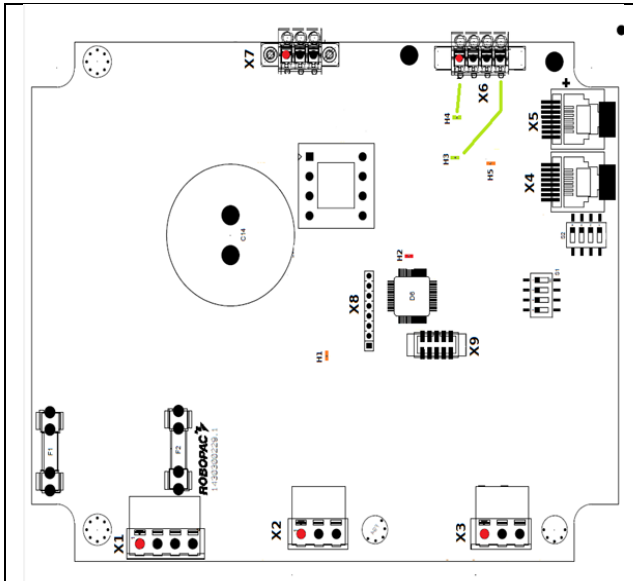
LED Number	Input description	Led Status	Contact Type
H1	230 VAC Power	ON	
H2	Error Led	1 regular blink	
H3	Input 1 on X6 – Carriage Motor Sensor	OFF	N.O.
H4	Input 2 on X6	N/A	
H5	24V Modbus Power	ON	

Table description (U1): X1 – X2 – X3 – X4 – X5 – X6 – X7 – X8 – X9 Connectors

Connector Number	Description
X1	230 VAC – Card Power Supply
X2	Motor 2 – Carriage Lift
X3	Motor 1 – Table Rotation
X4	Communication Out
X5	Communication In
X6	Digital Inputs
X7	Driver Enable
X8	SD for SW update
X9	Debug


4.6/N1
4.7/L1
1.5 mm²
BLACK
1.5 mm²
BLUE
K1
10.4
SA1
33
34
S2
3
4
1
2
11
12
11.5
10.2
K1
10.4
43
44
S0
S1
SB1
10.0
11
12
S3
0.5mm²
BLUE
SQ4
1
3
4
BN
BU
BK
W13 CON M12
4x0.34 mm²
U1
X1
1
2
3
4
X7
1
2
3
X6
1
2
3
4
ON
1
S2
ON
1
S1
(Only for Robopac)
Per il quadrista:
settare DipSwitch come indicato
1.5 mm²
G/Y
VITE M3SSM8020
SCHEDA
Motor
X2
1
2
3
Motor
X3
1
2
3
RJ45
RJ45
X4
X5
NET
7.3
W2
FROR ES-IEC60446
4G1mm²
BK
GY
BN
GN/YE
U
V
W
M2
0.25 kW
230V
M
3 ~
GND
MOTORE
CARRELLO
CARRIAGE
MOTOR
W1
FROR ES-IEC60446
4G1.5mm²
BK
GY
BN
GN/YE
U
V
W
M1
0.75 kW
230V
M
3 ~
GND
MOTORE ROTAZIONE
ROTATION MOTOR
SENSORE
MOTORE
CARRELLO
CARRIAGE
MOTOR
SENSOR

Inverter card INV01ROB_2 (U2) – CODE 1430300271



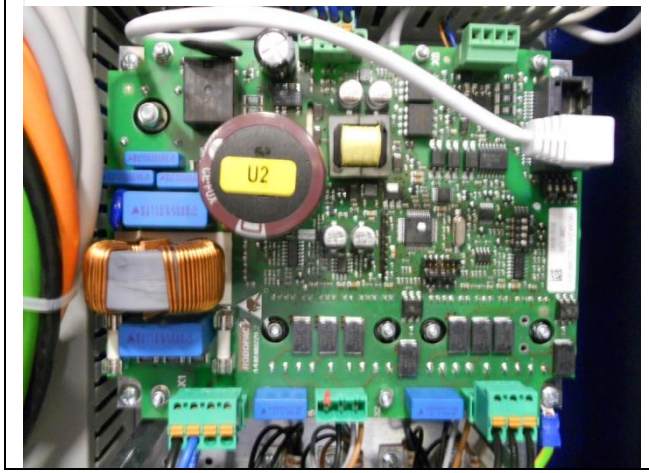
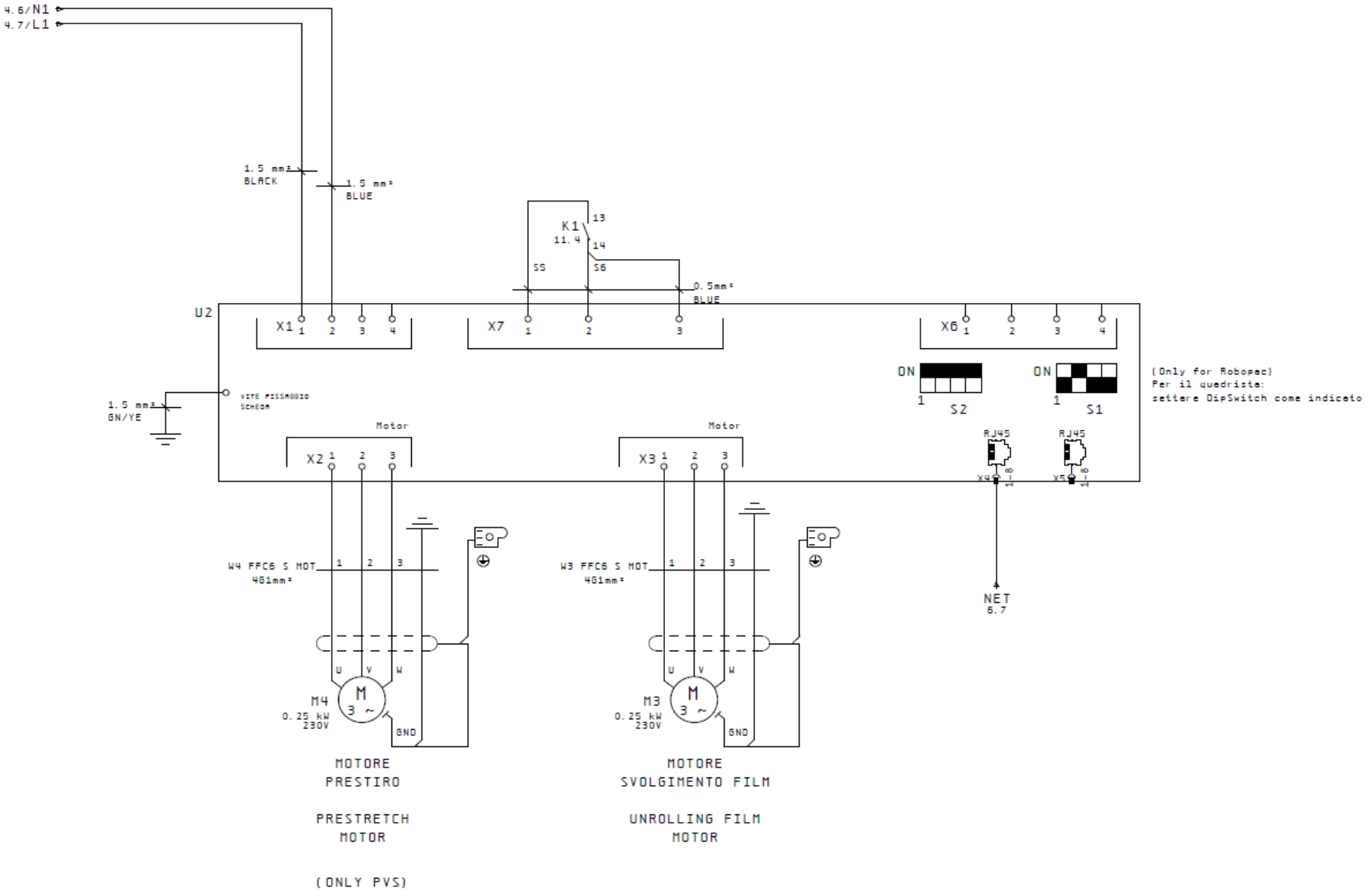


Table description status input (U2) Unrolling Film Motor and Pre-Stretch Film Motor

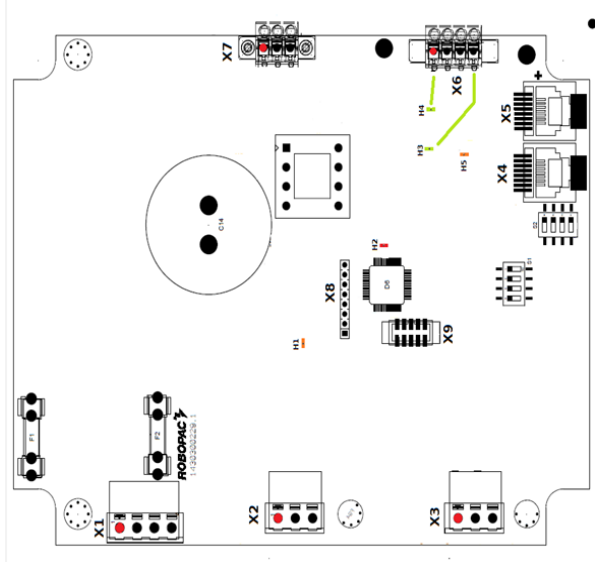
LED Number	Input description	Led Status	Contact Type
H1	230 VAC Power	ON	
H2	Error Led	1 regular blink	
H3	Input 1 on X6	OFF	N.O.
H4	Input 2 on X6	N/A	
H5	24V Modbus Power	ON	

Table description (U2): X1 – X2 – X3 – X4 – X5 – X6 – X7 – X8 – X9 Connectors

Connector Number	Description
X1	230 VAC – Card Power Supply
X2	Motor 4 – Pre-Stretch Film Motor
X3	Motor 3 – Unrolling Film Motor
X4	Communication Out
X5	Communication In
X6	Digital Inputs
X7	Driver Enable
X8	SD for SW update
X9	Debug


4.6/N1
4.7/L1
1.5 mm²
BLACK
1.5 mm²
BLUE
K1
11.4
13
14
S5
S6
0.5mm²
BLUE
U2
X1
X7
X6
ON
S2
S1
(Only for Robopac)
Per il quadrista:
settare DipSwitch come indicato
1.5 mm²
GN/YE
Motor
X2
X3
RJ45
W4 FFC6 S MOT
461mm²
W3 FFC6 S MOT
461mm²
NET
6.7
M4
0.25 kW
230V
M3
0.25 kW
230V
GND
MOTORE
PRESTIRO
PRESTRETCH
MOTOR
(ONLY PVS)
MOTORE
SVOLGIMENTO FILM
UNROLLING FILM
MOTOR

Inverter Card INV01ROB_2 (U5) – CODE 1430300271



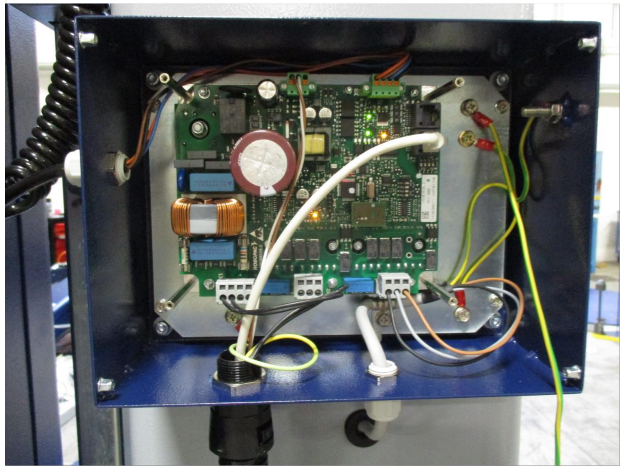
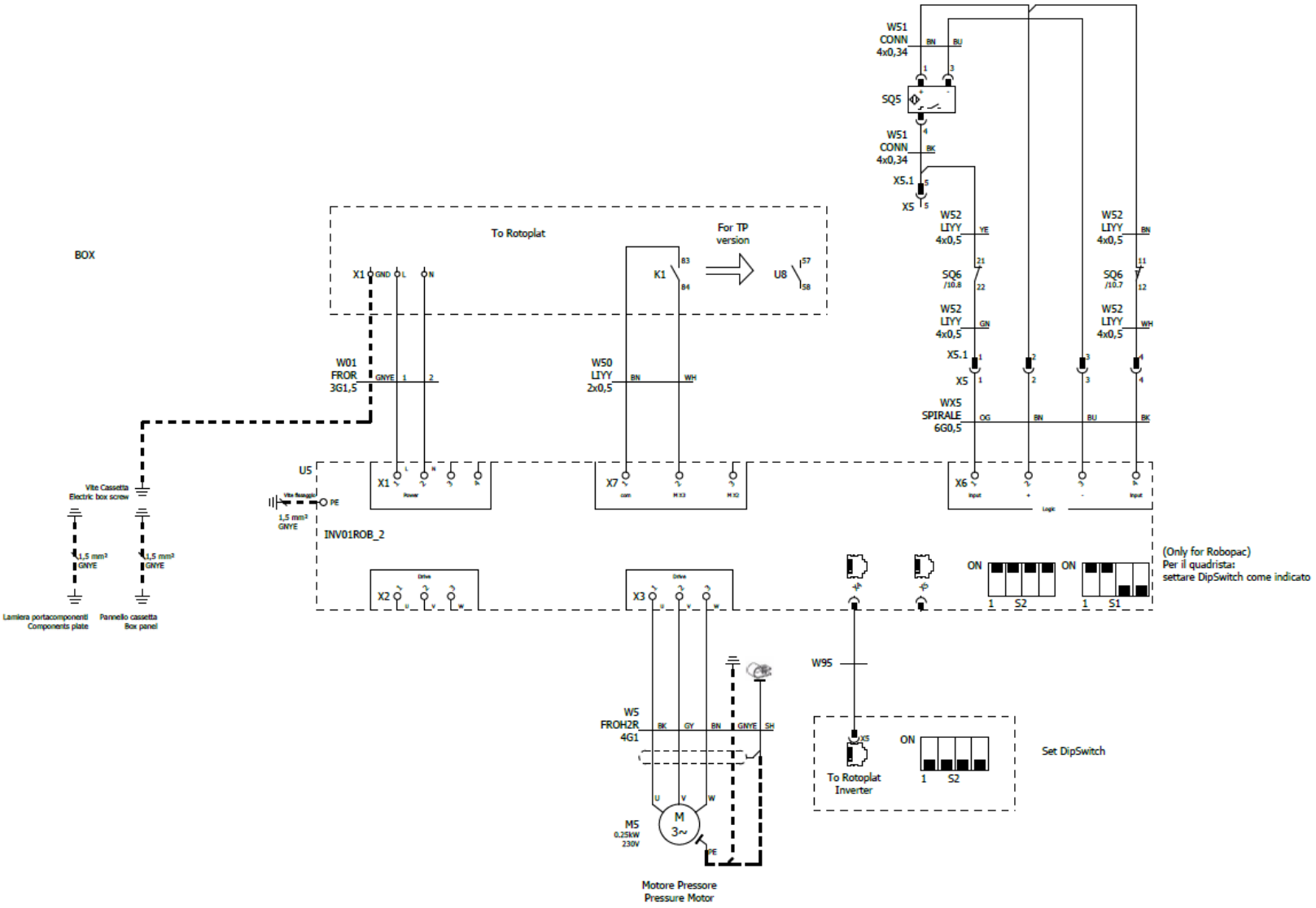


Table description status input (U5) Mechanical Pressure Platen Motor (Optional)

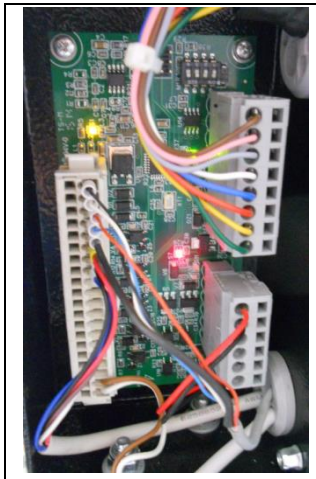
LED Number	Input description	Led Status	Contact Type
H1	230 VAC Power	ON	
H2	Error Led	1 lampeggio regolare	
H3	Input 1 – Pressure Platen High Limit Switch	ON	N.C.
H4	Input 2 – Pressure Platen Low Limit Switch	ON	N.C.
H5	24V Modbus Power	ON	

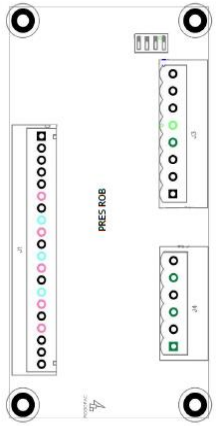
Table description (U5): X1 – X2 – X3 – X4 – X5 – X6 – X7 – X8 – X9 Connectors

Connector Number	Description
X1	230 VAC – Card Power Supply
X2	Motor 6 – Free
X3	Motor 5 – Pressure Platen Motor
X4	Communication Out
X5	Communication In
X6	Digital Inputs
X7	Driver Enable
X8	SD for SW update
X9	Debug


BOX
To Rotoplat
For TP version
X1
GND
L
N
K1
U8
W01
FROR
3G1,5
GNYE
W50
LIYY
2x0,5
BN
WH
W51
CONN
4x0,34
BU
SQ5
BK
X5.1
X5
W52
LIYY
4x0,5
YE
SQ6
/10.8
GN
BN
SQ6
/10.7
WH
WX5
SPIRALE
6G0,5
OG
Vite Cassetta
Electric box screw
1,5 mm²
GNYE
Lamiera portacomponenti
Components plate
Pannello cassetta
Box panel
U5
Vite flangiata
PE
INV01ROB_2
X7
X6
Input
Logic
X2
X3
Drive
ON
S2
S1
(Only for Robopac)
Per il quadrista:
settare DipSwitch come indicato
W95
W5
FROH2R
4G1
BK
GY
SH
M5
0.25kW
230V
M
3~
Motore Pressore
Pressure Motor
To Rotoplat
Inverter
Set DipSwitch

Exspansione Card PRES03ROB (U11) - – CODE 1430300220





J1 Connector (Pin)	Signal Description
0V (1)	0V Load Cell Power (Black)
In+ (2)	Signal LoadCell (+ mv) (White)
In- (3)	Signal LoadCell (- mv) (Red)
12V (4)	12V Load Cell Power (Bleu)
SCH (5)	Cable shield

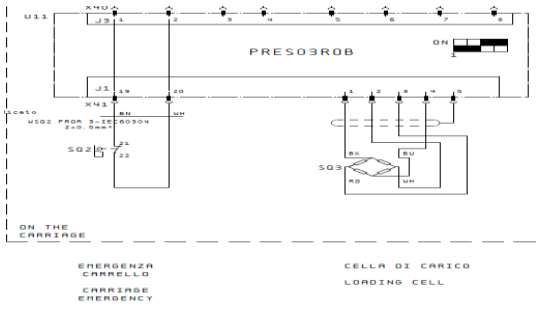
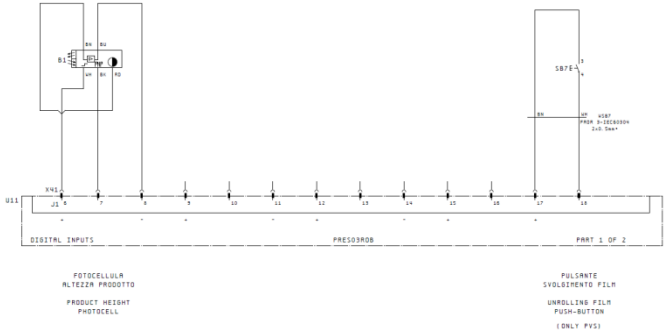
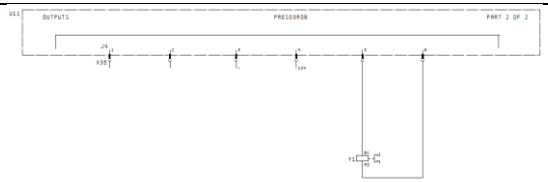


Table description status input/output (U11)

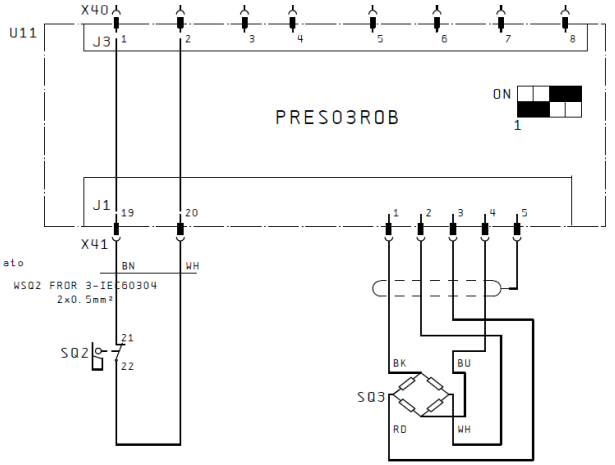
J1 Connector (Pin)	Input Description	Led Status	Contact Type
+ (6)	+24 VDC		
In1 (7)	Product Height Photocell	ON	N.O.
- (8)	0 VDC		
+ (17)	+24 VDC		
In2 (18)	Unrolling Film Push-Button (PVS Only)	ON	N.O.
+ (19)	+24 VDC		
In4 (20)	Carriage Emergency	OFF	N.C.
J4 Connector (Pin)	**Output Description**		
Out1 - S10 (6)	Clutch (PDS Only)		

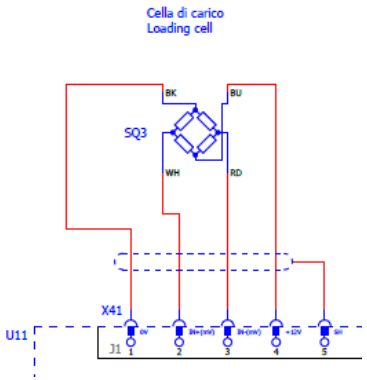




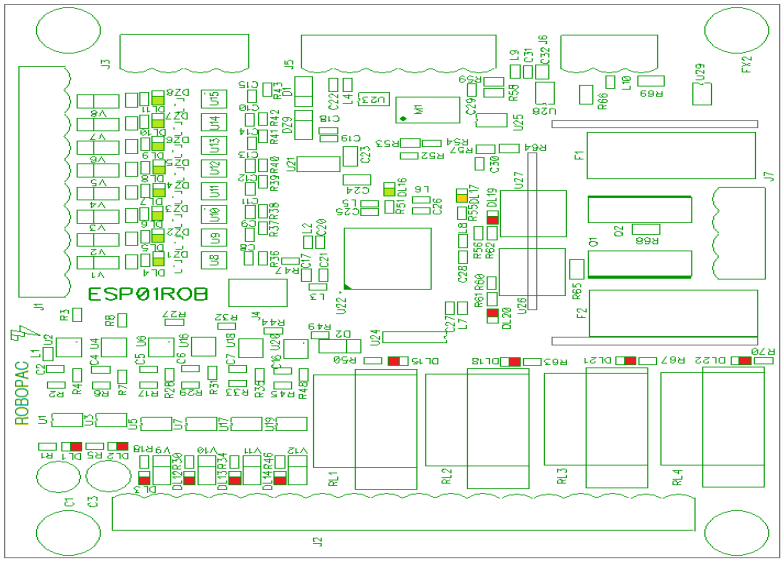
Check function of load cell (on PRES03ROB card on carriage)

To verify the correct operation of the load cell must be checked on the card on carriage, which between the Blue and Black wires of the same there are the 12 VDC representing the power.
Among White and Red wires must detect the output signal of the cell that will vary from 0 mV to 24 mV DC DC (being the ratio of 2 mV x Volt DC power supply) applying by hand a variable traction roller anchored to the cell to simulate the film's shooting.





Expansion Card ESP01ROB (U20) - CODE 1430300232



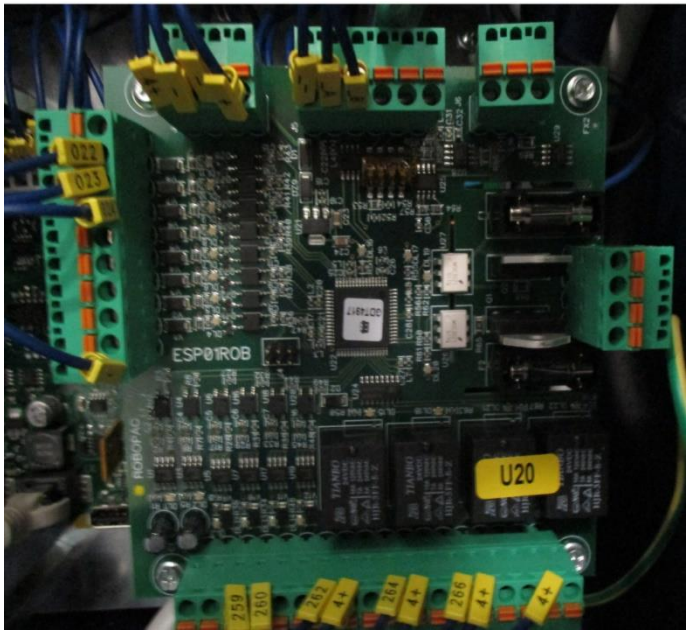
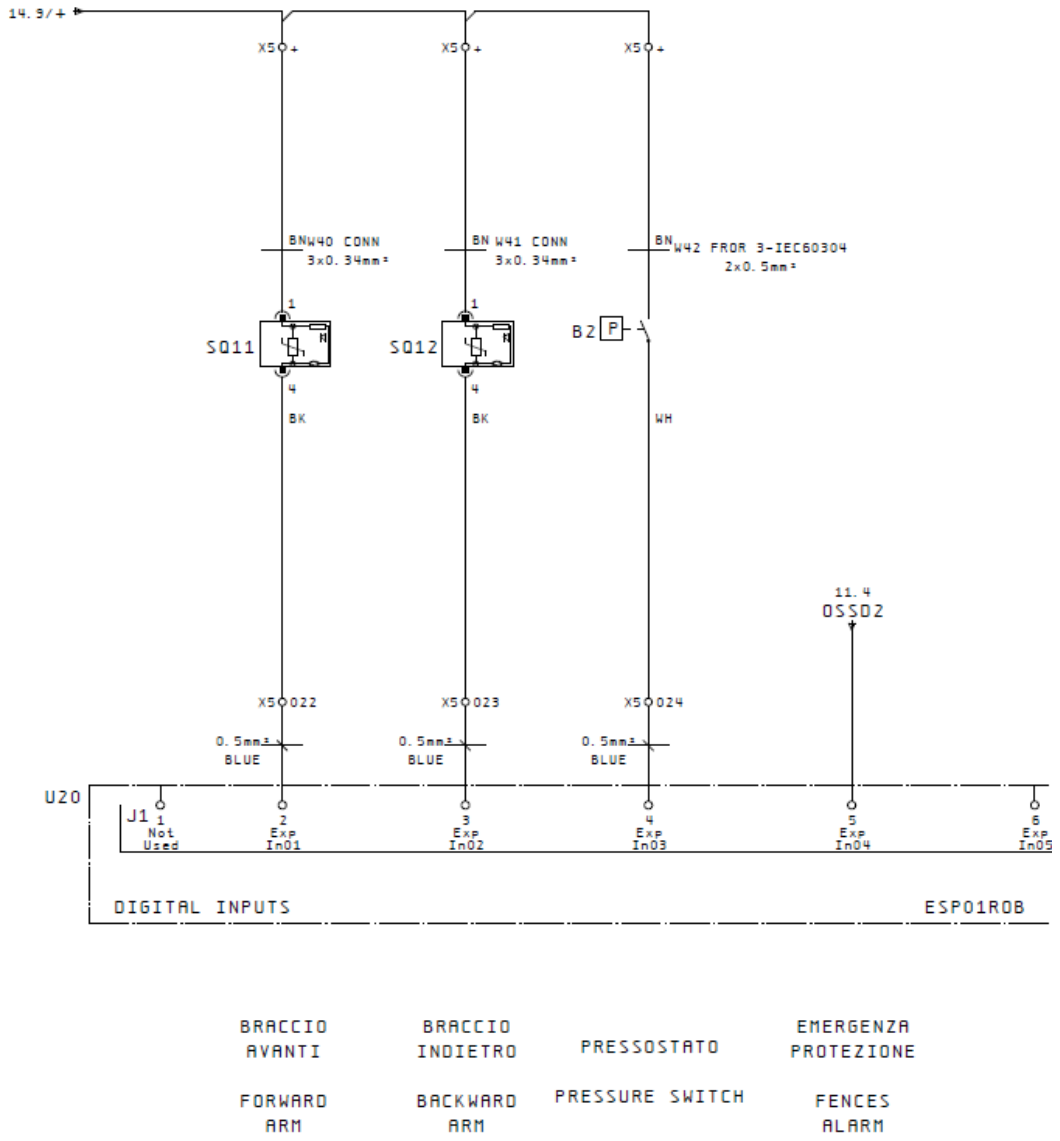
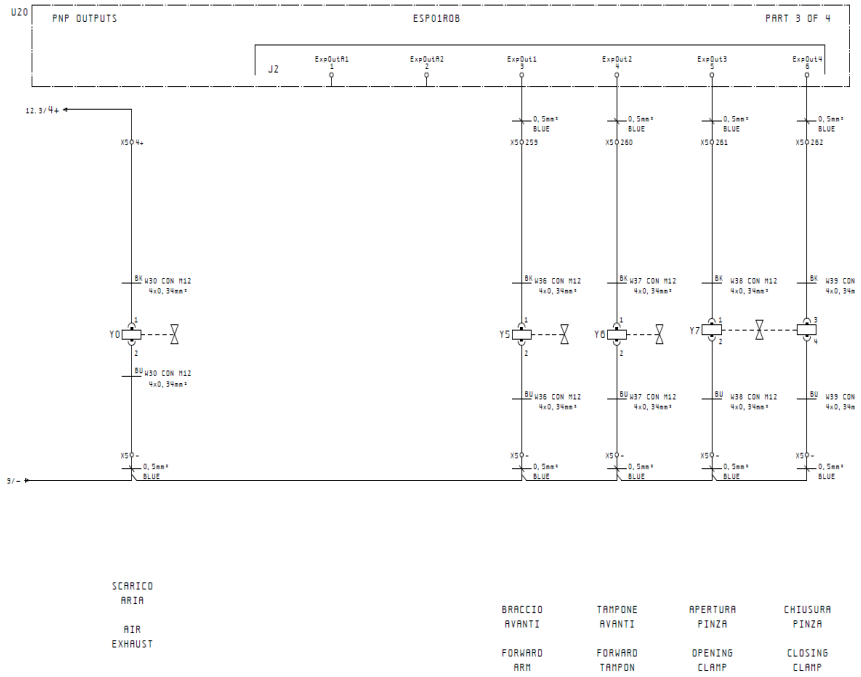
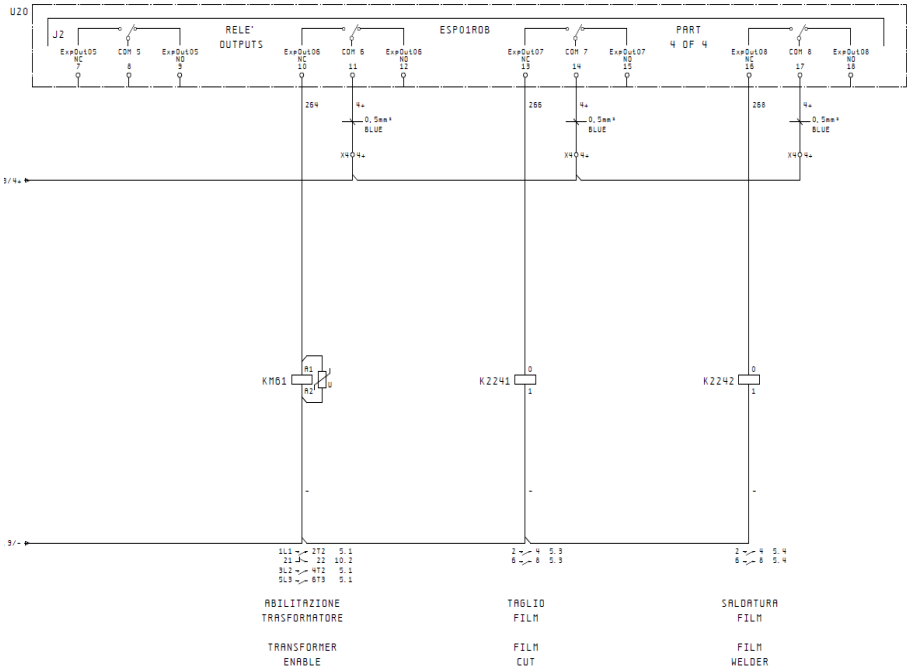


Table description status input/output (U20)

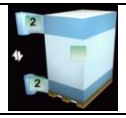
LED	Input / Out	Description	Led Status	Contact Type
DL1	Analogue Out 1	Not used		
DL2	Analogue Out 2	Not used		
DL3	Digital Out 1	FORWARD ARM Command		
DL4	Digital In 8	Not used		
DL5	Digital In 7	Not used		
DL6	Digital In 6	Not used		
DL7	Digital In 5	Not used		
DL8	Digital In 4	FENCES ALARM Signal	OFF	N.C.
DL9	Digital In 3	PRESSURE SWITCH Signal	ON	N.O.
DL10	Digital In 2	BACKWARD ARM POSITION Signal	ON	N.O
DL11	Digital In 1	FORWARD ARM POSITION Signal	ON	N.O
DL12	Digital Out 2	FORWARD BUFFER Command		
DL13	Digital Out 3	OPENING CLAMP Command		
DL14	Digital Out 3	CLOSING CLAMP Command		
DL15	Relay Out 1	Not used		
DL16	Modbus	Communication Fault with PLC → 2 blinks /sec Communication Right with PLC → 10 blinks /sec		
DL17	Logic Power	3,3V Power Supply present		
DL18	Relay Out 2	TRANSFORMER ENABLE Command		
DL19	Power Out 1	Not used		
DL20	Power Out 2	Not used		
DL21	Relay Out 3	FILM CUT Enable		
DL22	Relay Out 4	FILM WELDER Enable		


14.9/+
X5 +
X5 +
X5 +
BN W40 CONN
3x0.34mm²
BN W41 CONN
3x0.34mm²
BN W42 FROR 3-IEC60304
2x0.5mm²
SQ11
SQ12
B2
P
1
4
BK
BK
WH
11.4
OSSD2
X5 022
X5 023
X5 024
0.5mm²
BLUE
0.5mm²
BLUE
0.5mm²
BLUE
U20
J1
1
Not
Used
2
Exp
In01
3
Exp
In02
4
Exp
In03
5
Exp
In04
6
Exp
In05
DIGITAL INPUTS
ESP01ROB
BRACCIO
AVANTI
FORWARD
ARM
BRACCIO
INDIETRO
BACKWARD
ARM
PRESSOSTATO
PRESSURE SWITCH
EMERGENZA
PROTEZIONE
FENCES
ALARM


U20
PNP OUTPUTS
ESP01ROB
PART 3 OF 4
J2
ExpOutA1
ExpOutA2
ExpOut1
ExpOut2
ExpOut3
ExpOut4
12.3/4+
X50 4+
X50 259
X50 260
X50 261
X50 262
0,5mm² BLUE
BK W30 CON M12 4x0,34mm²
BU W30 CON M12 4x0,34mm²
BK W36 CON M12 4x0,34mm²
BU W36 CON M12 4x0,34mm²
BK W37 CON M12 4x0,34mm²
BU W37 CON M12 4x0,34mm²
BK W38 CON M12 4x0,34mm²
BU W38 CON M12 4x0,34mm²
BK W39 CON 4x0,34m
BU W39 CON 4x0,34m
Y0
Y5
Y6
Y7
X50 -
3/-
SCARICO ARIA
AIR EXHAUST
BRACCIO AVANTI
FORWARD ARM
TAMPONE AVANTI
FORWARD TAMPON
APERTURA PINZA
OPENING CLAMP
CHIUSURA PINZA
CLOSING CLAMP


U20
J2
RELE' OUTPUTS
ESP01ROB
PART 4 OF 4
ExpOut05 NC 7
COM 5 8
ExpOut05 NO 9
ExpOut06 NC 10
COM 6 11
ExpOut06 NO 12
ExpOut07 NC 13
COM 7 14
ExpOut07 NO 15
ExpOut08 NC 16
COM 8 17
ExpOut08 NO 18
264
266
268
4+
X40 4+
0,5mm² BLUE
3/4+
3/-
KM61
K2241
K2242
A1
A2
1L1 2T2 5.1
21 22 10.2
3L2 4T2 5.1
5L3 6T3 5.1
2 4 5.3
6 8 5.3
2 4 5.4
6 8 5.4
ABILITAZIONE TRASFORMATORE
TRANSFORMER ENABLE
TAGLIO FILM
FILM CUT
SALDATURA FILM
FILM WELDER

LIST OF RECIPES DATA

Parameter		Min. – Max.		Step	Unit of measure / Notes	
Packaging cycle type		Up and Down cycle				
		Up only cycle or Down only cycle				
		Top sheet cycle				
		Packaging cycle with Pressure platen		Option activation	**ON** **BLUE COLOURED BUTTON**	OFF GREY COLOURED BUTTON
		Packaging cycle with Roping unit		Option activation	**ON** **BLUE COLOURED BUTTON**	OFF GREY COLOURED BUTTON
		Packaging Cycle with cutting clamp/arm		Option activation	**ON** **BLUE COLOURED BUTTON**	OFF GREY COLOURED BUTTON
		Packaging Cycle with Welding on		Option activation	**ON** **BLUE COLOURED BUTTON**	OFF GREY COLOURED BUTTON
		Blows on		Option activation	**ON** **BLUE COLOURED BUTTON**	OFF GREY COLOURED BUTTON
Bottom wraps		0 – 20		1	Wraps	
Top wraps		0 – 20		1	Wraps	
Photocell delay		0 – 100		1	cm	
Reinforcement height and reinforcement wraps			0 -- 310	1	cm	
			0 – 20	1	Wraps	
Table Rotation speed		5 – 12		1	Rpm	

Carriage up/down speed		 	1.5 – 5.5	0.1	m/minute
Altimeter		0 – 310		1	cm
Pressure Device Parameters		0 - 300		1	cm
Roping Device Parameters		0 - 20		1	Wraps
Welding time		0.0 – 5.0		0.1	Sec.
Cut Time		0.0 – 5.0		0.1	Sec.
FR CARRIAGE (Technoplat 308)					
Film Drive		0 – 100		1	Dimensionless

PDS CARRIAGE (Technoplat 508)				
Film Drive		0 – 100	1	Film Drive
Film pre-stretch		0 -- 25	1	Film pre-stretch

Stretch control off.
Pre-stretch is not a variable but always set to maximum.
The obtained pre-stretch depends on the gear ratio applied on the carriage (200% - 250% - 300%).

Standard operations includes 250% maximum applied pre-stretch.

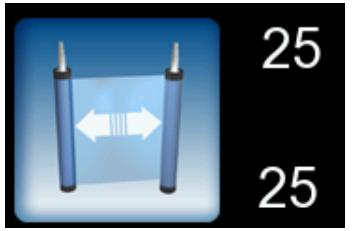
While pressing for about 4 sec.

the icon  enables the management of the shot into 4 values (Bottom wraps – Carriage up - Top wraps – Carriage down)

Stretch control on.
It's possible to DEACTIVATE the prestretch.
With values from 0 to 6/7/8/9
(it depends on many elements) the prestretch is DEACTIVATED, with values over that value the Prestretch is ACTIVATED
The obtained pre-stretch depends on the gear ratio applied on the carriage (200% - 250% - 300%).
Standard operations includes 250% maximum applied pre-stretch.

While pressing for about 4 sec.

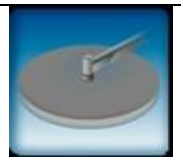
the icon  enables the management of the pre-stretch into 2 values (Carriage up – Carriage down)



PVS CARRIAGE (Technoplat 708)				
Film Drive		0 – 100	1	Dimensionless
Film pre-stretch		150 -- 400	10	%

	Enabling Special packaging cycles • DISABLED FUNCTION → ICON GREY BACKGROUND.		Cycle standard packing with bottom wraps at end of cycle (SPECIAL CYCLE DISABLED – icon background color gray)
	• FUNCTION ENABLED ICON BACKGROUND BLUE		Special cycle for packaging products with bottom wraps at the start of cycle (SPECIAL CYCLE ENABLED – icon background color blue)

MACHINE OPTIONS

Optional function	Description	Mechanical settings	Electrical settings	Pneumatic settings
	Pneumatic pressure platen	✔	✖	✖
	Mechanical pressure platen	✔	✖	**N/A**
	Roping Device unit	✔	✖	✖
	Welding unit	✔	✔	✔

OPERATOR PANEL PASSWORD USE

Proceed as follows to change the operator panel password:

From the main page (the one that appears when the machine is turned on), press the "TOOLS" icon.

In the applications page, press the "ACCOUNT" icon.

In the account page, press the "USER" icon until the required user icon is displayed (see specifications below). Press the button to confirm

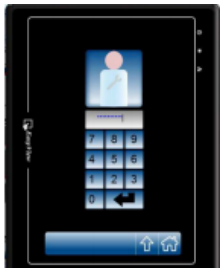
Default "CUSTOMER USER" password reset procedure (factory settings).

If the first level password is lost (**CUSTOMER USER operator**), the default password can be reset (**1111**).

Open the RESET page and press the four corners of the TOUCH screen operator panel, starting from the top left in counter-clockwise order, within 5 seconds. When finished, the panel will beep and display a key for several seconds. The new default password (**1111**) will appear to confirm the new settings..

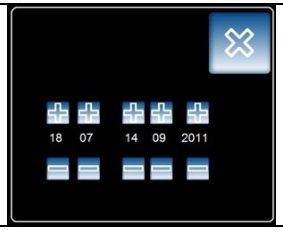
The key with password **1111** appears on the touch screen panel display to confirm that the password was reset to DEFAULT

Enter the new password and press ENT.
The new password is displayed in the image below (example 2222). Press the green button to confirm changes or press the red button to keep the current password.

<table>
<tr><td rowspan="2">MACHINE USER
CUSTOMER
SELECTION</td><td>  </td><td>  </td><td>No access password to higher use levels.
Touch-screen operator panel locked..</td><td rowspan="2"> 
Machine use for packaging.</td></tr>
<tr><td>  </td><td>  </td><td><u>CUSTOMER USER</u>
(Machine manager/User)
Enter password = 1111</td></tr>
<tr><td colspan="5">Utilizzo della macchina limitato alla impostazione dei valori di ciclo ed impostazione di una diversa password di accesso.</td></tr>
<tr><td>ROBOPAC
DEALER
SECTION</td><td>  </td><td>  </td><td><u>MAINTENANCE TECHNICIAN USER</u>
(Robopac dealer)
Password = 6161</td><td> 
Maintenance technician password accepted confirmation.</td></tr>
<tr><td colspan="5">Possibilità di utilizzo della macchina come “Utente cliente” ed accesso alle funzioni ed alla diagnostica per la manutenzione.</td></tr>
<tr><td>ROBOPAC
SECTION</td><td colspan="2">  </td><td><u>ROBOPAC TECHNICIAN USER</u>

For exclusive ROBOPAC technician use</td><td> 
ROBOPAC technician password accepted confirmation.</td></tr>
</table>

INITIAL TOUCH SCREEN PANEL SETTINGS (ROBOPAC USE ONLY)

	Press the configuration button		
	Insert the USB key containing file erw0.erp in the panel (in the Robopac access EXMEM folder). Press the user key until the user with the Robopac symbol appears		
	Enter password **3333** and press  **Enter** The correct password is confirmed by the user image with the Robopac "lightening bolt" in the tool bar.		
	Press the HMI key		
	Press the date and time settings key Set the time and date and press the close key  followed by the  HOME key		

VARIOUS TOUCH SCREEN OPERATOR PANEL FUNCTIONS

HMI Setting

Press the "Beeper" key to turn off panel key touch beep.

Press the padlock key to lock/unlock program editing by the base operator.

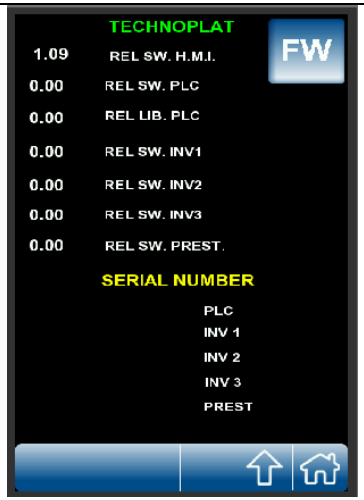
Press the flag key to change the panel display language

SW / HW Information

Press the info key. 

The screen displays the PLC software (SW + library), 3 inverters (main, carriage and pressure platen) and touch screen panel versions.

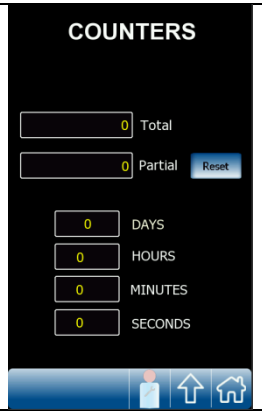
Press the FW key to display touch screen panel version details at the bottom.



Counter Reset

Press the reset key to the left of the 'Total' to reset all screen values.

The reset key to the left of 'Partial" ONLY resets the partial counter.



MACHINE CONFIGURATION AND INTERNAL PARAMETER LIST

To edit the parameters in the list below, we suggest you contact a Robopac technician

Machine Configuration Parameters *(from Sw Rel. Pack_Technoplat_S8_09.0)*

PARAMETER	DESCRIPTION	VALUE	508 (DEF)	308	708
1	Carriage Type	2 = 308 FR 4 = 508 PDS 5 = 708 PVS	4	2	5
2	FREE	0-0			
3	Film Brake Alarm On	0-1	1	0	1
4	Beep during Cycle ON	0-1	0	0	0
5	Pressure Platen Function	0 = Not present 1 = Pneumatic 2 = Mechanical	0	0	0
6	Enable U.S.A. display	0-1	0	0	0
7	Enable Roping Unit function	0-1	0	0	0
8	Reel Height (cm) It's the dimension of the film SPOOL	0-100	50	50	50
9	Beeper Selection (0=ext , 1=int)	0-1	0	0	0
10	Compensation pre-stretch film	0-100	0	0	0
11	K_PID (Curve PID/Drive) Never change, inside software parameter	0-100	45	45	45
12	K_P1 (Proportional to Drive=0) Never change, inside software parameter	0-200	41	41	41
13	K_P2 (Proportional to Drive =100) Never change, inside software parameter	0-200	20	20	20
14	K_I1 (Integral to Drive = 0) Never change, inside software parameter	0-200	26	26	26
15	K_I2 (Integral to Drive = 100) Never change, inside software parameter	0-200	8	8	8

16	K_GAIN Never change, inside software parameter	0-200	115	115	115
17	K_TMIN (Minimum Drive) Never change, inside software parameter	0-200	25	25	25
18	K_PMIN (Costant pre-stretch) Never change, inside software parameter	0-200	30	30	30
19	Enable Simulation	0-1	0	0	0
20	Max Cell Drive Changing in load cell sensibility, high value – hight sensibility, low value – low sensibility	0-100	68	68	68
21	FREE	0-0			
22	Maximum friction voltage (FR) Maximum value of the clutch in FR carriage (50 = 12 VDC, 100 = 24VDC)	0-100	50	50	50
23	Pre-stretch value (PDS)	0=150% 1=200% 2=250% 3=300%	2	2	2
24	Table diameter	0=1650 mm 1=1800 mm 2=2200 mm 3=2400 mm	0	0	0
25	Pressure platen delay	0-30	10	10	10
26	Restart Time	0 = Disable xx = wait seconds	0	0	0
27	Enable Protection	0-1	0	0	0
28	Enable Forklift TP	0-1	0	0	0
29	Carriage gear motor	1=500 mm 2=750 mm	1	1	1
30	Enable Special Cycles	0-1	1	1	1
31	Enable Welder Film	0-1	0	0	0

32	Carriage lift at start Height of the carriage at the beginning of the cycle	0-100	22	22	22
33	Cutting time Cutting time (100 = 10sec)	0-100	40	40	40
34	Stretch at start Film tension at the beginning (0 = film slow, 100= film hightest tensioned)	0-100	0	0	0
35	Stretch arm forward. Film tension as the arm is going forward; an hight value can “force” the arm movement	0-100	20	20	20
36	FREE (ex Clamp end cycle stretch)	0-100	0 (10)	0 (10)	0 (10)
37	Clamp open height Height of the carriage when the clump is opening	0-100	22	22	22
38	Forward arm height. Height of the carriage when the arm is going forward	0-100	19	19	19
39	Clamp close height. Height of the carriage when the clump is closing	0-100	5	5	5
40	FREE	0-0	0	0	0

The following parameters must be set at end inspection on all technoplat machines intended for the US market:
P38 H ARM UP=16
P39 H close clamp =5
Run a new cycle to make sure the new parameters were saved in the cycle (obviously the machine will not cut and weld correctly).

Machine Configuration Parameters *(from Sw Rel. Pack_Technoplat_S8_10.0 from APRIL 2017)*

PARAMETER	DESCRIPTION	VALUE	508 (DEF)	308	708
1	Carriage Type	2 = 308 FR 4 = 508 PDS 5 = 708 PVS	4	2	5
2	MLC Enable To enable the Multi Layer Control function	0-1	0	0	0
3	Film Brake Alarm On	0-1	1	0	1
4	Beep during Cycle ON	0-1	0	0	0
5	Pressure Platen Function	0 = Not present 1 = Pneumatic 2 = Mechanical	0	0	0
6	Enable U.S.A. display	0-1	0	0	0
7	Enable Roping Unit function	0 = Non presente 1 = Pneumatico 2 = Mechanical	0	0	0
8	Reel Height (cm) It's the dimension of the film SPOOL	0-100	50	50	50
9	Self-braking motor enabling	0-1	0	0	0
10	Compensation pre-stretch film	0-100	0	0	0
11	K_PID (Curve PID/Drive) Never change, inside software parameter	0-100	45	45	45
12	K_P1 (Proportional to Drive=0) Never change, inside software parameter	0-200	41	41	41
13	K_P2 (Proportional to Drive =100) Never change, inside software parameter	0-200	20	20	20
14	K_I1 (Integral to Drive = 0) Never change, inside software parameter	0-200	26	26	26
15	K_I2 (Integral to Drive = 100) Never change, inside software parameter	0-200	8	8	8

16	K_GAIN Never change, inside software parameter	0-200	115	115	115
17	K_TMIN (Minimum Drive) Never change, inside software parameter	0-200	25	25	25
18	K_PMIN (Costant pre-stretch) Never change, inside software parameter	0-200	30	30	30
19	Enable Simulation	0-1	0	0	0
20	Max Cell Drive Changing in load cell sensibility, high value – hight sensibility, low value – low sensibility	0-100	68	68	68
21	Blow enable	0-1	1	1	1
22	Maximum friction voltage (FR) Maximum value of the clutch in FR carriage (50 = 12 VDC, 100 = 24VDC)	0-100	50	50	50
23	Pre-stretch value (PDS)	0=150% 1=200% 2=250% 3=300%	2	2	2
24	Table diameter	0=1650 mm 1=1800 mm 2=2200 mm 3=2400 mm	0	0	0
25	Pressure platen delay	0-30	10	10	10
26	Restart Time	0 = Disable xx = wait seconds	0	0	0
27	Enable Protection	0-1	0	0	0
28	Enable Forklift TP	0-1	0	0	0
29	Carriage gear motor	1=500 mm 2=750 mm	1	1	1
30	Enable Special Cycles	0-1	1	1	1
31	Enable Welder Film	0-1	0	0	0

32	Carriage lift at start Height of the carriage at the beginning of the cycle	0-100	22	22	22
33	Cutting time Cutting time (100 = 10sec)	0-100	40	40	40
34	Stretch at start Film tension at the beginning (0 = film slow, 100= film hightest tensioned)	0-100	0	0	0
35	Stretch arm forward. Film tension as the arm is going forward; an hight value can “force” the arm movement	0-100	20	20	20
36	Max roping range E’ il numero massimo di impulsi che fa il cordonatore meccanico tra le posizioni alta e bassa.	0-500	256	256	256
37	Clamp open height Height of the carriage when the clump is opening	0-100	22	22	22
38	Forward arm height. Height of the carriage when the arm is going forward	0-100	19	19	19
39	Clamp close height. Height of the carriage when the clump is closing	0-100	5	5	5
40	Roping stop advance	0-20	10	10	10

The following parameters must be set at end inspection on all technoplat machines intended for the US market:
P38 H ARM UP=17
P39 H close clamp =5
Run a new cycle to make sure the new parameters were saved in the cycle (obviously the machine will not cut and weld correctly).

Machine Configuration Parameters *(from Sw Rel. Pack_Technoplat_S8_12.0 from JUNE 2018)*

PARAMETER	DESCRIPTION	VALUE	508 (DEF)	308	708
1	Carriage Type	2 = 308 FR 4 = 508 PDS 5 = 708 PVS	4	2	5
2	MLC Enable To enable the Multi Layer Control function	0-1	0	0	0
3	Film Brake Alarm On	0-1	1	0	1
4	Beep during Cycle ON	0-1	0	0	0
5	Pressure Platen Function	0 = Not present 1 = Pneumatic 2 = Mechanical	0	0	0
6	Enable U.S.A. display	0-1	0	0	0
7	Enable Roping Unit function	0 = Non presente 1 = Pneumatico 2 = Mechanical	0	0	0
8	Reel Height (cm) It's the dimension of the film SPOOL	0-100	50	50	50
9	Self-braking motor enabling	0-1	0	0	0
10	Compensation pre-stretch film	0-100	0	0	0
11	K_PID (Curve PID/Drive) Never change, inside software parameter	0-100	45	45	45
12	K_P1 (Proportional to Drive=0) Never change, inside software parameter	0-200	41	41	41
13	K_P2 (Proportional to Drive =100) Never change, inside software parameter	0-200	20	20	20
14	K_I1 (Integral to Drive = 0) Never change, inside software parameter	0-200	26	26	26
15	K_I2 (Integral to Drive = 100) Never change, inside software parameter	0-200	8	8	8

16	K_GAIN Never change, inside software parameter	0-200	115	115	115
17	K_TMIN (Minimum Drive) Never change, inside software parameter	0-200	25	25	25
18	K_PMIN (Costant pre-stretch) Never change, inside software parameter	0-200	30	30	30
19	Enable Simulation	0-1	0	0	0
20	Max Cell Drive Changing in load cell sensibility, high value – hight sensibility, low value – low sensibility	0-100	65	65	65
21	Blow enable	0-1	1	1	1
22	Maximum friction voltage (FR) Maximum value of the clutch in FR carriage (50 = 12 VDC, 100 = 24VDC)	0-100	50	50	50
23	Pre-stretch value (PDS)	0=150% 1=200% 2=250% 3=300%	2	2	2
24	Table diameter	0=1650 mm 1=1800 mm 2=2200 mm 3=2400 mm	0	0	0
25	Pressure platen delay	0-30	10	10	10
26	Restart Time	0 = Disable xx = wait seconds	0	0	0
27	Enable Protection	0-1	0	0	0
28	Enable Forklift TP	0-1	0	0	0
29	Carriage gear motor	1=500 mm 2=750 mm	1	1	1
30	Enable Special Cycles	0-1	1	1	1
31	Enable Welder Film	0-1	0	0	0

32	Carriage lift at start Height of the carriage at the beginning of the cycle	0-100	24	24	24
33	Free	0	0	0	0
34	Stretch at start Film tension at the beginning (0 = film slow, 100= film hightest tensioned)	0-100	0	0	0
35	Stretch arm forward. Film tension as the arm is going forward; an hight value can “force” the arm movement	0-100	20	20	20
36	Max roping range E’ il numero massimo di impulsi che fa il cordonatore meccanico tra le posizioni alta e bassa.	0-500	256	256	256
37	Clamp open height Height of the carriage when the clump is opening	0-100	24	24	24
38	Forward arm height. Height of the carriage when the arm is going forward	0-100	19	19	19
39	Clamp close height. Height of the carriage when the clump is closing	0-100	5	5	5
40	Roping stop advance	0-20	10	10	10
41	Film Weight (g/5m)	10-100	55	55	55

The following parameters must be set at end inspection on all technoplat machines intended for the US market:
P38 H ARM UP=17
P39 H close clamp =5
Run a new cycle to make sure the new parameters were saved in the cycle (obviously the machine will not cut and weld correctly).

To edit the parameters in the list below, we suggest you contact a Robopac technician

Motors Parameters *(Vers. Sw Pack_Technoplat_S8_09.0)*

PARAMETER	DESCRIPTION	VALUE	DEFAULT VALUES				
			TABLE ROTATION	CARRIAGE LIFT MOTOR	FILM DRIVE MOTOR	FILM PRE-STRETCH MOTOR	PRESSURE PLATEN MOTOR (OPT)
1	FW version						
2	Bootloader version						
3	Minimum frequency	0-20 (Hz)	0	0	0	0	0
4	Maximum frequency	0-100 (Hz)	100	100	100	100	100
5	Acceleration	0-999 (Hz/sec)	5	200	170	170	200
6	Deceleration	0-999 (Hz/sec)	22	200	170	170	200
7	Maximum current	0-10 (A)	7	5	5	5	5
8	Average current	0-100 (dA)	50	25	25	25	20
9	Rated frequency	0-100 (Hz)	50	72	72	72	50
10	Boost voltage	0-100 (%)	5	5	5	5	5
11	Point 1 frequency	0-100 (Hz)	10	10	10	10	10
12	Point 1 voltage	0-100 (%)	20	16	16	16	20
13	Motor type	0-5	0	3	0	0	0
14	Positioning on	0-1	0	1	0	0	0
15	I Max Low Frequency	0-100	0	0	0	0	0
16	Feedback Value	0-6	0	1	0	0	0
17	Early low speed	0-999	0	35	0	0	0
18	Low speed value	0-999 (dHz)	50	220	50	50	0
19	Fast deceleration (Hz/sec)	0-999 (Hz/sec)	100	65	65	65	100
20	Communication Timeout	0-100 (ms)	30	30	30	30	30

For Carriage 750 PVS USA change the following parameters of the lifting motor :

P4 = 85 , P5 = 25, P6 = 400, P8 = 30. P10 = 35, P11 = 25, P12 = 40, P15 =30

PROCEDURE FOR REPLACING, LOADING SOFTWARE AND CALIBRATION OF ELECTRONIC CARDS

TOUCH SCREEN PANEL (U9)

In case you need to perform a software update on both touch screen panel (HMI) and the PLC card, you must always start from the download of the panel software.

New installation MT4414TE-RO KINCO --- till January 2021

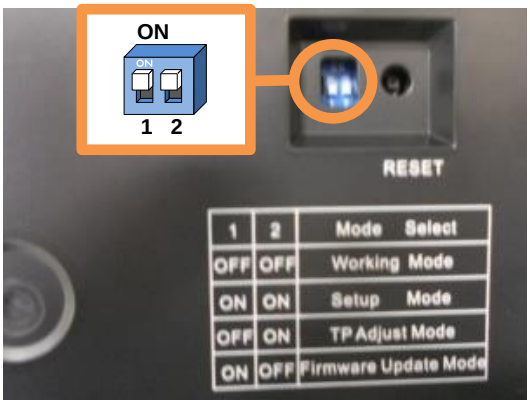
Code : 1490300020

The new Touch Screen panel is supplied as a spare part WITHOUT software

- Mount mechanically the new touch-screen panel in place of the faulty part.
- Wire electrically the new touch-screen panel.
- Switch on the machine

Install the touch-screen panel software by following this procedure:

Set the dip switches 1 and 2 to ON to enable the Setup Mode, then pres
the RESET pushbutton



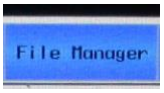
(Old bootloader Kinko Panel)

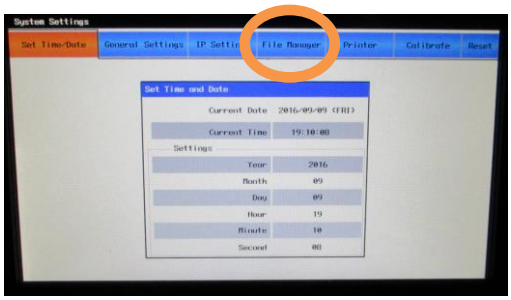
On the HMI screen, press the "USB/SD → HMI" button to open the file manager:

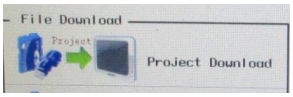
(New bootloader Kinko Panel)

On the HMI screen, press 

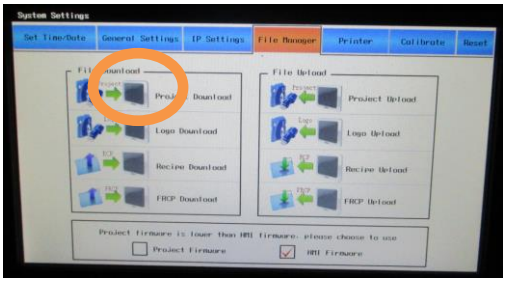
button to open the System Setting.

From the System Setting page, press the button 



From the File Manager page, press the button 

to open the page copy of the file:



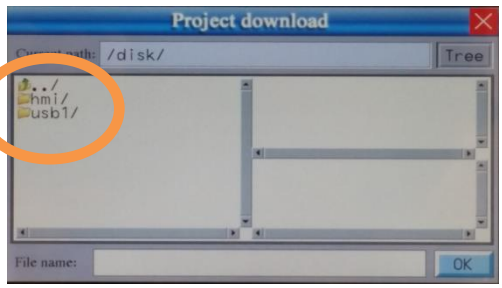
Retrieve the USB pen drive containing the original software versions which is supplied with the machine.

Robopac provides the original machine software with the USB 2.0 pen drive housed in the switchboard with all the technical machine documentation.
N.B.: In case it's necessary to create a new installation support (e.g: the original pen drive is lost) with a commercial pen drive:

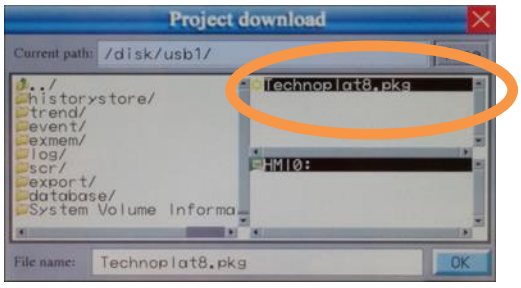
- *use a USB 2.0 pen drive only*
- *copy the PLC board software files provided by Robopac at first directory level of pen drive*

Insert the USB pen drive containing the original software version (file named TECHNOPLAT8.pkg) into USB plug (USB HOST) of the touch-screen panel.

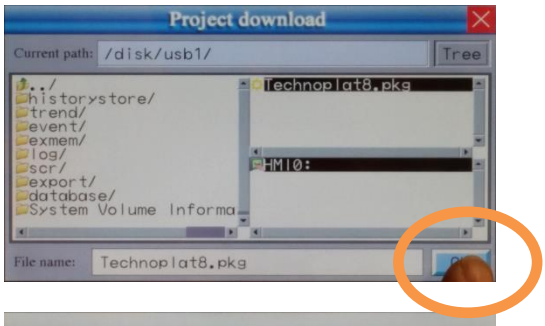
On the left screen side, press '**usb1 /**'.



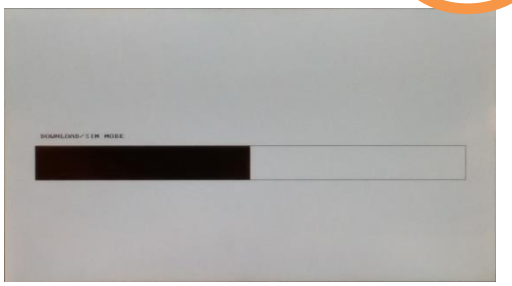
On the right screen side, select the file "**TECHNOPLAT8.pkg**".



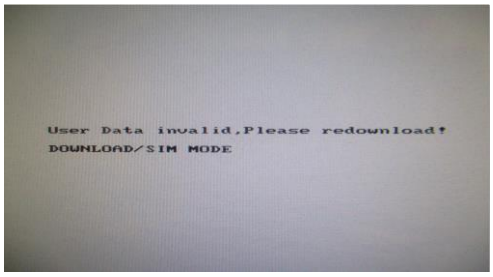
Press the OK button

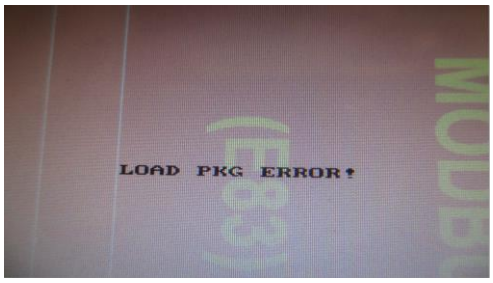


Wait for the end of the procedure

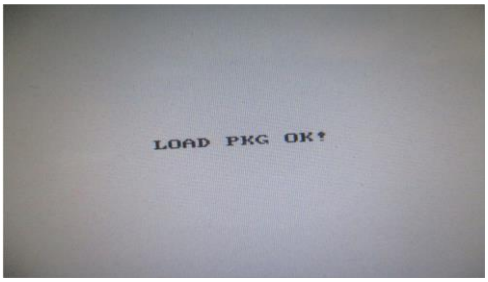


If at the end of the procedure the following messages appear loading has failed and must repeat the procedure as if you were installing a new panel.

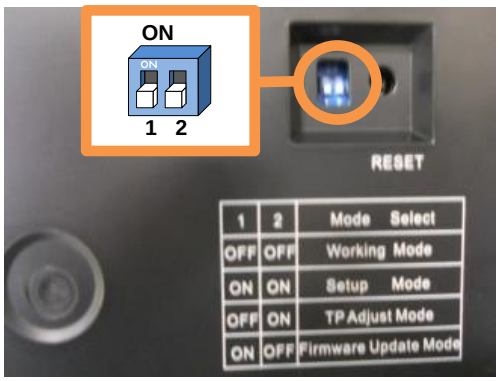




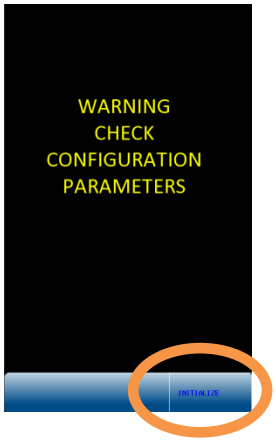
If at the end of the procedure the following message loading was successful



When the loading is complete, enable the Working Mode by putting the dip switches 1 and 2 to OFF, then press the RESET pushbutton.



If the panel is not initialized (update of previous software release) the warning page shown aside could appear. In this case, press the "INITIALIZE" button (at the lower right corner) to initialize the HMI, then turn off and on the machine. The warning window should no longer appear (HMI correctly initialized).
If the warning window doesn't appear, go ahead and press the RESET button.



The software installation procedure is now complete.

It's now necessary to run the **Default Parameters** and configuration of machine parameters and **Default Recipes** (see procedures) to fully restore the machine operation.

New installation K-GL070E-RO KINCO --- since January 2021

Code : 1490300034

The new Touch Screen panel is supplied as a spare part WITHOUT software

- Mount mechanically the new touch-screen panel in place of the faulty part.
- Wire electrically the new touch-screen panel.

Install the touch-screen panel software by following this procedure:

Retrieve the USB pen drive containing the original software versions which is supplied with the machine.

Robopac provides the original machine software with the USB 2.0 pen drive housed in the switchboard with all the technical machine documentation.

N.B.: In case it's necessary to create a new installation support (e.g: the original pen drive is lost) with a commercial pen drive:

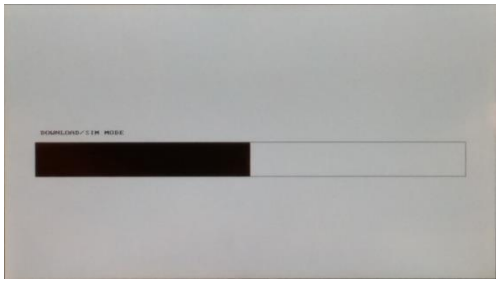
- *use a USB 2.0 pen drive only*
- *copy the PLC board software files provided by Robopac at first directory level of pen drive*

Insert the USB pen drive containing the original software version (file named TECHNOPLAT8.pkg) into USB plug (USB HOST) of the touch-screen panel

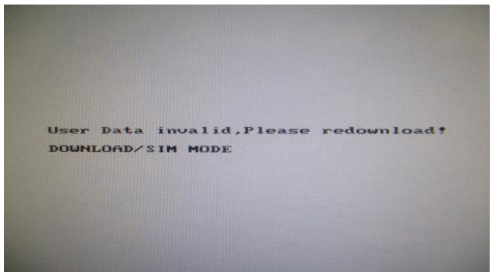
Switch on the machine

THE DOWNLOAD PROCEDURE IS AUTOMATIC

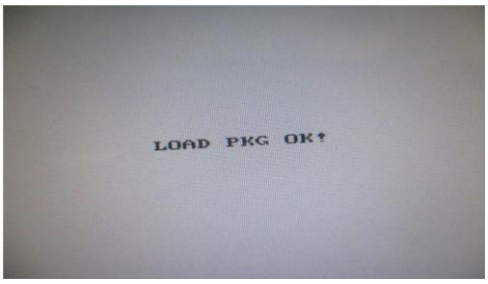
Wait for the end of the procedure



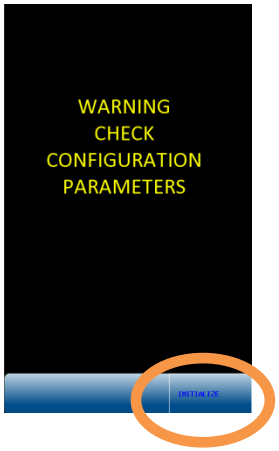
If at the end of the procedure the following messages appear loading has failed and must repeat the procedure as if you were installing a new panel.



If at the end of the procedure the following message loading was successful



If the panel is not initialized (update of previous software release) the warning page shown aside could appear. In this case, press the "INITIALIZE" button (at the lower right corner) to initialize the HMI, then turn off and on the machine. The warning window should no longer appear (HMI correctly initialized).
If the warning window doesn't appear, go ahead and press the RESET button.



The software installation procedure is now complete.

It's now necessary to run the **Default Parameters** and configuration of machine parameters and **Default Recipes** (see procedures) to fully restore the machine operation.

Software update

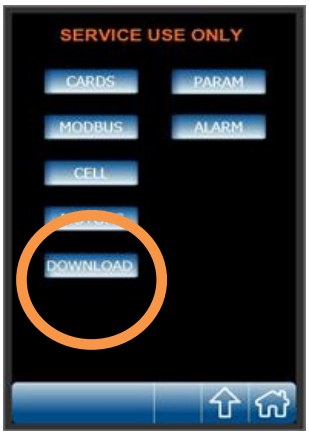
With the machine switched on, insert the USB pen drive containing the updated version of the panel software (file name: “TECHNOPLAT8.pkg”) into the USB port (“USB HOST”) of the touch-screen panel.

On startup screen, press the “Configuration” button: 

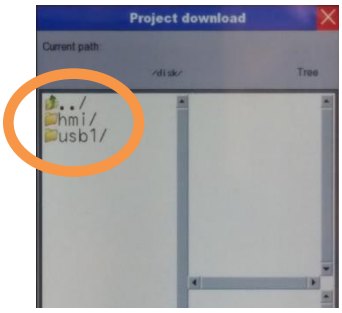
On Configuration page, press the “Service” button: 

On Service page, press the “Download” 

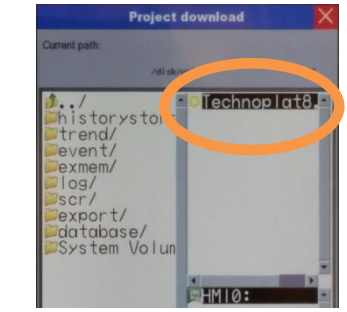
button to open the file manager:



On the file manager left panel, press “**usb1/**”.



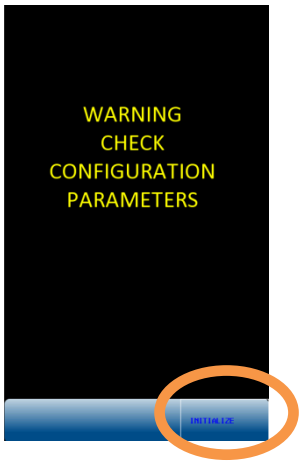
On the file manager right panel, select the file **“TECHNOPLAT8.pkg**”.



Press the “**OK**” button and wait until the software update ends.

When loading ends, a communication error page could appear.
Switch off and on the machine to reinitialize the communication and cancel the error.

If the panel is not initialized (update of previous software release) the warning page shown aside could appear. In this case, press the "INITIALIZE" button (at the lower right corner) to initialize the HMI, then turn off and on the machine. The warning window should no longer appear (HMI correctly initialized).
If the warning window doesn't appear, go ahead and press the RESET button.



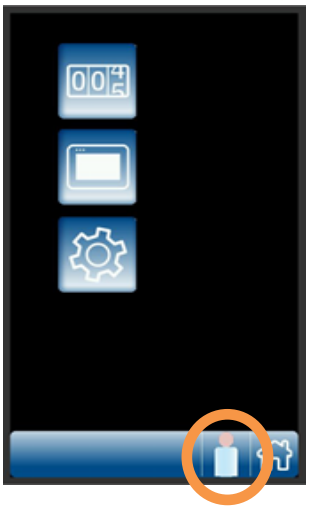
It's now necessary to run the **Default Parameters** and configuration of machine parameters and **Default Recipes** (see procedures) to fully restore the machine operation.

Default Parameters and re-configuration of machine parameters

After the software installation on touch screen panel (USB HOST), it's necessary to execute the "Machine Parameters Default" by following this procedure:

On startup screen press the Configuration button 

On Configuration page press the user password selection button.



Select the "maintenance technician" user level by pressing the user icon  until the icon  appears.

Now, on the onscreen keyboard  enter the password **6161**, then press 

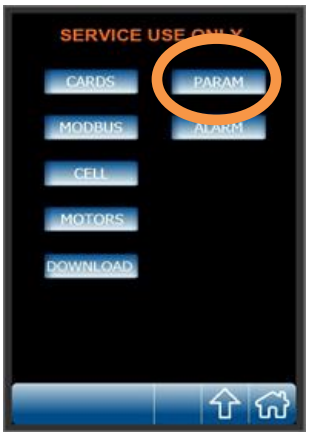
.

If the password is correctly entered and accepted, the Configuration page returns, with the “maintenance technician” icon on the bottom status bar.

Press now the Service button:

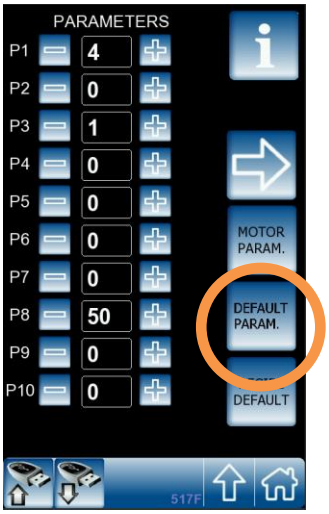
On “Service” page, press the “PARAM”  button

to enter the Page 1 of Machine Parameters.



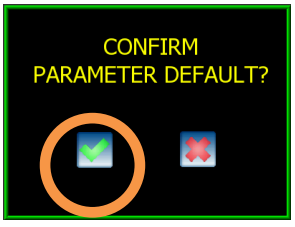
Press the 

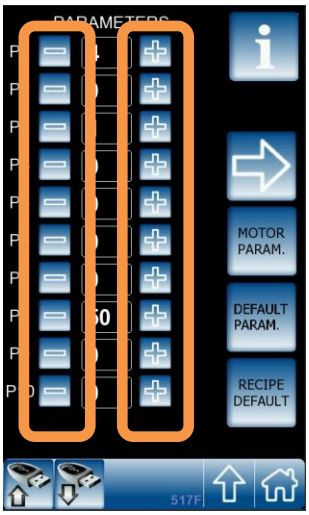
button to start the procedure for setting all machine parameters with their default values.



Confirm with the green button  to complete the **Parameters Default** procedure. In this way, the Parameters Default is performed.

Press the red button  *to abort the **Parameters Default** procedure.*





Depending on machine configuration, use the  and  buttons to modify the appropriate parameter values.

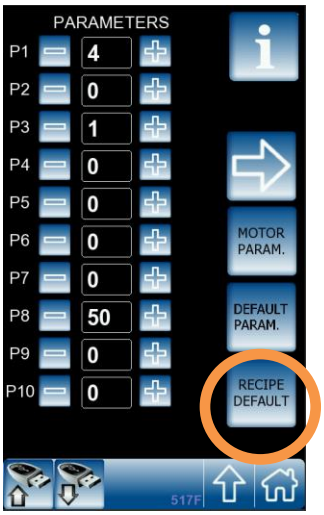
The new parameter value is automatically saved.

The Info button  shows the various parameters name.

Press the  button to change the parameters page.

Recipes Default

After the Parameters Default procedure, or to reinitialize all work program recipes, it's necessary to perform the Recipes Default procedure in the following way:



Press the "RECIPE DEFAULT" 

button to start the procedure for setting all work program recipes with their default values.

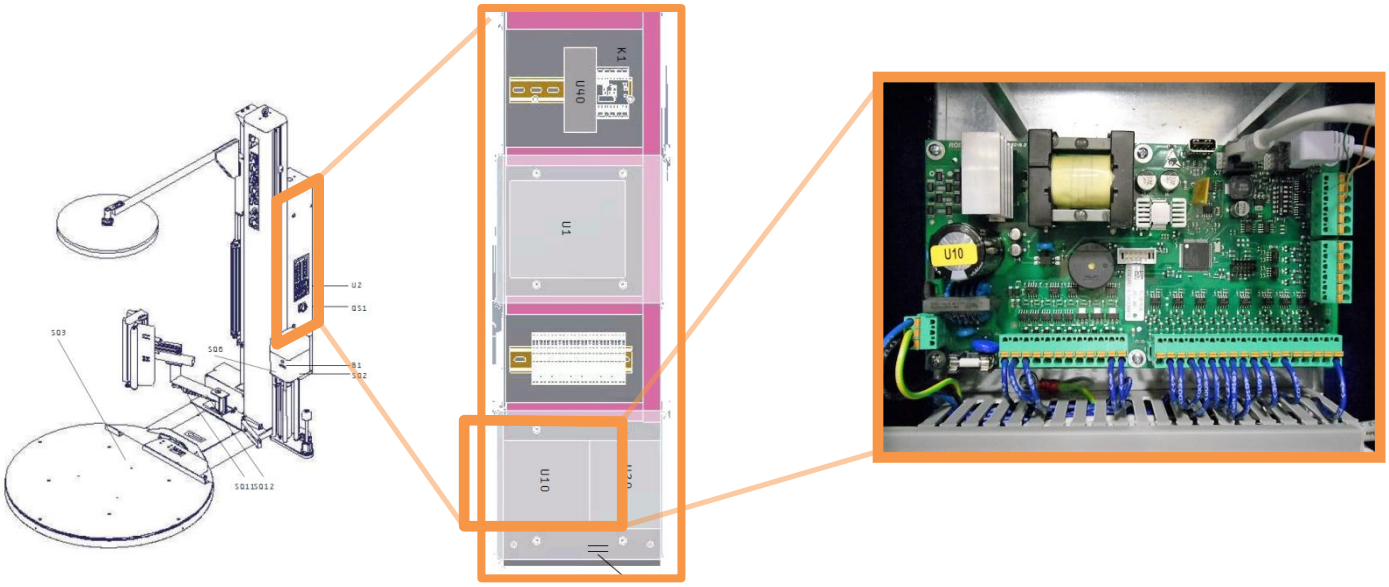
Confirm with the green button  to complete the **Recipe Default** procedure. In this way, the Recipes Default is performed.

Press the red button  *to abort the **Recipe Default** procedure.*

PLC CARD (U10)

New Installation or Software Update

This electronic card is supplied as spare part WITHOUT software.



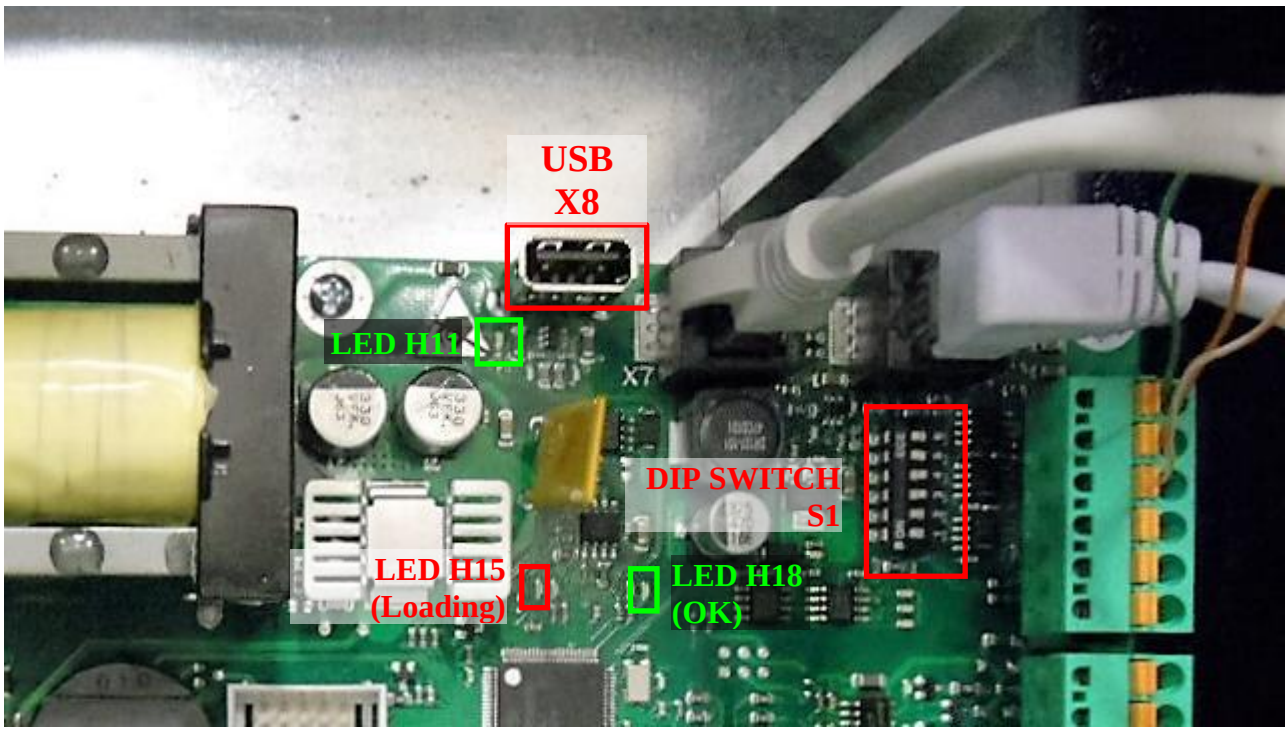
- Switch off the machine.
- Mount mechanically the new card in place of the faulty card.
- Wire electrically the new card.

Follow the PLC card software loading procedure as described below:

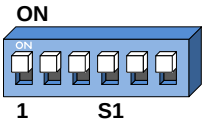
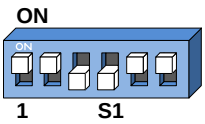
Retrieve the USB pen drive containing the original software versions which is supplied with the machine.

Robopac provides the original machine software with the USB 2.0 pen drive housed in the switchboard with all the technical machine documentation.
N.B.: In case it's necessary to create a new installation support (e.g: the original pen drive is lost) with a commercial pen drive:

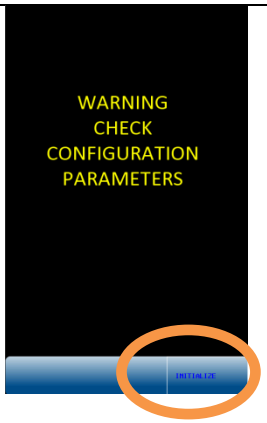
- *use a USB 2.0 pen drive only*
- *copy the PLC board software files provided by Robopac at first directory level of pen drive*



- Insert the USB pen drive into the port (X8 - USB), highlighted in red.
- Switch on the machine by turning the main switch.
- The green LED H11 begins to flash, indicating that the software download is in progress.
- The red LED H15 goes off as soon as the download of the software is successfully completed, and simultaneously the green LED H18 begins to flash.
- Switch off the machine.
- Remove the USB pen drive.
- Place the S1 switches of the card as follows:

Machine model: **FR**	
Machine model: **PDS – PVS**	

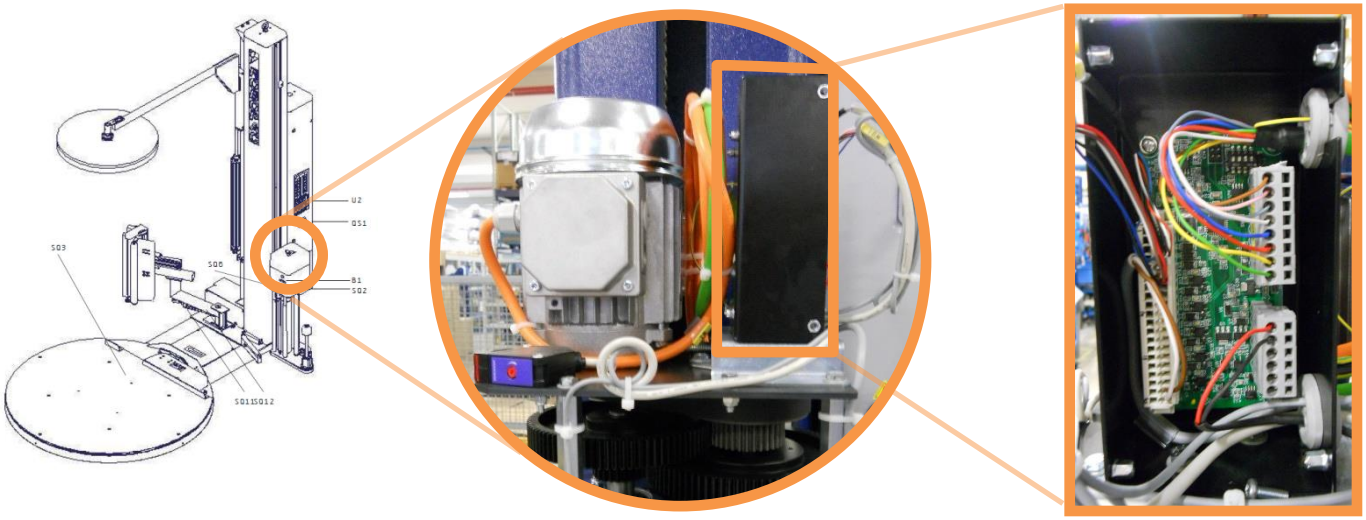
If the panel is not initialized (update of previous software release) the warning page shown aside could appear. In this case, press the "INITIALIZE" button (at the lower right corner) to initialize the HMI, then turn off and on the machine. The warning window should no longer appear (HMI correctly initialized).
If the warning window doesn't appear, go ahead and press the RESET button.



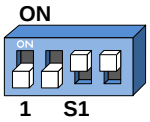
EXPANSION CARD (U11)

New Installation on the carriage of the PDS - PVS version machines.

This electronic card is provided as spare part COMPLETE with software.



- Switch off the machine.
- Mount mechanically the new card in place of the faulty card.
- Wire electrically the new card.
- Place the S1 switches of the card as follows:



- Switch on the machine.
- Remove the film from the last carriage reel (the one connected to the load cell)
- Calibrate the load cell by following the procedure below:

On startup screen, press the “Configuration” button 

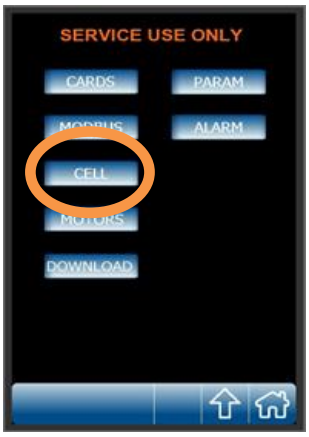
On Configuration page press the user password selection button  .

With the onscreen keyboard  enter the password **1111**, then press  .

If the password is correctly entered and accepted, the Configuration page returns, with the “maintenance technician” icon on the bottom status bar.

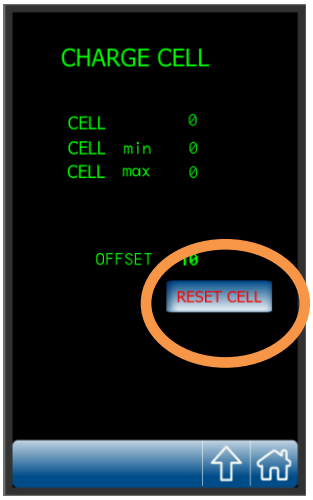
Press now the Service button: 

LOAD CELL CALIBRATION



On “Service” page press the “CELL” button 

To access the Load Cell Calibration page.



Press the Reset Cell button 

to perform the calibration.

The new “CELL min” value must be about 10 units higher than the present value of “CELL”, while the “CELL max” value is equal to:

*CELL min + (internal machine parameter P20) * 10*

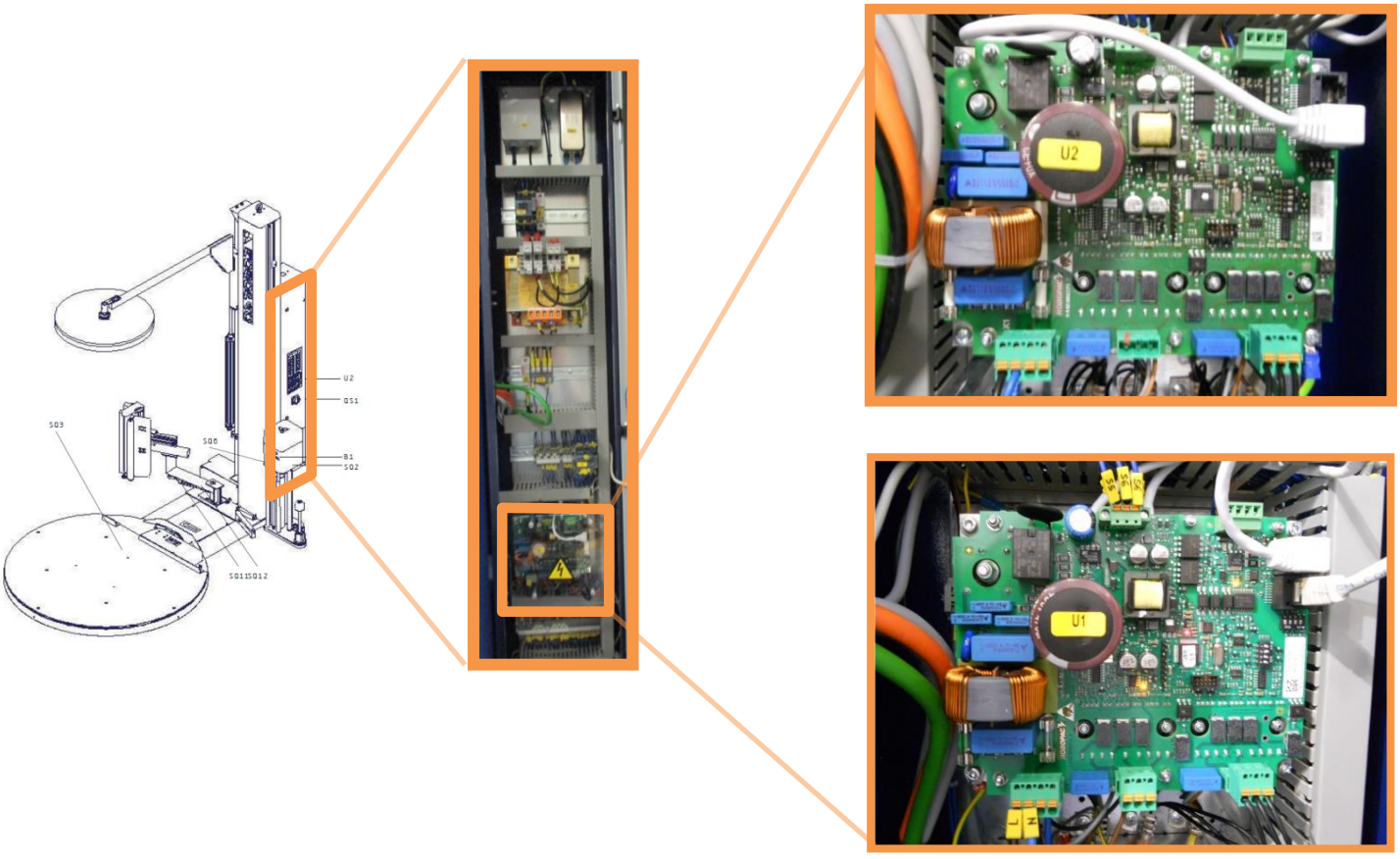
N.B.: CELL values are acceptable when in range:

CELL min	CELL max
– 35	+ 15

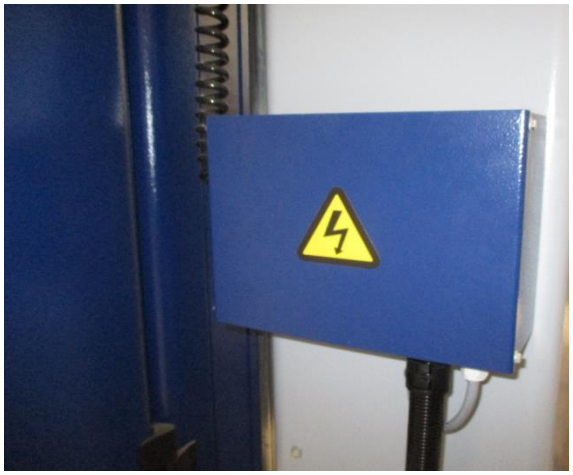
INVERTER CARD (U1 – U2 – U5)

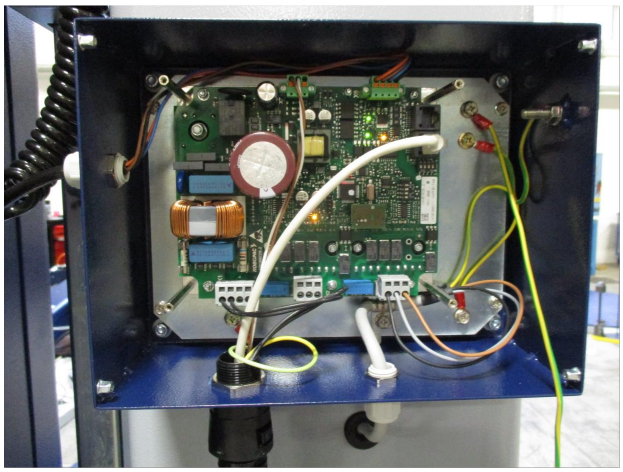
New Installation

This electronic card is provided as spare part COMPLETE with software.

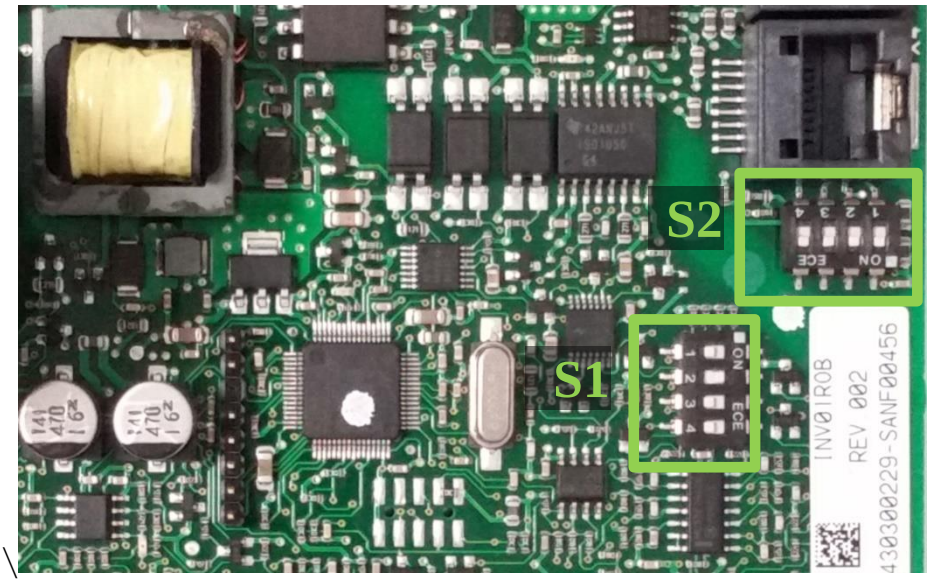


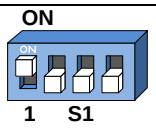
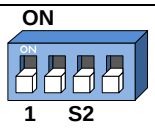
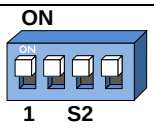
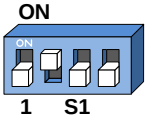
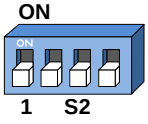
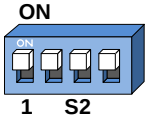
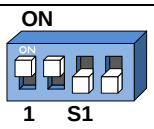
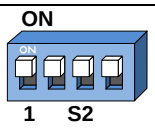
Mechanical Pressure Unit (Optional)





- Switch off the machine.
- Mount mechanically the new card in place of the faulty card.
- Wire electrically the new card.
- Place the S1 and S2 switches of the card as follows:

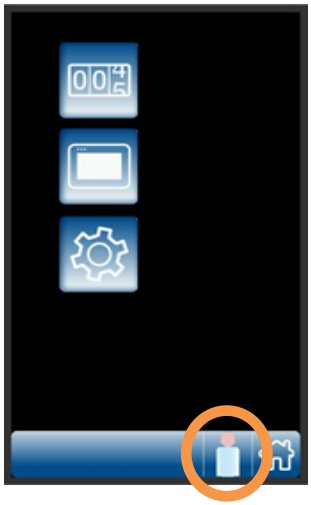


Inverter Card U1 - Table Rotation Motor - Carriage Up/Down Motor		 **if U2 and/or U5 PRESENT**	 **if U2 and U5 NOT PRESENT**
Inverter Card U2 (Pre-stretch Motors) - PDS Pre-stretch Reel Motor - PVS Pre-stretch Reel Motor		 **if U5 PRESENT**	 **if U5 NOT PRESENT**
Inverter Card U5 (Pressor Motor) - Pressor Lifting Motor (OPTIONAL)			

- Switch on the machine
- Set the card configuration using the following procedure:

On startup screen press the Configuration button 

On Configuration page press the user level password selection button.

Select the “maintenance technician” user level by pressing the user icon  until the icon  appears.

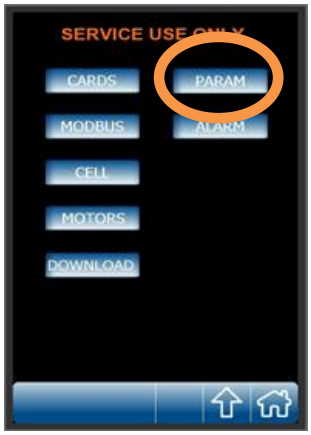
Now, on the onscreen keyboard  enter the password **6161**, then press 

.

If the password is correctly entered and accepted, the Configuration page returns, with the “maintenance technician” icon on the bottom status bar.

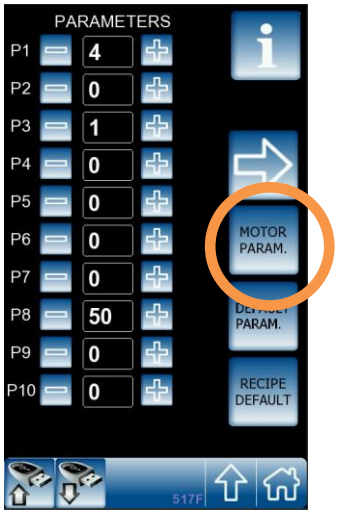
:

Press now the Service button: 



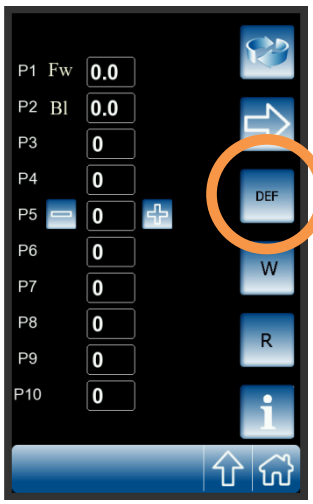
On “Service” page, press the “PARAM” button 

to enter the Page 1 of Machine Parameters.



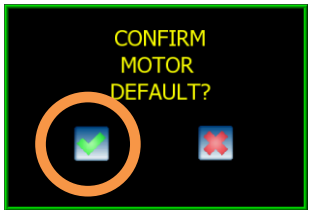
Press the 

button to start the procedure for setting all machine parameters with their default values.



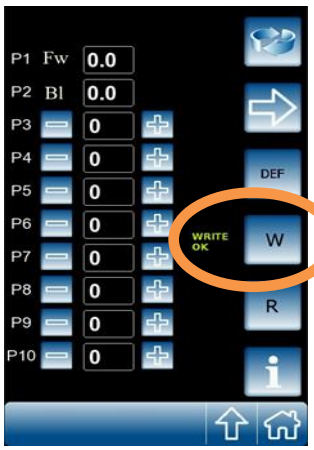
The "DEF" 

button starts the procedure for setting ALL motor parameters with their default values.



Confirm with the green button  to complete the **Motors Parameters Default** procedure.

Press the red button  *to abort the* ***Motors Parameters Default*** *procedure.*



To send the new inverter board the default parameters necessary press the W button until the message “WRITE OK” appears on the screen, to confirm the new value has been correctly written.

In this way, the new card configuration is finished.

Motor parameters modification

Normally the modification of motors parameter is not necessary and it has to be specified by Service staff. At “maintenance technician” user level, the only modifiable parameter is the “Acceleration” parameter P5. To modify any other parameter, please contact Service staff.

The button at the top right shows the motor that is currently selected, in the following order:

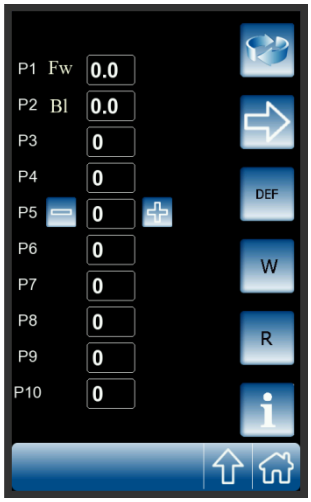
 Turntable motor parameters

 Roll Carriage Up/Down motor parameters

 Stretch control motor parameters

 Pre-stretch control motor parameters

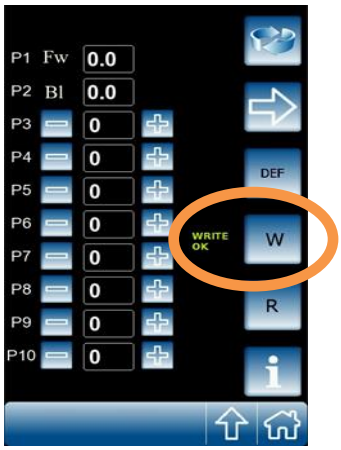
 Vertical pressure platen motor parameters



Press the  button to display the next page.
Each engine has 20 parameters (2 pages)

The Info button  displays the name of various parameters.

At "Robopac technician" user level, if it is necessary to change the value of a motor parameter, after the parameter modification by the  and  keys, it’s necessary to press the  button until the message “WRITE OK” appears on the screen, to confirm the new value has been correctly written.



PRODUCT HEIGHT DETECTION PHOTOCELL CALIBRATION

Standard photocell (for clear products)

Adjust the photocell sensitivity trimmer to load centre

Dark product photocell

Suppression distance setting

1. *Object detection*

Position object to detect in front of the sensor at the distance required.
Turn distance adjustment trimmer (ADJ) to minimum: yellow LED OFF and green LED ON.

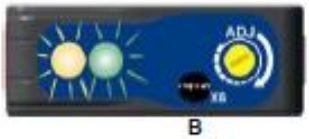
Rotate trimmer in a clockwise direction until the yellow LED and green LED turn ON. *Object detection condition* (A status of position indicator)

A

2. *Background suppression*

Remove object and ensure that the background is in front of the sensor: yellow LED OFF and green LED ON.

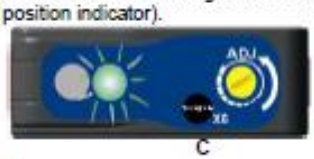
Rotate trimmer in a clockwise direction until the yellow LED and green LED turn ON: *background detection condition* (B status of position indicator).



B

The trimmer reaches maximum level with yellow LED OFF if the background is outside the operating range.

Rotate trimmer in an anticlockwise direction until yellow LED turns OFF and green LED ON: *condition where background is outside operating range* (C status of position indicator).

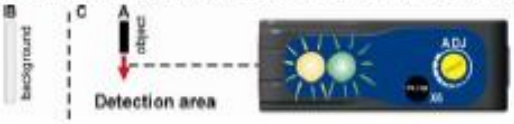


C

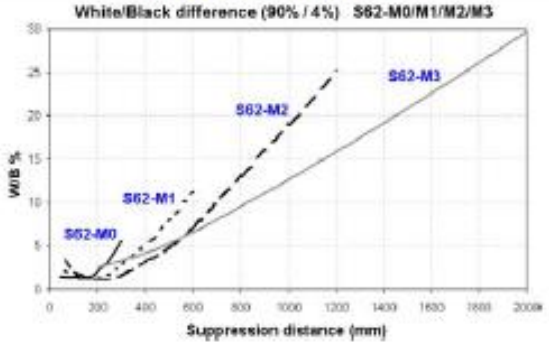
3. *Setting and control*

Rotate trimmer in an anticlockwise direction until the indicator reaches an intermediate point between position A and C.

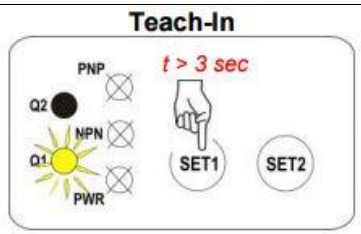
If position A and C are close to each other, leave trimmer on position C.
The sensor is now ready to function correctly and in stable conditions:



DETECTION DIAGRAM



Photocell for black products S65 – time of flight

	Place the target at the center of the pallet
	Keep pressed the Set1 button for more than 3 seconds, till led Q1 flashing
	Release the button, target detected

R-CONNECT DEVICE ACTIVATION

	R-Connect devices registration check that the FW Release and GSM FIELD have values other than 0 Check that the LED at the top next to the Rconnect logo is GREEN (Modbus OK) Press the 'REGISTER' button and wait until all 4 LEDS are green	

REMOTE CONTROL INSTALLATION & SETTING --- until September 2016 ---

To install the remote control it is necessary to perform the procedure of RX & TX codes in self-learning of the receiver.

New code setting

1.1. Set the dip switch 1 & 2 to OFF.
1.2. For the channel 1, press the button P1 till the related led will become ON (LED1).
1.3. Press the (START) push button of the remote and keep it pressed until the second led will become ON too (the second led makes a blink).
1.4. Release the (START) push button of the remote
1.5. The receiver will confirm the successful setting by a double blinks (2) of the two leds
1.6. In case of failed setting, the receiver will turn OFF the related led of the channel and will not make any double blink of setting confirmation. If the memory of the codes is full, the receiver will advise this event by seven (7) blinks of the two leds.
1.7. For the channel 2, press the push button P2; the other operations works the same as above (setting the STOP push button of the remote).

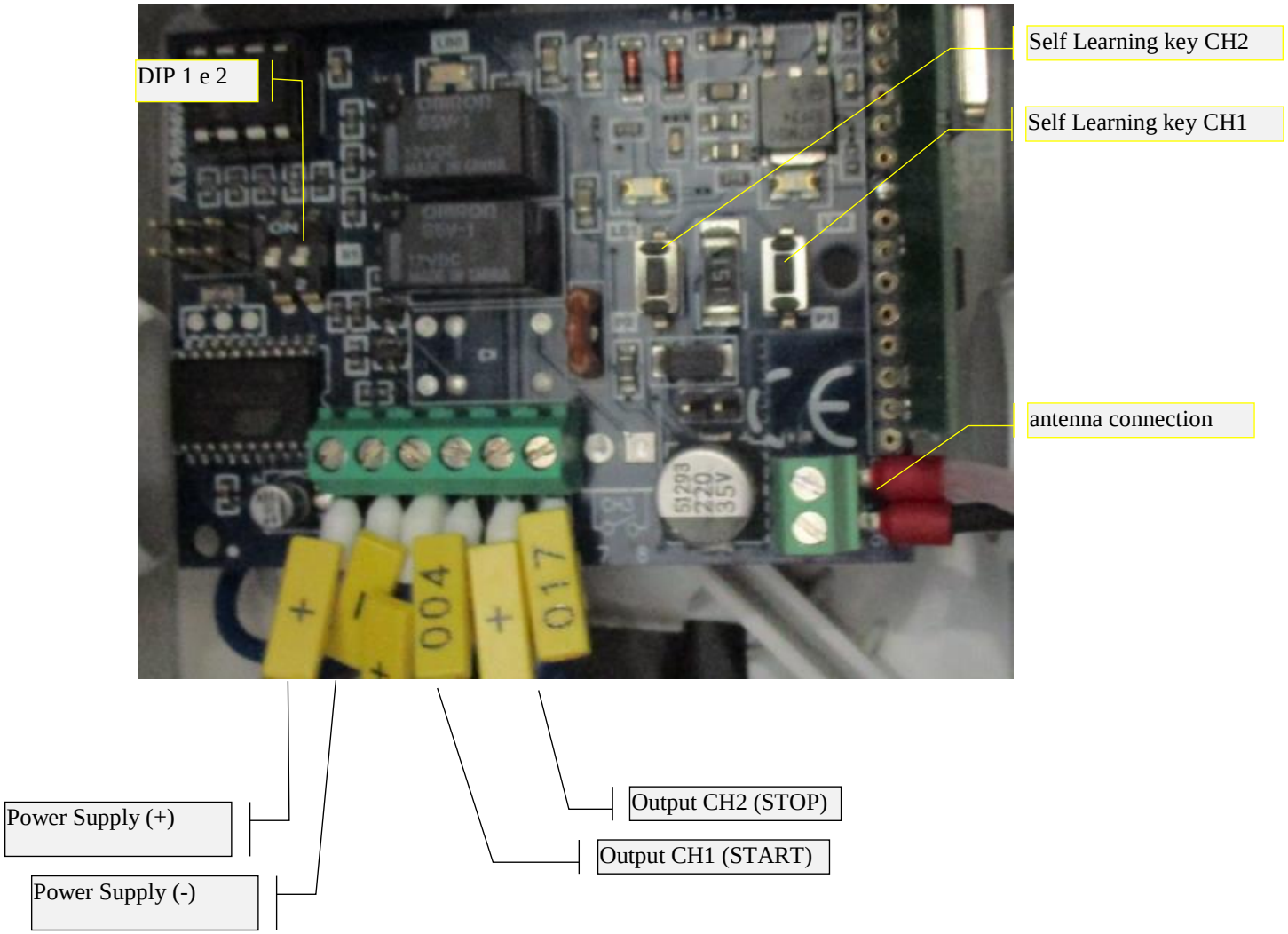
Set code deleting

2.1. Press the push button P1 (or P2) until the related led will become ON LED1 (or LED2).
2.2. Press the push button Ch.1 (or Ch.2) of the remote.
2.3. The receiver will confirm the successful deleting by five (5) blinks of the two leds
2.4. In case of failure on the receiver the related led of the selected channel and will not make the five blinks of confirmation.

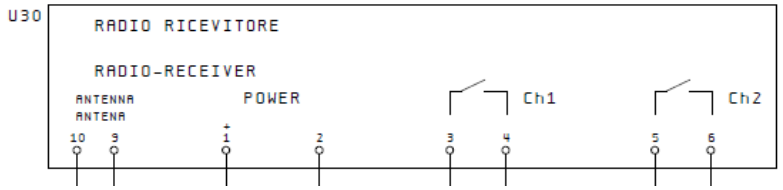
All set code deleting

3.1. Press the push button P1 until the LED1 will become ON and keep it pressed until it will become OFF again..
3.2. On the receiver will become ON the LED1, and after 7 seconds will become OFF again giving confirmation of the deleted codes.

RECEIVER RADIO CARD (code 1430300157)



RECEIVER RADIO CARD DESCRIPTION



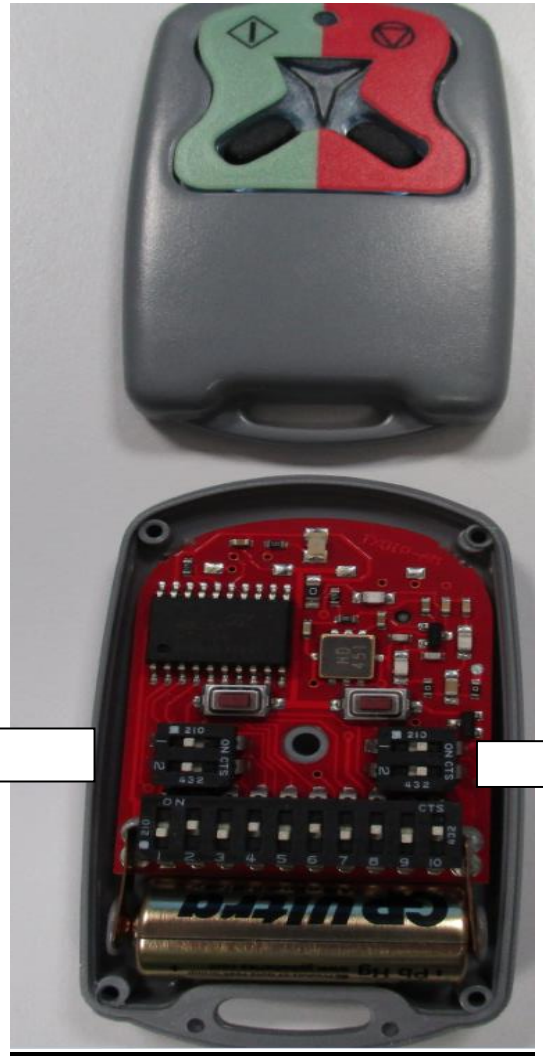
ELECTRICAL CONNECTION

9,10	Central “Antenna” – Sock “Antenna”
3,4	N.O. contact channel 1 (START)
5,6	N.O. contact channel 2 (STOP)
1	0 V ac,dc
2	+12V,+24V ac,dc

TECHNICAL CHARACTERISTICS

Power supply	+12V,+24V ac,dc
Consumption	50 mA
Receiver Frequency	433.92 MHz e 30.875 MHz
Min / Max. temperature of workng	-25°C +70°C
Dimensions	+12V,+24V ac,dc

REMOTE CONTROL EMITTER CARD CONFIGURATION (code 0590300000)

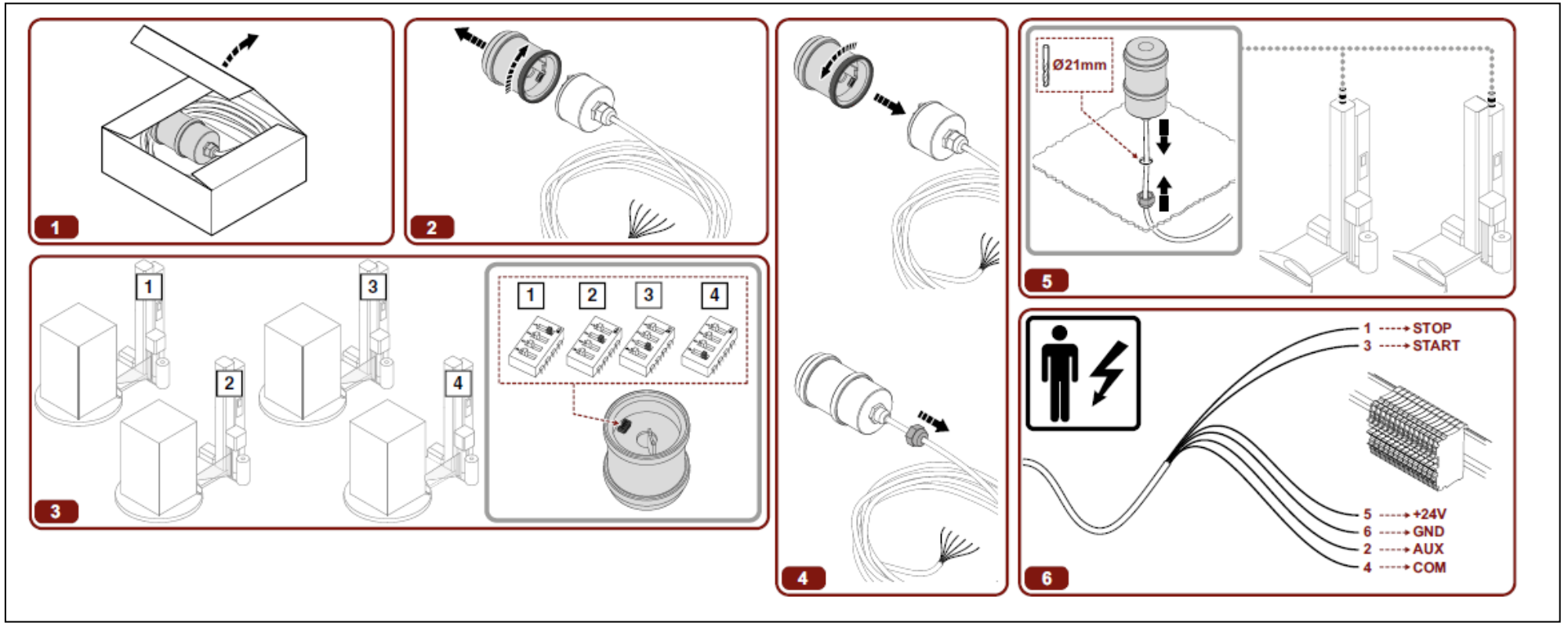


Set these two dip-switch to OFF position (on left side))

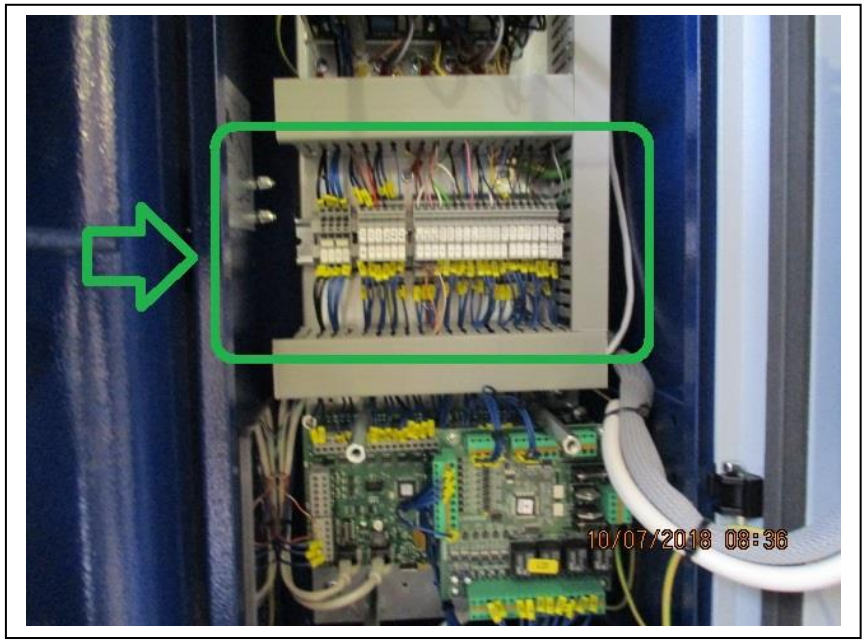
Set these two dip-switch to ON position (on right side)

NEW RADIO CONTROL INSTALLATION --- from September 2016 ---

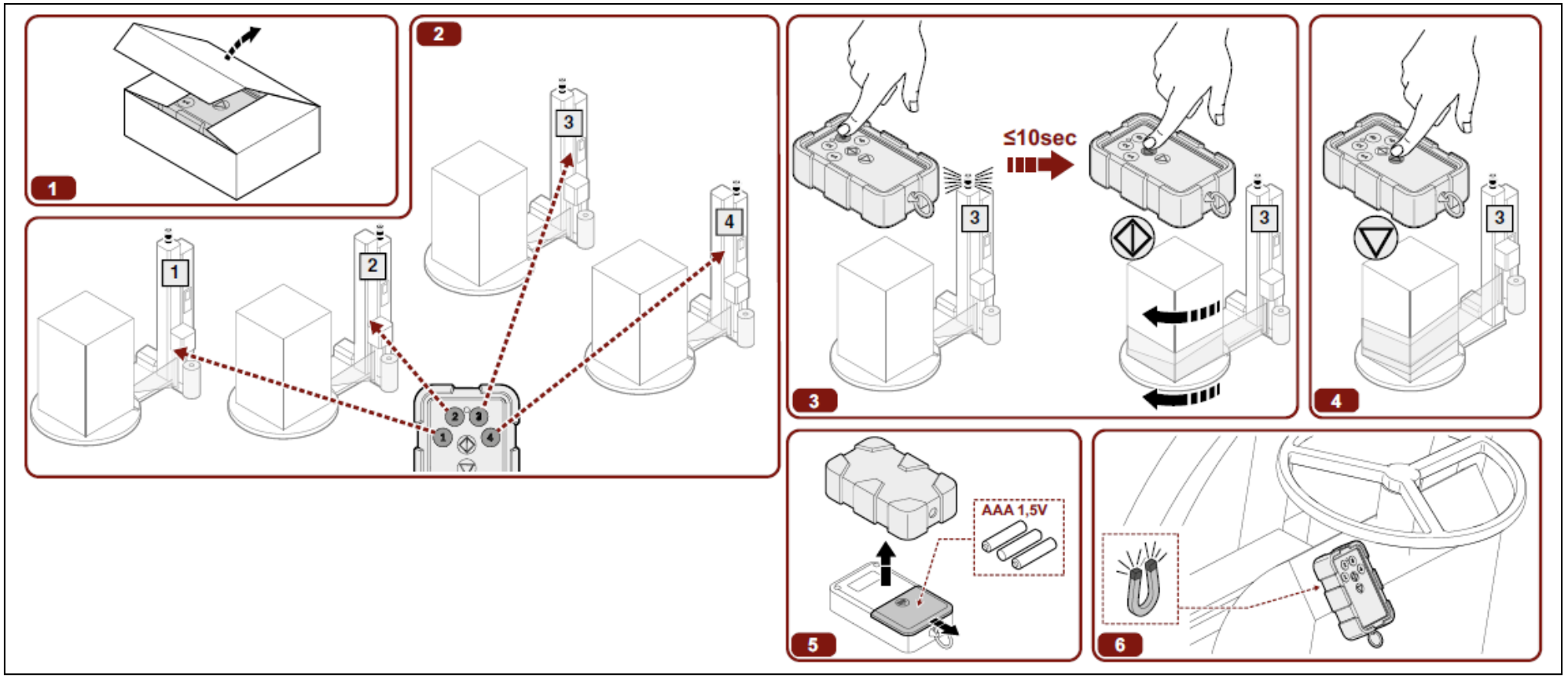
RECEIVER Installation



Check the wiring diagram for the correct connection to machine connector



TRANSMITTER Installation



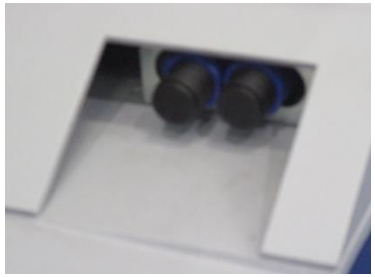
MECHANICAL ROPING DEVICE CALIBRATION

If setting a percentage value of the mechanical roping device (for example 25% or 65% …)
the device does not reach the correct position but “oscillates” around the set height --- > roping device calibration is required

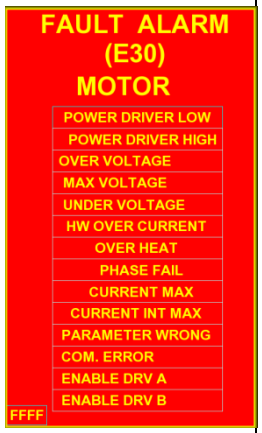
- check the value of the parameter P36 (max roping stroke)
- set the roping device to 50%
- start the cycle
- stop the cycle when the roping reaches the set height
- enter with the Service PSW 6161 
- select the manual roping device page and press ROPING SETUP
- check the COUNT value (it has to be COUNT = P36/2)
- if COUNT < P36/2 decrement P40 of P36/2 – COUNT
- se COUNT > P36/2 increase P40 of COUNT – P36/2

ALARM LIST AND TROUBLESHOOTING

Alarm code	Alarm description	Troubleshooting	Cause of the fault	Solution
	Emergency push button pressed			Turn and lift the mushroom head button and press RESET
		Check the SB1 emergency press button contact	Contact broken	Replace the SB1 emergency limit stop contact
	Carriage descent Safety Alarm 	Carriage descent emergency	Obstacle between floor and carriage	If the obstacle cannot be manually removed, turn the key button and manually lift the carriage.
		Check the conditions of the limit stop connected to the emergency plate.	The safety limit stop connected to the metallic plate is broken	Replace the mechanical limit stop

TRANSPALLET ALARM (E 03)	Forklift photocell alarm  	Check emergency photocell alignment with the reflector.	Incorrect photocell alignment with reflector	Newly align the photocells
		Check correct emergency photocell operations	Photocells damages or wiring disconnected	Replace the emergency photocell or fix wiring
			The machine PLC main board is defective	Replace the PLC main board.
	Roller lock forklift photocell alarm	Check photocell alignment with the reflector	Improper alignment photocell with reflector	Newly align the photocell.
		Check correct emergency photocell operations	Photocells damages or wiring disconnected	Replace the emergency photocell or fix wiring.
			The machine PLC main board is defective	Replace the PLC main board.

	Active protection barriers.	Remove any obstacle that blocks the barriers photocells.	Probable misalignment of the barriers photocells	

<table>
<tr>
<td rowspan="3"> 

Motor Index:
1 = Table rotation
2 = Carriage
3 = Stretch
4 = Pre-Stretch
5 = Top Platten (Pressure)</td>
<td rowspan="3"><u>Fault motore</u>

POWER DRIVER LOW/HIGH
Incorrect voltage Motor Enable

ENABLE DRV A/B
Absence Motor Enable

OVER / MAX / UNDER VOLTAGE
Incorrect voltage Motor supply

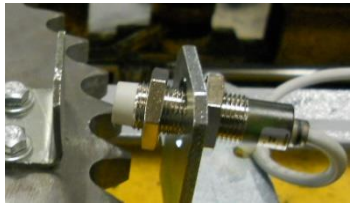
OVER HEAT
High temperature

PHASE FAIL
Motor incorrectly connected

CURRENT (INT) MAX
Overcurrent (short / full) of the motor (as a function of motor parameters)

HW OVER CURRENT
Instantaneous overcurrent (non programmable)

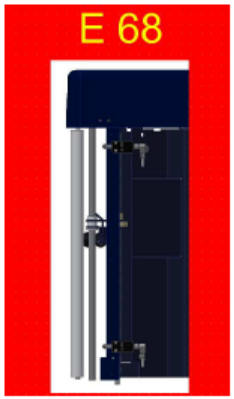
COMM.ERROR
Comunication error (see 83)</td>
<td rowspan="2">Disconnect the motor indicated in the error message from the inverter card and start a cycle.</td>
<td>If the error message no longer appears, it could be a motor fault</td>
<td>Replace the motor.</td>
</tr>
<tr>
<td>If the message persists, it could be an inverter card fault</td>
<td>Replace the inverter card.</td>
</tr>
<tr>
<td>Possible gear motor fault.</td>
<td>Possible gear motor fault.</td>
<td>Replace the gear motor</td>
</tr>
</table>

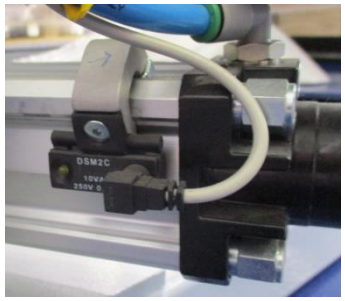
FILM BREAK ALARM (E60)	Film break alarm for carriages with driven pre-stretch only			Replace the film reel on the carriage or re-attach the edge of the film to the product and press START.
		Check correct load cell operations (extensometer)	The load cell does not send the signal to the signal amplifier board.	Replace the load cell (extensometer).
			The load cell correctly operates	Replace the cell signal amplifier/pre-stretch motor inverter board.
TURNTABLE PHASE ALARM (E61)	Table rotation alarm  	Check revolution counter sensor position (the alarm appears with there is no PLC input signal for at least 2 table revolutions)	Incorrect sensor position.	Correctly reposition the sensor
		Check correct sensor operations	Possible sensor and relevant wiring fault	Replace the sensor
		Check IN07 input on the PLC board	Possible PLC board fault	Replace the PLC board.

SPEED CARRIAGE ALARM (E 64)	Carriage speed alarm 	The carriage is not lifted at the set speed. Check correct carriage encoder positioning.	Incorrect sensor position.	Correctly reposition the sensor
		Check correct carriage encoder operations and wiring	Possible encoder sensor fault or wiring fault.	Replace the sensor or restore wiring
		Check the carriage speed encoder sensor input on the U1 board (lower level). The H3 led blinks quickly.	Possible U1 board fault (lower level).	Replace the U1 board (lower level).

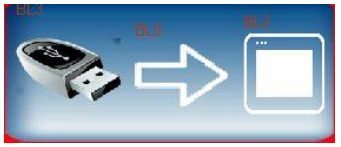
TOP PLATEN ALARM (E 65)	Top platen (Pressure) blocked alarm 	The pressure platen did not reach the product (or limit stop) within the set time. Check motor drive	Possible motor fault.	Replace the motor
		Check pressure sensors on plate and limit stop	Possible sensor or limit stop and relevant wiring fault	Replace the sensor or limit stop or restore wiring
WELDING ALARM (E 66)	Anomaly of the current flow in the Welder circuit	Check electrical connections of the welder circuit.	The welder relays may be blocked.	

	Low air pressure in the pneumatic circuit 	Check air connection in the pneumatic system.	Lack of air in pneumatic system	

	MECHANIC roping position Alarm	The roping failed to reach the set altitude within 10 seconds.	Mechanic problem	Check for any mechanical obstructions
			Encoder sensor problem	Check correct position and operation of the encoder sensor
			Wrong value of the P40 parameter (roping stop)	Change the parameter P40
	MECHANIC roping Alarm	Roping hardware alarm: example overload, voltage, brake.	Problem with the roping fuse	Check the fuse correct position and / or change it
			Problem with the cables of the roping device group	Check and fix the correct wiring connection

ARM POSITION ALARM (E 73)	Attempting to start the cycle with the -Welding cutting arm on the correct setting of back. Exceeded time-out for -Welding cutting arm not in the correct position of forward.  	Check the air pressure in the pneumatic system	Lack air in the pneumatic system or failure of the link.	
		Check the back position sensor on the cutting-welding arm. Check the forward position sensor on the cutting-welding arm.	Possible failure of the sensor arm into back position or failure associated wiring. Possible failure of the sensor arm into forward position or failure associated wiring.	Sensor replacement or restore wiring.

 **INVERTER1** (Table Rotation + Carriage) **INVERTER2** (Stretch + pre-Stretch) **INVERTER3** (Top Platten) **PRES03ROB** (Control Card for load cell) **HMI** (Touch screen Panel) **IOEXP** (I/O Expansion)	The screen shows the electronic cards that show the communication alarm simultaneously.	Check connections with the various devices **Note. To exit the alarm screen, press the button hidden in the upper right vertex**	Possible communication wire fault	Replace connection wire
		Try connecting one device at a time. **Note. To exit the alarm screen, press the button hidden in the upper right vertex**	Possible electronic board fault	Replace the electronic board.

	Wrong configuration of parameters The list of parameters is not 'consistent with the value of Csum stored.	When the machine turn on it was found a discrepancy between the configuration parameters stored in the memory and the set.	Possible is a "damaging the machine configuration parameters	Restore the correct parameters by copying from the USB stick with the machine  Or, to manually set the parameters, press the button 
E90	Emergency Feedback alarm	During machine start up, checking the status of contactor has failed.	Check the contactor release and / or its connections.	Replace the contactor, or restore correct wiring.

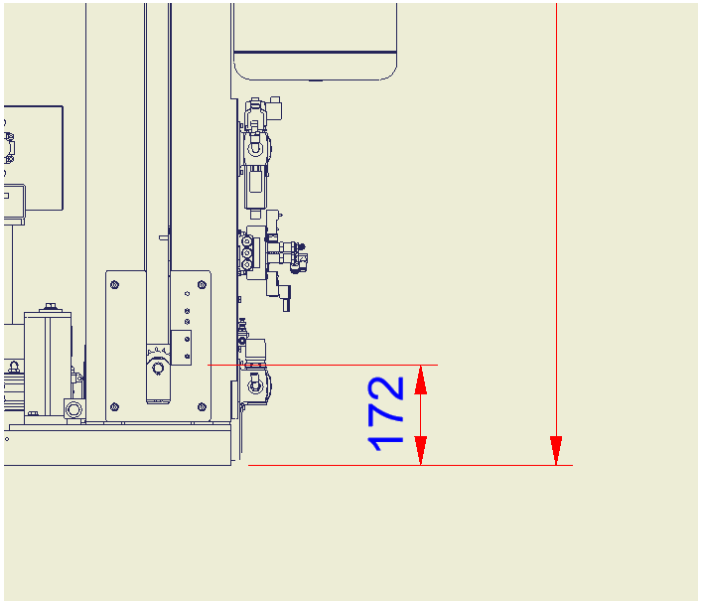
PNEUMATIC AND MECHANICAL ADJUSTMENT

Cutting ad welding arm adjustment

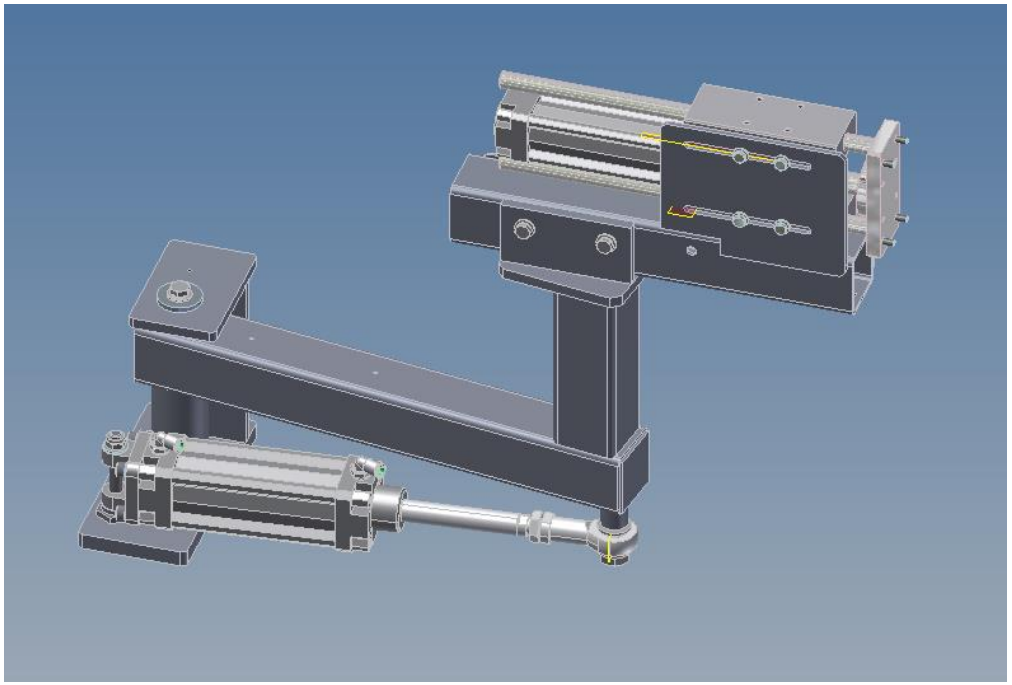
Pneumatic System

The general pressure reducer must be adjusted to 6 bar.
The buffer/welder pressure reducer must be adjusted to 2 bar.

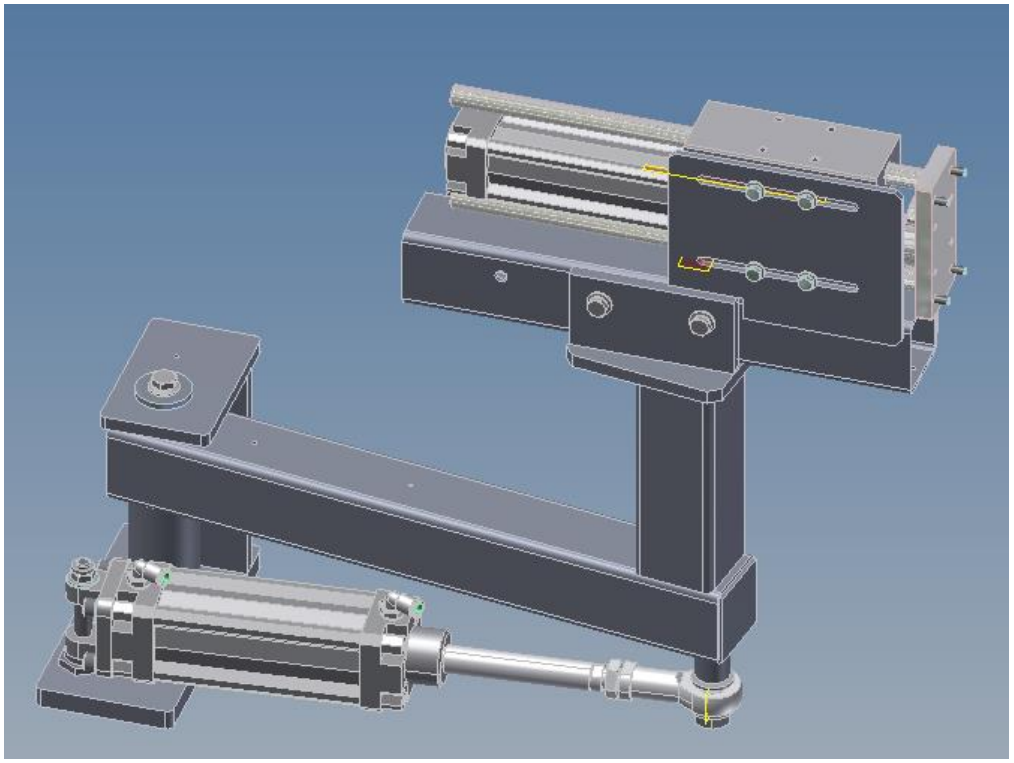
Low carriage cam.



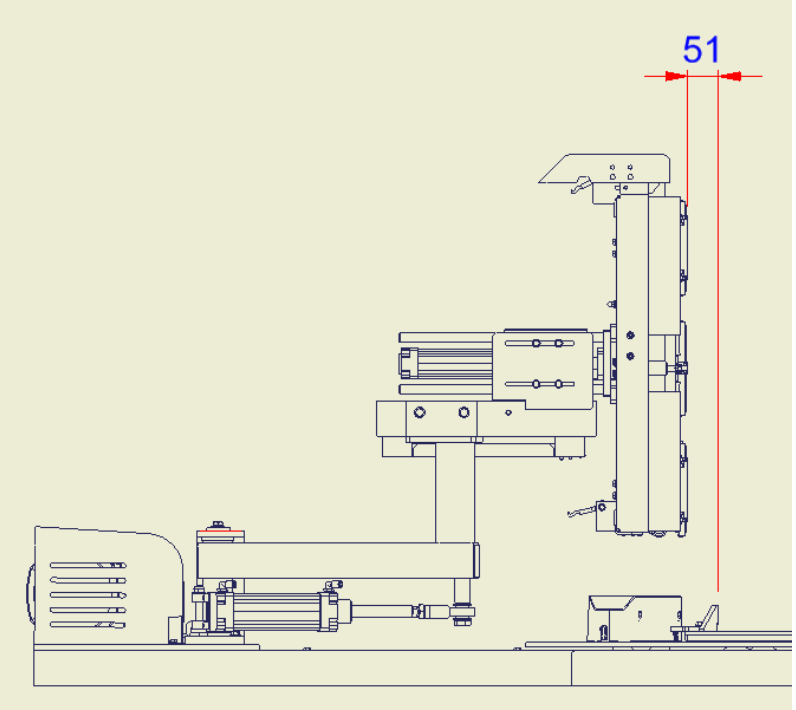
Arm Positioning for Plate diameter D=1650 mm

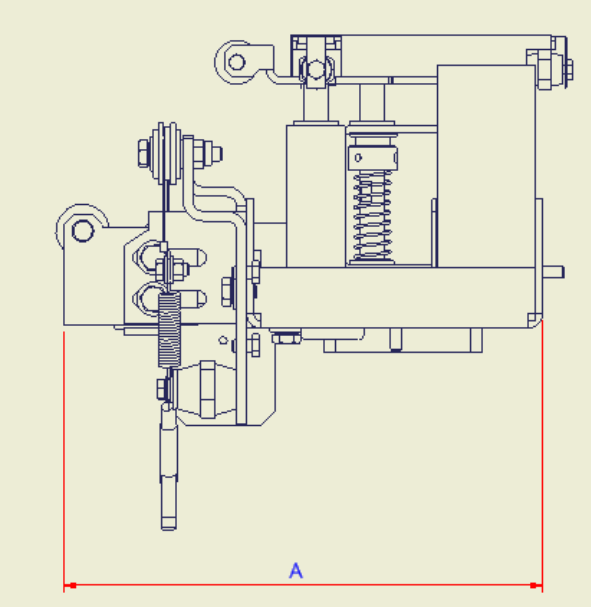


Arm Positioning for Plate diameter D=1800 mm



Welder Positioning (CW)





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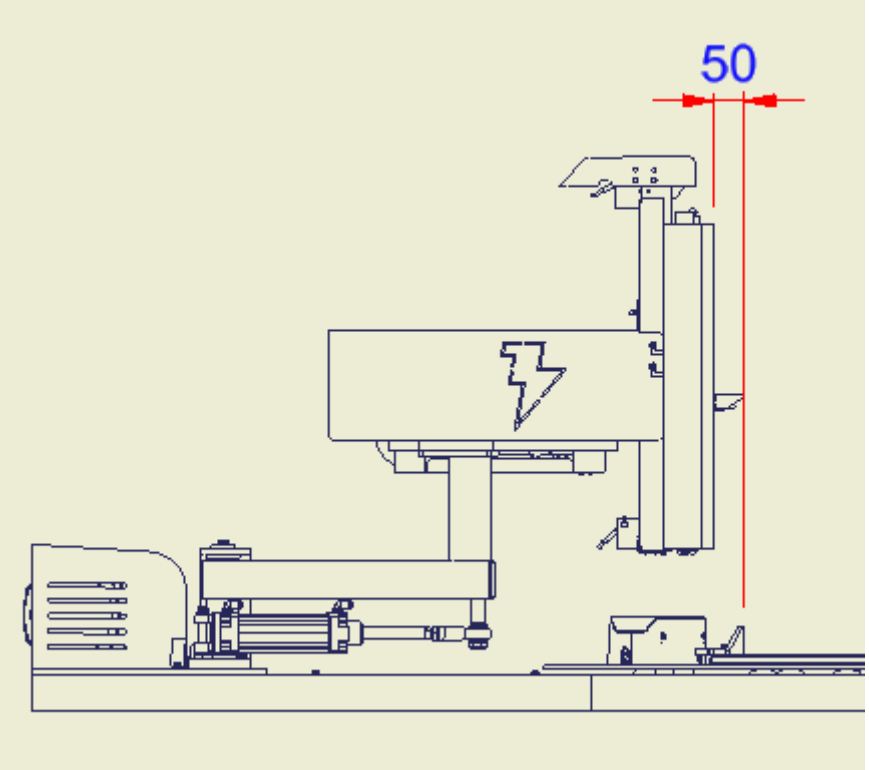
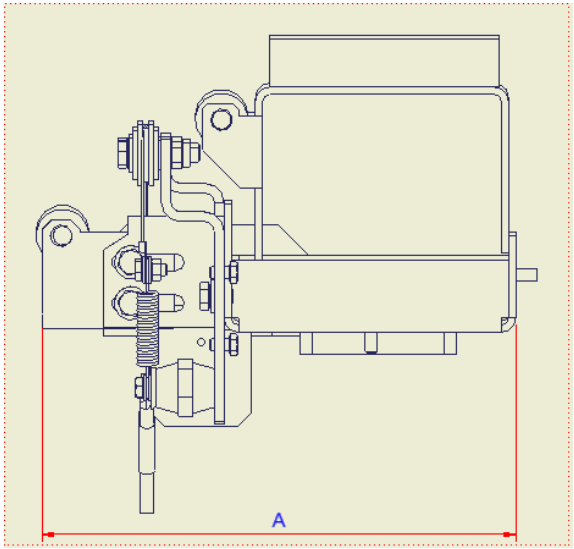
Spreader Positioning (CS)





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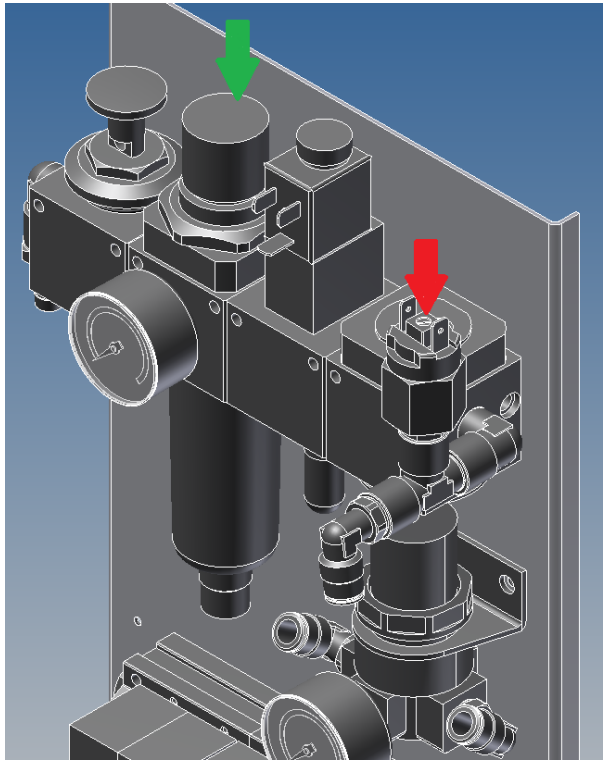
Pressure switch regolation

The pressure switch must be calibrated so that intervenes when the pressure on the falling edge reaches 1+/- 0,5 bar.



Turning the screw indicated by the red arrow to - the threshold value decreases, toward + increases.

1) Adjust the pressure with the knob indicated by the green arrow around 6 bar.
2) Turn the knob to lower the pressure until the pressure switch sends emergency machine.
3) Check the value indicated by the manometer.
4) Adjust the screw indicated by the red arrow accordingly
5) Repeat from step 1 until you get the desired value of intervention