

# TEMA 2

## **Echipa 2:**

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## 1. Descrierea sistemului

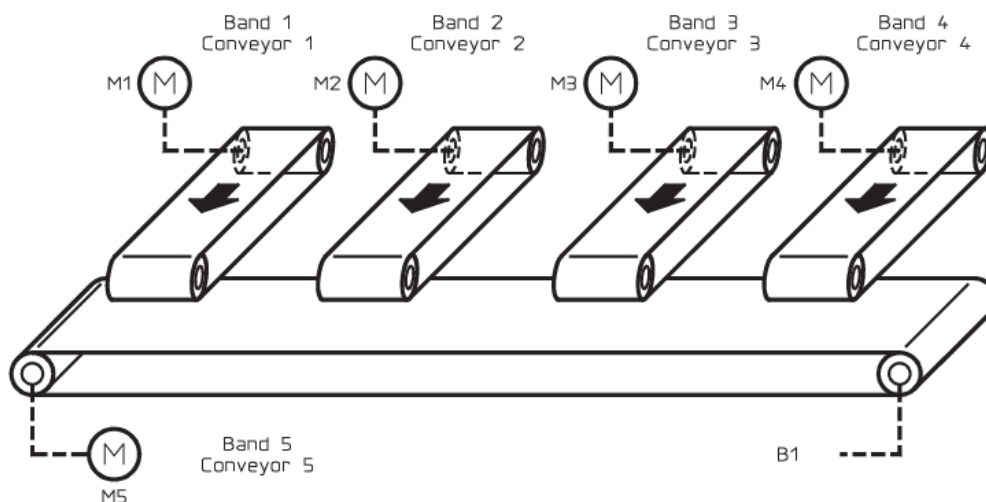
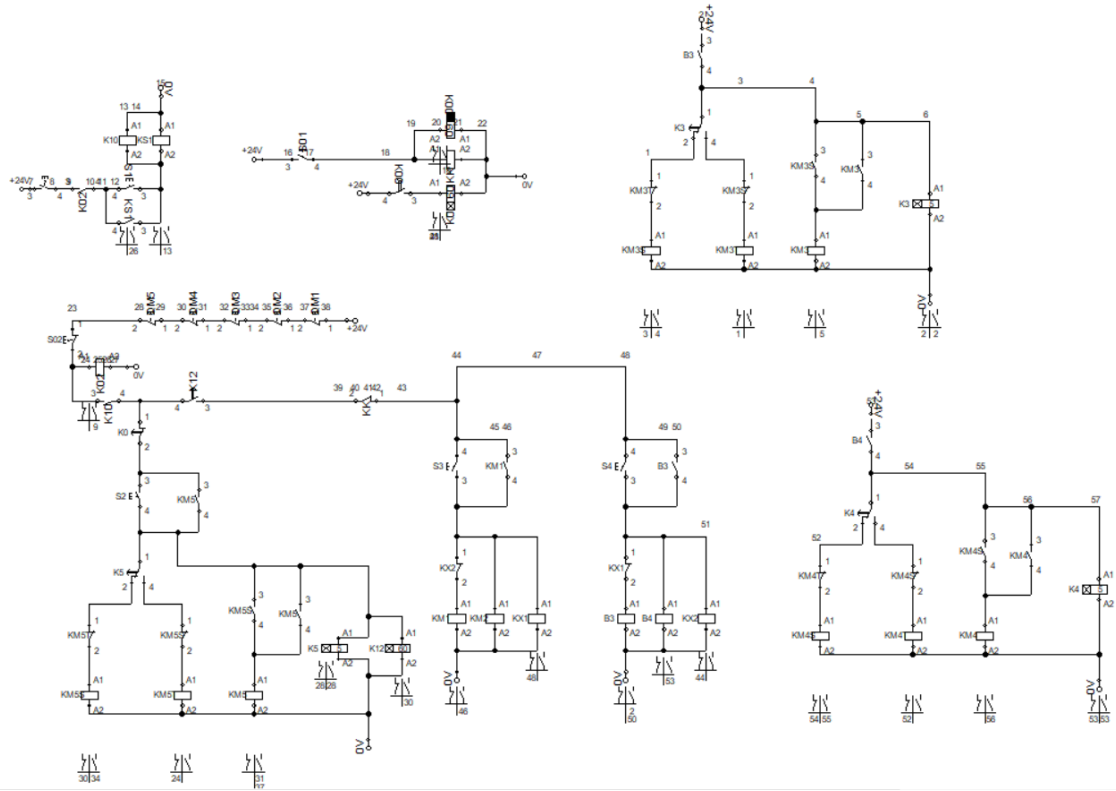


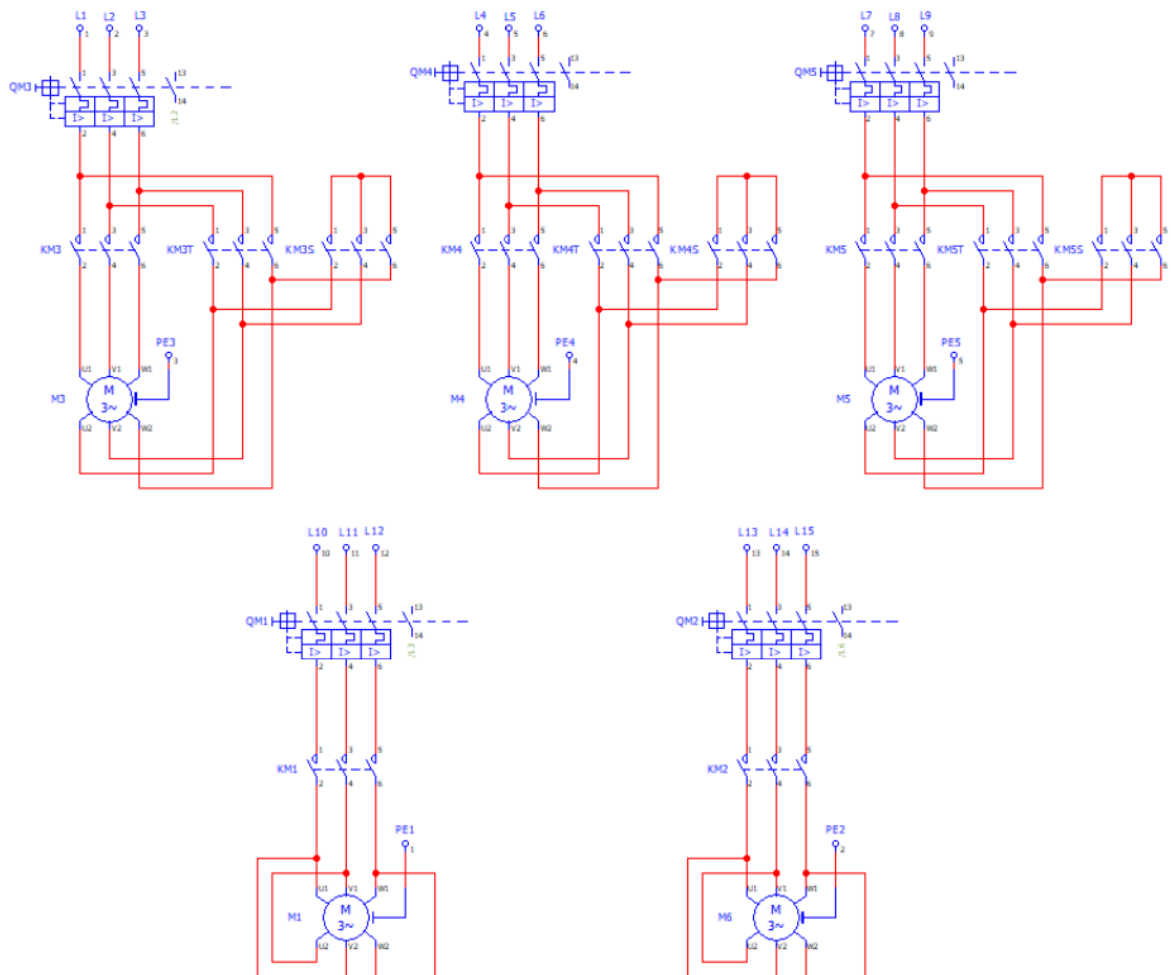
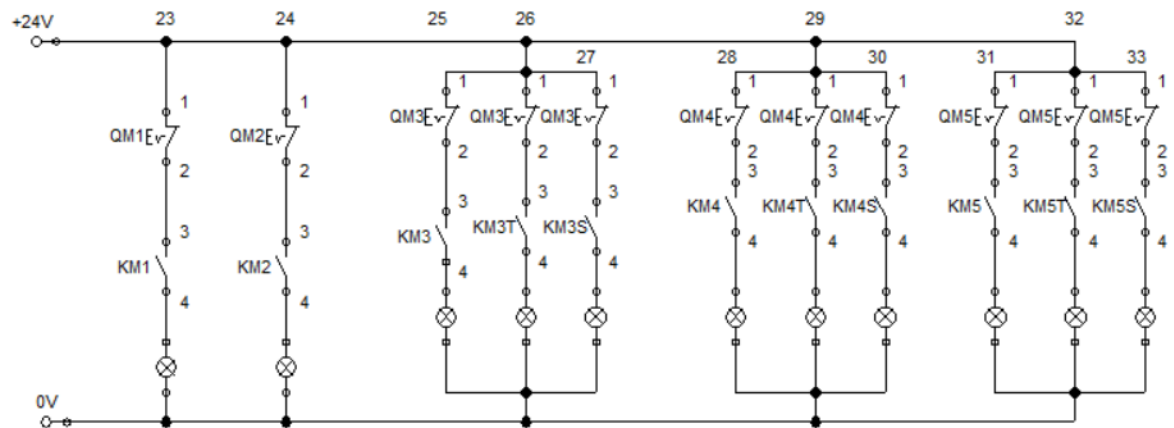
Fig. 1: Sistem de 5 benzi transportoare

Proiectul nostru constă într-un sistem format din cinci benzi transportoare. Fiecare bandă este acționată de un motor electric- banda BC1 este acționată de un motor M1, banda BC2 este acționată de un motor M2, banda BC3 este acționată de un motor M3, banda BC4 este acționată de un motor M4, iar banda BC5 este acționată de un motor M5. Banda BC5 este alimentată cu material de benzile BC1, BC2, BC3 și BC4. De asemenea, pentru a evita supraîncărcarea benzii BC5, vor fi pornite în același timp doar 2 benzi de alimentare (fie BC1 + BC2, fie BC3+BC4).

## 2. Schema de comandă



### 3. Schema de forță



4. Componente



3RV10 11-1KA15- Circuit breaker  
size S00 for motor protection

Rated current	Suitable for induction motors with P	Setting range for thermal overload releases	Instantaneous overcurrent releases	Short-circuit breaking capacity at 400 V AC	Screw terminals	Weight per PU approx.	DT	Cage Clamp terminals
12 A	5.5 kW	9 ... 12 A	156 A	50 kA	3RV10 11-1KA15	0.297 kg	B	3RV10 11-1KA25



3RV10 21-4DA15- Circuit breaker  
size S0 for motor protection

Rated current	Suitable for induction motors with P	Setting range for thermal overload releases	Instantaneous overcurrent releases	Short-circuit breaking capacity at 400 V AC	Screw terminals	Weight per PU approx.	DT	Cage Clamp terminals
25 A	11 kW	20 ... 25 A	325 A	50 kA	3RV10 21-4DA15	0.382 kg	-	-



3RV10 21-4DA15- Circuit breaker  
size S2 for motor protection

Rated current	Suitable for induction motors with P	Setting range for thermal overload releases	Instantaneous overcurrent releases	Short-circuit breaking capacity at 400 V AC	Screw terminals	Weight per PU approx.	DT	Cage Clamp terminals
40 A	18.5 kW	28 ... 40 A	520 A	50 kA	3RV10 21-4DA15	1.047 kg	-	-





### 3RT19 16-2ED31- Timing relay

ON-delay (varistor integrated)

For contactors	Version	Time setting range t	Rated control supply voltage $U_s$	Screw terminals	Weight per PU approx.
3RT10 1, 3RH11	NO + NC	5...100 s	200...240 V	3RT19 16- 2ED31	0.090 kg



### 3RT19 16-2FL31- Timing relay

OFF-delay without auxiliary voltage

(varistor integrated)

For contactors	Version	Time setting range t	Rated control supply voltage $U_s$	Screw terminals	Weight per PU approx.
3RT10 1, 3RH11	NO + NC	5...100 s	200...240 V	3RT19 16- 2FL31	0.090 kg



3RH11 22-1AP00- Contactor relay

Rated operational current $I_e$ /AC- 15/AC-14 at 230 V	Contacts		Rated control supply voltage $U_s$	Screw terminals	Cage clamp terminals	Weight per PU approx.
	Ident. No.	Version				
6 A	22E	2 NO + 2 NC	230 V	3RH11 22- 1AP00	3RH11 22- 2AP00	0.200 kg



3SB22 03-1AC01 -  
EMERGENCY-STOP mushroom  
pushbuttons acc. to ISO 13850,  
latching

Version	Contact blocks	Color of handle	Flat connectors	Weight per PU approx.
Latches automatically when pressed; unlatches by turning the mushroom head anticlockwise, with yellow name plate, with inscription "NOT-HALT"	NC	Red	3SB22 03-1AC01	0.032 kg



B 3SB35 00-0DA31- Pushbuttons  
with flat button, latching - Yellow

Version	Inscriptions	Color of handle	DT	Order No.	Weight per PU approx.
Unlatches by pressing again	-	Yellow	B	3SB35 00-0DA31	0.080 kg



3SB36 02-0AA41- Pushbuttons  
with flat button, normally open -  
Green

Rated voltage of lamp	Color of handle	Contacts for front plate mounting	Screw terminals	Spring-type terminals	Weight per PU approx.
-	Green	NO	3SB36 02-0AA41	3SB36 02-0AA41-0CC0	0.090 kg



3SB36 03-0AA21- Pushbuttons  
with flat button, normally closed -  
Red

Rated voltage of lamp	Color of handle	Contacts for front plate mounting	Screw terminals	Spring-type terminals	Weight per PU approx.
-	Red	NC	3SB36 03-0AA21	3SB36 03-0AA21-0CC0	0.090 kg



3LD2 724-7UK01- Changeover  
switch with knob-operated  
mechanism

Main contact elements	The contacts Rated data at 50 Hz ... 60 Hz, 380 V ... 440 V			DT	Order No	Weight per PU approx.
	P/AC-3	P/AC-23A	I <sub>u</sub>			
3	30 kW	37 kW	100 A	A	3LD2 724-7UK01	1.061 kg





3RT10 24-1AP04- Contactor for  
Switching Motors- NO / NC

AC-2 and AC-3, Tu: Up to 60 °C		AC-1, Tu: 40 °C Operational current I <sub>e</sub> up to 690 V	Auxiliary contacts		Rated control supply voltage U <sub>s</sub> at 50 Hz	Screw terminals	Cage Clamp terminals for coil terminals	Weight per PU approx.
Operation al current I <sub>e</sub> up to 400 V	Rating of induction motors at 50 Hz and 400 V		Ident. No.	Version				
12 A	5.5 kW	40 A	22 E	2 NO + 2 NC	230 V	3RT10 24- 1AP04	-	0.400 kg