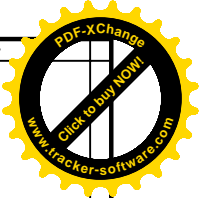


# SORTATEC<sup>®</sup> GMBH

## SORTIER- UND ANLAGENTECHNIK

Circuit diagram  
for  
street-mobile non-ferrous metals  
separator  
Pro HM1-S 2044-1/11.19

Sortatec GmbH  
Auf den Bleeken 1  
21709 Düdenbüttel  
Tel.: 0 41 44 / 69 89 7-0  
Fax.: 0 41 44 / 69 89 7-270



Customer: Goudsmit Magnetic Systems

Petunialaan 19  
5582 HA Waalre,  
Niederlande

Project: PRO HM1-S 2044-1/11.19

Office: Sortatec GmbH  
Auf den Bleeken 1  
21709 Düdenbüttel

Wiring colours:

Black : Power unit

Red : 230V controlling

Blue : Null controlling

Dark blue : 24VDC

Reference:  
Sortatec holds the copyrights of this  
circuit diagram. Every reproduction or  
and passing on to third parties is  
impermissible and will be prosecuted.

Protection type: Ip55

Total connected load : 63A

Operating Voltage: 400V

Control Voltage : 230V

Planner:

### Terminal allocation

X1 : Drives  
X2 : Emergency shut-off, start-up warning  
X3 : Hydraulic + solenoid valves hydraulic buttons

Circuit diagram No.:

Location:

Description :  
System cover sheet

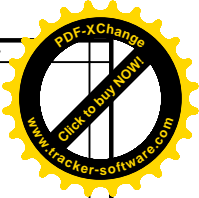
Project :  
PRO HM1-S

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07.04.2020

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001	General cover sheet	07.04.2020
002	System cover sheet	07.04.2020
003	Tabel of contents	07.04.2020
004	Input / Control transformer	07.04.2020
005	Power section (part) 1	07.04.2020
006	Power section (part) 2	07.04.2020
007	Emergency stop control/ Motor protection	07.04.2020
008	Logo1 process module drive	07.04.2020
009	Logo2 process module rotation speed display	07.04.2020
010	Logo1 Inputs 230V	07.04.2020
011	Logo1 Outputs 230V (1)	07.04.2020
012	Logo1 Outputs 230V (2)	07.04.2020
013	Hydraulic control setup (1)	07.04.2020
014	Hydraulic control setup (2)	07.04.2020
015	Frequency converter control	07.04.2020
016	Frequency converter parameters	07.04.2020
017	Overview of drive and current consumption	07.04.2020

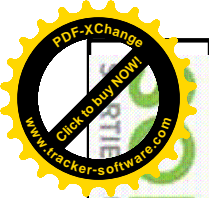
Description :  
Table of contents

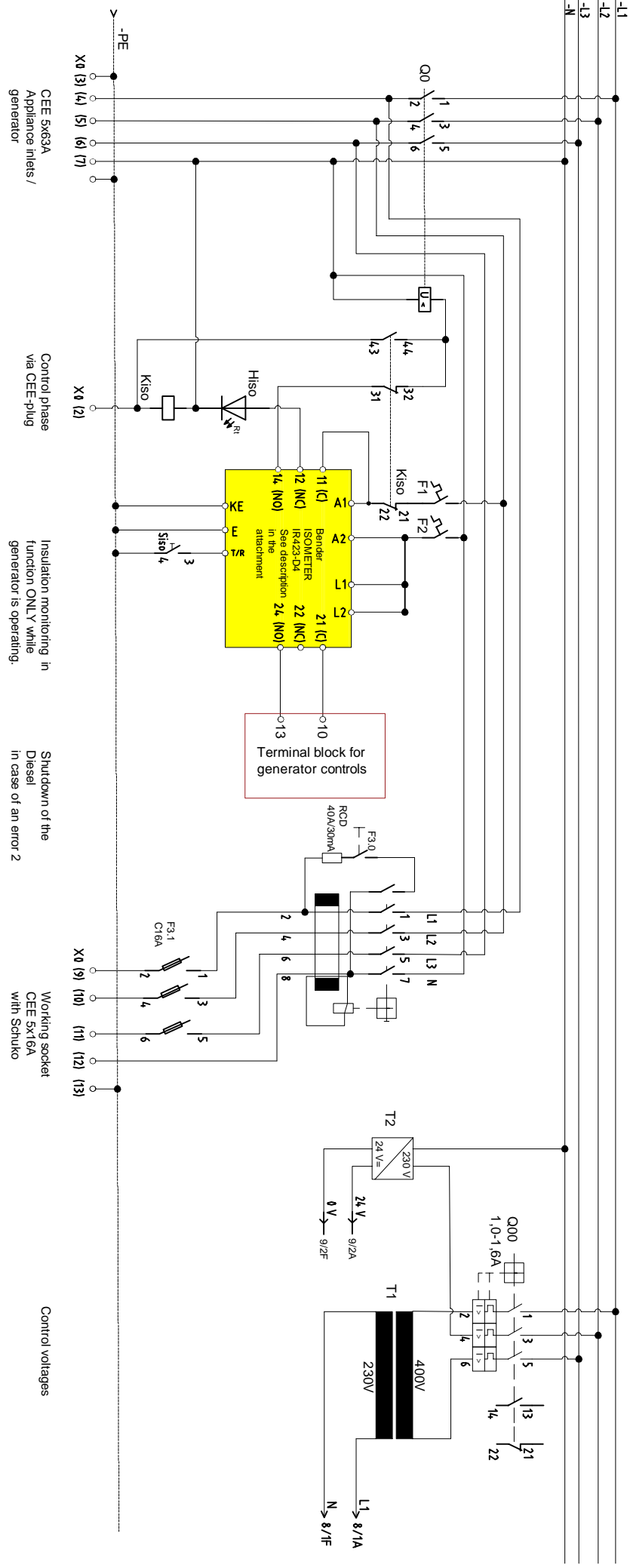
Project :  
PRO HM1-S

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07.04.2020

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**Description:**  
Input / Control transformer

**Project :**  
PRO HM1-S

**Planner :**

**Date :**  
07.04.2020

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CEE 5x63A  
Appliance inlets /  
generator

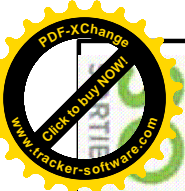
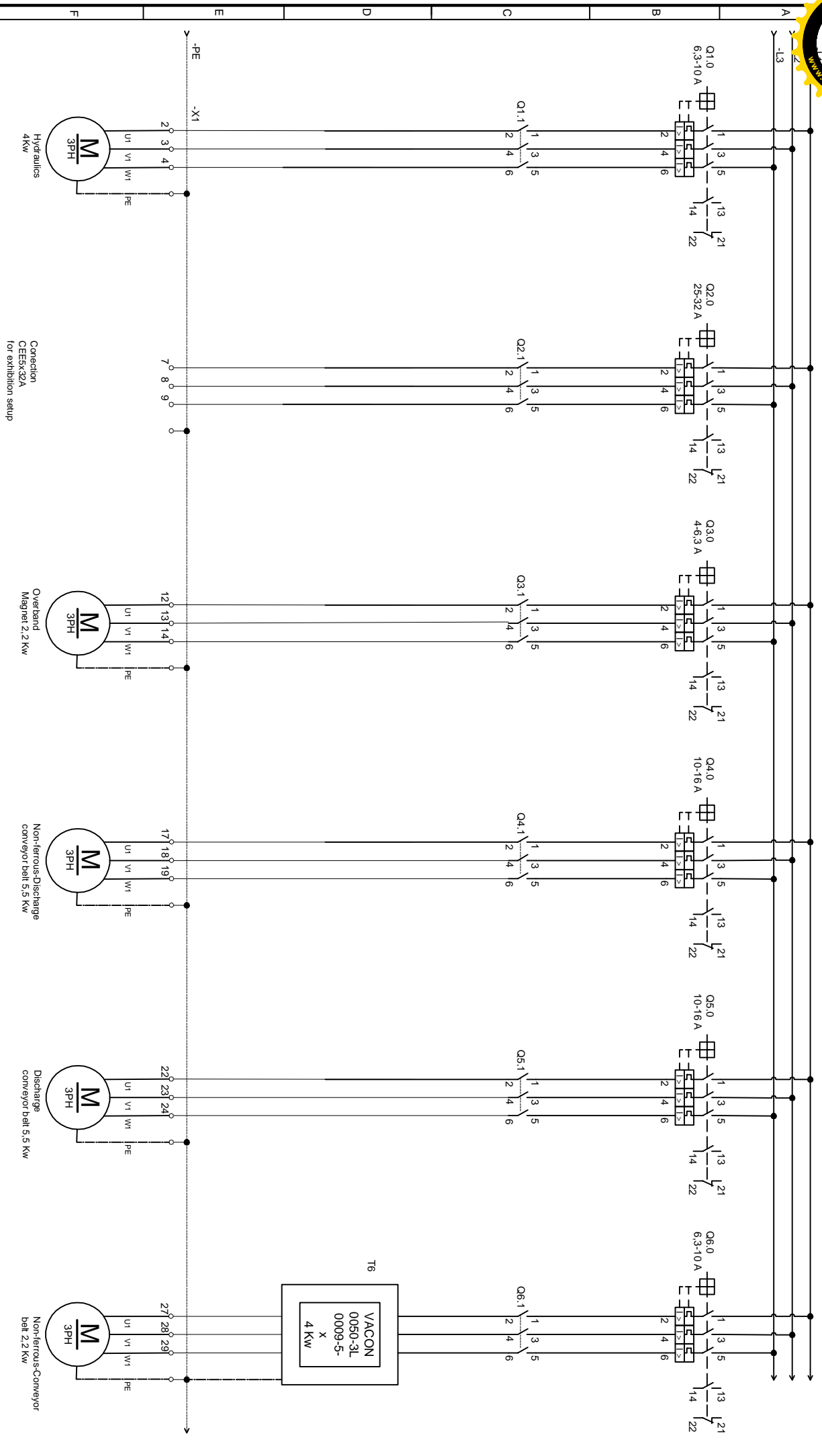
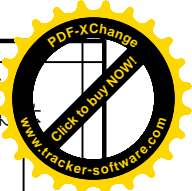
Control phase  
via CEE-plug

Insulation monitoring in  
function ONLY while  
generator is operating.

Shutdown of the  
Diesel  
in case of an error 2

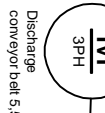
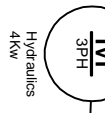
Working socket  
CEE 5X16A  
with Schuko

Control voltages



**Description :**  
 Power section (part) 1

Connection  
 CEEEX-32A  
 for exhibition setup

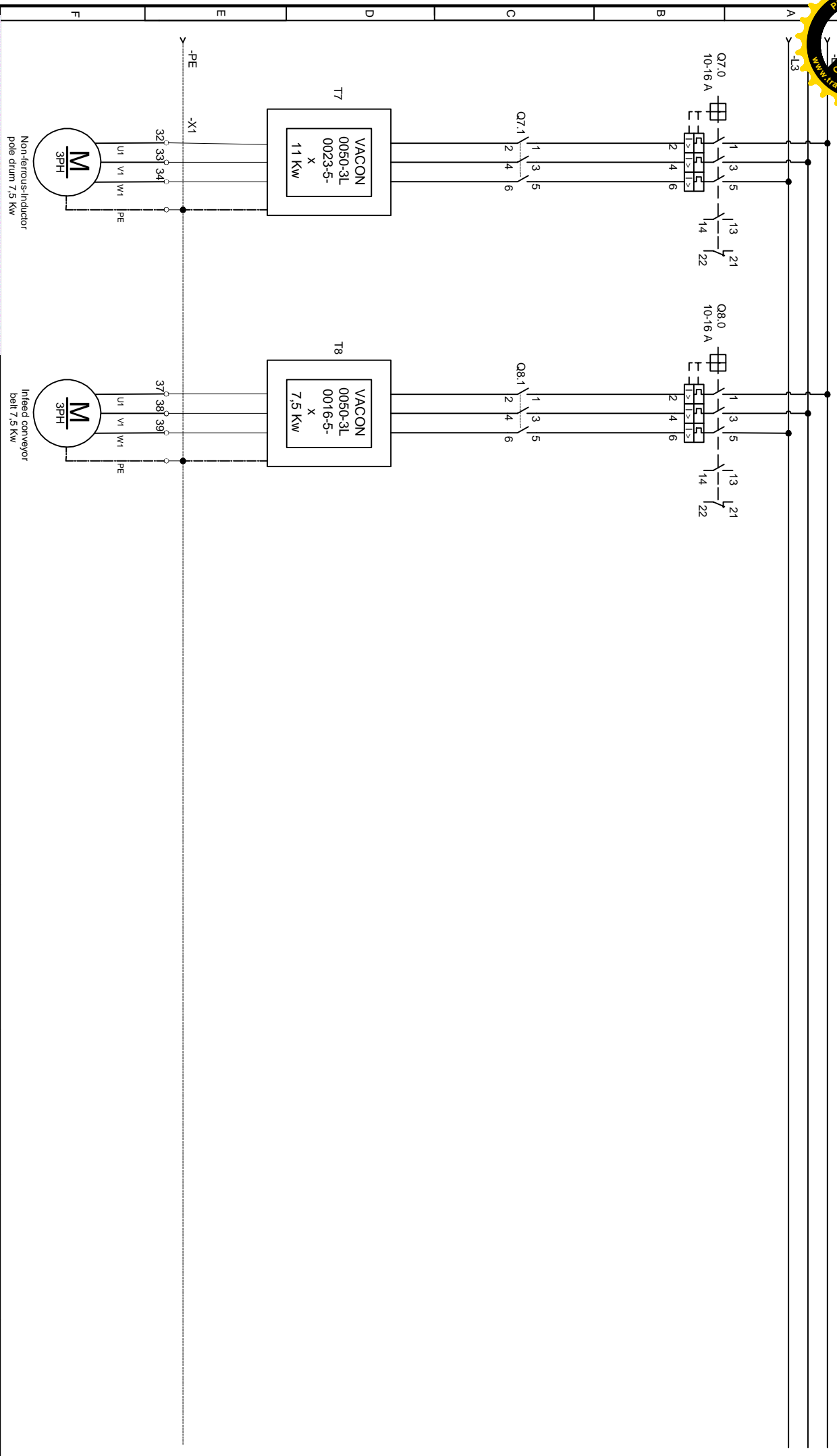
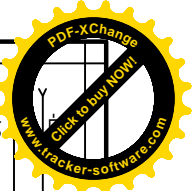


**Project :**  
 PRO HM1-S

**Planner :**

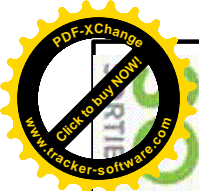
**Date :**  
 07.04.2020

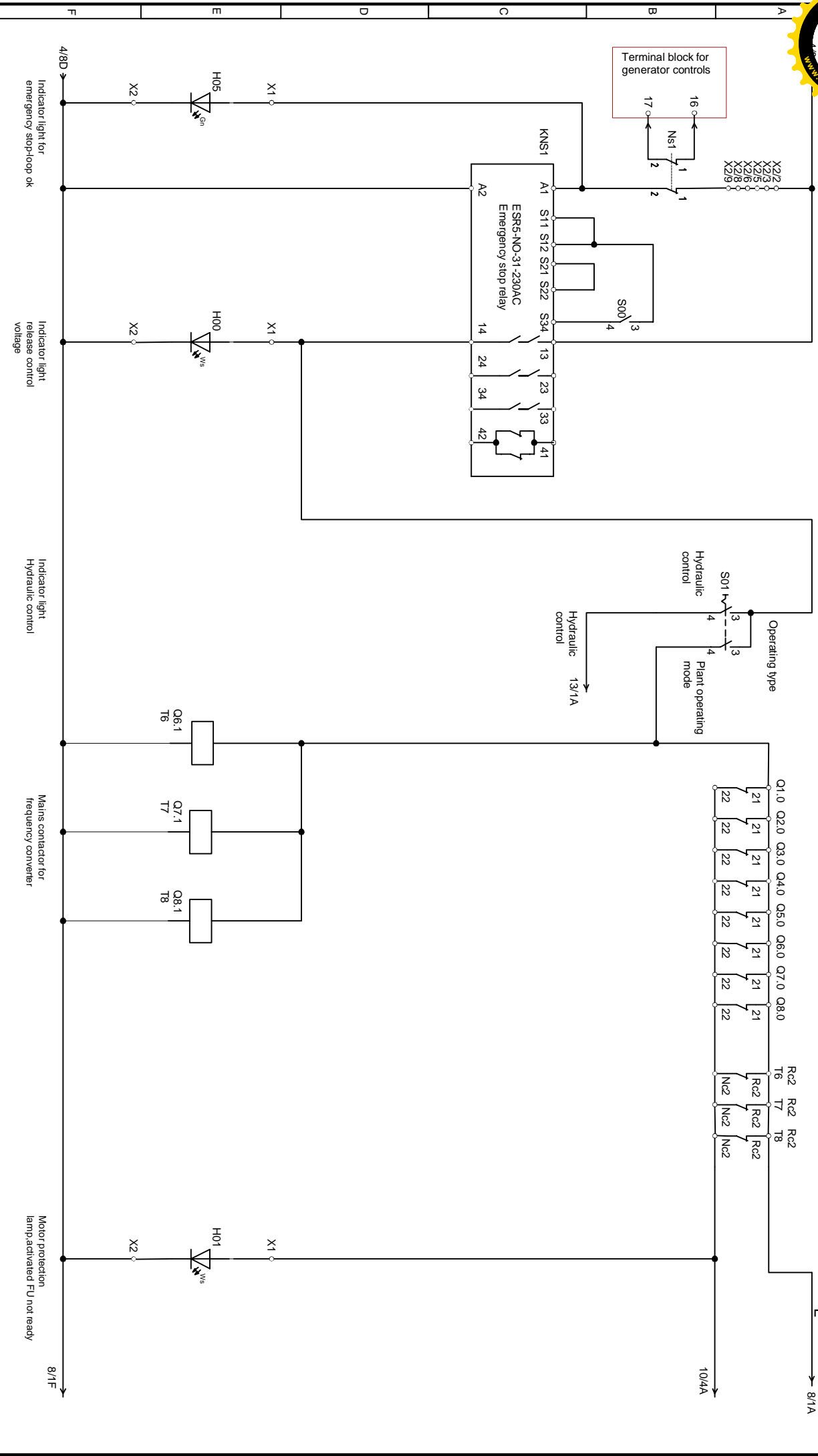
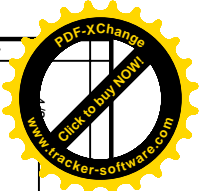
**Page :**  
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Description :  
 Power section (part) 2

Project :	Planner :	Date :	Page :
PRO HM1-S		07.04.2020	006





**Description :**  
**Emergency stop control/ Motor protection**

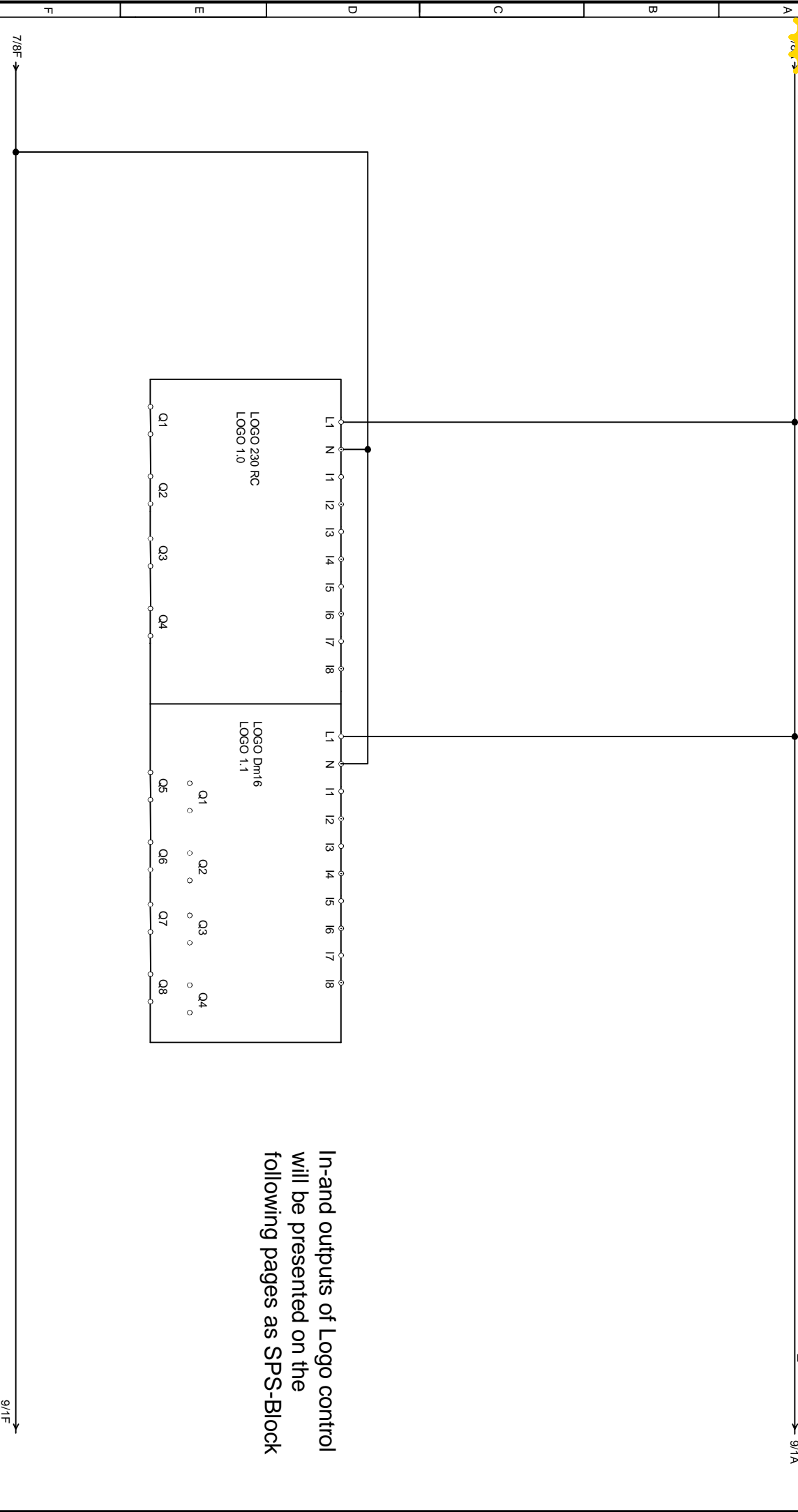
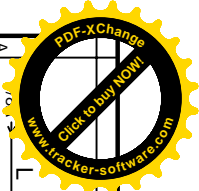
**Project :**  
 PRO HM1-S

**Planner :**

**Date :**  
 07.04.2020

**Page :**  
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In-and outputs of Logo control will be presented on the following pages as SPS-Block

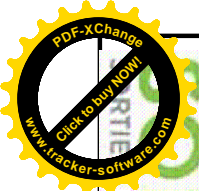
**Description :**  
 Logo1 process modul drive

**Project :**  
 PRO HM1-S

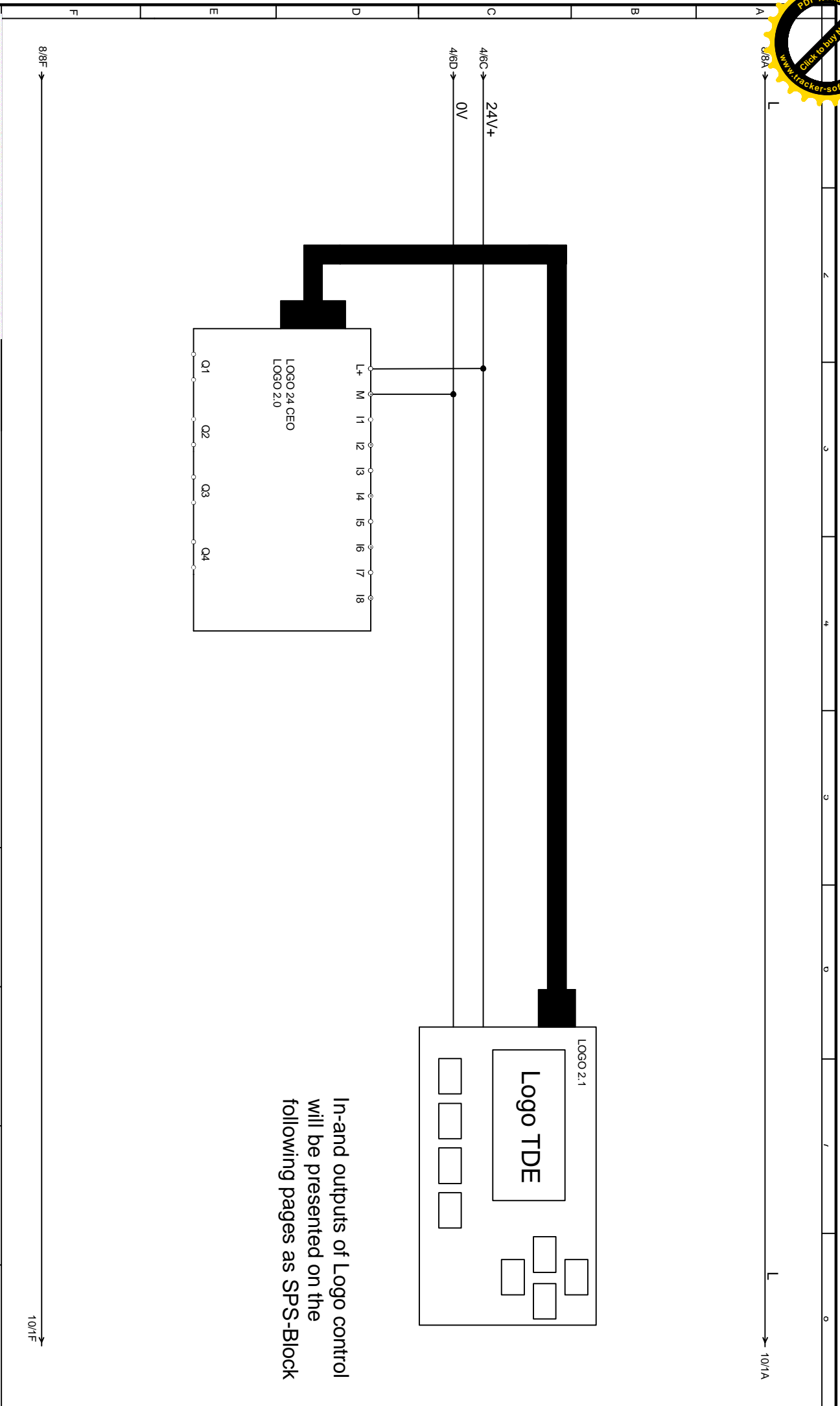
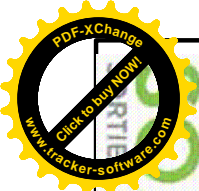
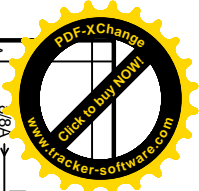
**Planner :**

**Date :**  
 07.04.2020

**Page :**  
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In-and outputs of Logo control  
 will be presented on the  
 following pages as SPS-Block

**Description :**  
 Logo2 process modul rotation speed display

**Project :**  
 PRO HM1-S

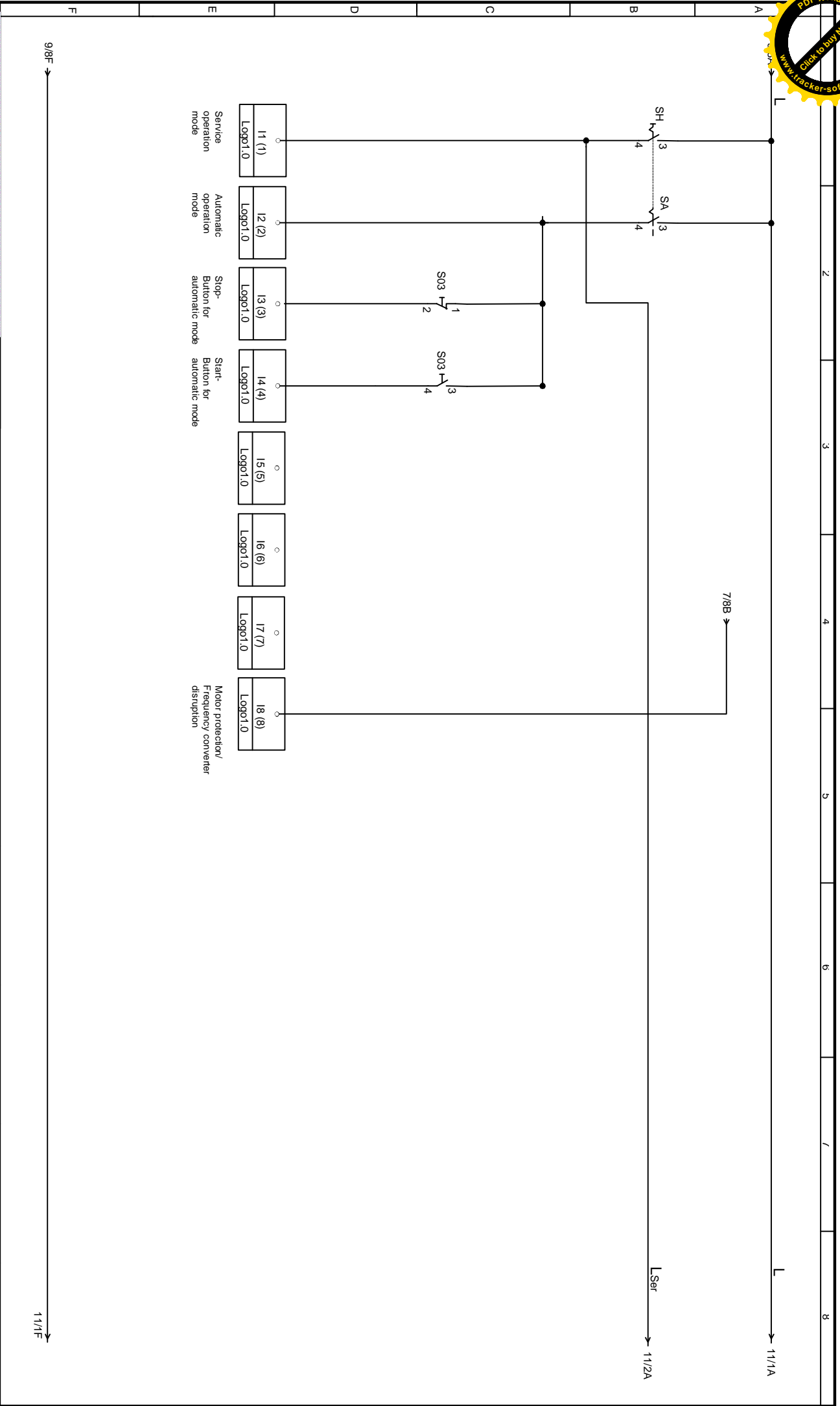
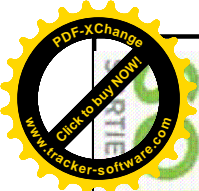
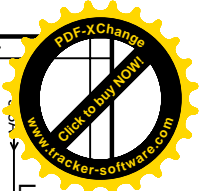
**Planner :**

**Date :**  
 07.04.2020

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8/8F → 10/1F

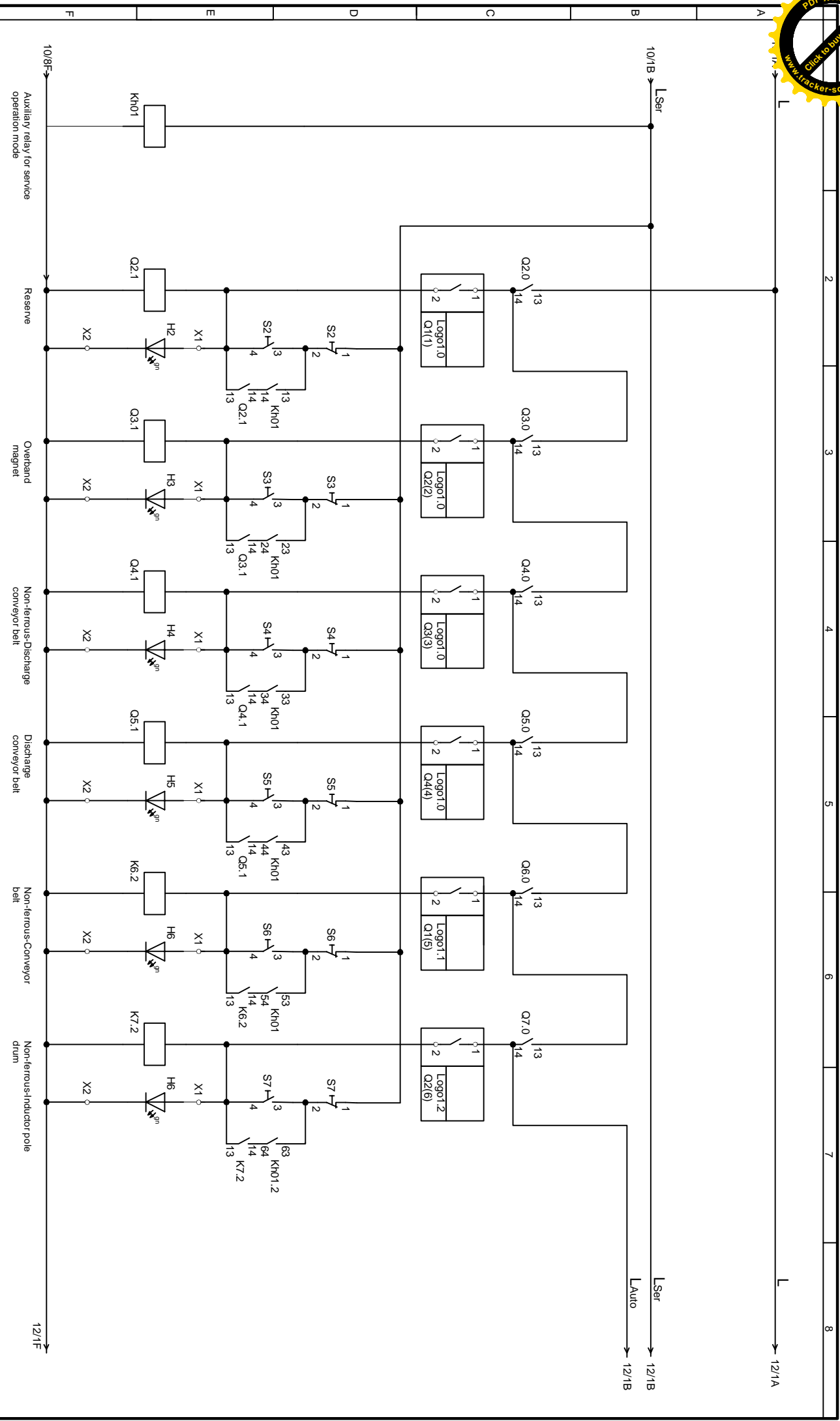
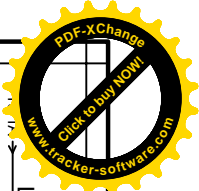
U8/A → 10/1A



**Description :**  
 Logo1 Inputs 230V

<b>Project :</b> PRO HM1-S	<b>Planner :</b>	<b>Date :</b> 07.04.2020	<b>Page :</b> 010
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9/8F → 11/1F



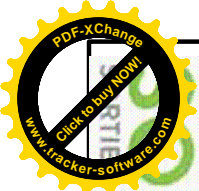
Description :  
Logo1 outputs 230V (1)

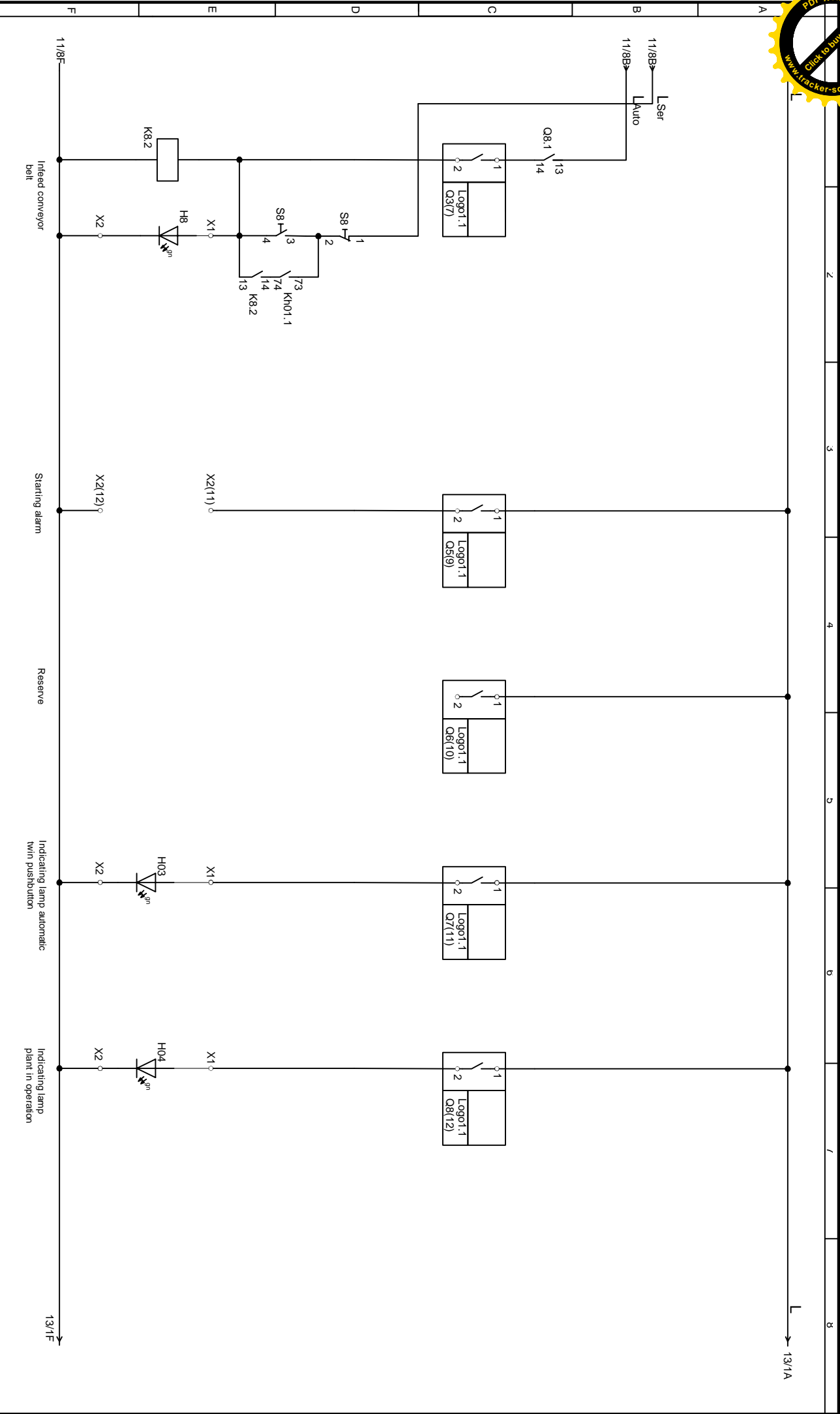
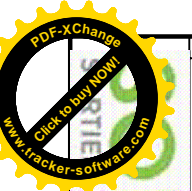
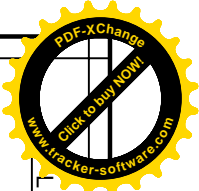
Project :  
PRO HM1-S

Planner :

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**Description :**  
**Logo1 Outputs 230V (2)**

**Project :**  
**PRO HM1-S**

**Planner :**

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**07.04.2020**

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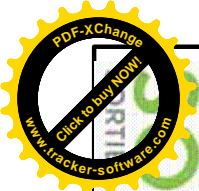
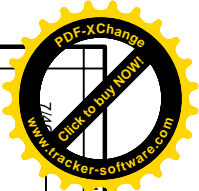
6

7

8

L → 13/1A

13/1F →



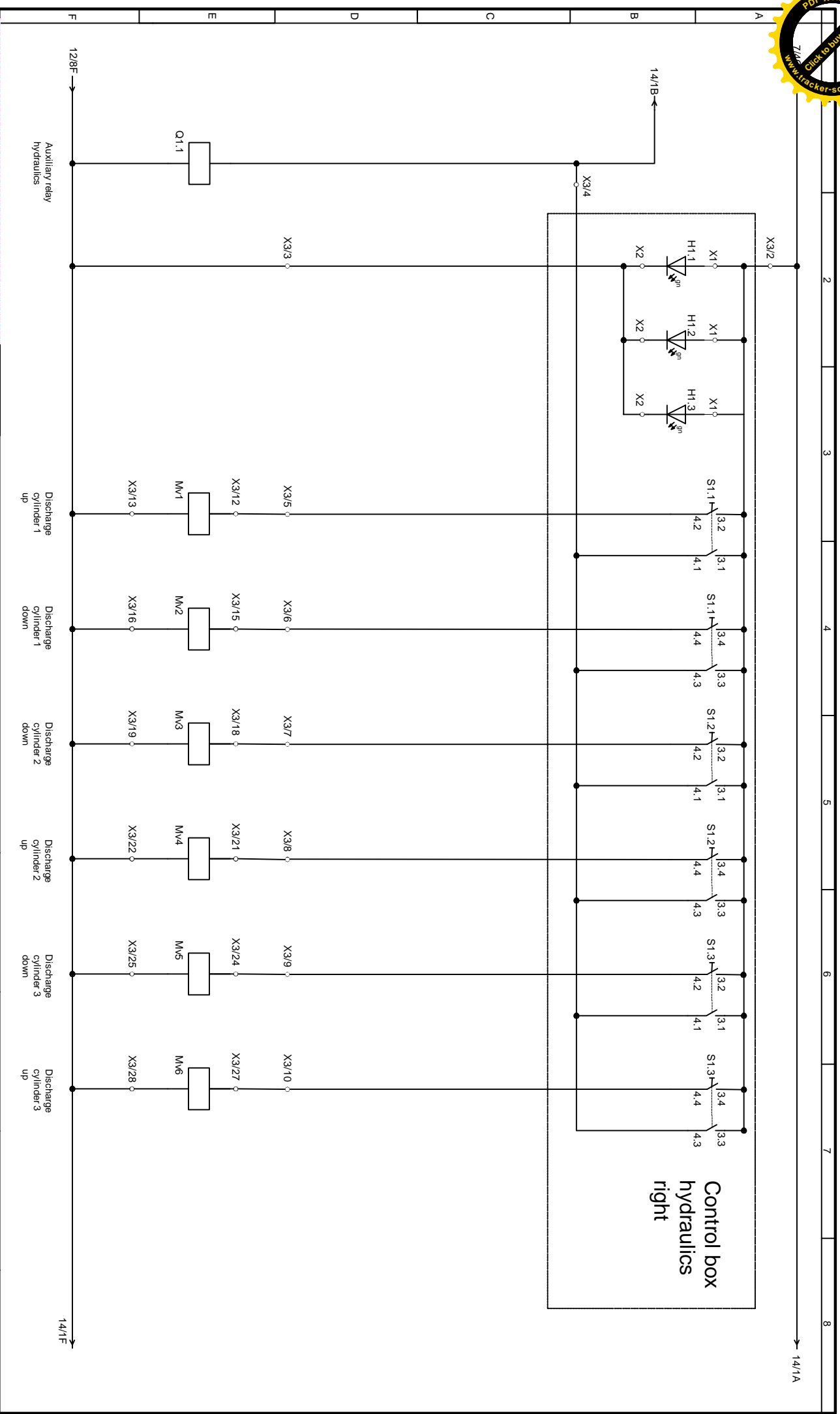
**Description :**  
 Hydraulic control setup (1)

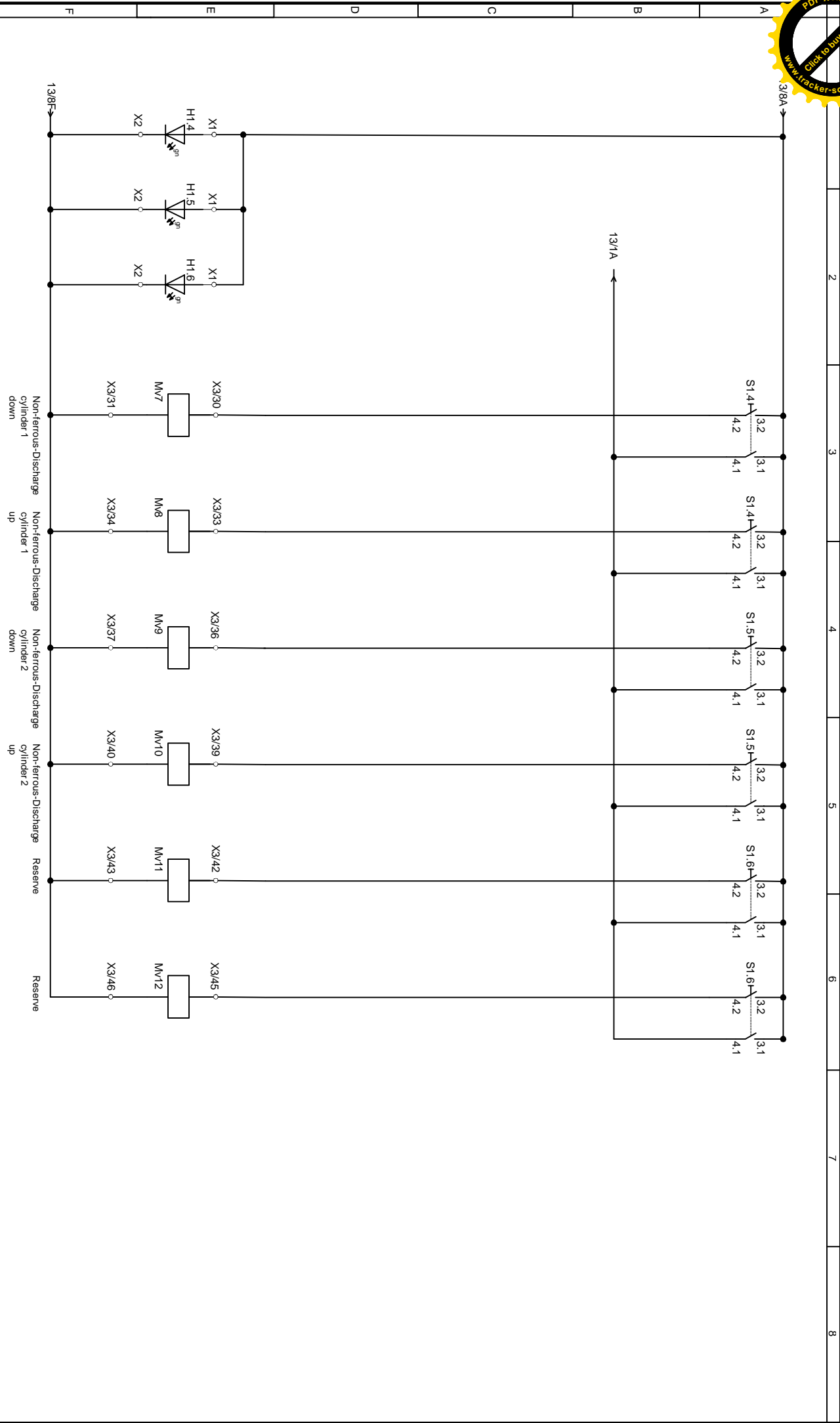
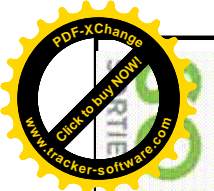
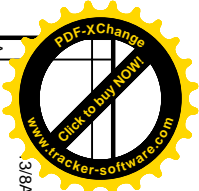
**Project :**  
 PRO HM1-S

**Planner :**

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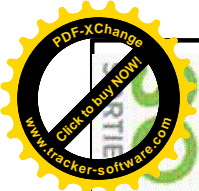
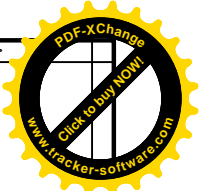
**Description :**  
 Hydraulic control setup (2)

**Project :**  
 PRO HM1-S

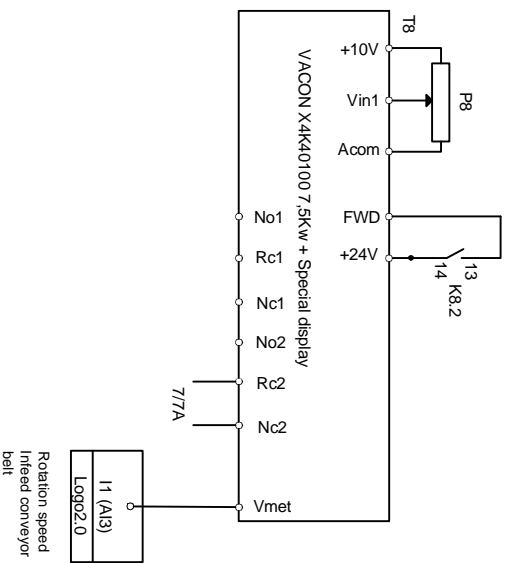
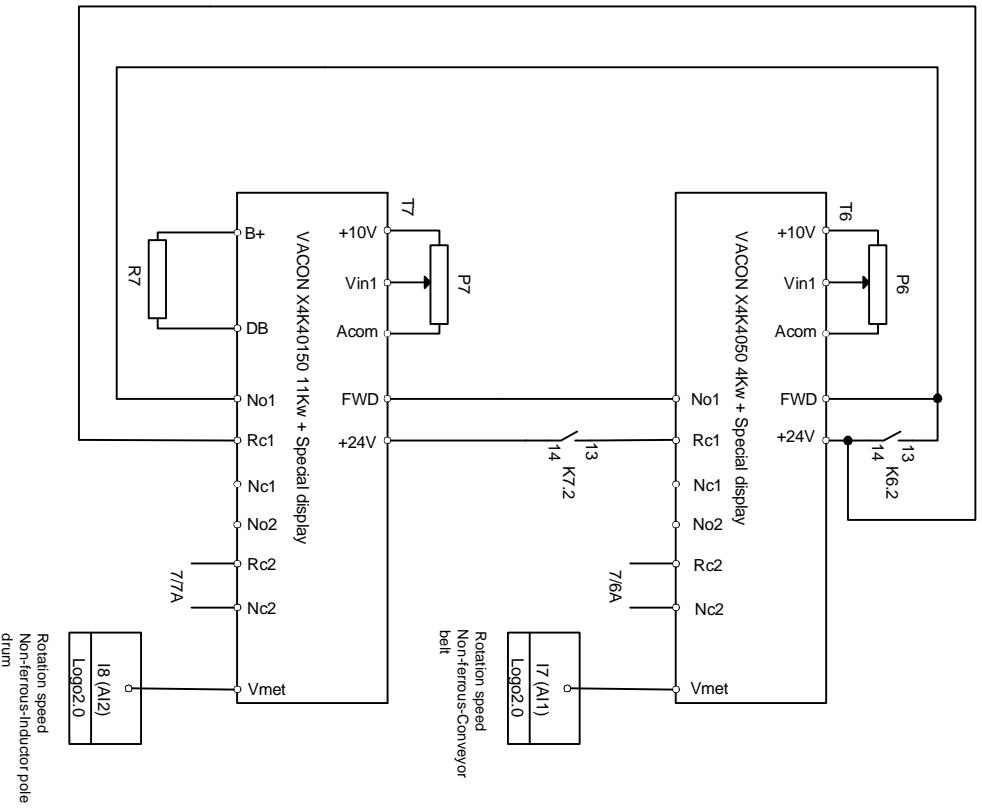
**Planner :**

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 07.04.2020

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**Description :**  
**Frequency converter control**

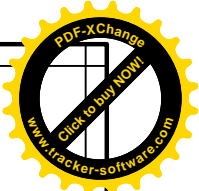


Project :  
PRO HM1-S

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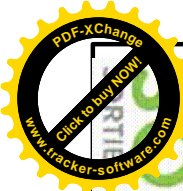
Page :  
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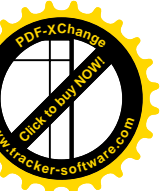
2 3 4 5 6 7 8

	Description of parameters	Non-ferrous-Conveyor belt T6	Non-ferrous-Inductor pole drum T7	Feed conveyor belt T8
P201	Input mode	Remote only	Remote only	Remote only
P301	Min frequency	25Hz	25Hz	25Hz
P302	Max frequency	50Hz	52Hz	50Hz
P306	Preset Freq 4	30 Hz	3Hz	30 Hz
P402	Accel Time	5sec	120sec	2sec
P403	Decel Time	5sec	280sec	2sec
P410	DB Config	Internal	External	Internal
P510	Motor current	8,9A	21A	16A
P610	Rated Mtr FLA	Std Ind 60sec	Std Ind 5min	Std Ind 60sec
P701	Vmet Span	95,20%	95,40%	95,50%
P705	Relay 1	At speed	Freq. limit	Ready
P706	Relay 2	Ready	Ready	Ready
P802	Start Options	LSL w/FLY	LSL w/FLY	LSL w/FLY
P810	Language	English	English	English

<b>Description :</b> Frequency converter parameters	<b>Project :</b> PRO HM1-S	<b>Planner :</b>	<b>Date :</b> 07.04.2020	<b>Page :</b> 016
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Pos.No.	Description	MTS	KW	Nominal current	Measured	Comment
1	Hydraulics	6,3-10	3Kw	6,7	5,6	
2	Reserve Exhibition setup	25-32	-	-	7,5	2x2,2Kw conveyor belts
3	Overband magnet	4-6,3	2,2Kw	4,75	2,8	
4	Non-ferrous-Discharge conveyor belt	10-16	5,5Kw	7,4	7,1	
5	Discharge conveyor belt	10-16	5,5Kw	10,7	7,4	
6	Non-ferrous-Conveyor belt	6,3-10	3Kw	4,85	3,8	T6 at 36Hz
7	Non-ferrous-Inductor pole drum	10-16	7,5Kw	13,7	5,7	T7 at 50,5Hz
8	Infeed conveyor belt	10-16	5,5Kw	11	6,9	T8 at 41Hz
Calculated total current					46,8A	

Total current measured at idle run on 28.08.2019 28.4A

**Description :**

Overview of drive and current consumption

**Project :**

PRO HM1-S

**Planner :**

**Date :**

07.04.2020

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