USER MANUAL

JASOPELS SKINNING TOWER AUTOMATIC XL

PRODUCT NO. 32100041

Our quality – your choice Jasopels

1. TABLE OF CONTENTS

2. PREFACE

- Congratulations on buying a Jasopels skinning tower!
- This User Manual and safety guidelines are necessary for safe and correct use of the machine. Read it carefully before starting to use the machine and keep it for further reference.
- This manual contains important information about the safety and proper use of the machine. All users should be trained in correct use of the machine. The supervisor is also responsible for instructing the machine operator.
- The manual should be stored with the machine. It is important that the user manual is supplied with the machine upon resale and loan.
- The user of the machine must make sure that the operator, service personnel and others who have access to the machine are instructed on the proper use and handling of the machine. Refer to this User Manual for further information.

3. DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY WITH EU REGULATIONS

Equipment type: GET 0092
Description: Jasopels Skinning Tower Automatic XL

Manufacturer:
Name: Jasopels a/s
Address: Fabriksvej 19
Postal code and city: 7441 Bording
Telephone 98 42 05 66

JASOPELS PRODUKTION A/S DECLARES UNDER ITS SOLE RESPONSIBILITY THAT THE PRODUCT CONFORMS TO THE FOLLOWING EU DIRECTIVES:

- Directive 73/23/EEC of 19 February1973 (low-voltage directive), as amended by the CE marking directive 93/68/ EEC of 22 July 1993
- Directive 2006/42/CE – machinery directive

THE FOLLOWING HARMONIZED STANDARDS HAVE BEEN APPLIED, IN WHOLE OR IN PART:

- EN 60204-1: Safety of machinery. Electrical equipment of machines. Part 1: General requirements
- EN 60439-1: Low-voltage switchgear and controlgear assemblies. Type-tested and partially type-tested assemblies
- EN ISO 12100: Safety of machinery. General principles for design. Risk assessment and risk reduction
- EN ISO 13850: Safety of machinery. Emergency stop function. Principles for design

DECLARATION ISSUED BY:
Name: Poul A. Bach
Company: Jasopels A/S
Address: Fabriksvej 19
Postal code and city: 7441 Bording

Signature : Date: 15 September 2015

Administration Director, Poul A. Bach, Fabriksvej 19, 7441 is authorized to submit technical documentation.

Updated on 3 / 11-2016

4. EXPLANATION OF SYMBOLS

- Please read this manual and follow the included instructions. In order to emphasize certain information, the following expressions are used:

NOTE!!

A triangle containing an exclamation mark is a warning symbol that warns you about important instructions or information concerning this machine.

WARNING!!

A triangle containing a warning about a crush or injury hazard.

5. PRESENTATION OF THE MACHINE

5.1 MACHINE DESCRIPTION

- Jasopels Skinning Tower Automatic XL 3210-187005 has been designed and manufactured for mink skinning.
  - Simple operation
  - Reliability. Stable production.
- Jasopels Skinning Tower Automatic XL 3210-187005 is easy to operate, both mechanically and electrically.
- Easy maintenance

5.2 IMPORTANT INFORMATION
IMPORTANT INFORMATION FOR THE SUPERVISOR

NOTE!!

- The supervisor must make sure that the operator, service personnel and others who have access to the machine are instructed on the proper use and handling of the machine.
  Read the manual carefully to obtain further information.
- The machine has been designed and made specifically for mink skinning and must not be used for other purposes.
- If any problems should occur with the machine or its operation, they must not be corrected before the machine is properly de-energized. Changes of operation and small software corrections can be made via the machine's control buttons. Observe the guidelines included in this manual.
- The user manual should always be kept available for the operator.

6. START OF OPERATION

6.1 BEFORE USING THE MACHINE

- Before the Jasopels Skinning Tower Automatic XL can be used, make sure that it is standing on a firm and stable surface.
  (Use the adjustable machine feet to achieve the desired position).
- The machine can be used only for skinning of previously prepared minks.

6.2 WARNINGS

DANGER!
To avoid any entanglement and crush hazard during the machine's operation, it is important that the operator should observe all safety instructions and does not touch the moving parts in the machine, especially the mink holders.

- A sudden, unexpected movement of the holders after starting the machine can be dangerous.

- Do not attempt to stop any of the moving parts by hand.
- To prevent dangerous situations always use the emergency stop.
  - Do not use the Stop button to prevent dangerous situations
  - In a hazard always use the Emergency Stop.
- The Jasopels Skinning Tower Automatic XL is factory-fitted with a 5-pin 400V EU plug. Always use the machine with this plug to provide earthing.

NOTE!
The machine's power supply cable must be earthed.
If this requirement is not observed, the warranty becomes void.

(Absence of earthing can cause an unintentional execution of the program or errors)

IMPORTANT!
Any kind of work involving the machine that does not include the skinning process, such as cleaning, making adjustments, etc., may only be performed when the power is disconnected.

NOTE!
In order to prevent possible damage to the control unit's microcontroller and the rest of the electrical system during thunderstorms, it is recommended to disconnect the power when the machine is not in use.

7. SAFETY

7.1 USER SAFETY

1. The machine operator must be instructed in detail in using the machine and must know the manual and safety rules. The supervisor is responsible for instructing the operator.
2. Due to the weariness caused by monotony and repeatability of the work Jasopels recommends that the operators do not work on the machine longer than 4 hours per shift. The supervisors are responsible for enforcing this requirement. Jasopels recommends rotating personnel at this workplace.
3. When working on the machine do not wear loose hanging objects and loose clothes on your body and around your head.
4. Protect long hair and beards with a net or something similar. Working on the machine with unprotected long hair and beards is prohibited due to safety hazards.
5. The supervisor is responsible for enforcing the requirements from 3 and 4 above to the same degree as individual operators.
6. The operator shall wear personal projective equipment:
   - Protective footwear
   - Gloves (recommended)
   - Safety glasses (recommended)

7.2 MACHINE SAFETY

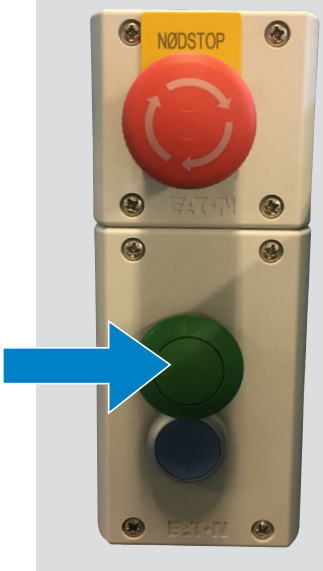
1. Observe the safety regulations when installing the machine.
2. The machine must be used only according to its intended purpose. See section 4.2

8. OPERATION

Fig. 8.1.1

Emergency stop

Fig. 8.1.2



Start

Fig. 8.1.3

Reset

8.1 BUTTONS AND FUNCTIONS

8.1.1 EMERGENCY STOP

Stops the machine immediately. The machine will remain in the position in which it was stopped. Use the blue Reset button to restart the machine after an emergency stop.
Note! The emergency stop should be used only in hazardous situations, not for regular stopping of the machine.

8.1.2 START

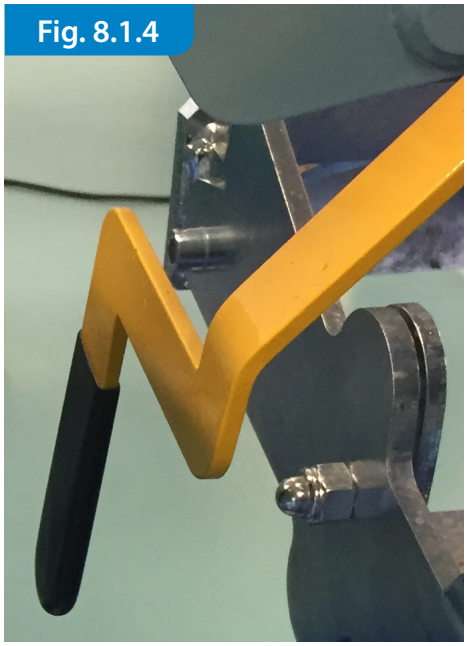
Puts the carriage and jaws in home position 1 and position 2.

- Press the Start button to move the carriage to the home position 1, i.e. the bottom position when a mink is attached to the upper hook and the pelt can be fastened between clamping jaws.
- Press the Start button again to move the carriage to the home position 2, i.e. the top position so that the pelt can be attached to the upper hook.

8.1.3 RESET

Press to return to the normal operation mode after an emergency stop.
IMPORTANT! Wait at least 2 minutes after an emergency stop before you press the Reset button.
Hint: if the blue Reset button is pressed too early the machine may stop and report an error.
If the blue Reset button is pressed too early, you can try to disconnect the power for 2 minutes. Then press the Reset button again and the machine will return to the normal operation mode.

Fig. 8.1.4



Clamping jaws handle

Fig. 8.1.5

Carriage movement pedal.

8.1.4 CLAMPING JAWS

To activate the clamping jaws pull the handle so that the jaws grab the mink and do not tear it.

8.1.5 PEDAL

- Press the pedal and the clamping jaws will grab the skin (under low pressure). Then the carriage will move down the tower and remove the skin from the mink.
- Press the pedal again to activate the clamping jaws (under high pressure), the carriage moves down and removes the skin from the mink. The movement lasts as long as the pedal is pressed, i.e. when you release the pedal the movement will be interrupted.

9. CONNECTIONS

9.1 CEE PLUG
9.1.1 TILSLUTNING

The machine is connected to the mains using a CEE 400V plug.
Correct electrical connections and earthing are important for operator safety and uninterrupted operation of the machine.

Note!!
Never disconnect the power when the motor is running.
You can unplug the machine only when the machine is not in operation.

9.2 CONNECTING OTHER EQUIPMENT
It is prohibited to connect other equipment to the Jasopels machine.

10. DESCRIPTION OF FUNCTIONS

Machine functions:

10.1 START:

- Make sure the machine is plugged in.
- Check if the carriage is in the top position.
  - If not, press the green button once. See Fig. 8.1.2

10.2 CARRIAGE ADJUSTMENT
Adjust the carriage to fit the mink length.

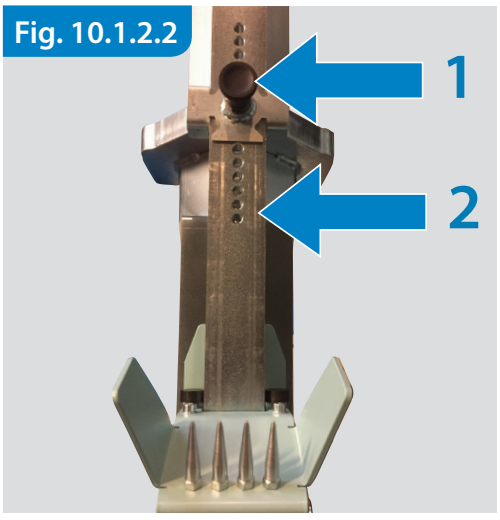
SEE FIG. 10.1.2.1
Fasten the prepared mink by its hind legs with the teeth facing up.

SEE FIG. 10.1.2.2
Adjust the teeth in the vertical direction depending on the mink length.
Pull out the black handle (1) to set the required teeth height.
Release the black handle and the carriage will be fixed in the nearest hole (2).

Fig. 10.1.2.1

Teeth facing up

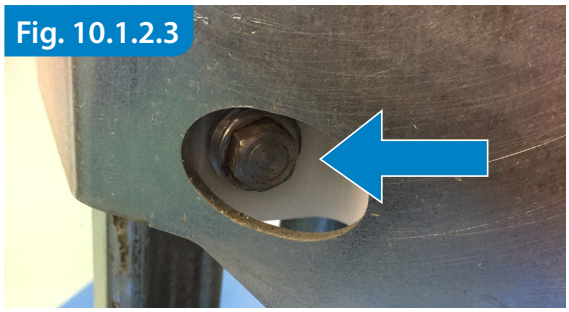
Fig. 10.1.2.2



Adjustment

SEE FIG. 10.1.2.3

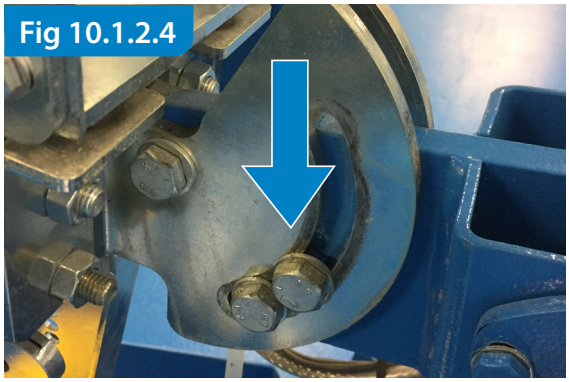
- Brake adjustment bolts
- The brake ensures the opening and closing of the skin clamp at a right time.



Brake adjustment

SEE FIG. 10.1.2.4
Adjust the carriage inclination (angle relative to vertical) to suit the operator.

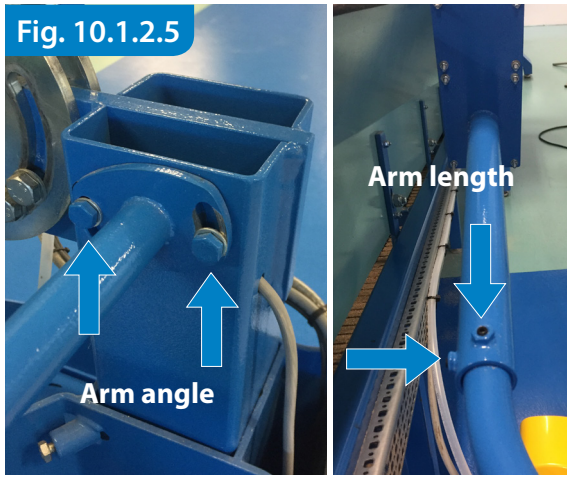
- Remove the nuts.
- Adjust the carriage inclination.
- Tighten the nuts.



Carriage inclination

SEE FIG. 10.1.2.5
The arm with controls (Start, Reset and Emergency Stop buttons) can be adjusted to suit the operator.

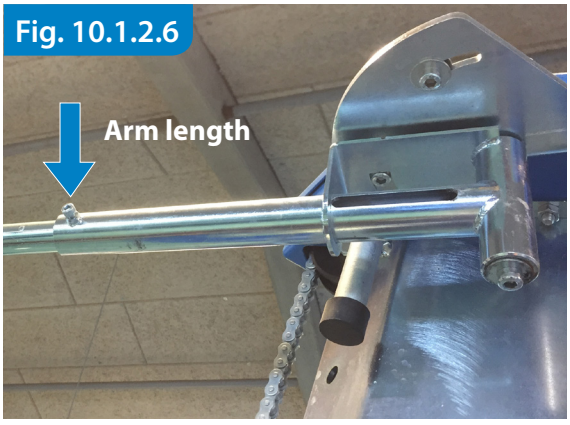
- Adjust the arm angle: loosen the bolts, Fig. 10.1.2.5 (arm angle adjustment)
- Set the arm at the required angle and tighten the bolts.
- Adjust the arm length, Fig. 10.1.2.5 (arm length adjustment): set the required arm length and tighten the bolts. Note – when bolts are loosened the arm can rotate.



Arm angle adjustment

SEE FIG. 10.1.2.6
The arm in the top part of the skinning tower used to hang tools can be adjusted in the horizontal plane in terms of angle and length.

- Adjust the arm angle, Fig. 10.1.2.6 (horizontal arm adjustment): loosen the bolts, set the arm in the required position and tighten the bolts.
- Adjust the arm length, Fig. 10.1.2.6 (arm length adjustment): set the required arm length and tighten the bolts. Note – when bolts are loosened the arm can rotate.



Tool arm adjustment

10.3 MINK SKINNING

1. When the mink is correctly hung on the top hook press the green Start button, see Fig. 8.1.2. The carriage will move to home position 2, the lowermost position.
2. Place the tail part between the jaws, see Fig. 10.3.2
3. Press the pedal once, Fig. 8.1.5. The jaws will gently grab the skin.
   - The equipment uses low pressure for safety reasons.
4. When the jaws grab the skin press the pedal again. The jaws will grip the skin more firmly using high pressure.
5. When you press the pedal again the carriage will move up. The carriage moves as long as the pedal is pressed. Release the pedal when the skin moves to the place where horizontal jaws are, see Fig. 10.3.5
6. Now pull the yellow handle. See Fig. 8.1.4.
   - Horizontal jaws will lock on the mink skin. .
7. Press the pedal to skin the mink. .
   - The carriage moves only when the pedal is pressed.
8. Mink skinning.
9. When the skin is cut out and removed from the machine, press the green button, see Fig. 8.1.2
10. The horizontal jaws are loosened and the carriage moves to the home position.
11. Now remove the mink carcass.
12. The tower is ready for the next cycle – see 1 above.

Fig. 10.3.2

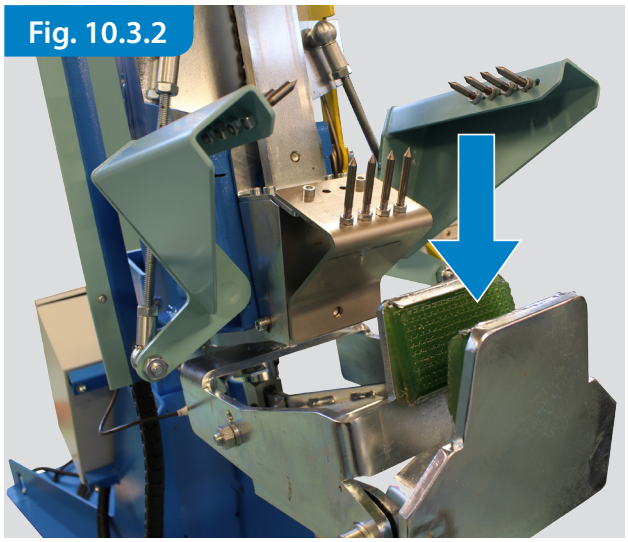
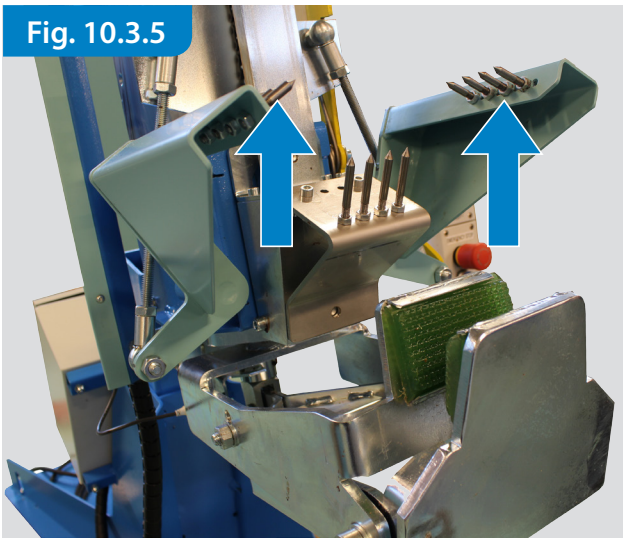


Fig. 10.3.5



11. TROUBLESHOOTING

11.1 TROUBLESHOOTING TABLE

Failure/ mode	Description
Emergency Stop	Emergency Stop is activated. Restart the machine: first deactivate the emergency stop button, wait 2 minutes and then press the blue Reset button.
Emergency Stop is deactivated, reset is active, machine does not work	You pressed Reset too early after pressing the Emergency Stop; at least 2 minutes should pass between these two actions. Wait 2 minutes after activation of the Emergency Stop and press Reset. Then reconnect the machine to mains. Wait at least 2 minutes and press Reset.
Machine does not work	Check connection to the mains.
Motor runs, but machine does not work	Have the machine checked by a qualified technician. Contact the Techincal Department at Jasopels A/S.
Clamping jaws do not open or close	Have the machine checked by a qualified technician. Contact the Techincal Department at Jasopels A/S.
Jaws do not open or close	Adjust the brake - see Fig. 10.1.2.3.

12. HANDLING AND TRANSPORT

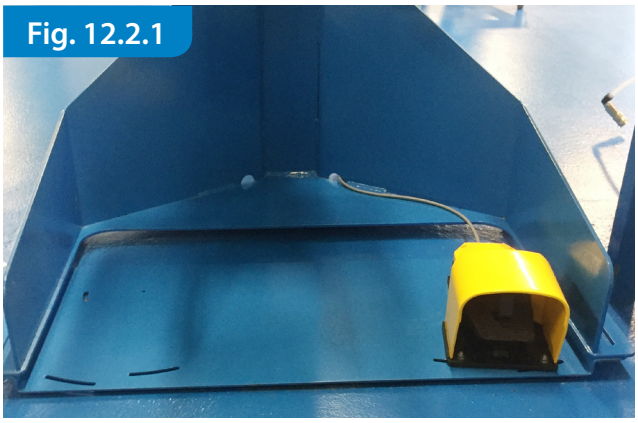
12.1 HANDLING

The handling of the machine should be performed by a technician

12.2 TRANSPORT

The transport of the machine should be performed by a technician.
A trustworthy person should supervise the target area of machine operation and the other person should supervise transport safety. These two people should communicate with each other.

Fig. 12.2.1



The machine can be transported on a pallet as shown in Fig. 12.2.1.
It takes at least two people to place the machine on the pallet. After placing the machine, strap it securely to the transportation pallet.

13. MAINTENANCE

The machine should be correctly maintained for effective day-to-day operation.
There are three levels of maintenance.

13.1 OPERATOR'S LEVEL

Maintenance performed by an operator.

- Before starting the machine, inspect all visible surfaces for signs of damage. Visible damage should be evaluated by a technician.
- Before starting the machine, check all moving parts for correct operation:
  - Test the clamping jaws, clamping device and carriage.
  - Defects of mechanical parts should be evaluated by a technician.
- Before starting the machine, inspect cables for signs of wear. The cables should run far from traffic areas in order to avoid damage. All cable damage should be evaluated by a qualified technician.
- Perform the daily cleaning, remove impurities from the machine. Keep the workplace clean.
- It is recommended to clean the tower, jaws and clamping device every day after work.

13.2 TECHNICIAN'S LEVEL

Maintenance performed by a technician.

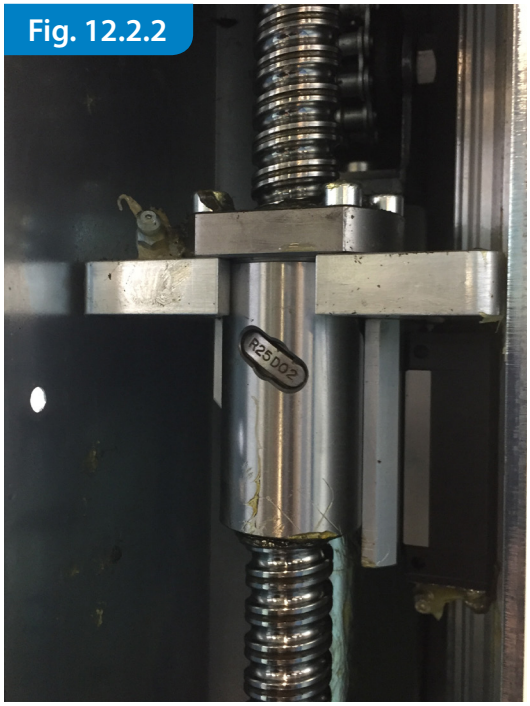
- Visible damage should be evaluated by a technician.
- Inspect the moving parts such as the tower, carriage, jaws and clamping device at least every 6 months. Replace mechanical parts if necessary.
- Run the emergency stop test at least every 6 months.
- Check the physical placement of the machine, i.e. adjust the height (feet) if necessary and check the correct location in the work area.
- Lubricate the mandrel every week - see Fig. 12.2.2

13.3 AUTHORIZED SERVICE LEVEL

Maintenance performed by an authorized service.

- Errors in power consumption and in the mains should be repaired by a qualified electrician. All works relating to the power supply and the electrical system of the machine should be performed by a qualified electrician.

Fig. 12.2.2



Carriage adjustment

GET0092-V03-Flåtårn

Electric circuits

Skinning tower

Rockwell components

Type/serial no.: GET0092-V03-Flåtårn

created on 20-11-2014

Document list

Function	Page	Document type	Description	Description	Updated on
	1	Dokument list			27-01-2016
	1	Front page	Document type		27-01-2016
	2	Front page	Introduction	Skinning tower	27-01-2016
	2	Circuit diagrams	Layout		27-01-2016
	4	Circuit diagrams	Wire colours		27-01-2016
	4 a	Circuit diagrams	Wire colours		27-01-2016
	10	Circuit diagrams	Supply/Main power		27-01-2016
	15	Circuit diagrams	Bet jening	PLC input	27-01-2016
	16	Circuit diagrams	Sensor-position	Final stop	27-01-2016
	17	Circuit diagrams	Sensor-position	Mid-point	27-01-2016
	20	Circuit diagrams	Emergency stop (effects)	PLC output	27-01-2016
	22	Circuit diagrams	Frequency convertor	PLC output	27-01-2016
	60	Circuit diagrams	JAWS		27-01-2016
	61	Circuit diagrams	JAWS		27-01-2016
	100	Circuit diagrams	PLC reference	Modul O (PLC)	27-01-2016

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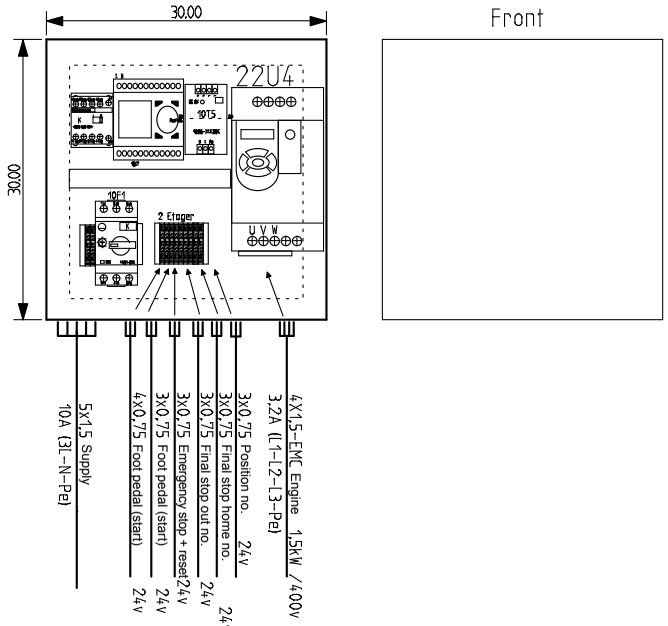

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Colours/ function of wires

Main power

>1,0 # Light blue	=	Zero in power circuits
>1,0 # Black	=	Power circuits

Steering power 230V AC

0,75# Light blue	=	230v AC Zero
0,75# Black	=	230v AC

Steering power 24V AC

Steering power 24V DC

0,75# Dark blue (DBU)	=	Gnd 24v DC
0,75# Red (RD)	=	24v DC
0,75# Brown (BR)	=	interconnections

External voltage

All # orange (OG) = external voltage (from the outside)

Wire colours

Skinning tower
December 2014
Rockwell components

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Supply wires

Supply wires, for example 24V AC are not marked because they can be easily identified with their colours. If there are more main power fuses, then supply wires appear after the fuses, described with a fuse number.
Supply conductors L1 - L2 - L3 are not marked with a side number.

NUMBERS signified by "S" relate to the diagram page nr.

SSSNN

Numbers signified by "N" mean wire numbers on an updated page (always last 2 numbers)

The main power wires are marked with a phase number, e.g. XXYYL1.That's why there can be even 4 different wires with the same XXYY number differing only with final numbers.

Abbreviations for colours

BK	Black	Sort
BN	Brown	Brun
RD	Red	Rød
OG	Orange	Orange
YE	Yellow	Gul
GN	Green	Grøn
BU	Blue (incl. light blue)	Blå (inkl. lys blå)
VT	Violet (purple)	Violet
GY	Grey (slate)	Grå
WH	White	Hvid
PK	Pink	Lyserød
GD	Gold	Guld
TQ	Turquoise	Turkis
SR	Silver.Sølv	
GNYE	Green-and-yellow	Grøn-gul (jord)

DS/EN61346-2

A: Touchscreen
B: Sensor, detector, measuring device, photocells, temperature
C: Buffer, condensator
E: Boiler, light & heating element
F: Fuse, thermal protection, surge supressor
G: Generator, power supply
K: Relays, contuctors, filters
M: Engine, activating pole
N: Analogue elements
P: Measuring device, sygnal lamp, testing device
Q: Effect interruptors, seperators
R: Resistors
S: Interruptor in master circuit
T: AC/DC converters, seperators
U: Isolator
V: Filter, semiconductor
W: Busbars, cable
X: Terminals, sockets, jacks

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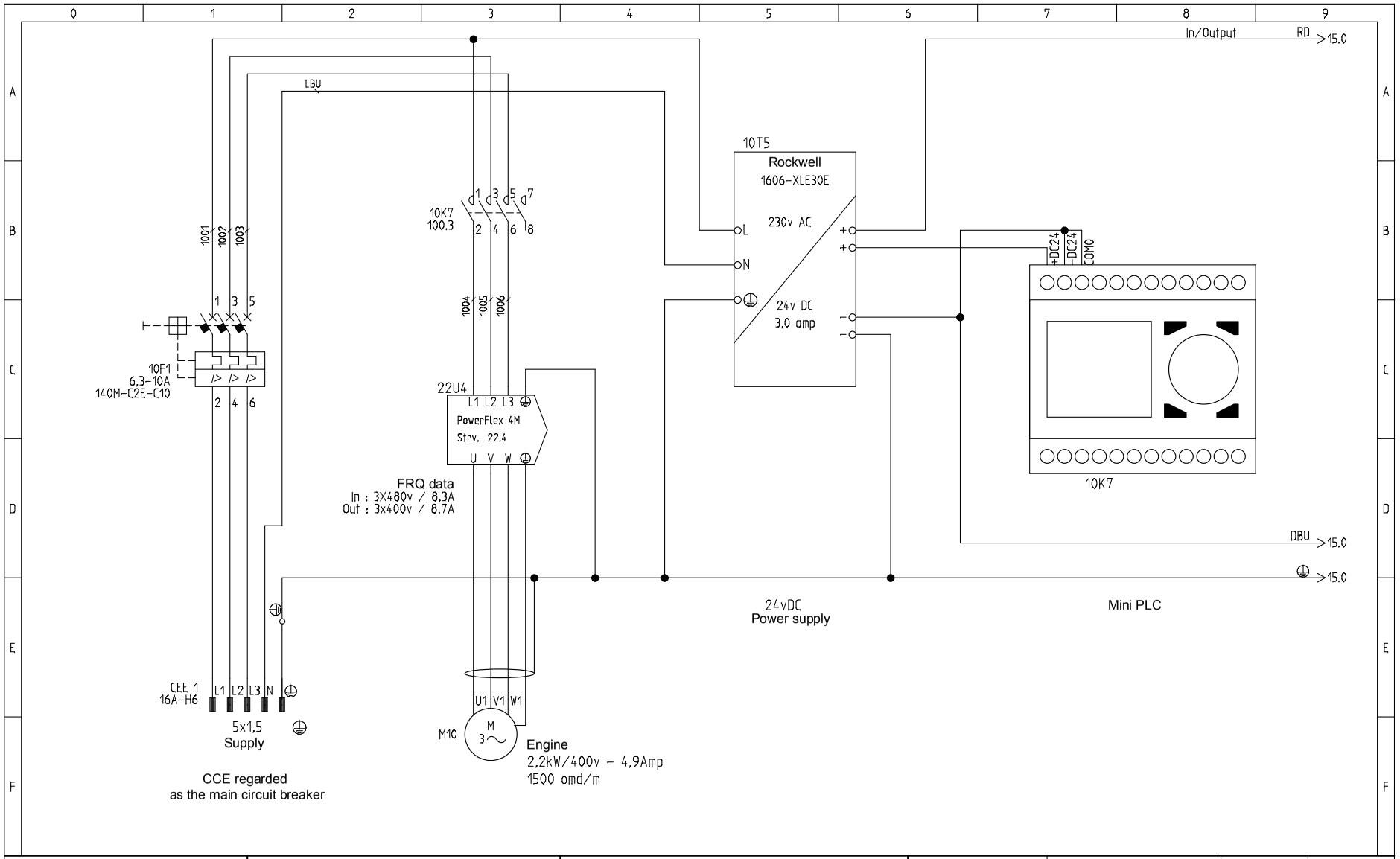
Standards
Skinning tower
December 2014
Rockwell components
Jasopels



Jasopels	Skinning tower December 2014 Rockwell components	Supply / main power	Proj. no. GET0092-V03-Flåtårn	Drawing no:	Updated: 27-01-2016	Fuit: JCG
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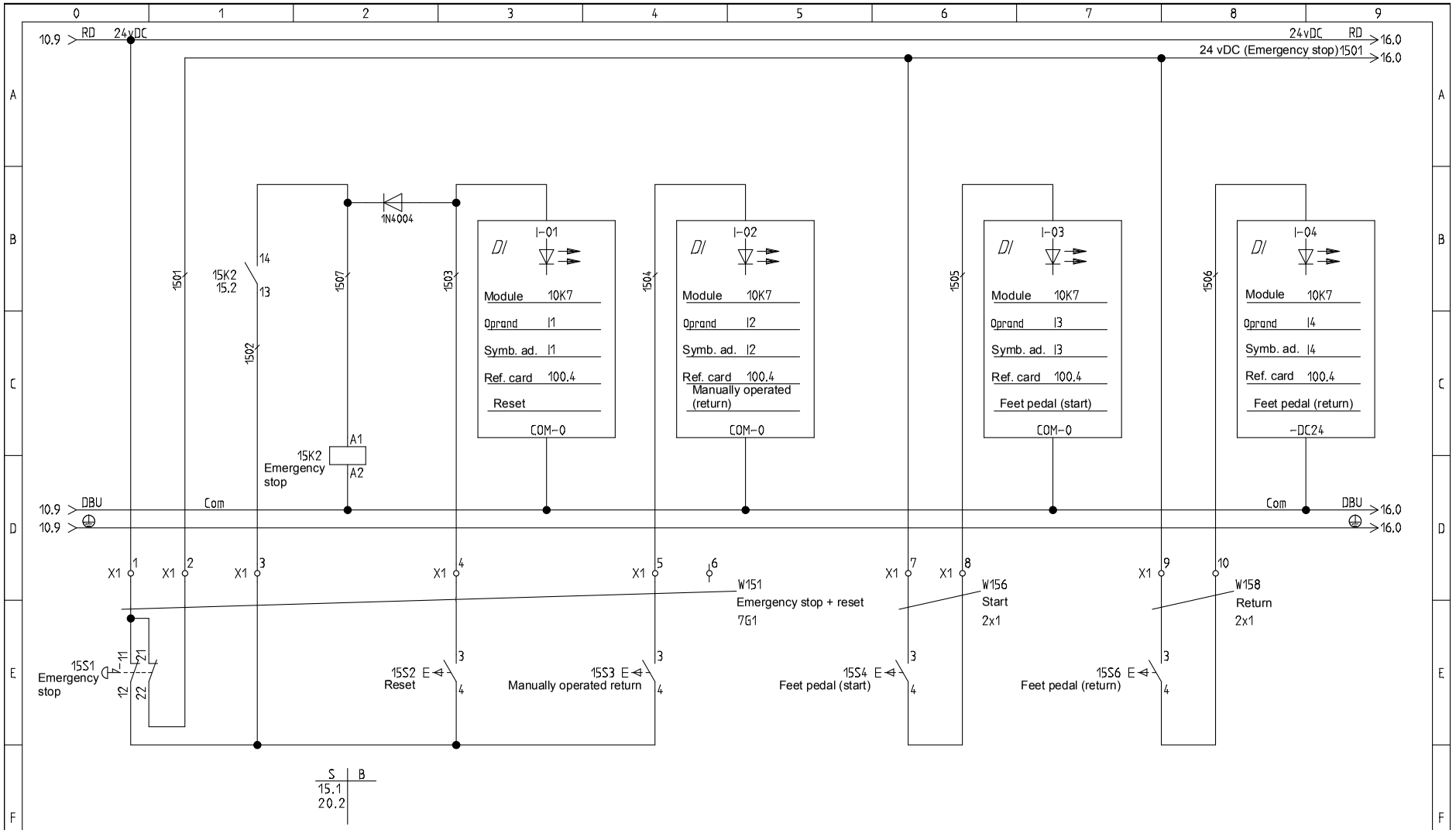

Jasopels	Skinning tower December 2014 Rockwell components	Control PLC input	Proj. no.: GET0092-V03-Flåtårn	Drawing no:	Updated: 27-01-2016	Fuit: JCG
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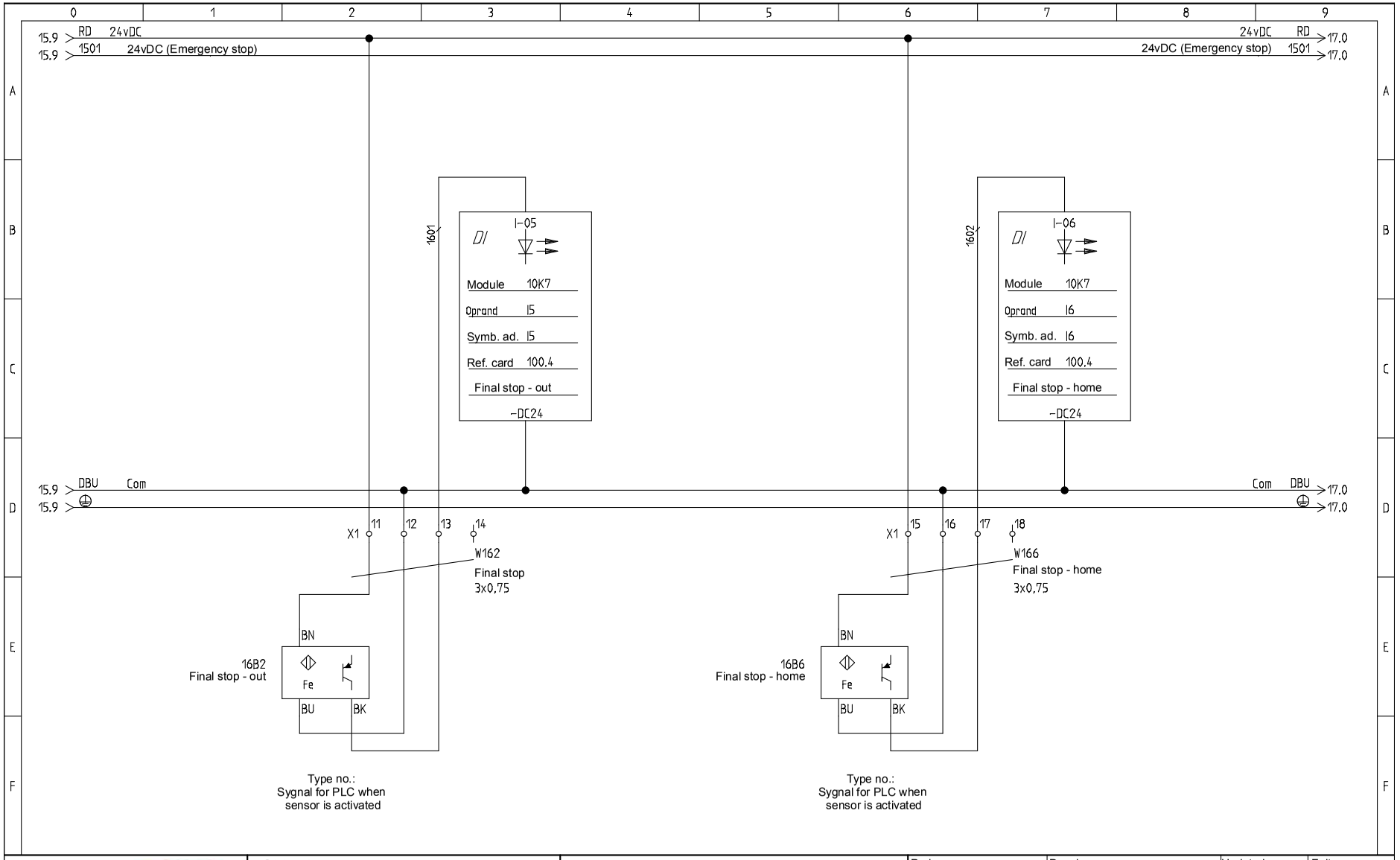

Jasopels	Skinning tower December 2014 Rockwell components	Sensor: Position Final stop PLC input	Proj. no.: GET0092-V03-Flåtårn	Drawing no:	Updated: 27-01-2016	Fuit: JCG
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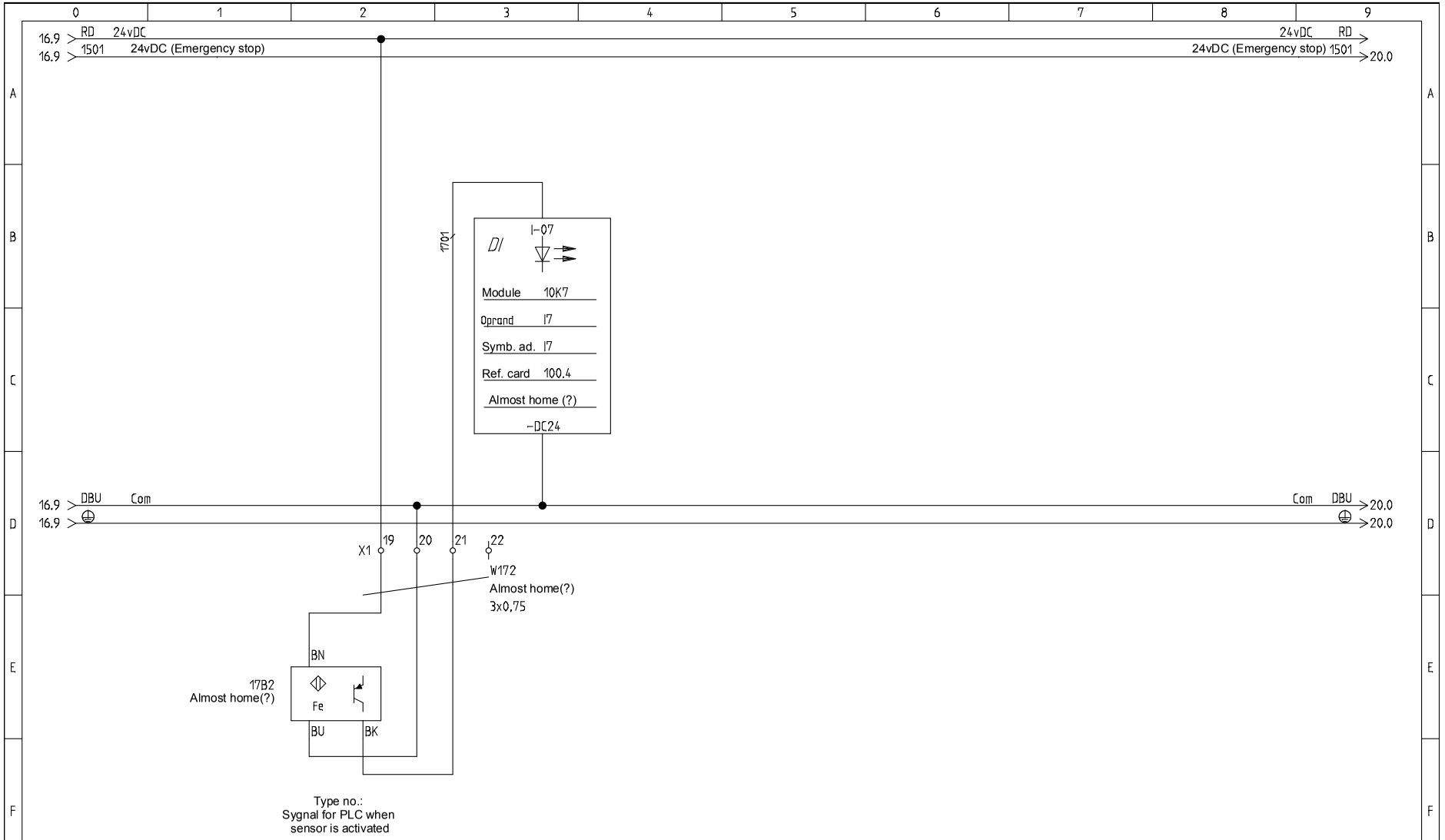

Jasopels	Skinning tower December 2014 Rockwell components	Sensor: Position mid-power PLC input	Proj. no.: GET0092-V03-Flåtårn	Drawing no:	Updated: 27-01-2016	Fuit: JCG
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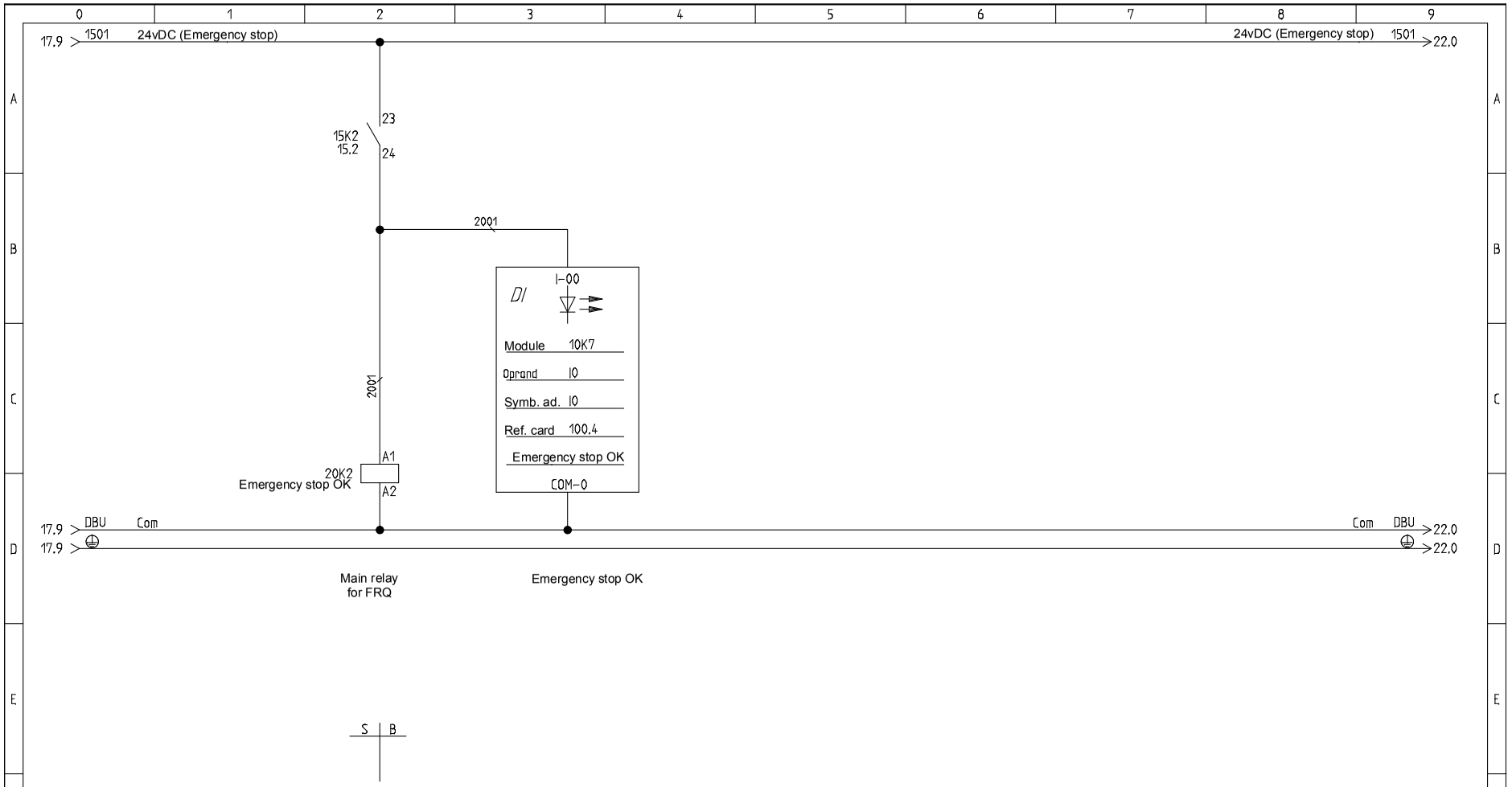
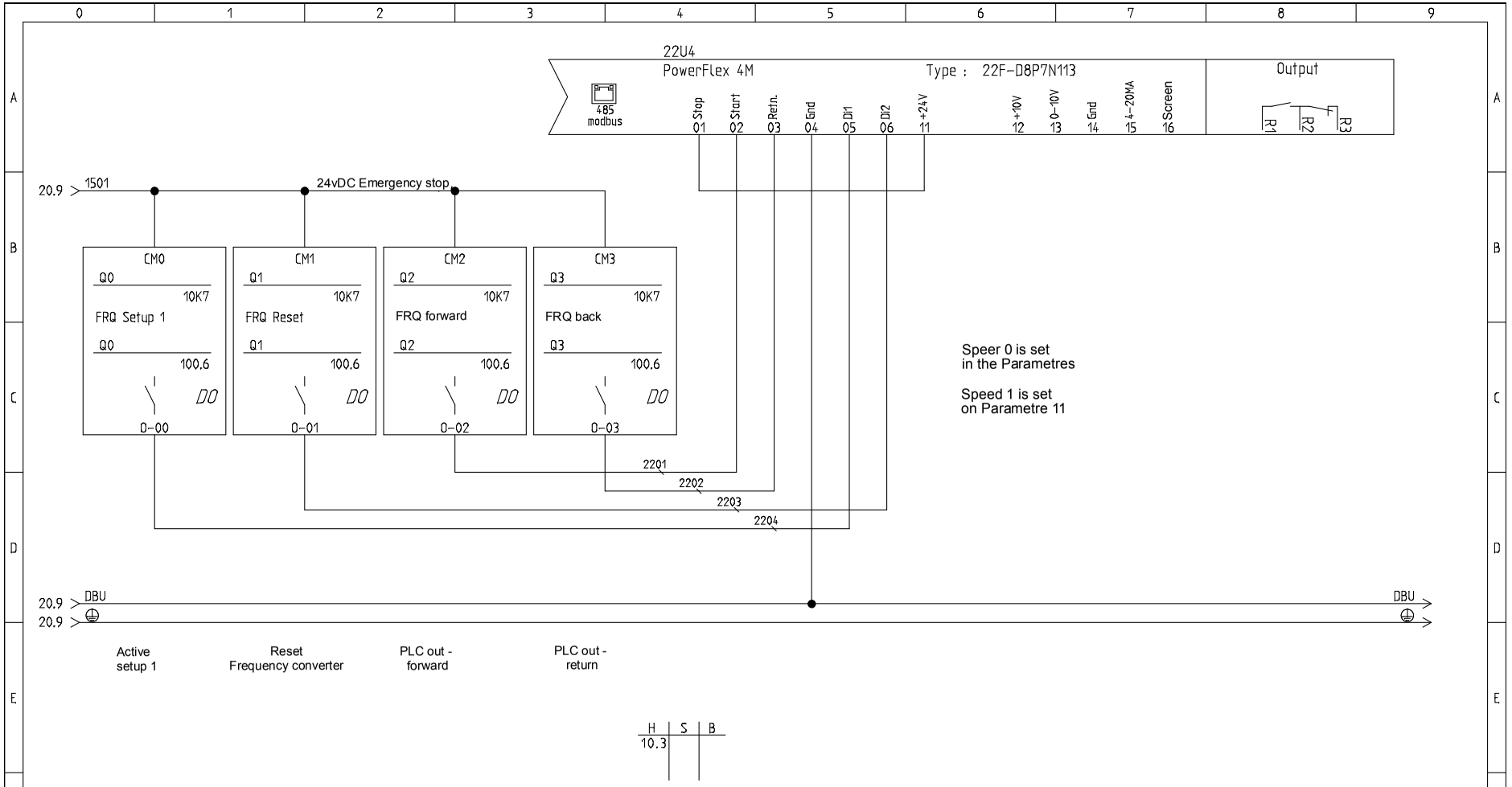
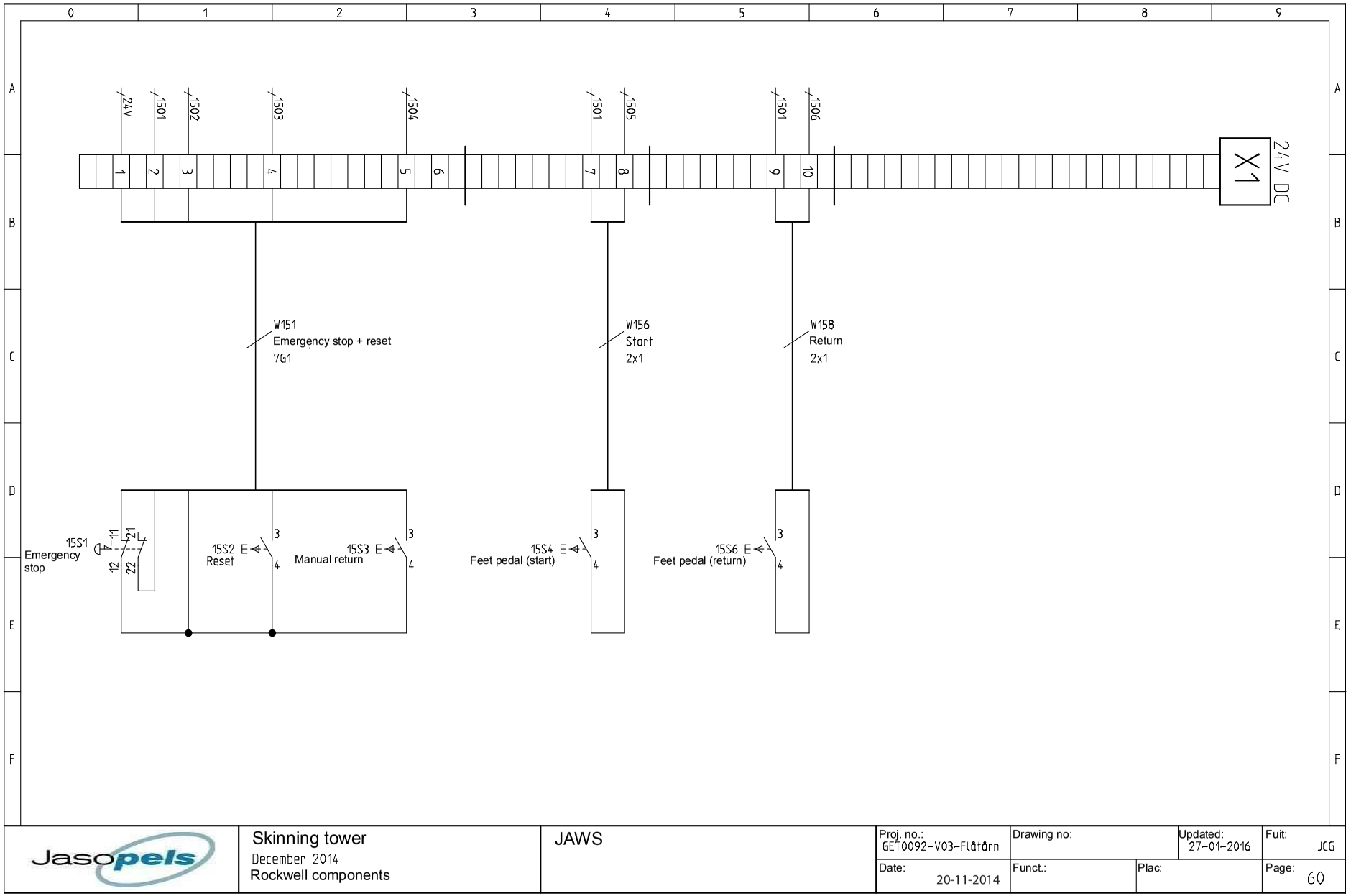


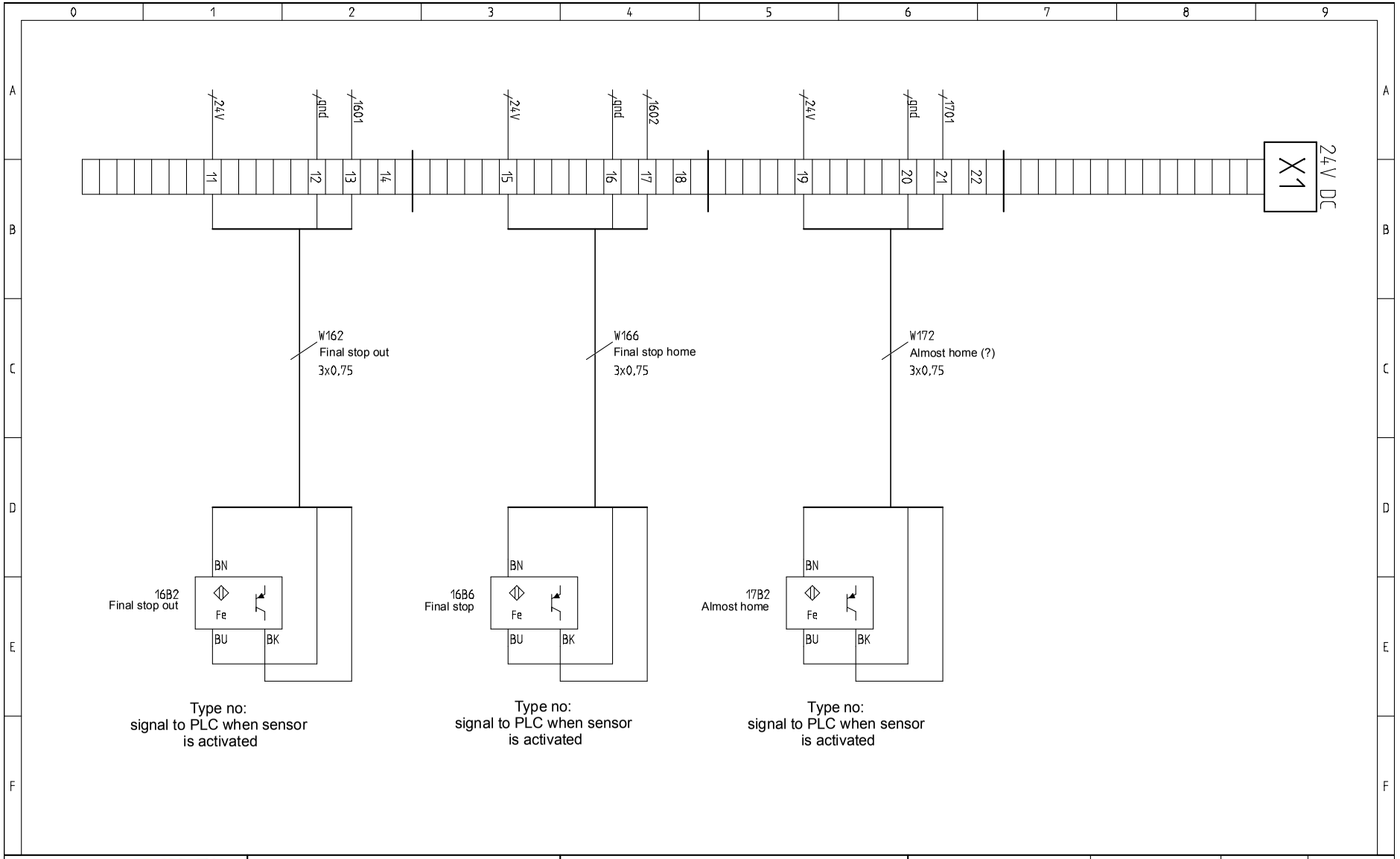
Jasopels	Skinning tower December 2014 Rockwell components	Emergency stop (effect) PLC out	Proj. no.: GET0092-V03-Flåtårn	Drawing no:	Updated: 27-01-2016	Fuit: JCG
			Date: 20-11-2014	Funct.:	Plac:	Page: 20

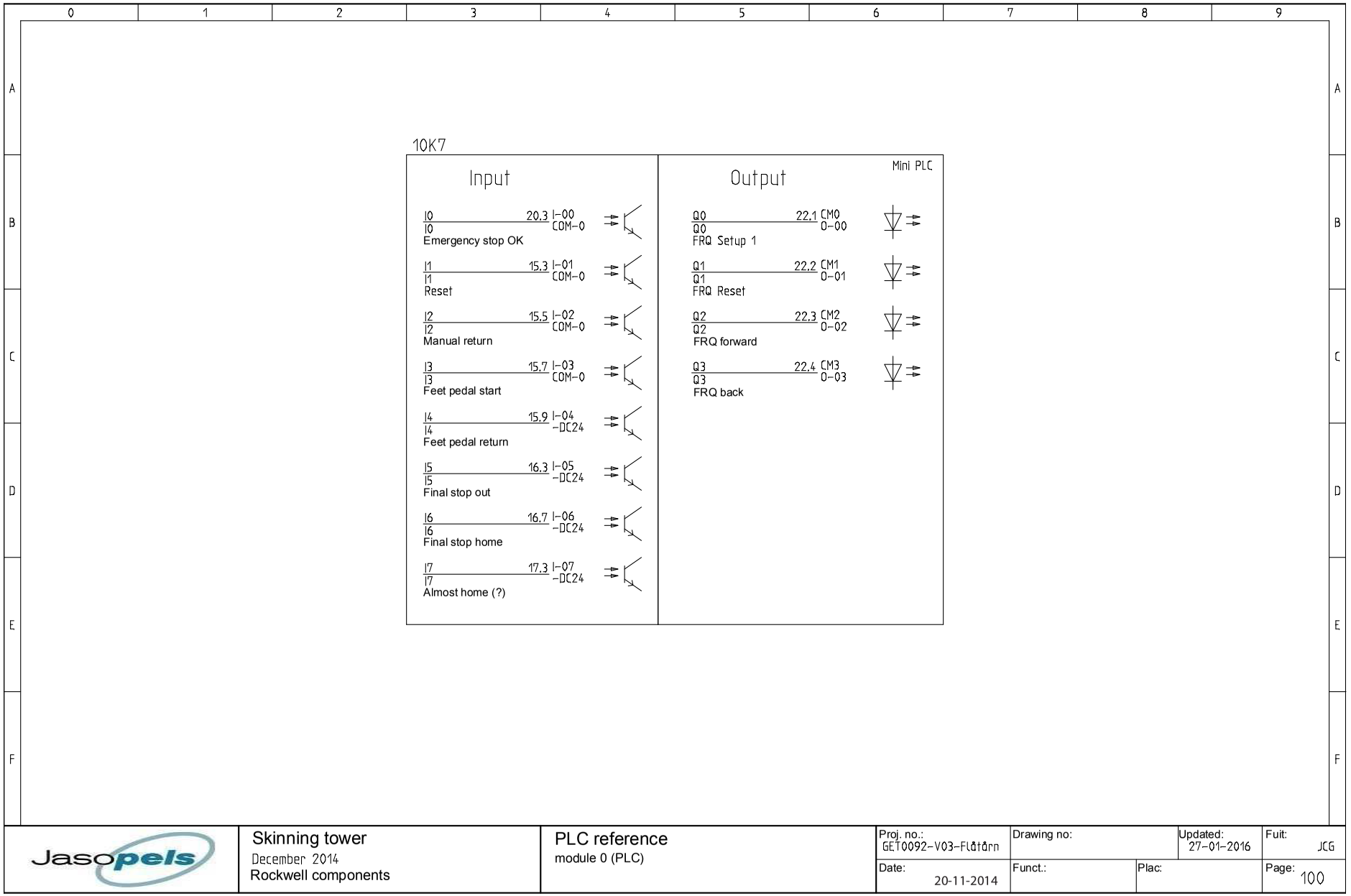


Jasopels	Skinning tower December 2014 Rockwell components	Frequency converter PLC out	Proj. no.: GET0092-V03-Flåtårn	Drawing no:	Updated: 27-01-2016	Fuit: JCG
			Date: 20-11-2014	Funct.:	Plac:	Page: 22



Jasopels	Skinning tower December 2014 Rockwell components	JAWS	Proj. no.: GET0092-V03-Flåtårn	Drawing no:	Updated: 27-01-2016	Fuit: JCG
			Date: 20-11-2014	Funct.:	Plac:	Page: 60


0 1 2 3 4 5 6 7 8 9
A B C D E F
24V
gnd
1601
1602
1701
11 12 13 14 15 16 17 18 19 20 21 22
X1
24V DC
W162
Final stop out
3x0,75
W166
Final stop home
3x0,75
W172
Almost home (?)
3x0,75
BN
16B2
Final stop out
Fe
BU
BK
16B6
Final stop
17B2
Almost home
Type no:
signal to PLC when sensor
is activated
Skinning tower
December 2014
Rockwell components
JAWS
Proj. no.: GET0092-V03-Flåtårn
Drawing no:
Updated: 27-01-2016
Fuit: JCG
Date: 20-11-2014
Funct.:
Plac:
Page: 61



Jasopels	Skinning tower December 2014 Rockwell components	PLC reference module 0 (PLC)	Proj. no.: GET0092-V03-Flåtårn	Drawing no:	Updated: 27-01-2016	Fuit: JCG
			Date: 20-11-2014	Funct.:	Plac:	Page: 100

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