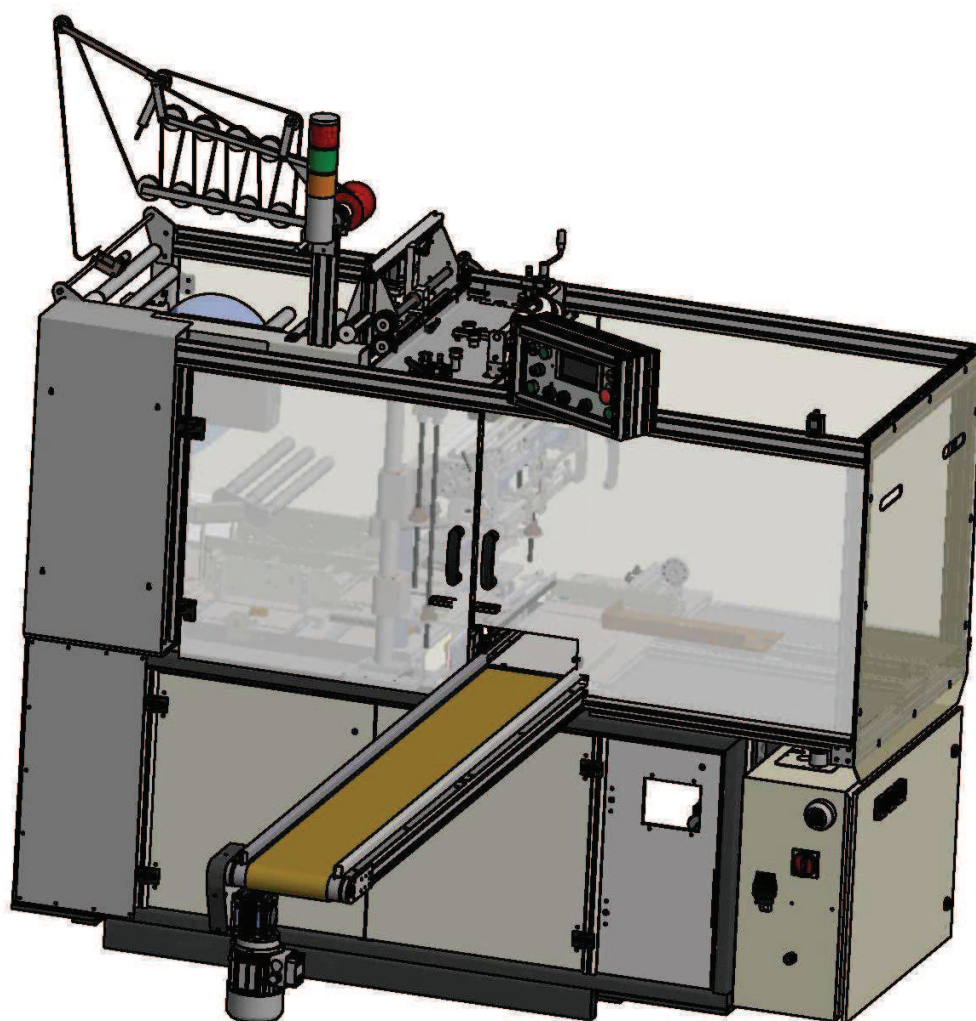
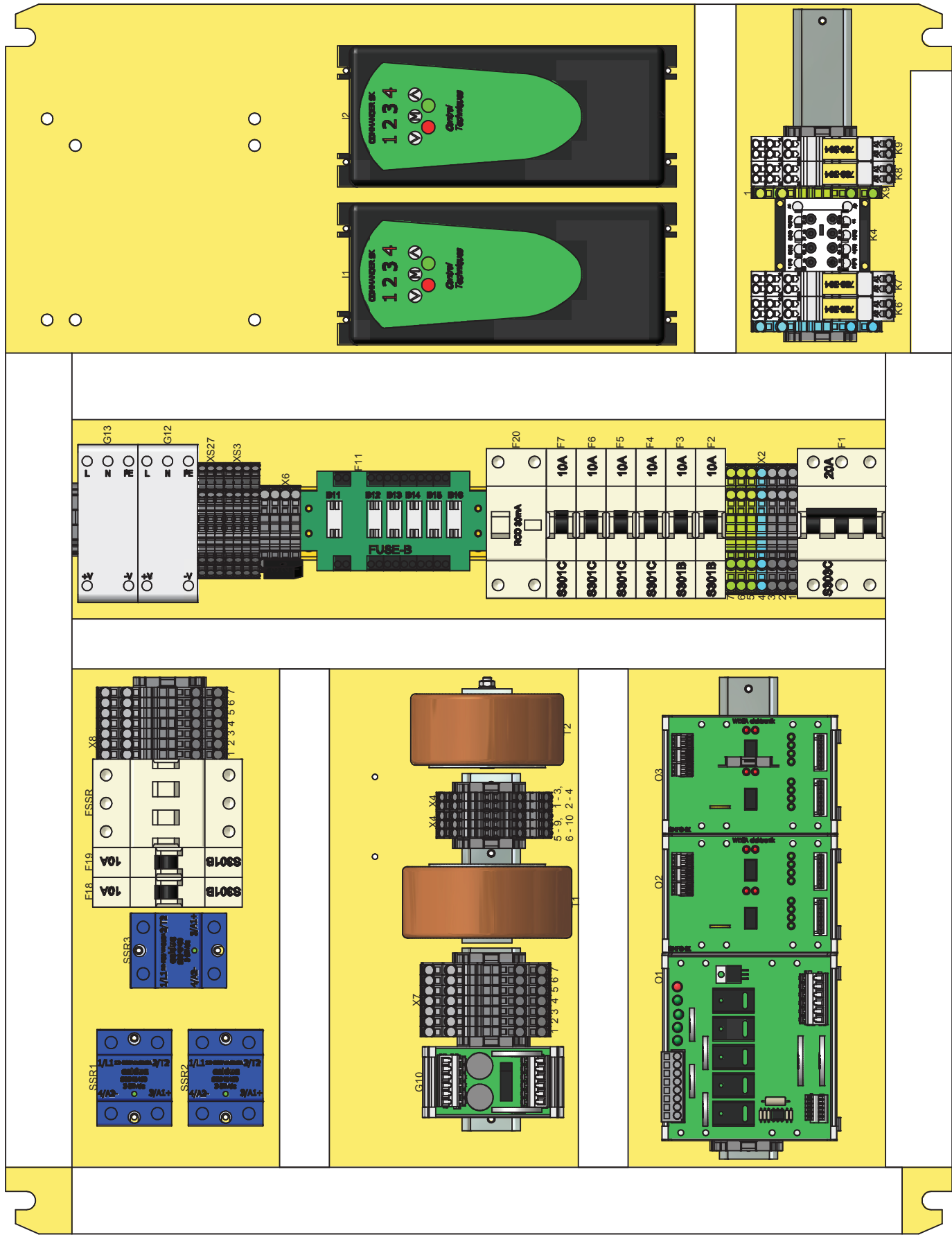


Электрическое и пневматическое схемы для машины типа АМ-4/100С

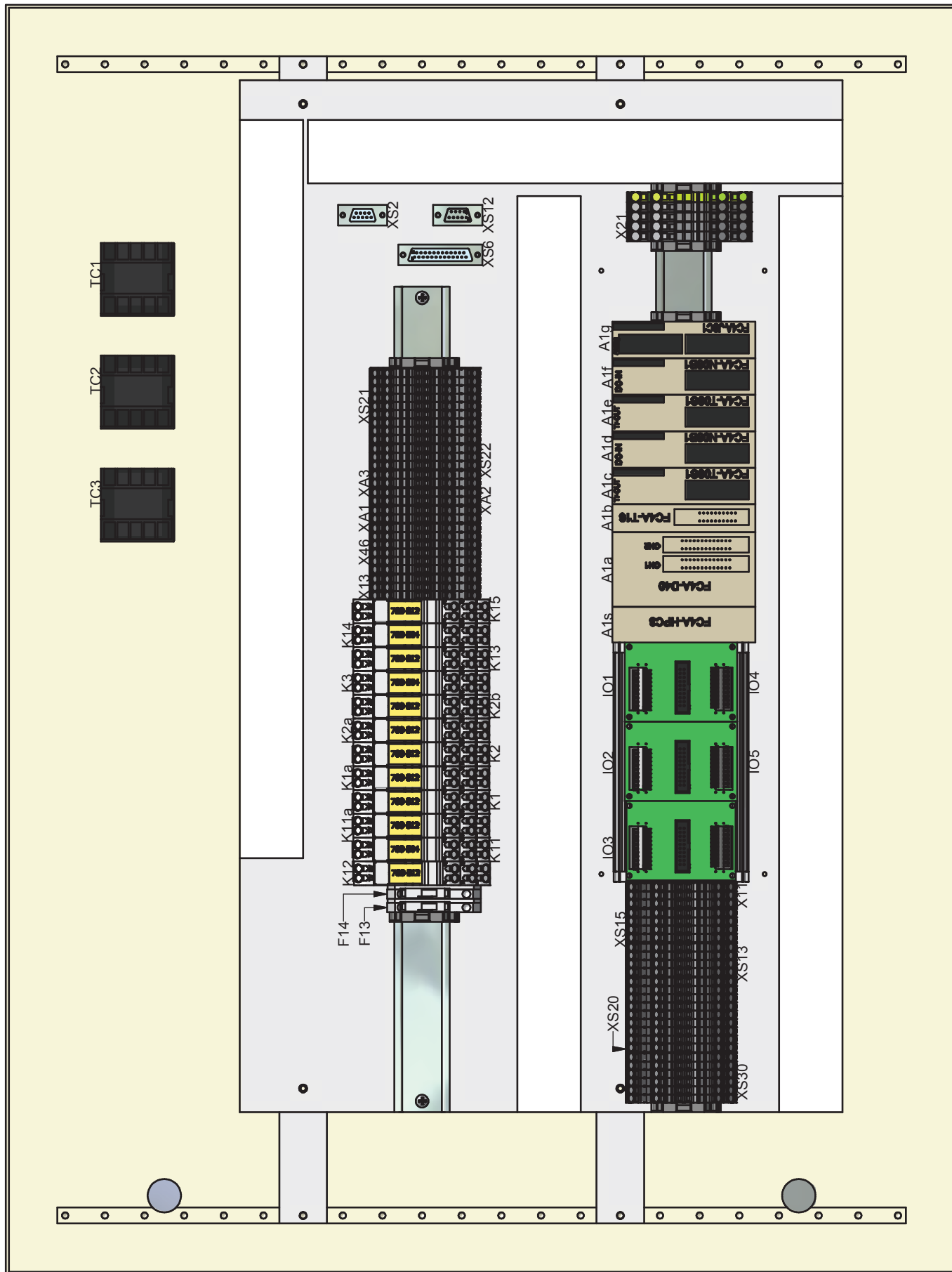




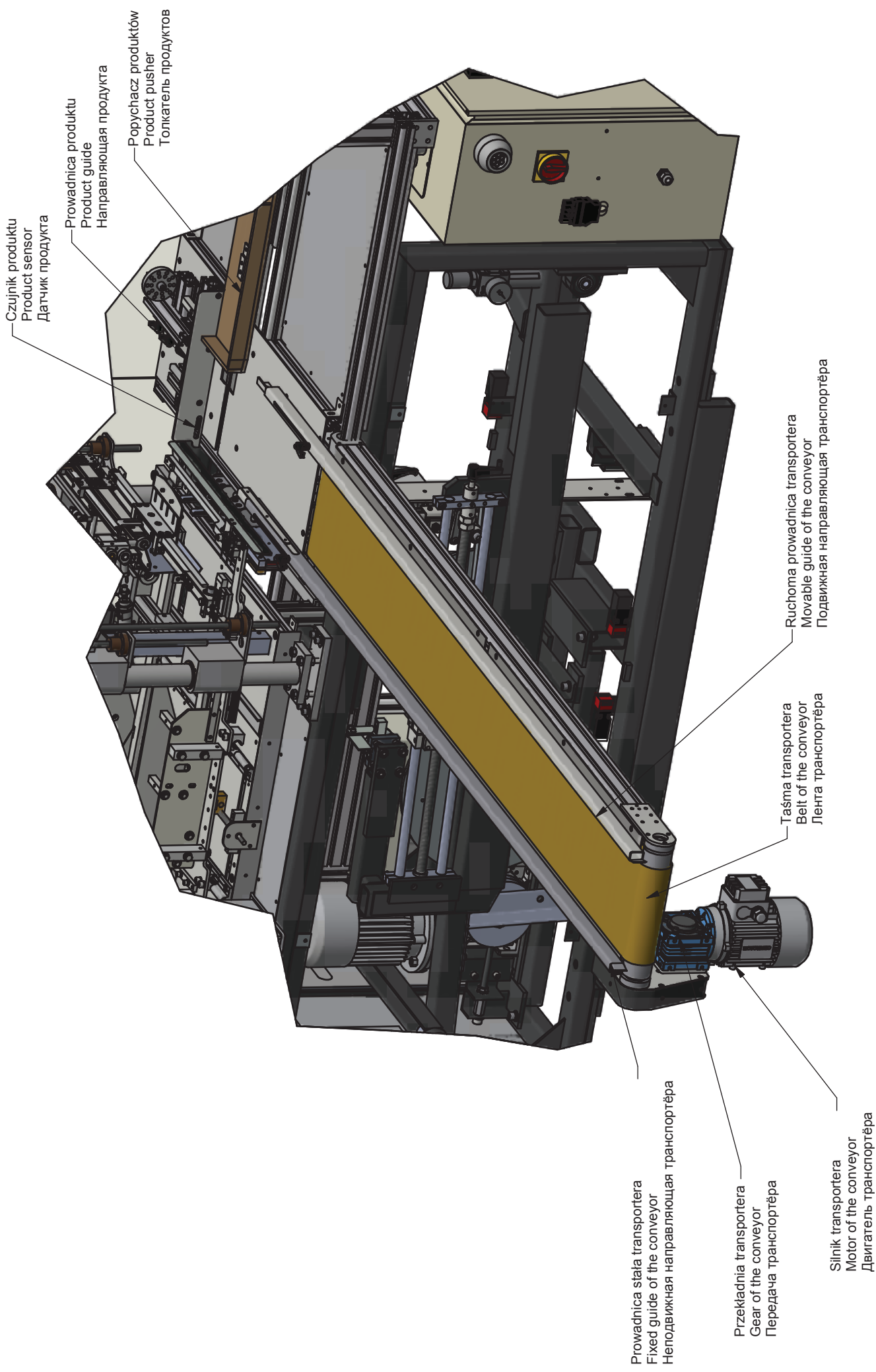
Rys.6 Płyta główna skrzyni elektrycznej

Fig. 6 The main electrical board

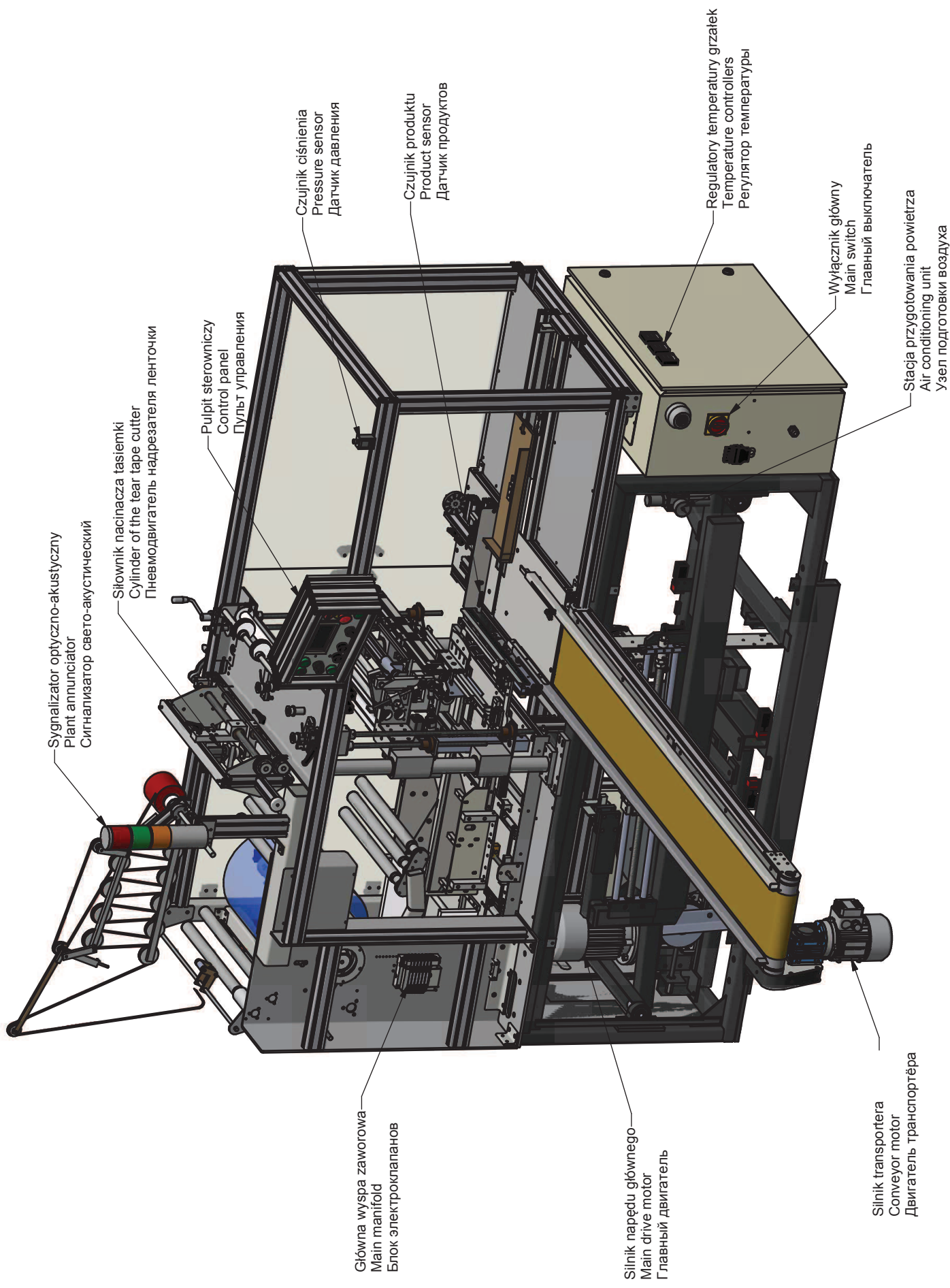
Рис. 6 Главный электрический ящик



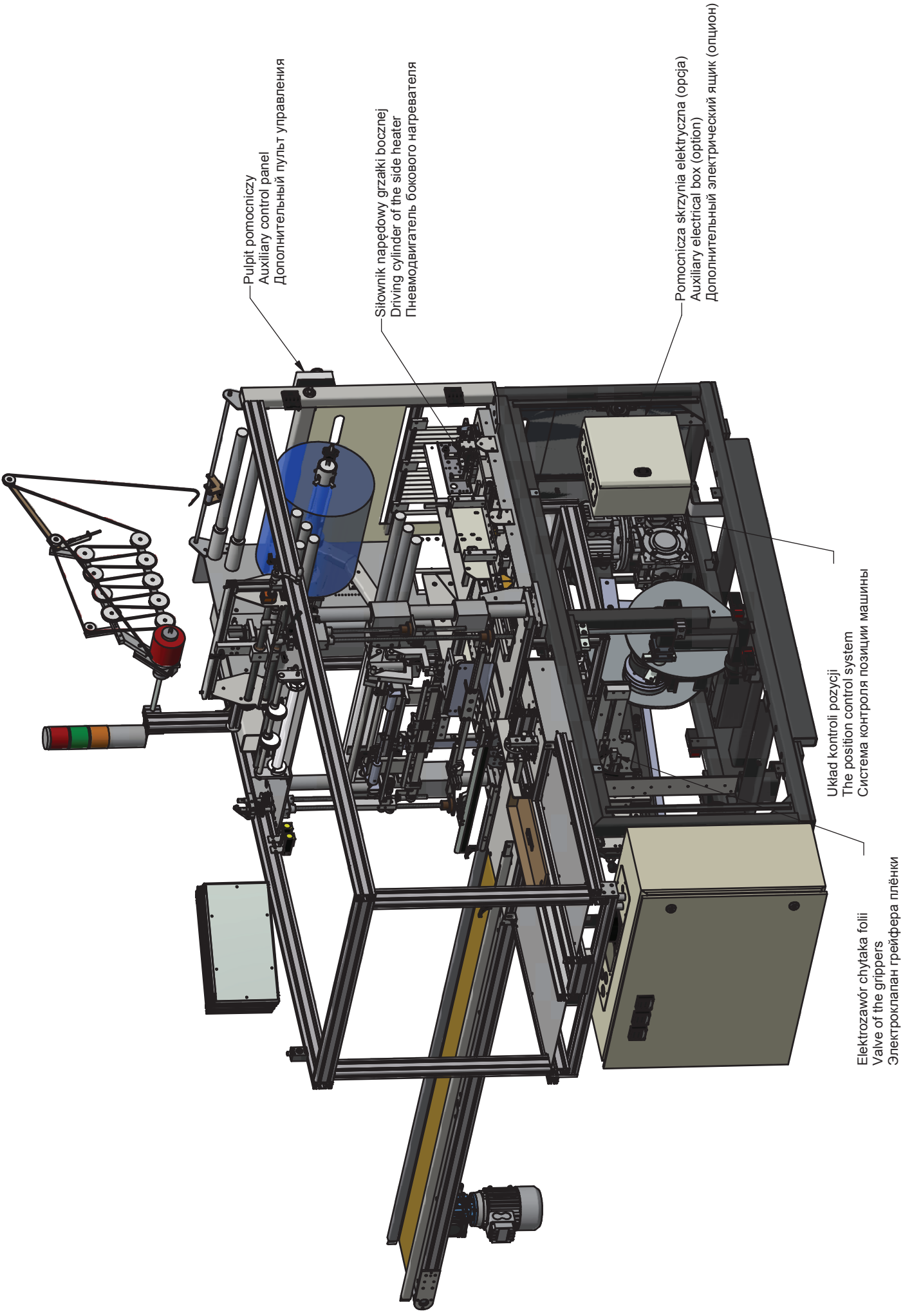
Rys. 7 Wyposażenie elektryczne drzwi skrzyni sterowniczej
 Fig. 7 The electrical equipment of the door of the control box
 Рис. 7 Электрические оборудование на дверях ящика



Rys.16 Transporter taśmowy/ Fig.16 The belt conveyor/ Рис.16 Лентовой транспортер



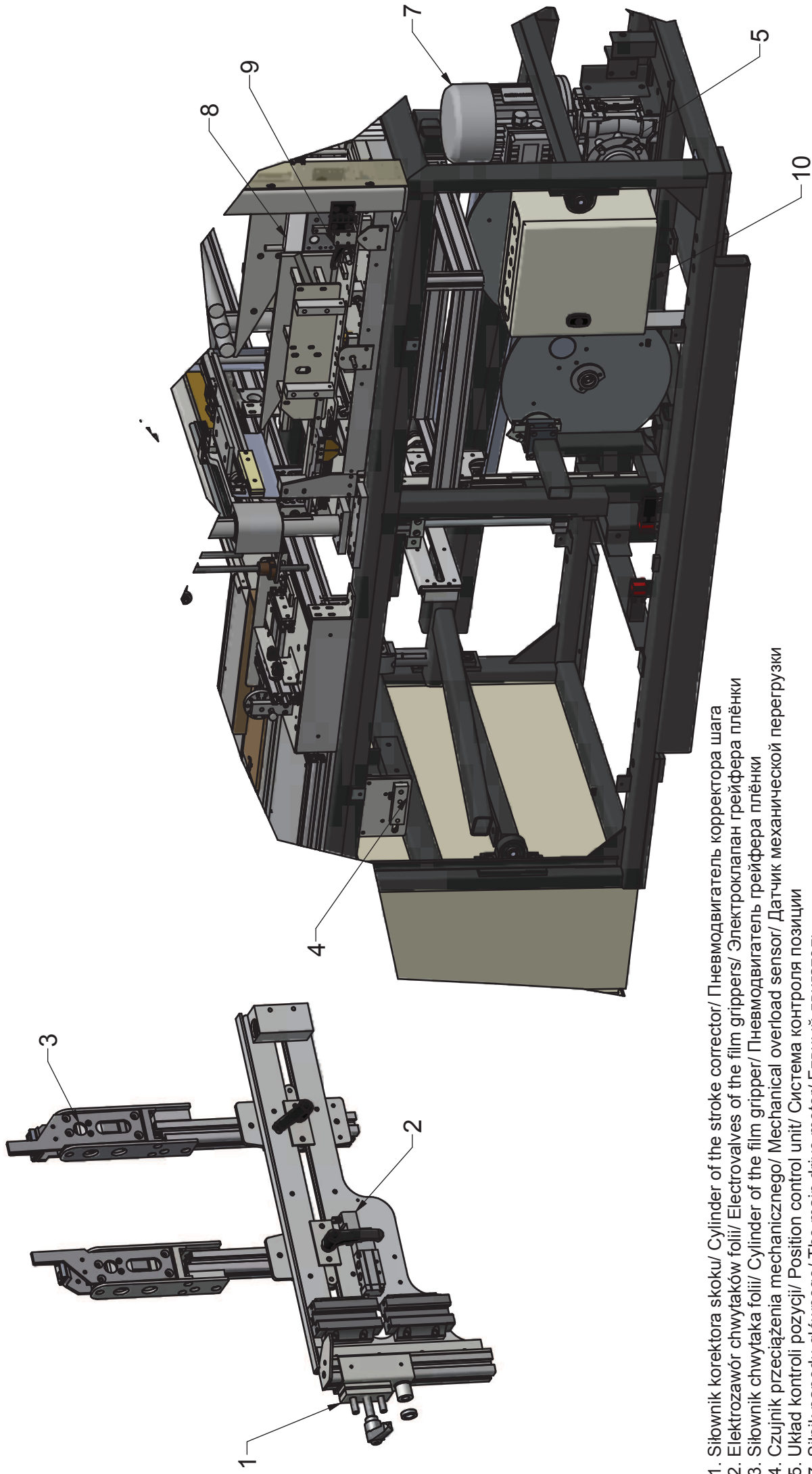
Rys.21a Wyposażenie elektryczne i pneumatyczne
 Fig.21a Electrical and pneumatical equipment
 Рис.21a Электрические и пневматические оборудование



Rys.21b Wyposażenie elektryczne i pneumatyczne

Fig.21b Electrical and pneumatical equipment

Рис.21б Электрические и пневматические оборудование



1. Siłownik korektora skoku/ Cylinder of the stroke corrector/ Pневмодвигатель корректора шага
2. Elektrozwór chwytaków folii/ Electrovalves of the film grippers/ Электродвигатель рейфера плёнки
3. Siłownik chwytaka folii/ Cylinder of the film gripper/ Пневмодвигатель рейфера плёнки
4. Czujnik przeciążenia mechanicznego/ Mechanical overload sensor/ Датчик механической перегрузки
5. Układ kontroli pozycji/ Position control unit/ Система контроля позиции
7. Siłnik napędu głównego/ The main drive motor/ Глвный двигатель
8. Płyta grzejąca prawej grzałki/ Heating plate of the right heater/ Нагревательная плита правого нагревателя
9. Siłownik prawej grzałki/ Cylinder of the right heater/ Пневмодвигатель правого нагревателя
10. Skrzynia elektryczna napędów regulacyjnych (opcja)/ Electrical box of the adjusting drives/ Электрический ящик регулировочных приводов

Rys.22 Elementy elektryczne i pneumatyczne dolnej części maszyny
 Fig.22 Electrical and pneumatical elements of the lower part of the machine
 Рис.22 Электрически и пневматически элементы нижней части машины

| | | | | | |
|--|---|---|------------------------|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| A | B | C | D | E | F |
| <p>Manufacturer: Wega elektronik Sylwester Wysocki i wspólnicy mgr inż. Sylwester Wysocki ul. Kamienna 11 61-423 Poznań Poland</p> <p>tel/fax +48 61 8304039 +48 61 8300311</p> <p>e-mail: wegaelek@wlkp.top.pl http://www.wega-elektronik.pl</p> <p>Machine type: AM-4/100C</p> <p>Machine name: The AM-4/100C automatic</p> <p>Project: AM-4C 01-PN</p> <p>Assembly diagram of pneumatic equipment</p> <p>Valid for machines no from: 1202527928</p> <p>Technical data: Compressed air power: max 6 bar, 180 l/min</p> | | | | | |
| A | B | C | D | E | F |
| Project: AM-4C 01-PN | | | WEGA elektronik | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| A | B | C | D | E | F |

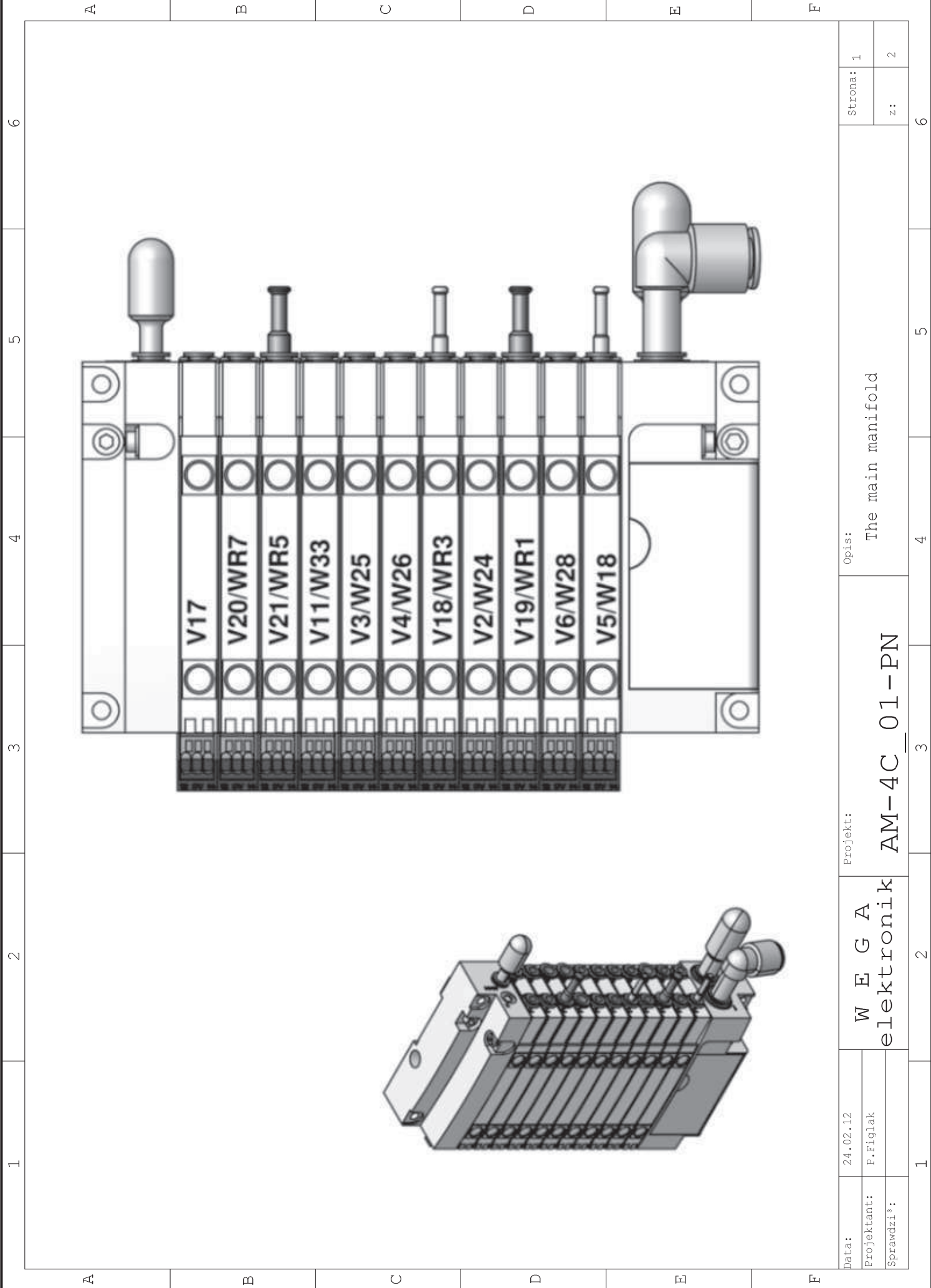
Table of contents:AM-4C 01-PN

No File Comment Date

| No | File | Comment | Date |
|----|----------------------|--|------------|
| 1 | AM-4C 01-PN GR.0001 | The main manifold | 24.02.2012 |
| 2 | AM-4C 01-PN SCH.0001 | Compressed air preparation unit | 24.02.2012 |
| 3 | AM-4C 01-PN SCH.0002 | Elements of the film preparing unit | 24.02.2012 |
| 4 | AM-4C 01-PN SCH.0003 | Elements of the film preparing unit | 24.02.2012 |
| 5 | AM-4C 01-PN SCH.0004 | Wrapping unit elements | 24.02.2012 |
| 6 | AM-4C 01-PN SCH.0005 | Wrapping unit elements | 24.02.2012 |
| 7 | AM-4C 01-PN SCH.0006 | Film gripper | 24.02.2012 |
| 8 | AM-4C 01-PN SCH.0007 | Side heaters and frontal heater pulling back | 24.02.2012 |
| 9 | AM-4C 01-PN SCH.0008 | Film cutting unit | 24.02.2012 |
| 10 | AM-4C 01-PN SCH.0009 | Vacuum type film holding | 24.02.2012 |
| 11 | AM-4C 01-PN SCH.0010 | Electropneumatic drive (OPTIONAL) | 24.02.2012 |
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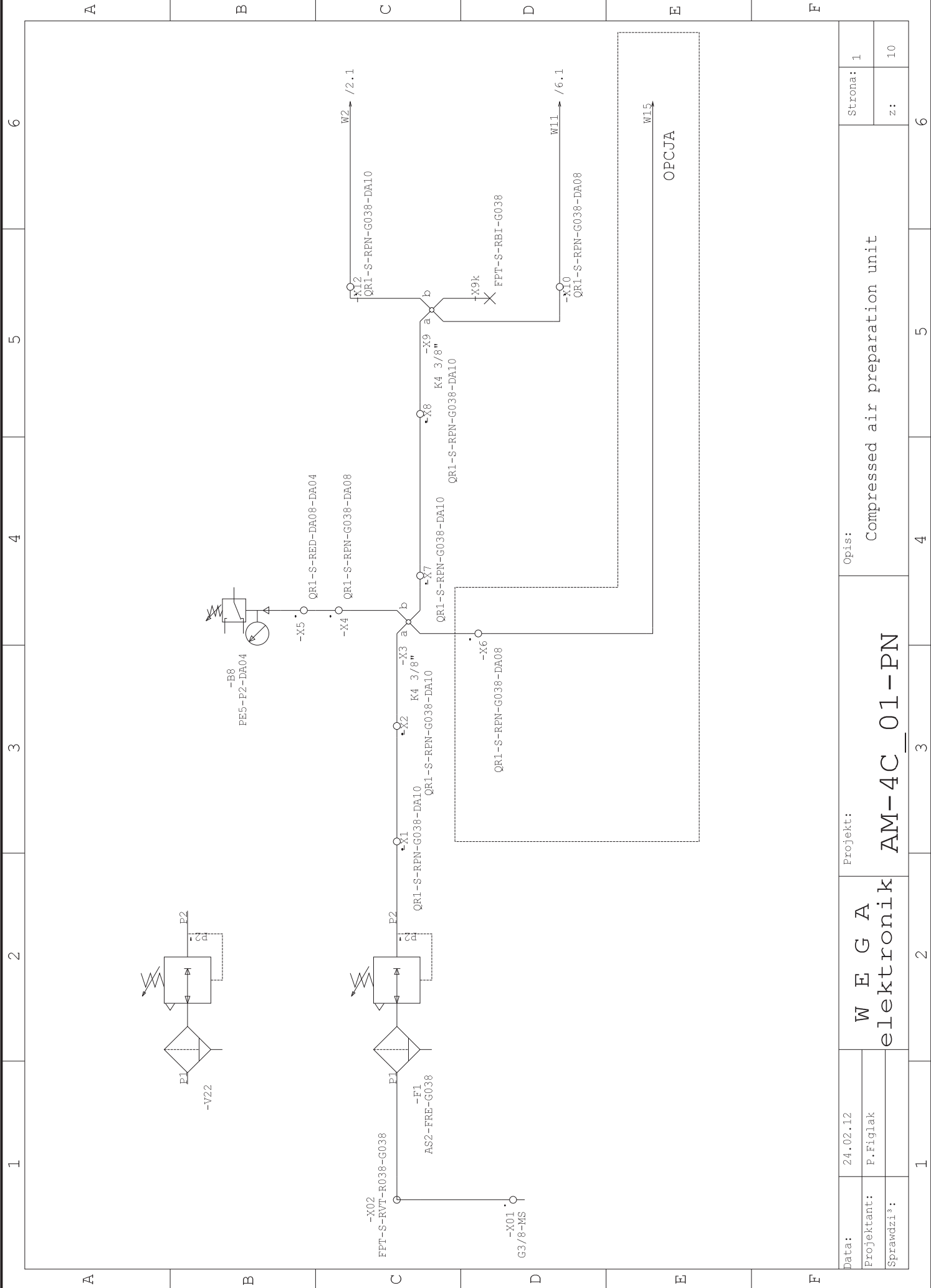
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| B | | | | | | B |
| C | | | | | | C |
| D | | | | | | D |
| E | | | | | | E |
| F | | | | | | F |

| | | | | | |
|---------------|----------|-----------------------|--------------------------------|-------|---|
| Date: | 24.02.12 | W E G A elektronik | Project: AM-4C 01-PN | Page: | 2 |
| Designer: | P.Figlak | | | from: | 2 |
| Inspected by: | | | | | |

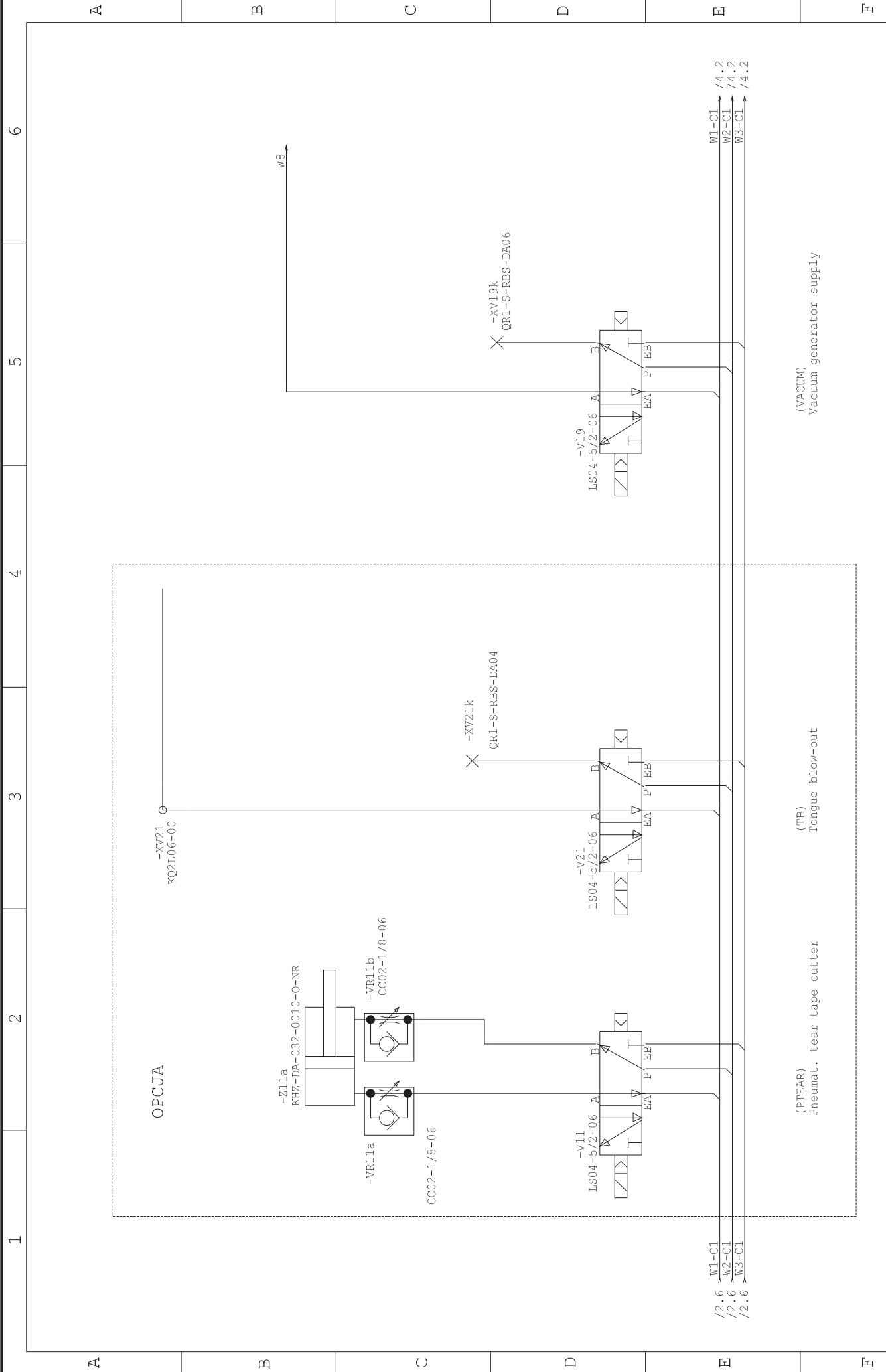


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| Data: | 24.02.12 | Projekt: | AM-4C_01-PN | Opis: | The main manifold | Strona: | 1 |
| Projektant: | P. Figlak | | | | | z: | 2 |
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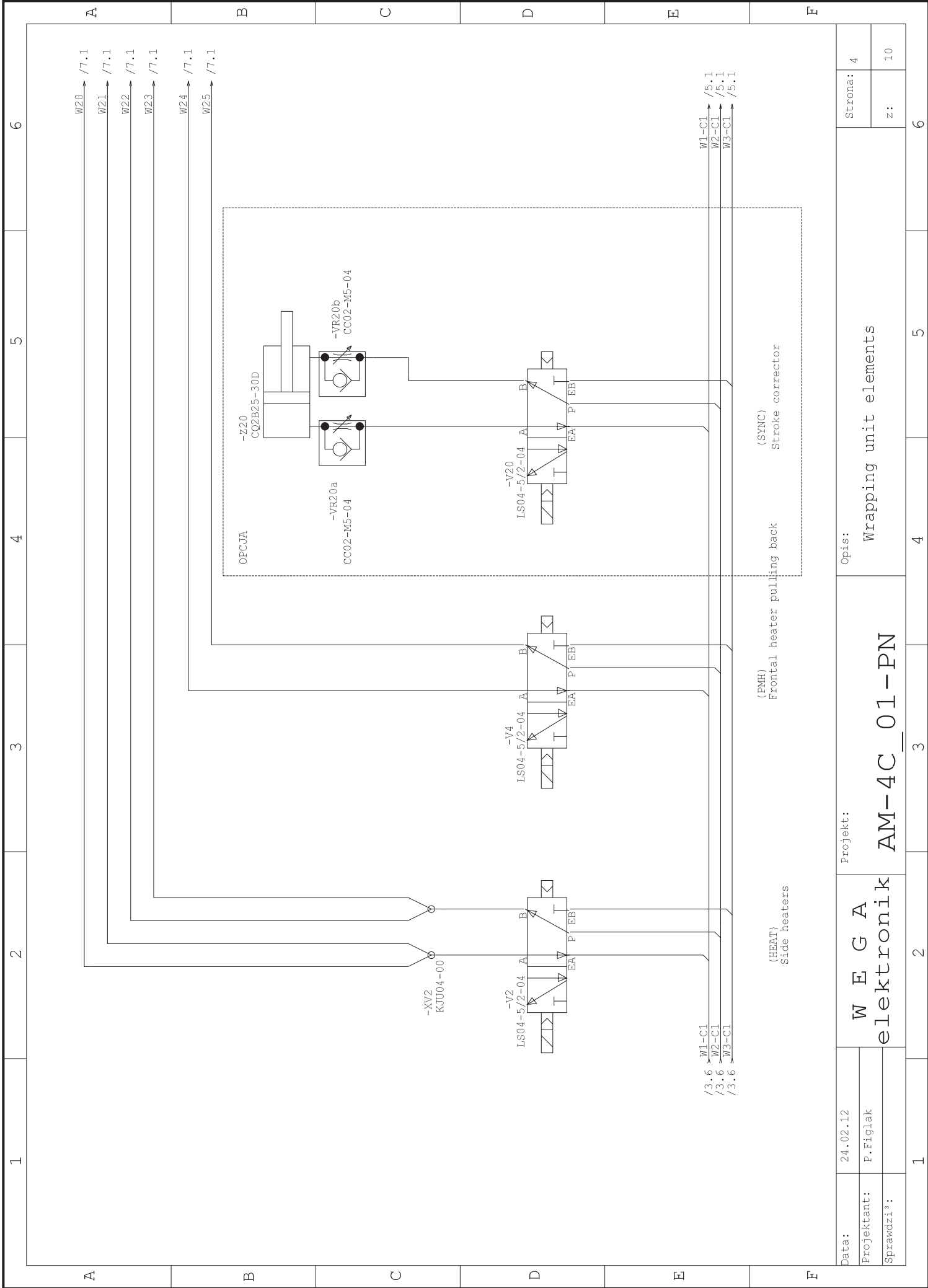
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| A | B | C | D | E | F |
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| Projektant: | P. Figlak | | | | |
| Sprawdził: | | | | | |
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| A | B | C | D | E | F |
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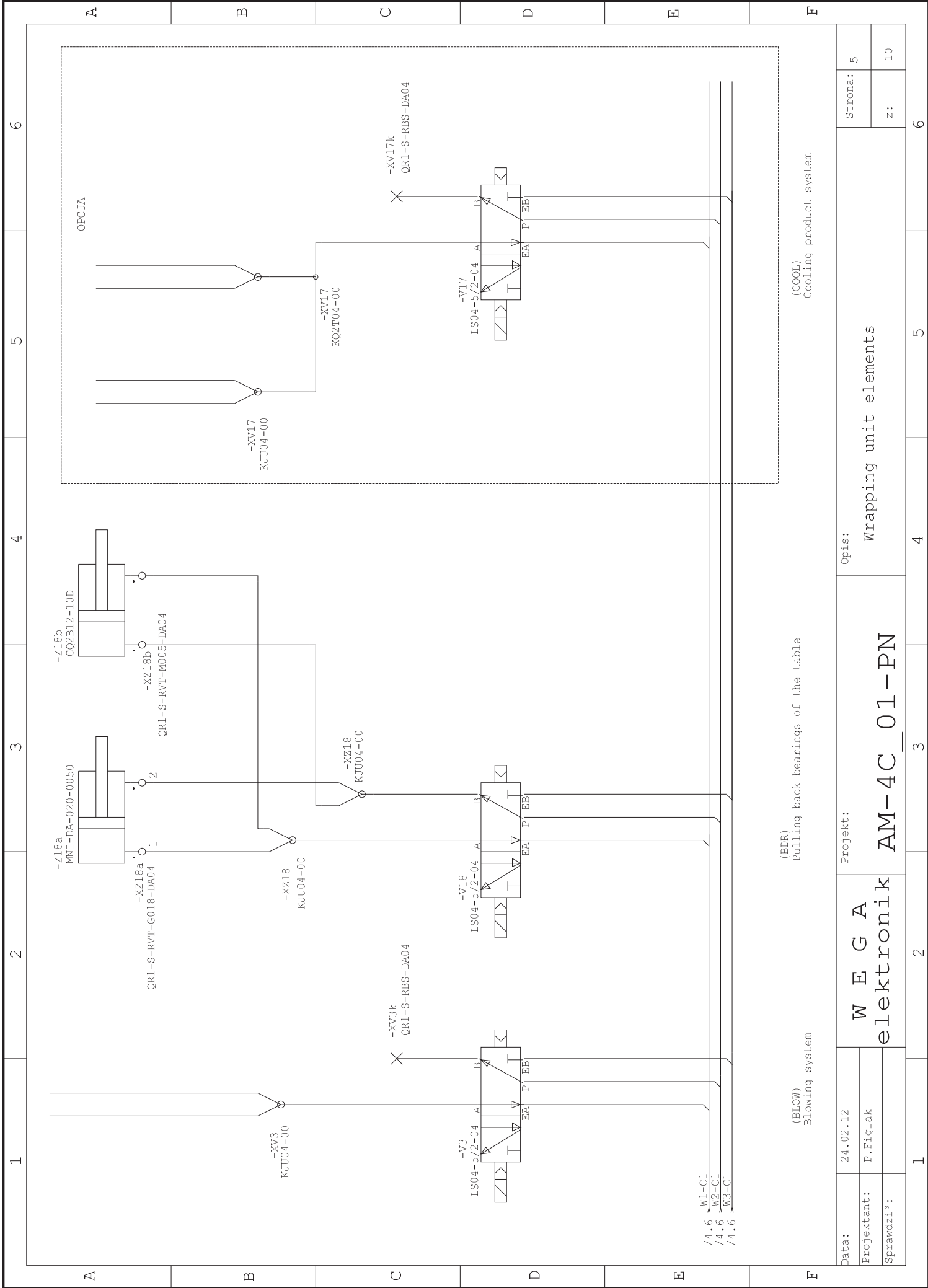
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| Sprawdził: | | | | Projekt: | | AM-4C_01-PN | | 6 | |
| | | | | Projekt: | | Compressed air preparation unit | | 6 | |



| | | | | | | | | | | | |
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| Data: | 24.02.12 | Projekt: | AM-4C_01-PN | | | Opis: | Elements of the film preparing unit | | | Strona: | 3 |
| Projektant: | P.Figlak | | | | | | | | | | |
| Sprawdził: | | | | | | | | | | | |
| | | | | | | | | | | z: | 10 |
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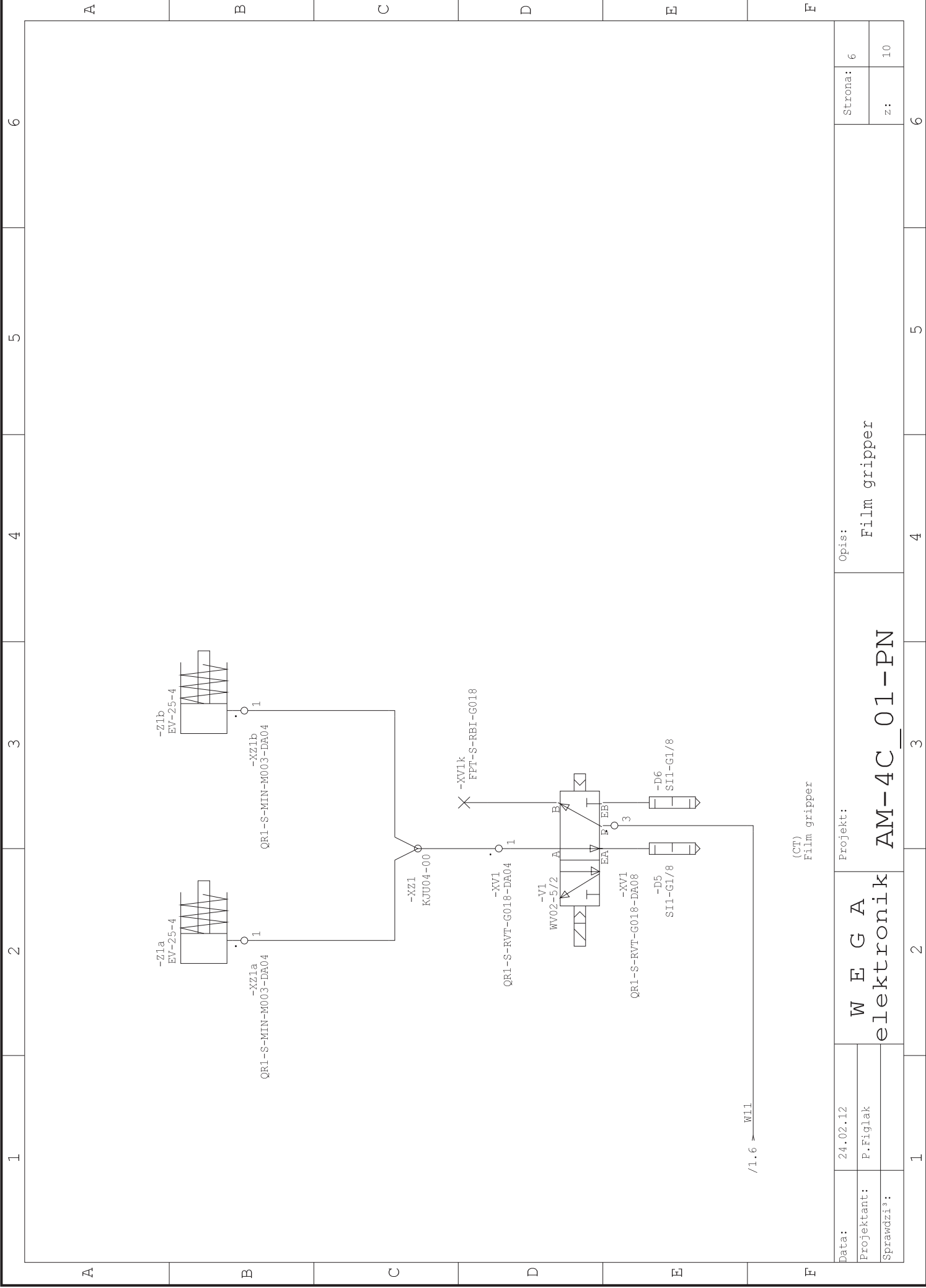


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| Projektant: | P. Figlak | Opis: | Wrapping unit elements | | | z: 10 |
| Sprawdził: | | | | | | |



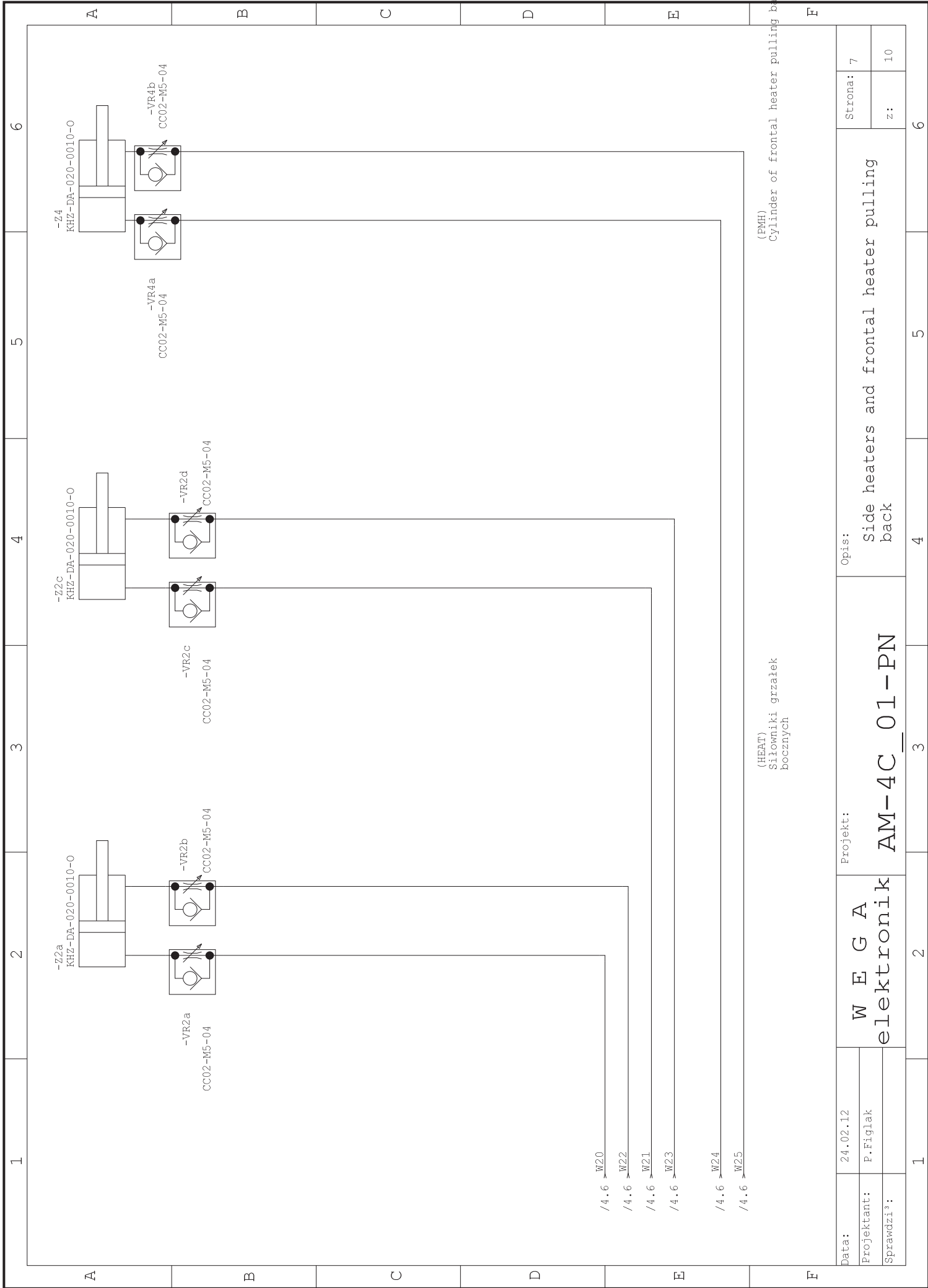
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| Projektant: | P.Figlak | Wrapping unit elements | | z: 10 |
| Sprawdził: | | | | |

AM-4C_01-PN

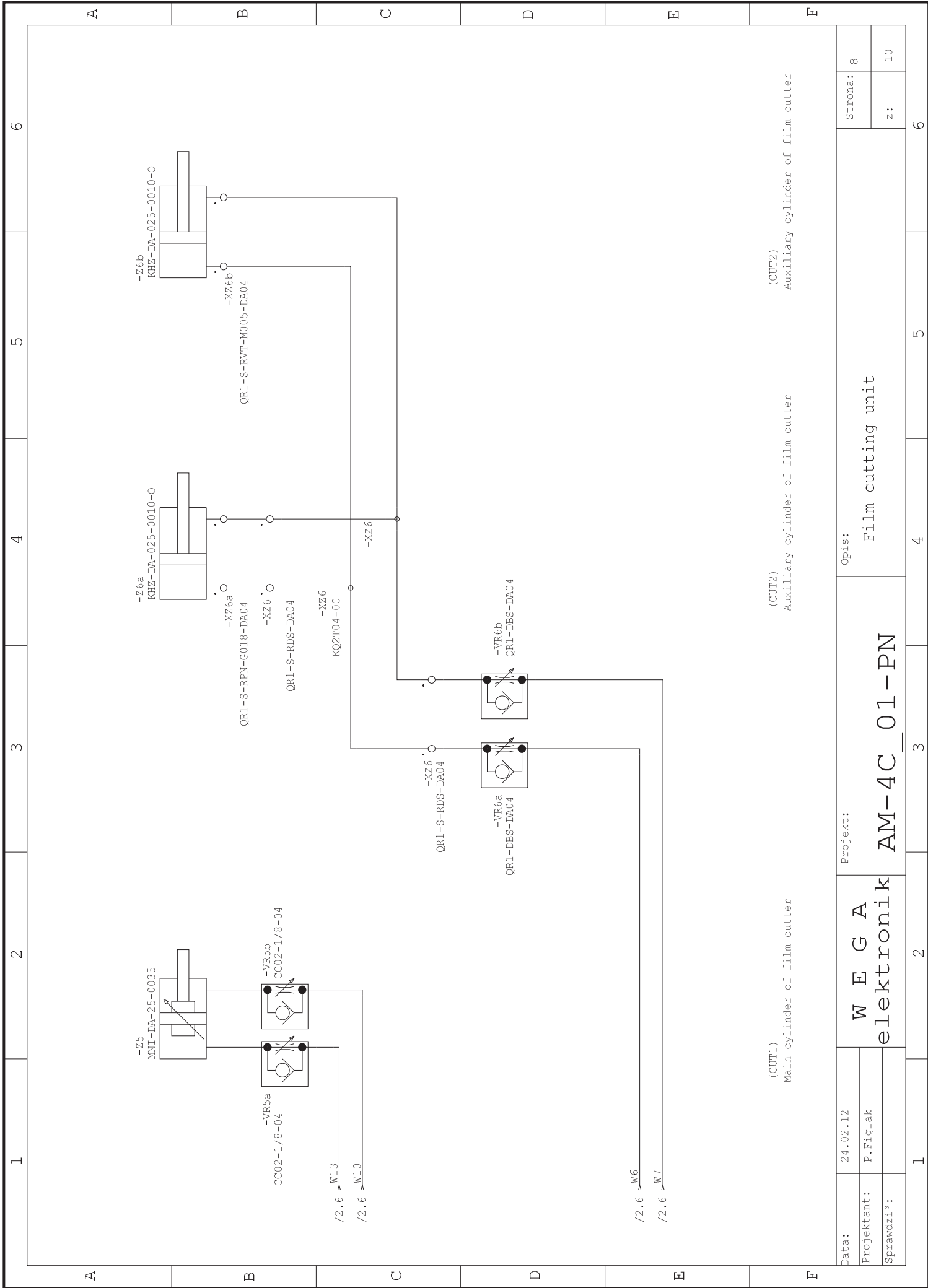


(CT)
Film gripper

| | | | | | |
|-------------|-----------|----------|--------------|---------|----|
| Data: | 24.02.12 | Projekt: | Film gripper | Strona: | 6 |
| Projektant: | P. Figlak | Opis: | Film gripper | z: | 10 |
| Sprawdził: | | Projekt: | AM-4C_01-PN | | |



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|-------------|--|----------|--|-------------|--|--|--|-----------|--|
| Data: | | 24.02.12 | | Projekt: | | Opis: | | Strona: 7 | |
| Projektant: | | P.Figlak | | AM-4C_01-PN | | Side heaters and frontal heater pulling back | | z: 10 | |
| Sprawdził: | | | | | | | | 6 | |



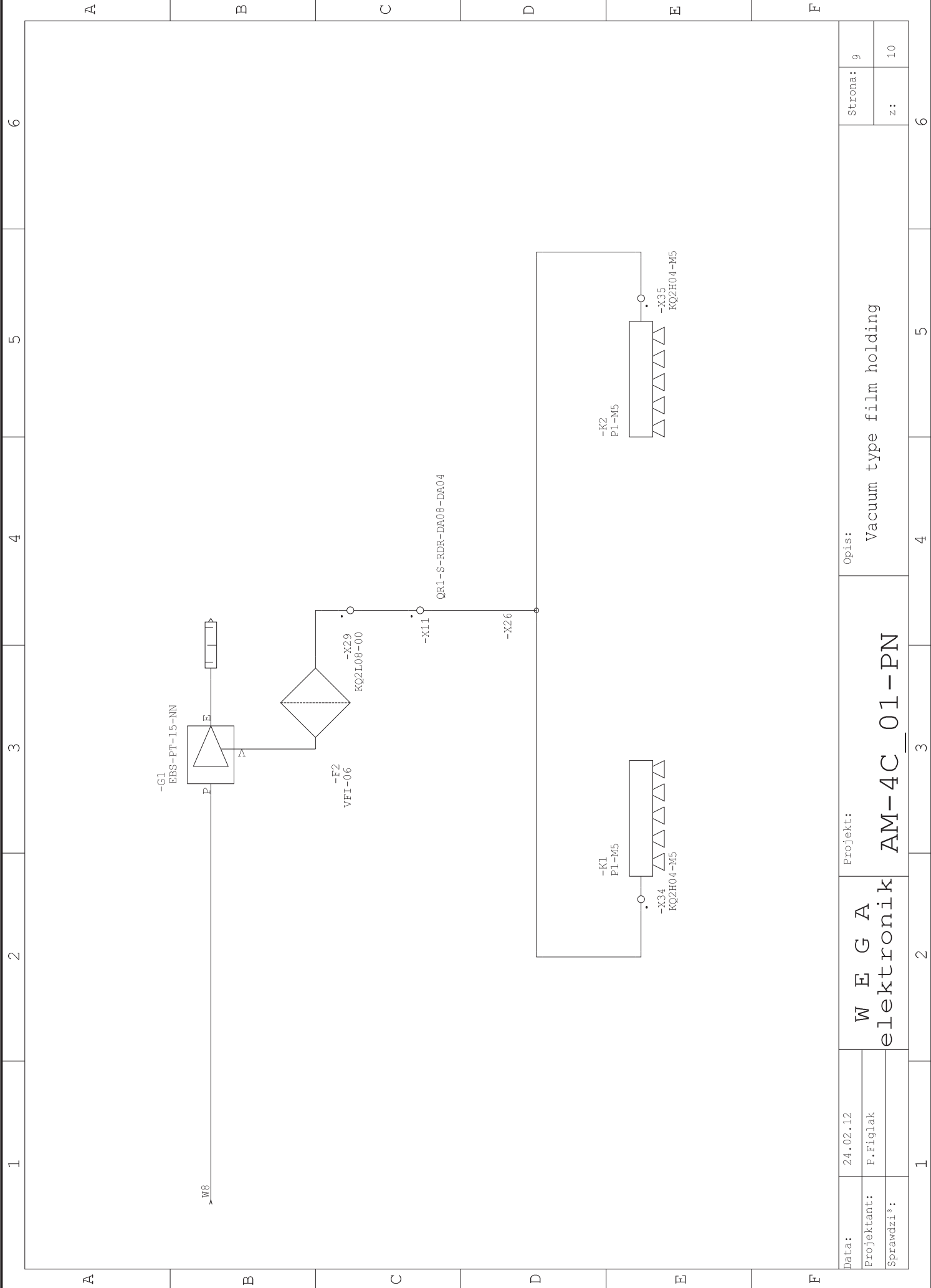
(CUT1)
Main cylinder of film cutter

(CUT2)
Auxiliary cylinder of film cutter

(CUT2)
Auxiliary cylinder of film cutter

| | | | | |
|-------------|----------|--------------------------------|----------------------------|-----------|
| Data: | 24.02.12 | Projekt: AM-4C_01-PN | Opis: Film cutting unit | Strona: 8 |
| Projektant: | P.Figlak | | | z: 10 |
| Sprawdził: | | | | |

W E G A
elektronik

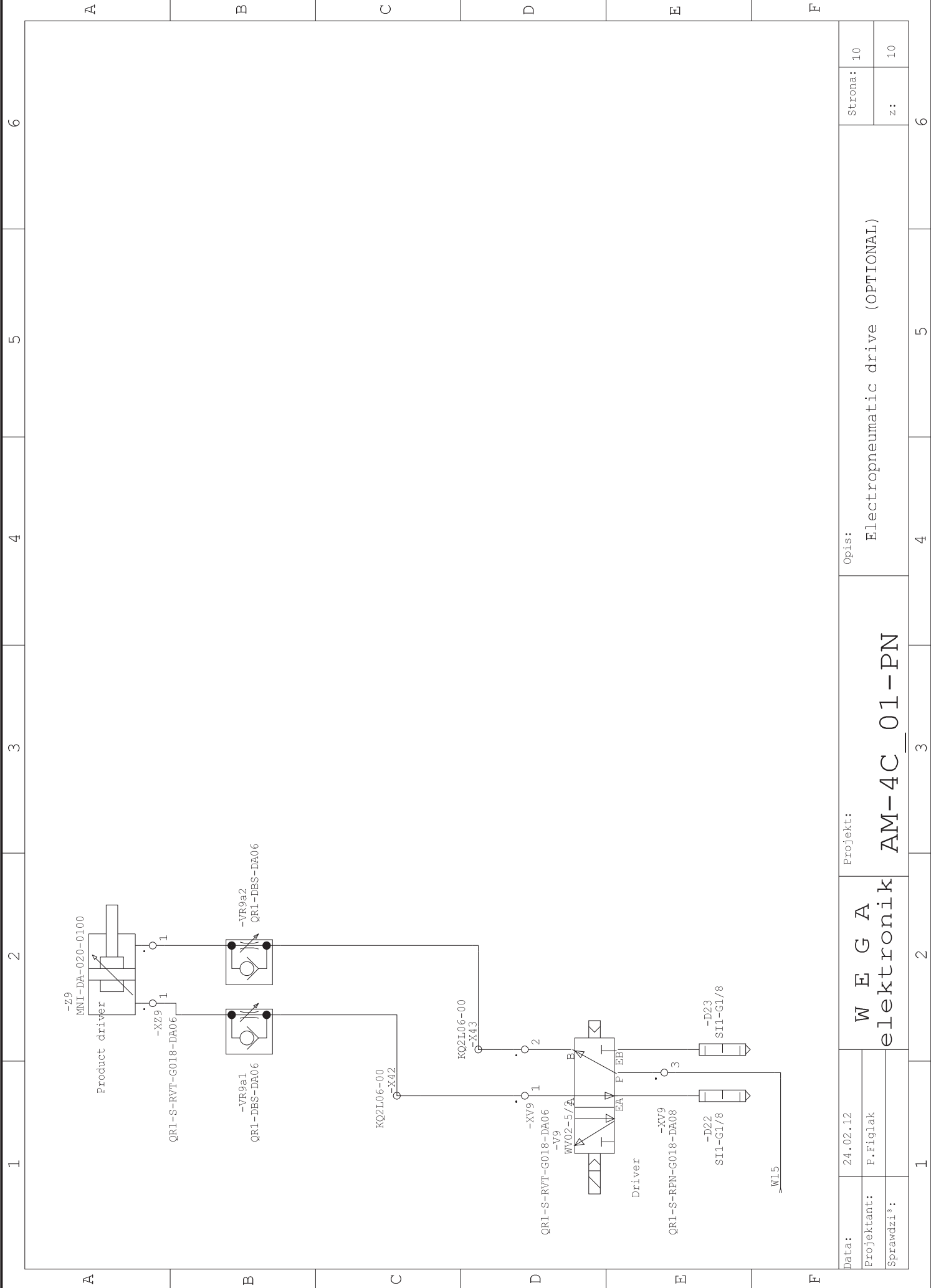


A B C D E F

1 2 3 4 5 6

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|-------------|----------|----------|-------------|-------|--------------------------|---------|----|
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| Projektant: | P.Figlak | | | | | z: | 10 |
| Sprawdził: | | | | | | | |

1 2 3 4 5 6



A B C D E F

1 2 3 4 5 6

1 2 3 4 5 6

1 2 3 4 5 6

A B C D E F

| | | | | | | | |
|-------------|----------|----------|-------------|-------|-----------------------------------|---------|----|
| Data: | 24.02.12 | Projekt: | AM-4C_01-PN | Opis: | Electropneumatic drive (OPTIONAL) | Strona: | 10 |
| Projektant: | P.Figlak | | | | | z: | 10 |
| Sprawdził: | | | | | | | |

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|-------------------|----|--------|----------------------|-------|---------|--------------|---|--|---|--|
| 1 | 2 | | 3 | | 4 | | 5 | | 6 | |
| Bill of material: | | | | | | | | | | |
| A | Nr | Ozn. | Typ | Ilość | WEGA ID | Producent | Nazwa | Funkcja | A | |
| | 1 | -D21 | ANA1-C10 | 1 | SMC | SMC | Silencer ANA1-C10 [6177] | | | |
| | 2 | -F1 | AS2-FRE-G038 | 1 | 46181 | Bosch | Zawór redukcyjny AS2-FRE-G038 (R412006210) [11989]xxx | Compressed air preparation unit | | |
| | 3 | -V22 | AS2-FRE-G039 | 1 | 46259 | Bosch | | | | |
| | 4 | -VR5a | CC02-1/8-04 | 1 | 12013 | Bosch | Throttle valve CC02-1/8-04 (0821200192) [12013] | Speed control.of main cylinder of cutter | | |
| | 5 | -VR5b | CC02-1/8-04 | 1 | 12013 | Bosch | Throttle valve CC02-1/8-04 (0821200192) [12013] | Speed control.of main cylinder of cutter | | |
| | 6 | -VR11a | CC02-1/8-06 | 1 | 12014 | Bosch | Throttle valve CC02-1/8-06 (0821200193) [12014] | Regulator prędkości nacinacza tasienki | | |
| | 7 | -VR11b | CC02-1/8-06 | 1 | 12014 | Bosch | Throttle valve CC02-1/8-06 (0821200193) [12014] | Regulator prędkości nacinacza tasienki | | |
| | 8 | -VR2a | CC02-M5-04 | 1 | 12015 | Bosch | Throttle valve CC02-M5-04 (0821200128) [12015] | Speed controller of left heater | | |
| | 9 | -VR2b | CC02-M5-04 | 1 | 12015 | Bosch | Throttle valve CC02-M5-04 (0821200128) [12015] | Speed controller of left heater | | |
| | 10 | -VR2c | CC02-M5-04 | 1 | 12015 | Bosch | Throttle valve CC02-M5-04 (0821200128) [12015] | Speed controller of right heater | | |
| | 11 | -VR2d | CC02-M5-04 | 1 | 12015 | Bosch | Throttle valve CC02-M5-04 (0821200128) [12015] | Speed controller of right heater | | |
| | 12 | -VR4a | CC02-M5-04 | 1 | 12015 | Bosch | Throttle valve CC02-M5-04 (0821200128) [12015] | Speed controller of fr.heat.pull.back | | |
| | 13 | -VR4b | CC02-M5-04 | 1 | 12015 | Bosch | Throttle valve CC02-M5-04 (0821200128) [12015] | Speed controller of fr.heat.pull.back | | |
| | 14 | -VR20a | CC02-M5-04 | 1 | 12015 | Bosch | Throttle valve CC02-M5-04 (0821200128) [12015] | Speed control. of stroke corrector | | |
| | 15 | -VR20b | CC02-M5-04 | 1 | 12015 | Bosch | Throttle valve CC02-M5-04 (0821200128) [12015] | Speed control. of stroke corrector | | |
| | 16 | -Z18b | CQ2B12-10D | 1 | SMC | SMC | Bilateral cylinder CQ2B12-10D [6967] | Podrzyzwanie folii | | |
| | 17 | -Z20 | CQ2B25-30D | 1 | SMC | SMC | Bilateral cylinder CQ2B25-30D [6181] | Stroke corrector | | |
| | 18 | -G1 | EBS-PT-15-NN | 1 | Bosch | Bosch | Vacuum generator EBS-PT-15-NN (R412007452) [11998] | Vacuum generator of film holding system | | |
| | 19 | -Z12a | EV-20-4 | 1 | 11196 | festo | Cylinder EV-20-4 [1196] | Left film holder | | |
| | 20 | -Z12b | EV-20-4 | 1 | 11196 | festo | Cylinder EV-20-4 [1196] | Right film holder | | |
| | 21 | -Z1a | EV-25-4 | 1 | 9637 | festo | Cylinder EV-25-4 [9637] | Left film gripper | | |
| | 22 | -Z1b | EV-25-4 | 1 | 9637 | festo | Cylinder EV-25-4 [9637] | Right film gripper | | |
| | 23 | -XV1k | FPT-S-RBI-G018 | 1 | Bosch | Bosch | Blanking screw FPT-S-RBI-G018 (1823462028) [12000] | | | |
| | 24 | -X9k | FPT-S-RBI-G038 | 1 | Bosch | Bosch | Blanking screw 3/8" FPT-S-RBI-G038 (8639003800) [12366] | | | |
| | 25 | -X02 | FPT-S-RVT-R038-G038 | 1 | Bosch | Bosch | Elbow fitting 3/8" FPT-S-RVT-R038-G038 (1823391729) [12366] | | | |
| | 26 | -X01 | G3/8-MS | 1 | Bosch | Bosch | Connector pipe G3/8-MS (1823351017) [12366] | | | |
| | 27 | -X3 | K4 3/8" | 1 | Bosch | Bosch | Divider 3/8" (1823390043) [12365] | | | |
| | 28 | -X9 | K4 3/8" | 1 | Bosch | Bosch | Divider 3/8" (1823390043) [12365] | | | |
| | 29 | -Z2a | KHZ-DA-020-0010-O | 1 | Bosch | Bosch | Bilateral cylinder KHZ-DA-020-0010-O (0822010521) [12365] | Left side heater | | |
| | 30 | -Z2c | KHZ-DA-020-0010-O | 1 | Bosch | Bosch | Bilateral cylinder KHZ-DA-020-0010-O (0822010521) [12365] | Right side heater | | |
| | 31 | -Z4 | KHZ-DA-020-0010-O | 1 | Bosch | Bosch | Bilateral cylinder KHZ-DA-020-0010-O (0822010521) [12365] | Cylinder of frontal heater pulling back | | |
| | 32 | -Z6a | KHZ-DA-025-0010-O | 1 | 11771 | BoschRexroth | Bilateral cylinder KHZ-DA-025-0010-O (0822010531) [1197] | Auxiliary cylinder of film cutter | | |
| | 33 | -Z6b | KHZ-DA-025-0010-O | 1 | 11771 | BoschRexroth | Bilateral cylinder KHZ-DA-025-0010-O (0822010531) [1197] | Auxiliary cylinder of film cutter | | |
| | 34 | -Z11a | KHZ-DA-032-0010-O-NR | 1 | Bosch | Bosch | Bilateral KHZ-DA-032-0010-O-NR (0822010741) [12310] | Main cylinder of bear tape cutter | | |
| | 35 | -XV2 | KJU04-00 | 1 | SMC | SMC | Union Y fitting KJU04-00 [1197] | | | |
| | 36 | -XV3 | KJU04-00 | 1 | SMC | SMC | Union Y fitting KJU04-00 [1197] | | | |
| | 37 | -XV12 | KJU04-00 | 1 | SMC | SMC | Union Y fitting KJU04-00 [1197] | | | |
| | 38 | -XV17 | KJU04-00 | 1 | SMC | SMC | Union Y fitting KJU04-00 [1197] | | | |
| F | | | | | | | | | | |

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|-------------|----------|------------|-------------------|-----------|
| Data: | 24.02.12 | Projekt: | Lista materiałowa | Strona: 1 |
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| Sprawdził: | | elektronik | | |

| | | | | | | | | | | |
|-------------------|----------|-------------|---------------------|----------|------------|-------------|--|---------------------------------------|---|--|
| 1 | 2 | | 3 | | 4 | | 5 | | 6 | |
| Bill of material: | | | | | | | | | | |
| A | Nr | Ozn. | Typ | Ilość | WEGA ID | Producent | Nazwa | Funkcja | | |
| A | 39 | -XZ1 | KJU04-00 | 1 | | SMC | Union Y fitting KJU04-00 [1197] | | | |
| | 40 | -XZ18 | KJU04-00 | 1 | | SMC | Union Y fitting KJU04-00 [1197] | | | |
| | 41 | -XZ18 | KJU04-00 | 1 | | SMC | Union Y fitting KJU04-00 [1197] | | | |
| | 42 | -X34 | KQ2H04-M5 | 1 | | SMC | Straight fitting KQ2H04-M5 [3598] | | | |
| | 43 | -X35 | KQ2H04-M5 | 1 | | SMC | Straight fitting KQ2H04-M5 [3598] | | | |
| | 44 | -XV21 | KQ2L06-00 | 1 | | SMC | Elbow fitting KQ2L06-00 [12029] | | | |
| | 45 | -X42 | KQ2L06-00 | 1 | | SMC | Elbow fitting KQ2L06-00 [12029] | | | |
| B | 46 | -X43 | KQ2L06-00 | 1 | | SMC | Elbow fitting KQ2L06-00 [12029] | | | |
| | 47 | -X29 | KQ2L08-00 | 1 | | SMC | Elbow fitting KQ2L08-00 [2497] | | | |
| | 48 | -XC1 | KQ2L10-99 | 1 | | SMC | Elbow fitting katowa KQ2L10-99 [12377] | | | |
| | 49 | -XV17 | KQ2T04-00 | 1 | | SMC | Union T fitting KQ2T04-00 [12028] | | | |
| | 50 | -XZ6 | KQ2T04-00 | 1 | | SMC | Union T fitting KQ2T04-00 [12028] | | | |
| | 51 | -XZ6 | KQ2T04-00 | 1 | | SMC | Union T fitting KQ2T04-00 [12028] | | | |
| | 52 | -XZ6 | KQ2T04-00 | 1 | | SMC | Union T fitting KQ2T04-00 [12028] | | | |
| C | 53 | -C1 | LS04 VTS | 1 | | Bosch | End plate kit CKD LS04 VTS SW (R422000970) [12311] | The air supply | | |
| | 54 | -V2 | LS04-5/2-04 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 (R422101308) [123C] | Side heaters | | |
| | 55 | -V3 | LS04-5/2-04 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 (R422101308) [123C] | Blowing system | | |
| | 56 | -V4 | LS04-5/2-04 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 (R422101308) [123C] | Frontal heater pulling back | | |
| | 57 | -V5 | LS04-5/2-04 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 (R422101308) [123C] | Main cylinder of cutter | | |
| | 58 | -V6 | LS04-5/2-04 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 (R422101308) [123C] | Auxiliary cylinder of cutter | | |
| | 59 | -V12 | LS04-5/2-04 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 (R422101308) [123C] | Pneumatic film holder | | |
| | 60 | -V17 | LS04-5/2-04 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 (R422101308) [123C] | Cooling product system | | |
| D | 61 | -V18 | LS04-5/2-04 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 (R422101308) [123C] | Pulling back bearings of the table | | |
| | 62 | -V20 | LS04-5/2-04 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 (R422101308) [123C] | Stroke corrector | | |
| | 63 | -V11 | LS04-5/2-06 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D6 (R422101309) [123C] | Pneumat. tear tape cutter | | |
| | 64 | -V19 | LS04-5/2-06 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D6 (R422101309) [123C] | Vacuum generator supply | | |
| | 65 | -V21 | LS04-5/2-06 | 1 | | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D6 (R422101309) [123C] | Tongue blow-out | | |
| | 66 | -Z18a | MNI-DA-020-0050 | 1 | | Bosch | Bilateral cylinder MNI-DA-020-0050 (0822333503) [120C] | Pulling back bearings of the table | | |
| | 67 | -Z9 | MNI-DA-020-0100 | 1 | | Bosch | Bilateral cylinder MNI-DA-020-0100 (0822333505) [120C] | Product driver | | |
| E | 68 | -Z5 | MNI-DA-25-0035 | 1 | 12008 | Bosch | Bilateral cylinder MNI-DA-25-0035 (0822334565) [1200f] | Main cylinder of film cutter | | |
| | 69 | -K1 | P1-M5 | 1 | | WEGA | One side supplied vacuum cup P2-M5 [6236] | Right vacuum cup holding film | | |
| | 70 | -K2 | P1-M5 | 1 | | WEGA | One side supplied vacuum cup P2-M5 [6236] | Left vacuum cup holding film | | |
| | 71 | -B8 | PE5-P2-DA04 | 1 | | Bosch | Pressure sensor PE5-P2-DA04-000-100-M012 (R412007978) | Manometer with pressure sensor | | |
| | 72 | -VR6a | QRI-DBS-DA04 | 1 | 12016 | Bosch | Throttle valve QRI-DBS-DA04 (R412005454) [12016] | Speed control.of aux.cylind.of cutter | | |
| | 73 | -VR6b | QRI-DBS-DA04 | 1 | 12016 | Bosch | Throttle valve QRI-DBS-DA04 (R412005454) [12016] | Speed control.of aux.cylind.of cutter | | |
| | 74 | -VR9a1 | QRI-DBS-DA06 | 1 | | Bosch | Throttle valve QRI-DBS-DA06 (R412005455) [12017] | Speed control.of aux.cylind.of cutter | | |
| | 75 | -VR9a2 | QRI-DBS-DA06 | 1 | | Bosch | Throttle valve QRI-DBS-DA06 (R412005455) [12017] | Speed control.of aux.cylind.of cutter | | |
| F | 76 | -XZ12a | QRI-S-MAN-M003-DA04 | 1 | | Bosch | Straight fitting QRI-S-MAN-M003-DA04 (R412005117) [12 | | | |
| Data: | 24.02.12 | Projektant: | P.Figlak | Projekt: | W E G A | AM-4C 01-PN | Lista materia³owa | Strona: 2 | | |
| Sprawdzi³: | | | | | elektronik | | | z: 3 | | |
| 1 | 2 | | 3 | | 4 | | 5 | | 6 | |

Bill of material:

| Nr | Ozn. | Typ | Ilość | WEGA ID | Producent | Nazwa | Funkcja |
|-----|--------|---------------------|-------|---------|-----------|--|------------------------------------|
| 77 | -XZ12b | QR1-S-MAN-M003-DA04 | 1 | | Bosch | Straight fitting QR1-S-MAN-M003-DA04 (R412005117) [12] | |
| 78 | -XZ1a | QR1-S-MIN-M003-DA04 | 1 | | Bosch | Straight fitting QR1-S-MIN-M003-DA04 (R412005265) [12] | |
| 79 | -XZ1b | QR1-S-MIN-M003-DA04 | 1 | | Bosch | Straight fitting QR1-S-MIN-M003-DA04 (R412005265) [12] | |
| 80 | -XV3k | QR1-S-RBS-DA04 | 1 | | Bosch | Plug QR1-S-RBS-DA04 (2123204000) [12371] | |
| 81 | -XV12k | QR1-S-RBS-DA04 | 1 | | Bosch | Plug QR1-S-RBS-DA04 (2123204000) [12371] | |
| 82 | -XV17k | QR1-S-RBS-DA04 | 1 | | Bosch | Plug QR1-S-RBS-DA04 (2123204000) [12371] | |
| 83 | -XV21k | QR1-S-RBS-DA04 | 1 | | Bosch | Plug QR1-S-RBS-DA04 (2123204000) [12371] | |
| 84 | -XV19k | QR1-S-RBS-DA06 | 1 | | Bosch | Plug QR1-S-RBS-DA06 (2123206000) [12372] | |
| 85 | -X11 | QR1-S-RDR-DA08-DA04 | 1 | | Bosch | Red.connect.f18/f14 QR1-S-RDR-DA08-DA04 (R412005324) | |
| 86 | -XZ6 | QR1-S-RDS-DA04 | 4 | | Bosch | Straight connector QR1-S-RDS-DA04 (2123104000) [12367] | |
| 87 | -X5 | QR1-S-RED-DA08-DA04 | 1 | | Bosch | Reducing fitting QR1-S-RED-DA08-DA04 (2121708040) [12] | |
| 88 | -XZ6a | QR1-S-RPN-G018-DA04 | 2 | | Bosch | Straight fitting QR1-S-RPN-G018-DA04 (2121004180) [12] | |
| 89 | -XV9 | QR1-S-RPN-G018-DA08 | 1 | | Bosch | Straight fitting QR1-S-RPN-G018-DA08 (2121008180) [12] | |
| 90 | -X4 | QR1-S-RPN-G038-DA08 | 1 | | Bosch | Straight fitting QR1-S-RPN-G038-DA08 (2121008380) [11] | |
| 91 | -X6 | QR1-S-RPN-G038-DA08 | 1 | | Bosch | Straight fitting QR1-S-RPN-G038-DA08 (2121008380) [11] | |
| 92 | -X10 | QR1-S-RPN-G038-DA08 | 1 | | Bosch | Straight fitting QR1-S-RPN-G038-DA08 (2121008380) [11] | |
| 93 | -X1 | QR1-S-RPN-G038-DA10 | 1 | | Bosch | Straight fitting QR1-S-RPN-G038-DA10 (2121010380) [11] | |
| 94 | -X2 | QR1-S-RPN-G038-DA10 | 1 | | Bosch | Straight fitting QR1-S-RPN-G038-DA10 (2121010380) [11] | |
| 95 | -X7 | QR1-S-RPN-G038-DA10 | 1 | | Bosch | Straight fitting QR1-S-RPN-G038-DA10 (2121010380) [11] | |
| 96 | -X8 | QR1-S-RPN-G038-DA10 | 1 | | Bosch | Straight fitting QR1-S-RPN-G038-DA10 (2121010380) [11] | |
| 97 | -X12 | QR1-S-RPN-G038-DA10 | 1 | | Bosch | Straight fitting QR1-S-RPN-G038-DA10 (2121010380) [11] | |
| 98 | -XV1 | QR1-S-RVT-G018-DA04 | 1 | | Bosch | Elbow fitting QR1-S-RVT-G018-DA04 (2122004180) [11996] | |
| 99 | -XV20 | QR1-S-RVT-G018-DA04 | 1 | | Bosch | Elbow fitting QR1-S-RVT-G018-DA04 (2122004180) [11996] | |
| 100 | -XZ18a | QR1-S-RVT-G018-DA04 | 1 | | Bosch | Elbow fitting QR1-S-RVT-G018-DA04 (2122004180) [11996] | |
| 101 | -XV9 | QR1-S-RVT-G018-DA06 | 2 | | Bosch | Elbow fitting QR1-S-RVT-G018-DA06 (2122006180) [12021] | |
| 102 | -XZ9 | QR1-S-RVT-G018-DA06 | 2 | | Bosch | Elbow fitting QR1-S-RVT-G018-DA06 (2122006180) [12021] | |
| 103 | -XV1 | QR1-S-RVT-G018-DA08 | 1 | | Bosch | Elbow fitting QR1-S-RVT-G018-DA08 (2122008180) [12030] | |
| 104 | -XZ6b | QR1-S-RVT-M005-DA04 | 2 | | Bosch | Elbow fitting QR1-S-RVT-M005-DA04 (2122004050) [12022] | |
| 105 | -XZ18b | QR1-S-RVT-M005-DA04 | 2 | | Bosch | Elbow fitting QR1-S-RVT-M005-DA04 (2122004050) [12022] | |
| 106 | -Dw1 | SI1-fi10 | 1 | | Bosch | Silencer SI1-fi10 (R412000593) [12009] | Silencer airboard |
| 107 | -D5 | SI1-G1/8 | 1 | | Bosch | Silencer SI1-G1/8 (1827000000) [12010] | |
| 108 | -D6 | SI1-G1/8 | 1 | | Bosch | Silencer SI1-G1/8 (1827000000) [12010] | |
| 109 | -D22 | SI1-G1/8 | 1 | | Bosch | Silencer SI1-G1/8 (1827000000) [12010] | |
| 110 | -D23 | SI1-G1/8 | 1 | | Bosch | Silencer SI1-G1/8 (1827000000) [12010] | |
| 111 | -F2 | VFI-06 | 1 | | Bosch | Vacuum filter VFI-06 (R412010113) [11997] | Filter of vacuum cups holding film |
| 112 | -V1 | WV02-5/2 | 1 | | Bosch | Electric valve WV02-5/2AS-024DC (0820038126) [12018] | Film gripper |
| 113 | -V9 | WV02-5/2 | 1 | | Bosch | Electric valve WV02-5/2AS-024DC (0820038126) [12018] | Driver |

Data: 24.02.12

Projektant: P.Figlak

Sprawdził:

Projekt:

W E G A
elektronik
AM-4C 01-PN

Lista materia³owa

Strona: 3

z: 3

1 2 3 4 5 6

Manufacturer:
Wega elektronik Sylwester Wysocki i wspólnicy
ul. Kamienna 11
61-423 Poznań
Poland

tel/fax +48 61 8304039
+48 61 8300311
e-mail: wegaelek@wlkp.top.pl
http://www.wega-elektronik.pl

Machine type: **AM-4/100C**
Machine name: The AM-4/100C automatic
Project: **AM-4-100C 01**

Assembly diagram of electric equipment

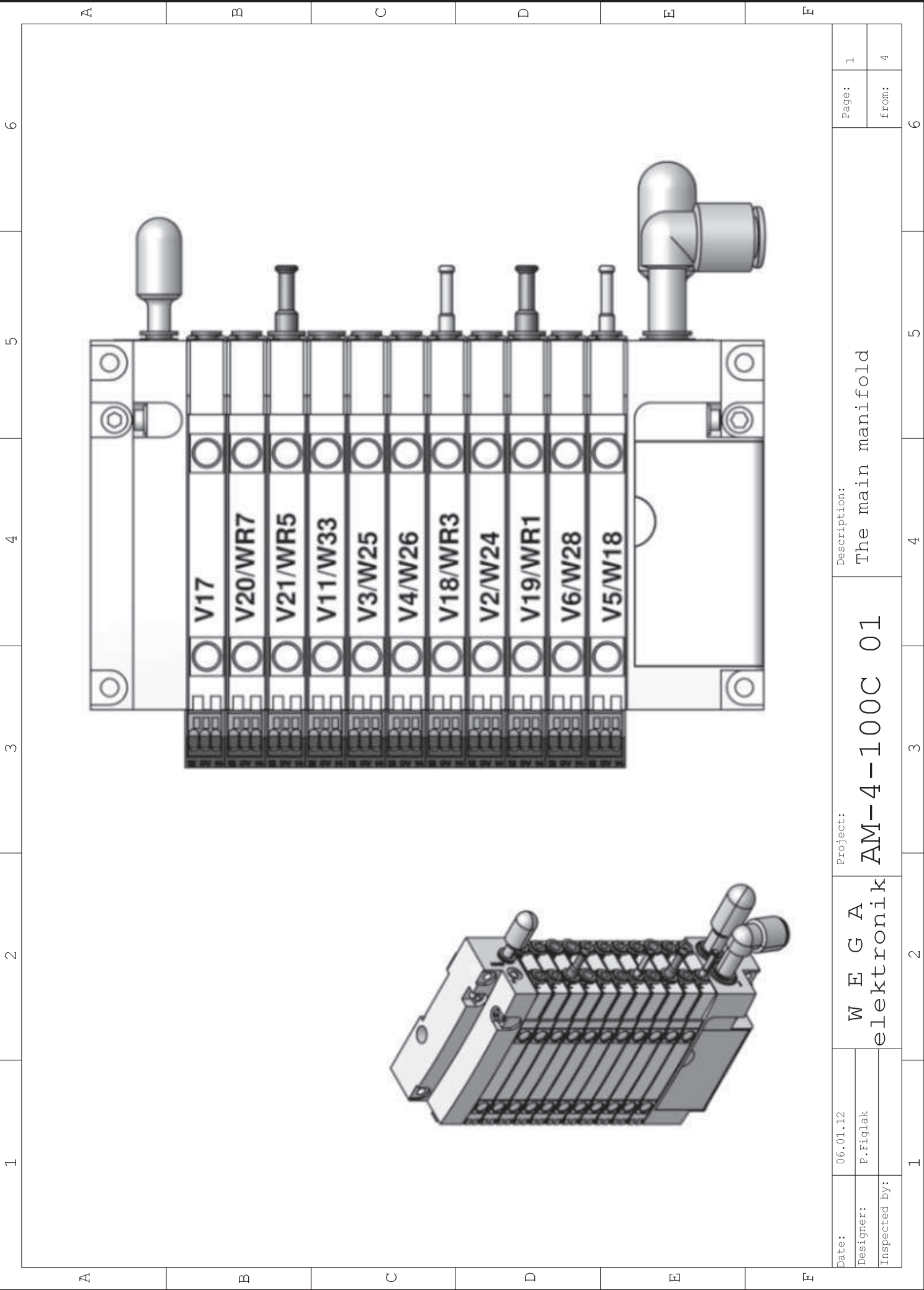
Valid for machines no from: 1202527928

Technical data:

Supply type: L1+L2+L3+N+PE
Main power supply: 3 x 400VAC
Conveyor supplying: 3 x 230VAC
Compressed air power: max 6 bar, 450 l/min

| | | | | |
|---------------|----------|----------|---------------------|------------------------|
| Date: | 06.01.12 | Project: | AM-4-100C 01 | WEGA elektronik |
| Designer: | P.Figiak | | | |
| Inspected by: | | | | |

1 2 3 4 5 6



Date: 06.01.12
 Designer: P. Figlak
 Inspected by:

W E G A
 elektronik

Project: AM-4-100C 01

Description:
 The main manifold

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A

B

C

D

E

F

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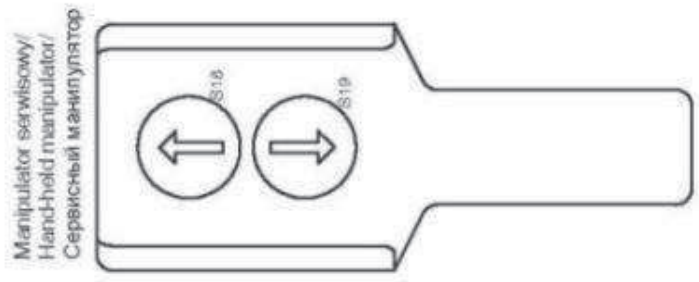
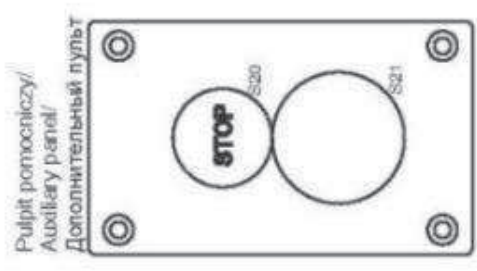
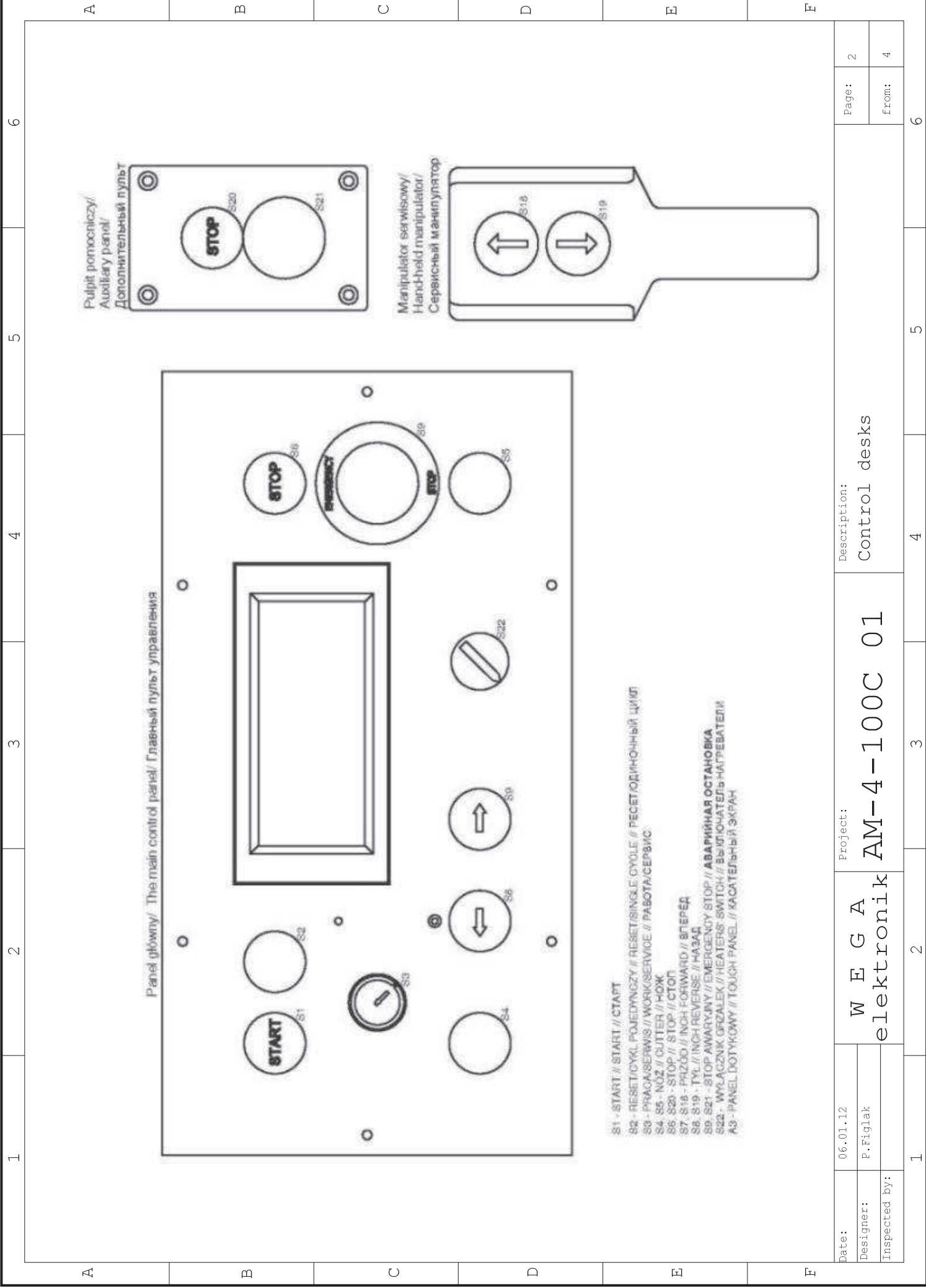
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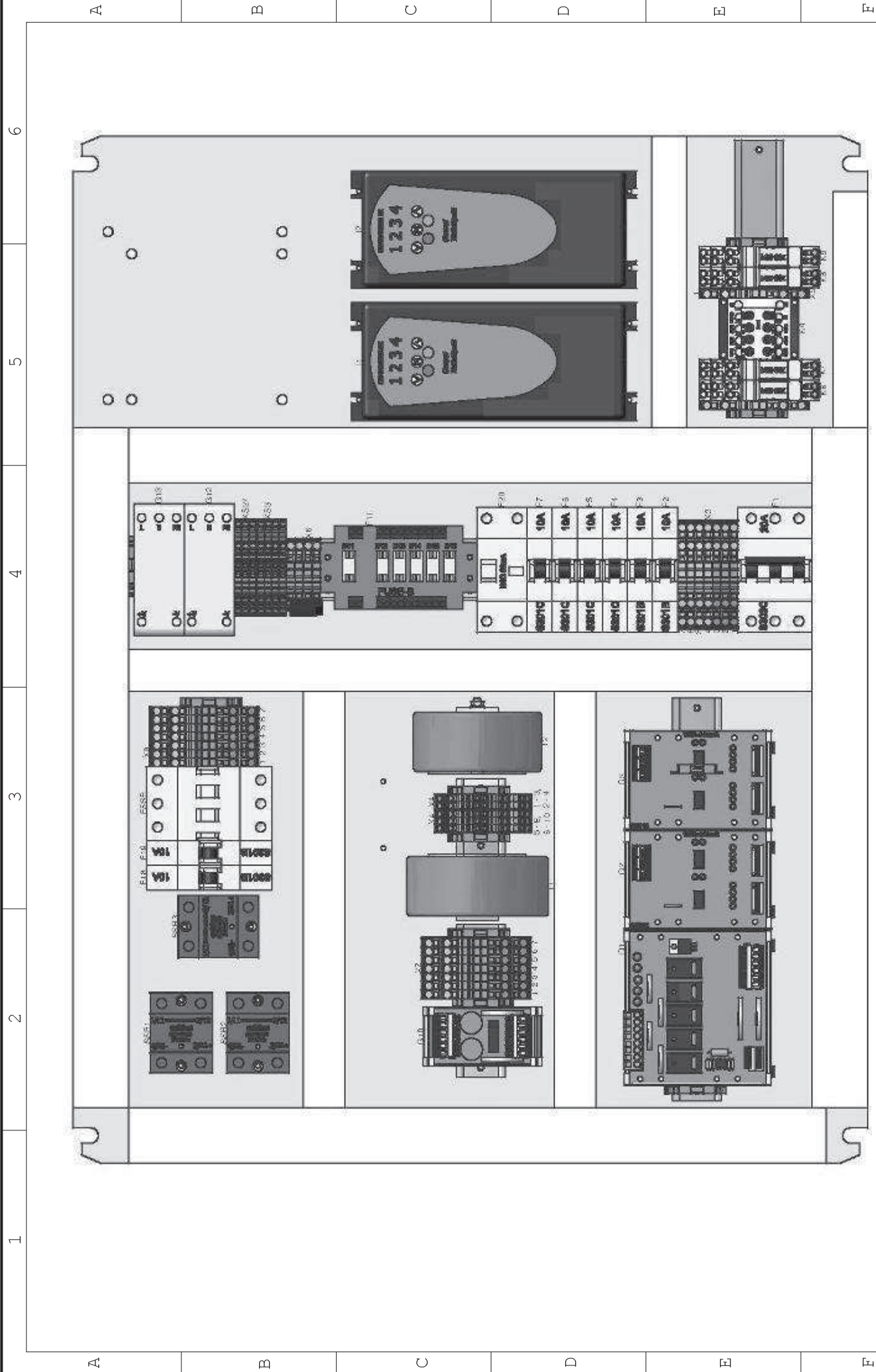
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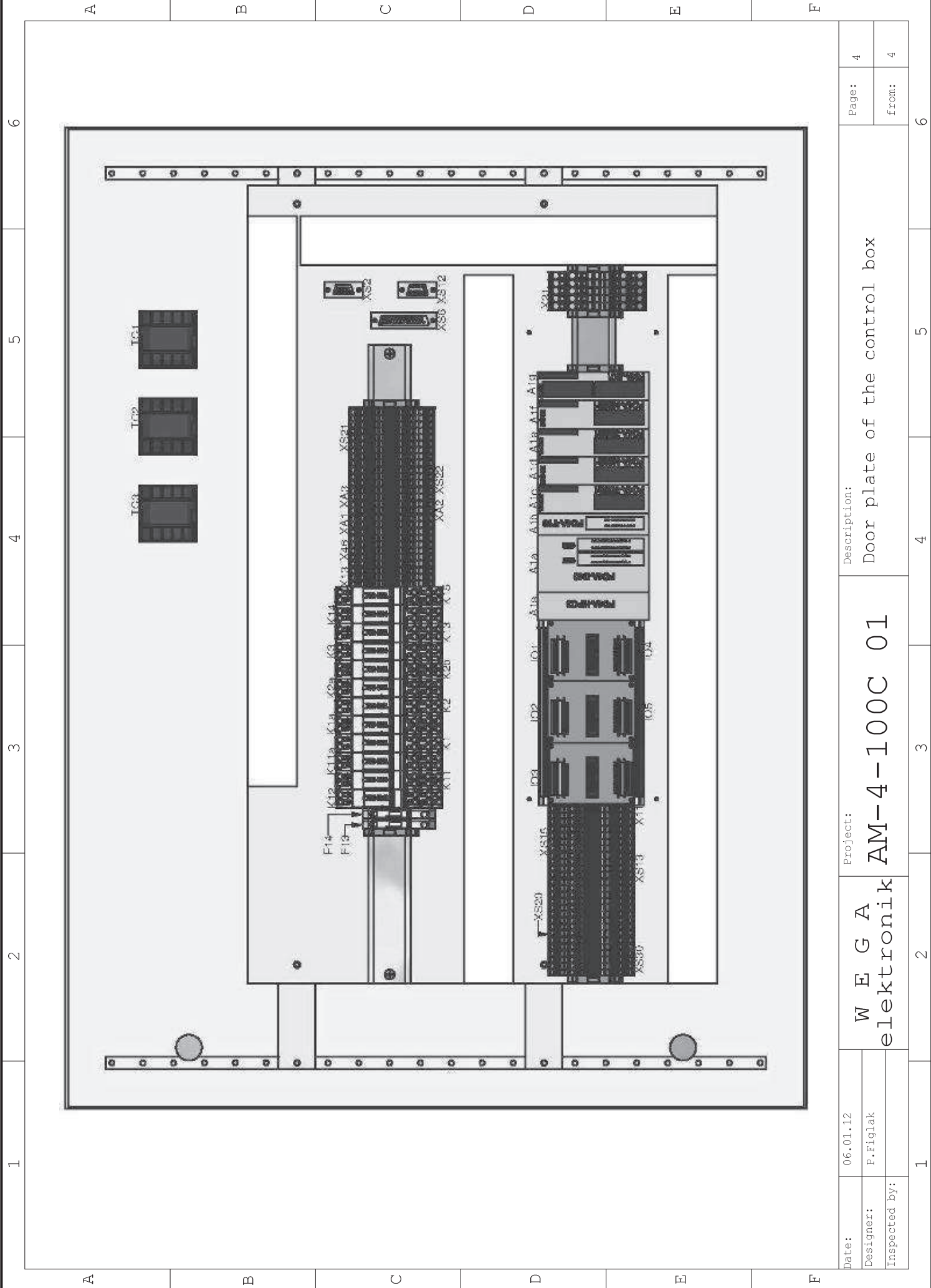
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|---------------|----------|----------|--------------|--------------|---------------|-------|---|
| Date: | 06.01.12 | Project: | AM-4-100C 01 | Description: | Control desks | Page: | 2 |
| Designer: | P.Figlak | | | | | from: | 4 |
| Inspected by: | | | | | | | |



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|---------------|----------|----------|--------------|---|-------|--------------|-------------------------------|--|--|
| Date: | 06.01.12 | Project: | AM-4-100C 01 | | | Description: | Main plate of the control box | | |
| Designer: | P.Figlak | W E G A | elektronik | | | Page: | 3 | | |
| Inspected by: | | | | | from: | 4 | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | | |



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|---------------|----------|----------|--------------|---|---|--------------|-------------------------------|--|--|
| Date: | 06.01.12 | Project: | AM-4-100C 01 | | | Description: | Door plate of the control box | | |
| Designer: | P.Figlak | W E G A | elektronik | | | Page: | 4 | | |
| Inspected by: | | | | | | from: | 4 | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | | | |

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Sheet 1

| No | File | Comment | Date |
|----|-----------------------|---|------------|
| 1 | AM-4-100C 01-TYT.0001 | Cover page | 17.10.2012 |
| 2 | AM-4-100C 01-TYT.0002 | Cover page | 17.10.2012 |
| 3 | AM-4-100C 01-GR.0001 | The main manifold | 17.10.2012 |
| 4 | AM-4-100C 01-GR.0002 | Control desks | 17.10.2012 |
| 5 | AM-4-100C 01-GR.0003 | Main plate of the control box | 17.10.2012 |
| 6 | AM-4-100C 01-GR.0004 | Door plate of the control box | 17.10.2012 |
| 7 | AM-4-100C 01.0001 | The main power supply 3x400V and cooling of the control box | 17.10.2012 |
| 8 | AM-4-100C 01.0002 | DC power supply block p.1 | 17.10.2012 |
| 9 | AM-4-100C 01.0003 | DC power supply block p.2 | 17.10.2012 |
| 10 | AM-4-100C 01.0004 | The main motor block | 17.10.2012 |
| 11 | AM-4-100C 01.0005 | Optional motors p.1 | 17.10.2012 |
| 12 | AM-4-100C 01.0006 | Optional motors p.2 | 17.10.2012 |
| 13 | AM-4-100C 01.0007 | Adjustment motor drive - optional equipment | 17.10.2012 |
| 14 | AM-4-100C 01.0008 | The temperature control block | 17.10.2012 |
| 15 | AM-4-100C 01.0009 | Heating elements | 17.10.2012 |
| 16 | AM-4-100C 01.0010 | Heating elements | 17.10.2012 |
| 17 | AM-4-100C 01.0011 | Temperature sensors of heaters | 17.10.2012 |
| 18 | AM-4-100C 01.0012 | PLC controller FC4A | 17.10.2012 |
| 19 | AM-4-100C 01.0013 | Expansion module (option) | 17.10.2012 |
| 20 | AM-4-100C 01.0014 | User's touch screen | 17.10.2012 |
| 21 | AM-4-100C 01.0015 | Connector module nr 1 | 17.10.2012 |
| 22 | AM-4-100C 01.0016 | Connector signals of module 1 | 17.10.2012 |
| 23 | AM-4-100C 01.0017 | Connector module nr 2 | 17.10.2012 |
| 24 | AM-4-100C 01.0018 | Connector signals of module 2 | 17.10.2012 |
| 25 | AM-4-100C 01.0019 | Expansion module (option) | 17.10.2012 |
| 26 | AM-4-100C 01.0020 | Expansion module (option) | 17.10.2012 |
| 27 | AM-4-100C 01.0021 | Expansion module (option) | 17.10.2012 |
| 28 | AM-4-100C 01.0022 | Guards switches | 17.10.2012 |
| 29 | AM-4-100C 01.0023 | Plant annunciator | 17.10.2012 |
| 30 | AM-4-100C 01.0024 | Operator panel switches | 17.10.2012 |
| 31 | AM-4-100C 01.0025 | Power module (output signals) | 17.10.2012 |
| 32 | AM-4-100C 01.0026 | Power module (output signals) | 17.10.2012 |
| 33 | AM-4-100C 01.0027 | Control relays | 17.10.2012 |
| 34 | AM-4-100C 01.0028 | Relays of motor positioning (option) | 17.10.2012 |
| 35 | AM-4-100C 01.0029 | Machine sensors p.1 | 17.10.2012 |
| 36 | AM-4-100C 01.0030 | Machine sensors p.2 | 17.10.2012 |

Date: 01.06.12

Designer: P.Figlak

Inspected by:

Project:

W E G A
elektronik

AM-4-100C 01

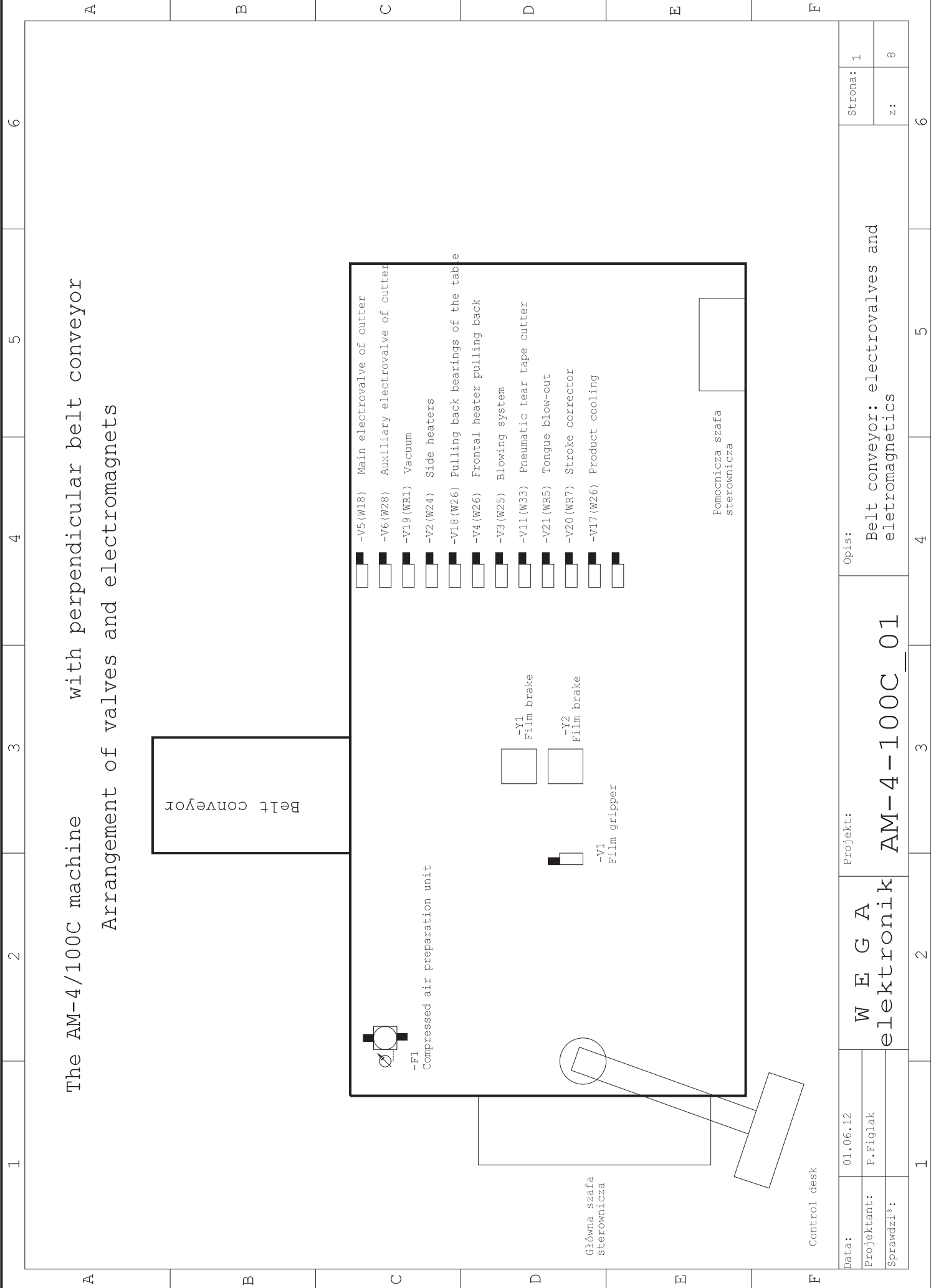
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| 37 | AM-4-100C 01.0031 | Machine sensors p.3 | 17.10.2012 |
| 38 | AM-4-100C 01.0032 | Analog channels-position measurement | 17.10.2012 |
| 39 | AM-4-100C 01.0033 | Reserve cables | 17.10.2012 |
| 40 | AM-4-100C 01.0034 | Communication to external machine | 17.10.2012 |
| 41 | AM-4-100C 01.0035 | Hotstamping printer | 17.10.2012 |
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|---------------|----------|--|-------|---|
| Date: | 01.06.12 | Project: | Page: | 2 |
| Designer: | P.Figlak | | from: | 2 |
| Inspected by: | | W E G A elektronik AM-4-100C 01 | | |
| | | | | |



The AM-4/100C machine with perpendicular belt conveyor
 Arrangement of valves and electromagnets

Belt conveyor

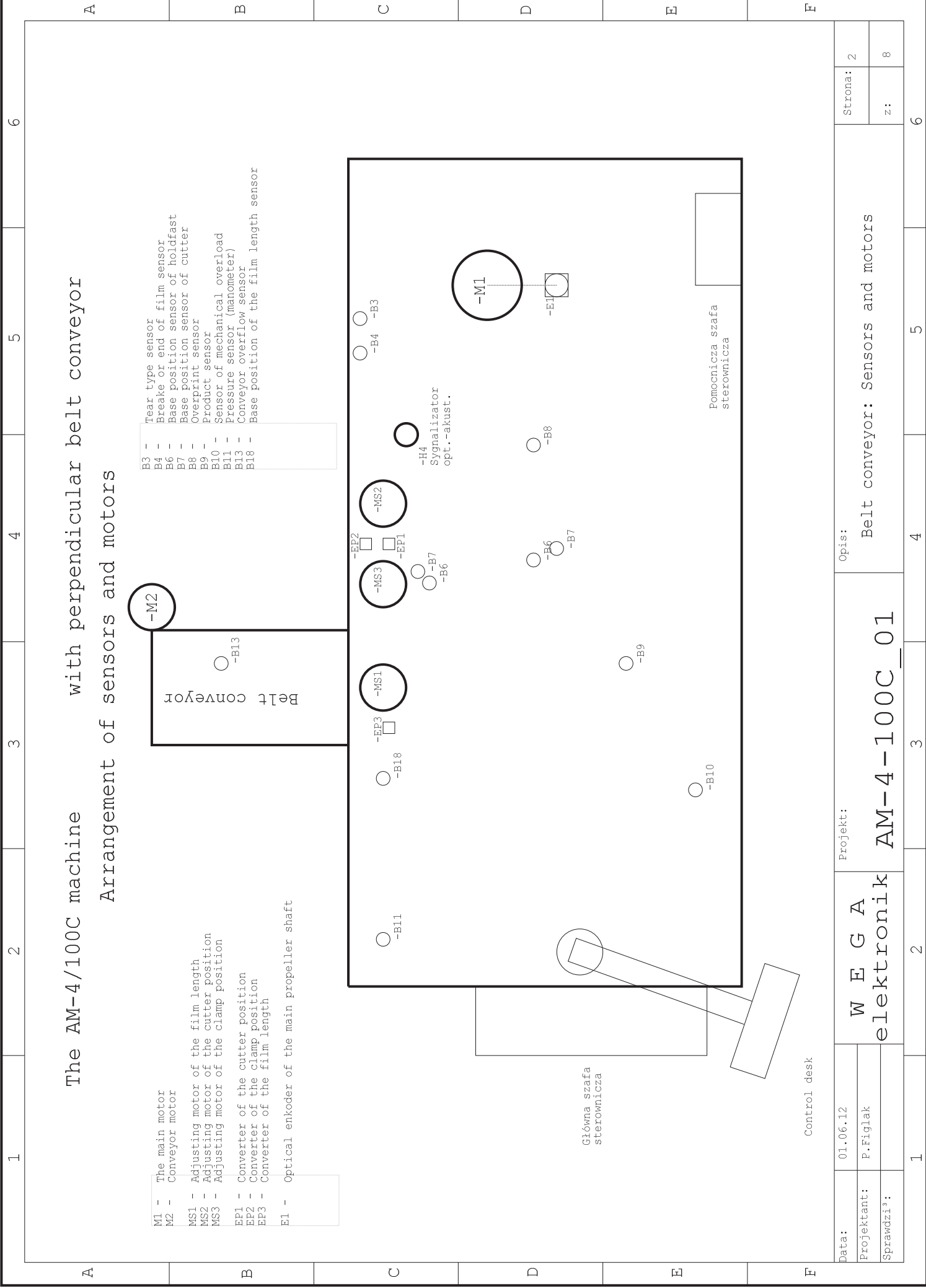
- F1 Compressed air preparation unit
- V5 (W18) Main electrovalve of cutter
- V6 (W28) Auxiliary electrovalve of cutter
- V19 (WR1) Vacuum
- V2 (W24) Side heaters
- V18 (W26) Pulling back bearings of the table
- V4 (W26) Frontal heater pulling back
- V3 (W25) Blowing system
- V11 (W33) Pneumatic tear tape cutter
- V21 (WR5) Tongue blow-out
- V20 (WR7) Stroke corrector
- V17 (W26) Product cooling
- V1 Film gripper
- Y1 Film brake
- Y2 Film brake
- V5 (W18) Main electrovalve of cutter
- V6 (W28) Auxiliary electrovalve of cutter

Pomocnicza szafa sterownicza

Główna szafa sterownicza

Control desk

| | | | | | |
|-------------|-----------|-----------------------|-------|---|------|
| Data: | 01.06.12 | Projekt: | Opis: | Strona: 1 | |
| Projektant: | P. Figlak | | | | |
| Sprawdził: | | | | | z: 8 |
| | | Projekt: AM-4-100C_01 | | Belt conveyor: electrovalves and electromagnetics | |
| | | W E G A elektronik | | 4 | |
| | | 2 | | 3 | |
| | | 1 | | 5 | |
| | | 6 | | 6 | |

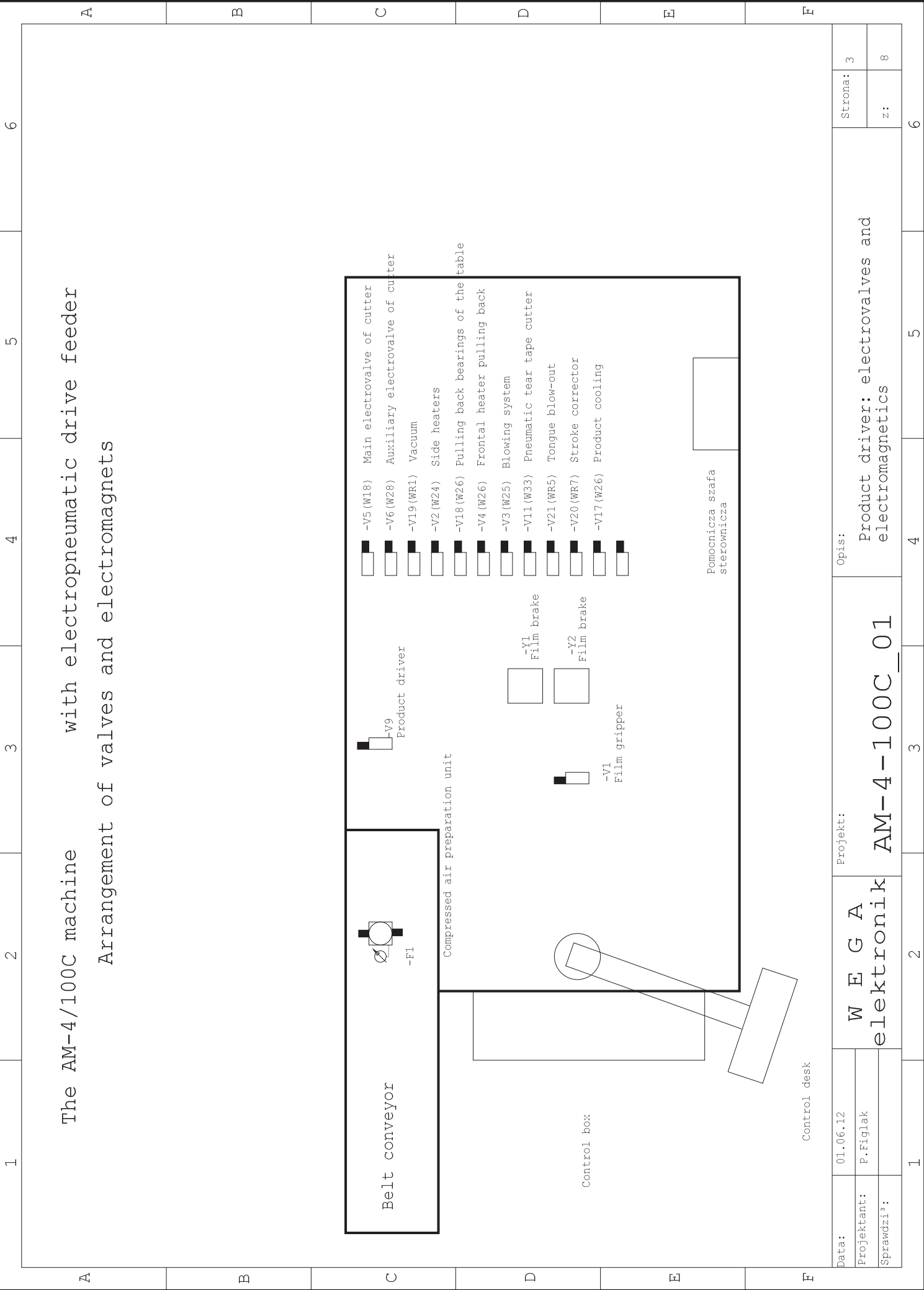


The AM-4/100C machine with perpendicular belt conveyor
Arrangement of sensors and motors

- M1 - The main motor
- M2 - Conveyor motor
- MS1 - Adjusting motor of the film length
- MS2 - Adjusting motor of the cutter position
- MS3 - Adjusting motor of the clamp position
- EP1 - Converter of the cutter position
- EP2 - Converter of the clamp position
- EP3 - Converter of the film length
- E1 - Optical encoder of the main propeller shaft

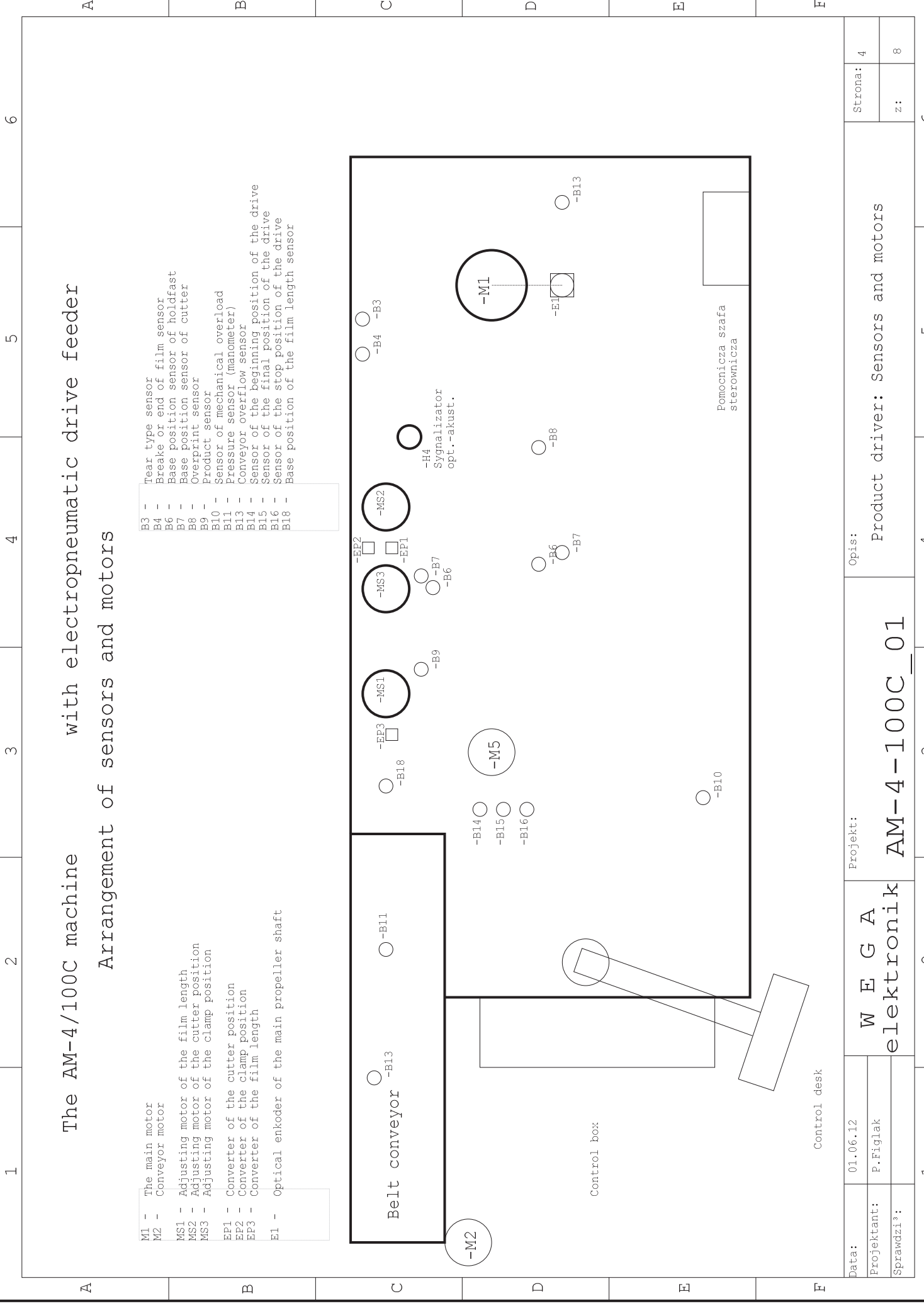
- B3 - Tear type sensor
- B4 - Brake or end of film sensor
- B6 - Base position sensor of holdfast
- B7 - Base position sensor of cutter
- B8 - Overprint sensor
- B9 - Product sensor
- B10 - Sensor of mechanical overload
- B11 - Pressure sensor (manometer)
- B13 - Conveyor overflow sensor
- B18 - Base position of the film length sensor

| | | | | | | |
|-------------|----------|----------|-----------------------------------|---|---|-----------|
| Data: | 01.06.12 | Projekt: | AM-4-100C_01 | | | Strona: 2 |
| Projektant: | P.Figlak | Opis: | Belt conveyor: Sensors and motors | | | z: 8 |
| Sprawdził: | | | 1 | 2 | 3 | 4 |
| | | | | | | 5 |
| | | | | | | 6 |



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|-------------|-----------|--------------|-------|-----------|
| Data: | 01.06.12 | Projekt: | Opis: | Strona: 3 |
| Projektant: | P. Figlak | W E G A | | |
| Sprawdził: | | elektronik | | |
| | | AM-4-100C_01 | | |
| | | 4 | 4 | 6 |
| | | 3 | 3 | 8 |
| | | 2 | 2 | |
| | | 1 | 1 | |

Product driver: electrovalves and electromagnetics



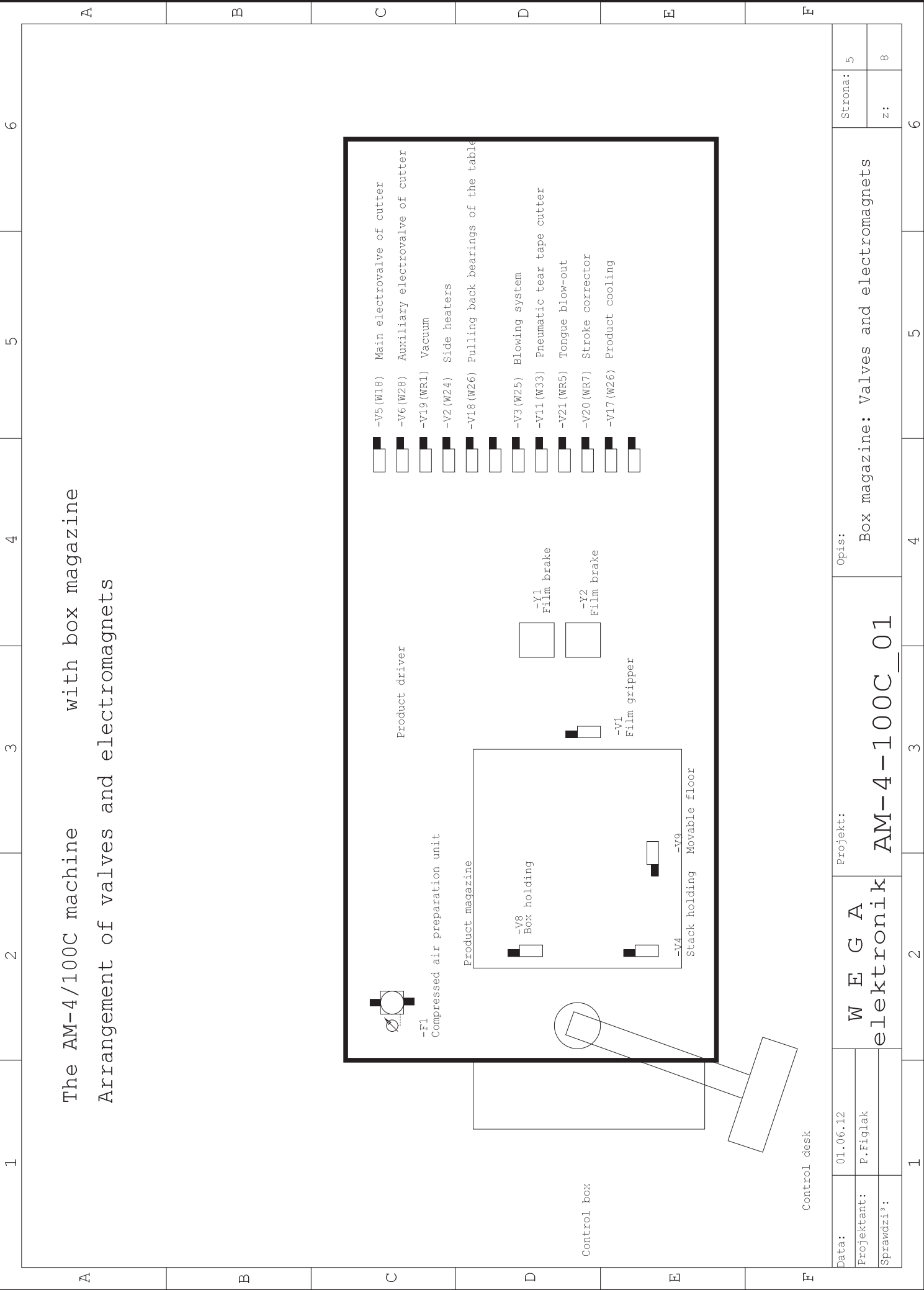
The AM-4/100C machine with electropneumatic drive feeder

Arrangement of sensors and motors

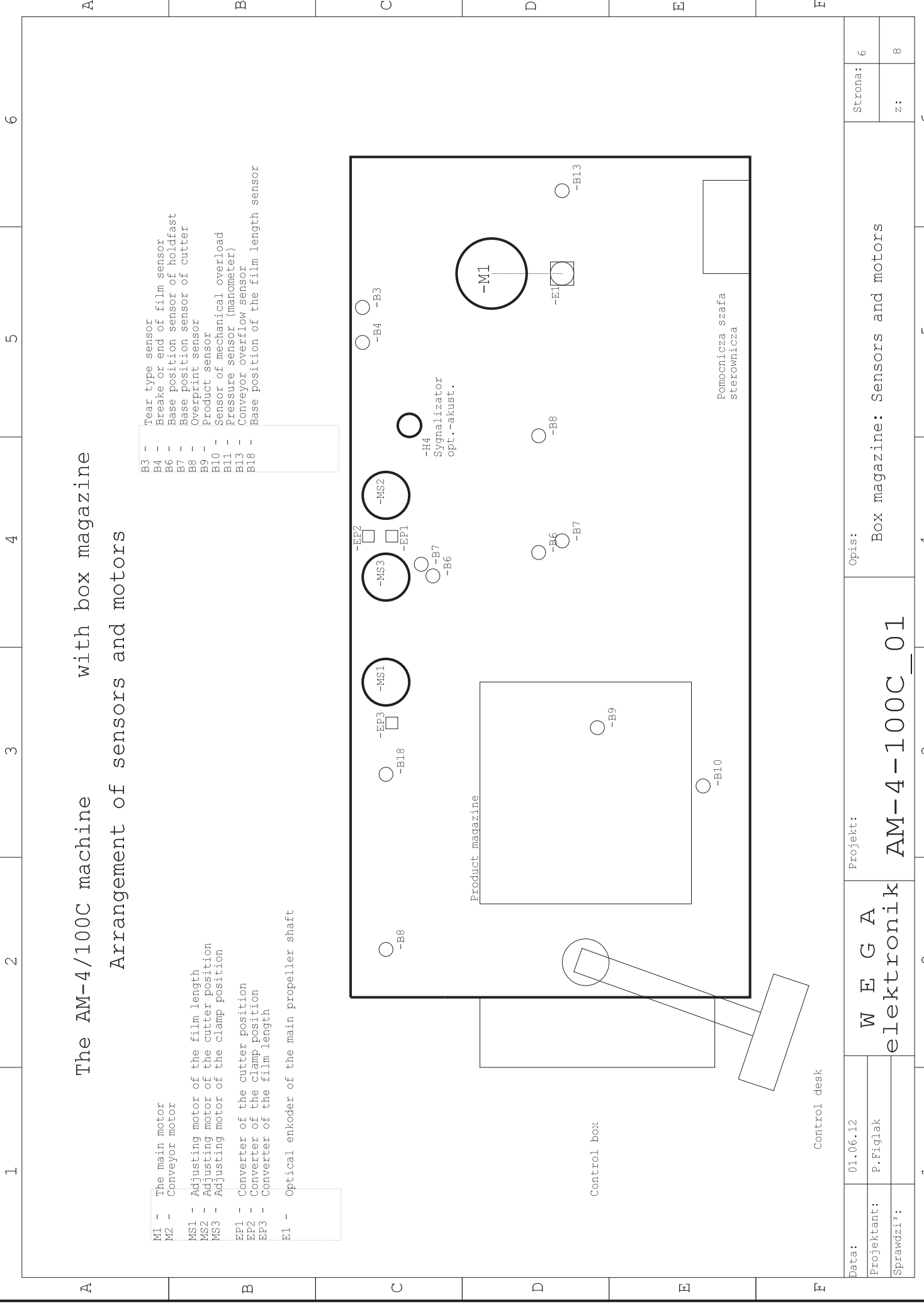
- M1 - The main motor
- M2 - Conveyor motor
- MS1 - Adjusting motor of the film length
- MS2 - Adjusting motor of the cutter position
- MS3 - Adjusting motor of the clamp position
- EP1 - Converter of the cutter position
- EP2 - Converter of the clamp position
- EP3 - Converter of the film length
- E1 - Optical encoder of the main propeller shaft

- B3 - Tear type sensor
- B4 - Brake or end of film sensor
- B6 - Base position sensor of holdfast
- B7 - Base position sensor of cutter
- B8 - Overprint sensor
- B9 - Product sensor
- B10 - Sensor of mechanical overload
- B11 - Pressure sensor (manometer)
- B13 - Conveyor overflow sensor
- B14 - Sensor of the beginning position of the drive
- B15 - Sensor of the final position of the drive
- B16 - Sensor of the stop position of the drive
- B18 - Base position of the film length sensor

| | | | | | | |
|-------------|-----------|----------|------------------------------------|---|---|-----------|
| Data: | 01.06.12 | Projekt: | AM-4-100C_01 | | | Strona: 4 |
| Projektant: | P. Figlak | Opis: | Product driver: Sensors and motors | | | z: 8 |
| Sprawdził: | | | 1 | 2 | 3 | 4 |
| | | | | | | 5 |
| | | | | | | 6 |



| | | | | |
|-----------------------|-----------|---|-------|-----------|
| Data: | 01.06.12 | Projekt: | Opis: | Strona: 5 |
| Projektant: | P. Figlak | Box magazine: Valves and electromagnets | | z: 8 |
| Sprawdził: | | AM-4-100C_01 | | |
| W E G A elektronik | | | | |
| 1 | | | 2 | 3 |
| 4 | | | 5 | 6 |



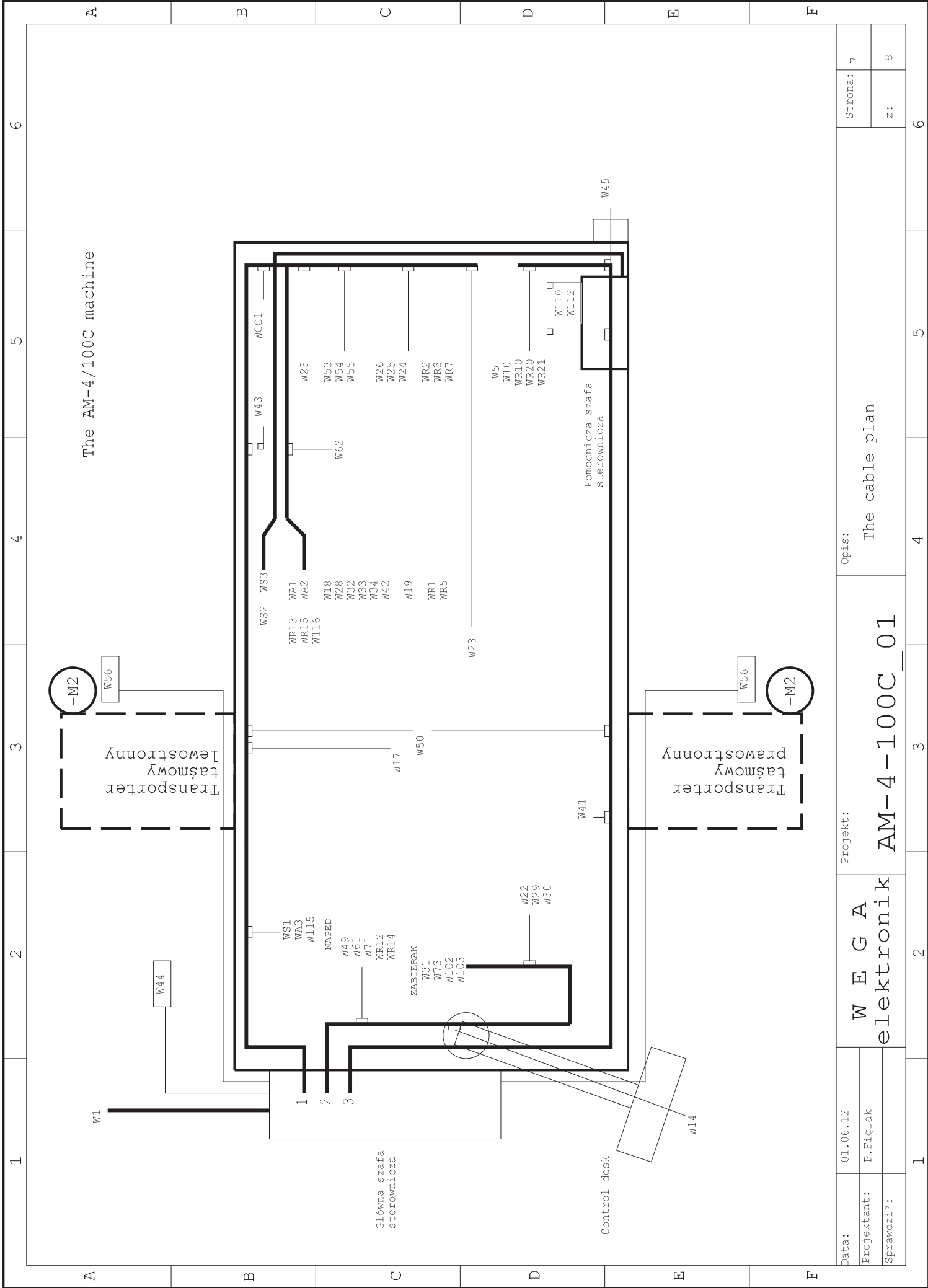
The AM-4/100C machine with box magazine

Arrangement of sensors and motors

- M1 - The main motor
- M2 - Conveyor motor
- MS1 - Adjusting motor of the film length
- MS2 - Adjusting motor of the cutter position
- MS3 - Adjusting motor of the clamp position
- EP1 - Converter of the cutter position
- EP2 - Converter of the clamp position
- EP3 - Converter of the film length
- E1 - Optical encoder of the main propeller shaft

- B3 - Tear type sensor
- B4 - Brake or end of film sensor
- B6 - Base position sensor of holdfast
- B7 - Base position sensor of cutter
- B8 - Overprint sensor
- B9 - Product sensor
- B10 - Sensor of mechanical overload
- B11 - Pressure sensor (manometer)
- B13 - Conveyer overflow sensor
- B18 - Base position of the film length sensor

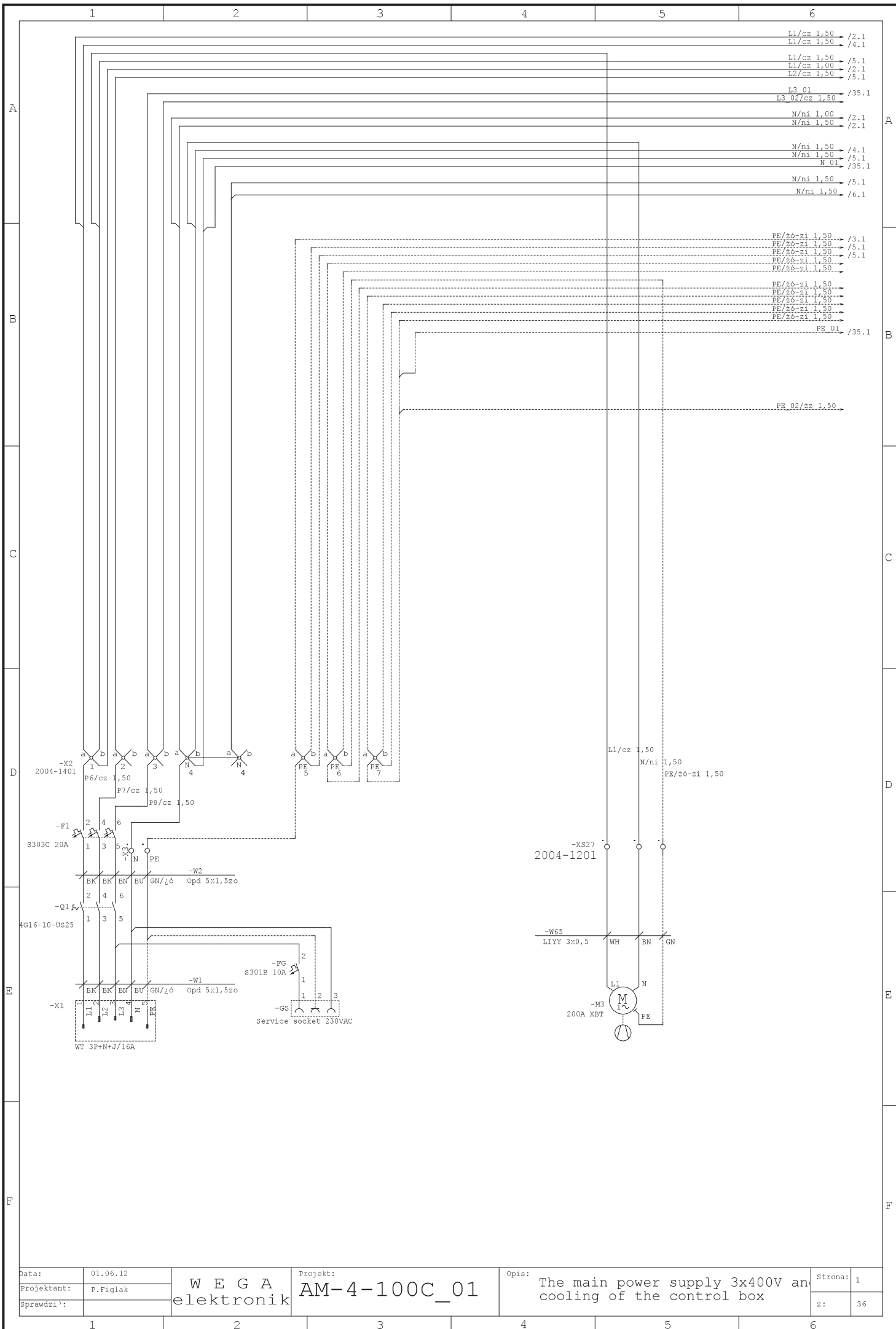
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|-------------|-----------|----------|--------------|-------|----------------------------------|
| Data: | 01.06.12 | Projekt: | AM-4-100C_01 | Opis: | Box magazine: Sensors and motors |
| Projektant: | P. Figlak | | | | |
| Sprawdził: | | | | | |
| | | | 1 | 2 | 3 |
| | | | 4 | 5 | 6 |
| | | | z: | 8 | Strona: 6 |



| | | | | | | | |
|-------------|-----------|----------|--------------|-------|----------------|---------|---|
| Data: | 01.06.12 | Projekt: | W E G A | Opis: | The cable plan | Strona: | 7 |
| Projektant: | P. Figlak | Projekt: | elektronik | Opis: | The cable plan | z: | 8 |
| Sprawdził: | | Projekt: | AM-4-100C_01 | Opis: | The cable plan | | |
| | | | | | | | 6 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| A | | | | | | |
| B | | | | | | |
| C | | | | | | |
| D | | | | | | |
| E | | | | | | |
| F | | | | | | |

| | | | | | |
|-------------|-----------|-------------------------------------|---------------------------------|-------|-----------|
| Data: | 01.06.12 | W E G A elektronik | Projekt: AM-4-100C_01 | Opis: | Strona: 8 |
| Projektant: | P. Figlak | | | | z: 8 |
| Sprawdził: | | | | | |



| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|---|---------|---|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | The main power supply 3x400V and cooling of the control box | Strona: | 1 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |

1

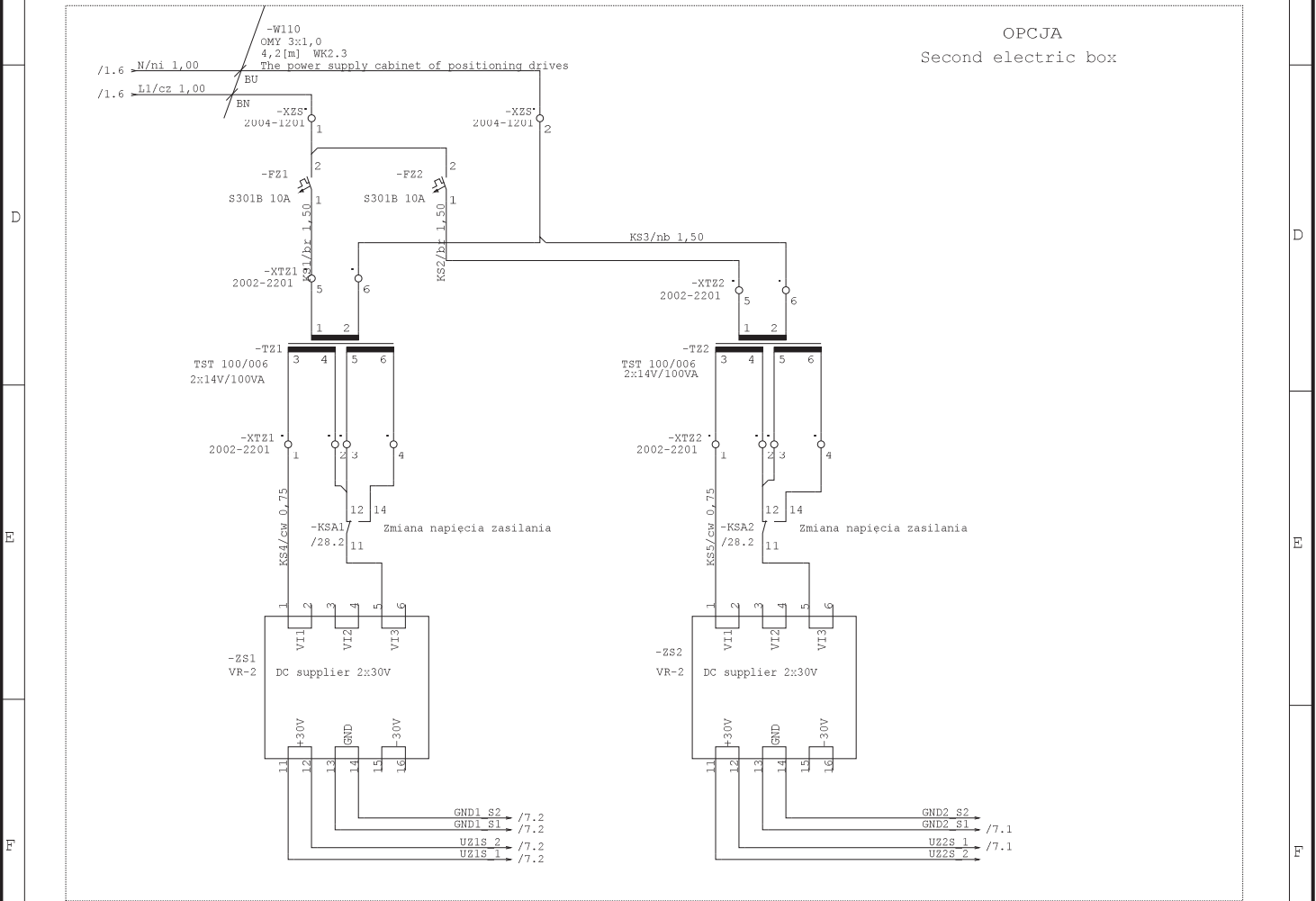
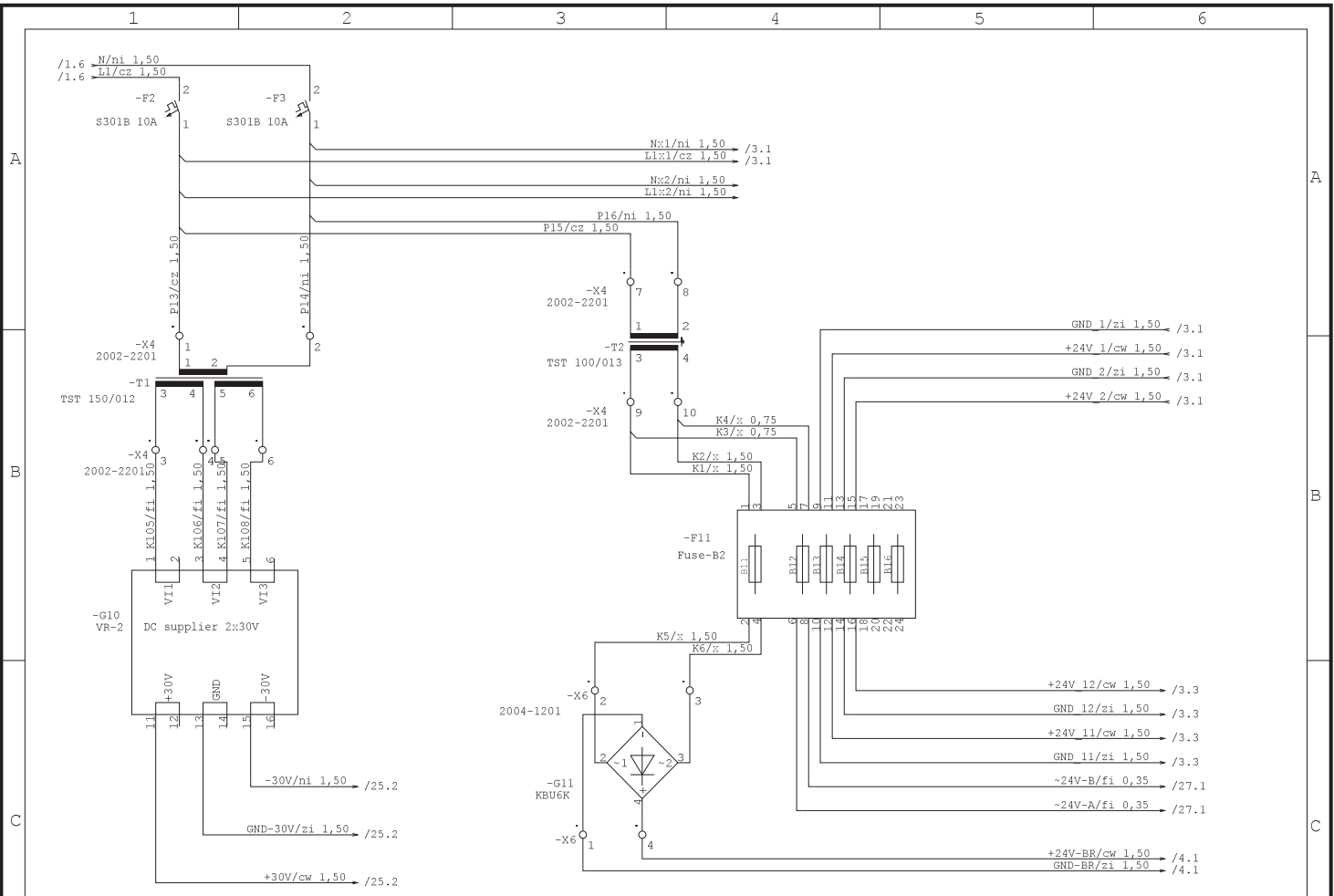
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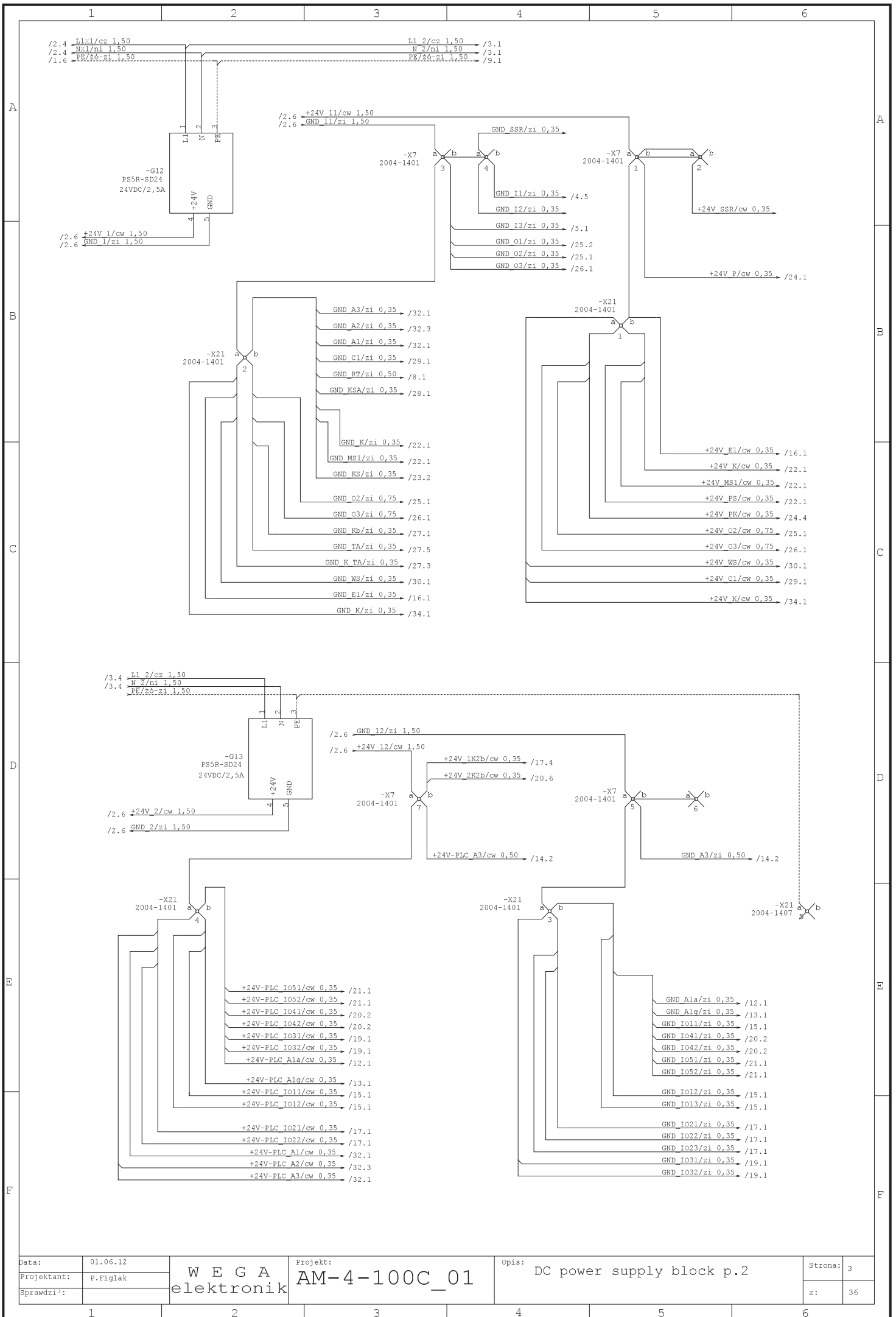
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5

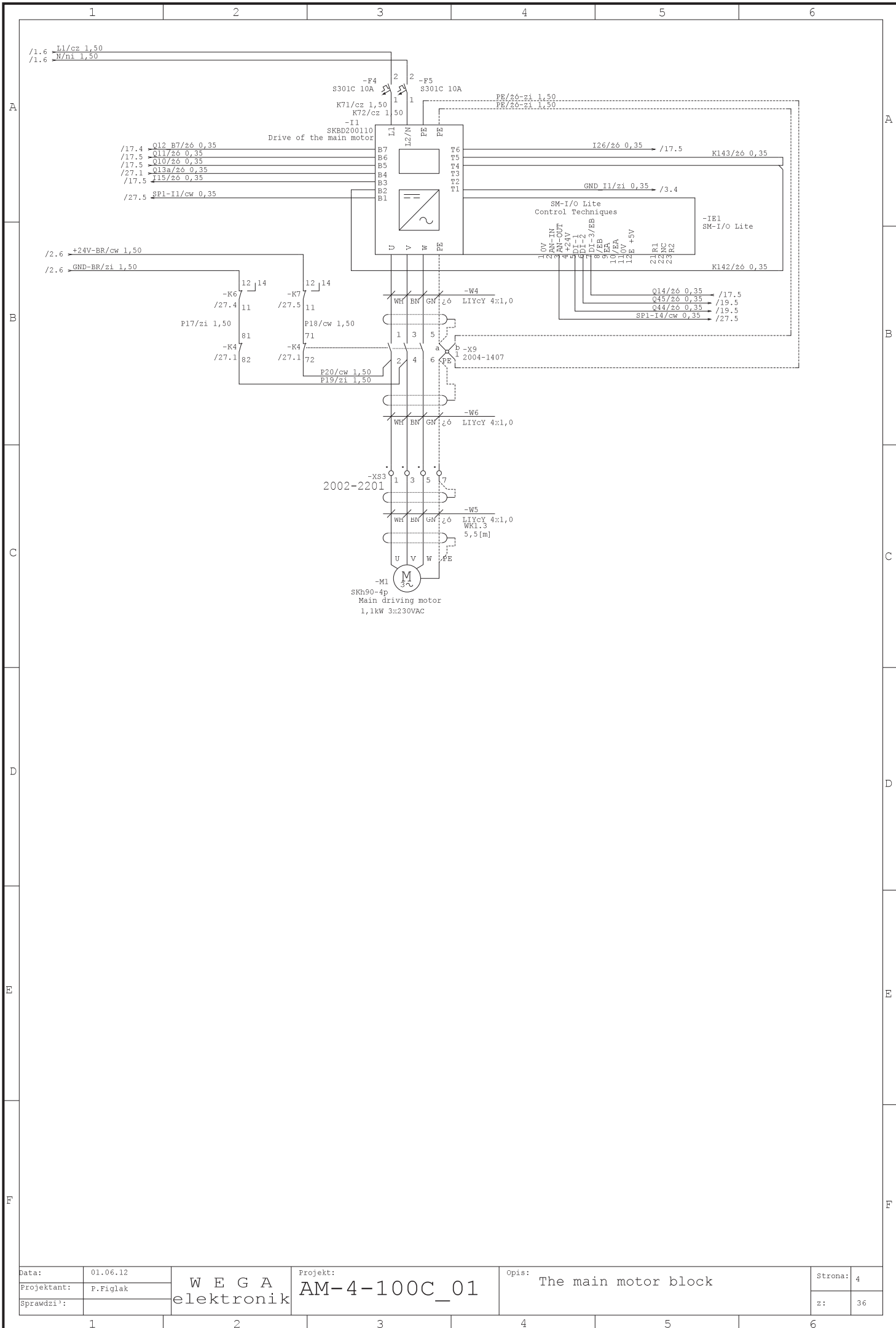
6



| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|---------------------------|---------|---|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | DC power supply block p.1 | Strona: | 2 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |



| | | | | | | | | |
|-------------|----------|-----------------------|------------|--------------|-------|---------------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | DC power supply block p.2 | Strona: | 3 |
| Projektant: | P.Figlak | | Sprawdził: | | | | z: | 36 |



| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|----------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | The main motor block | Strona: | 4 |
| Projektant: | P.Figlak | | | | | | z: | 36 |
| Sprawdził: | | | | | | | | |

1

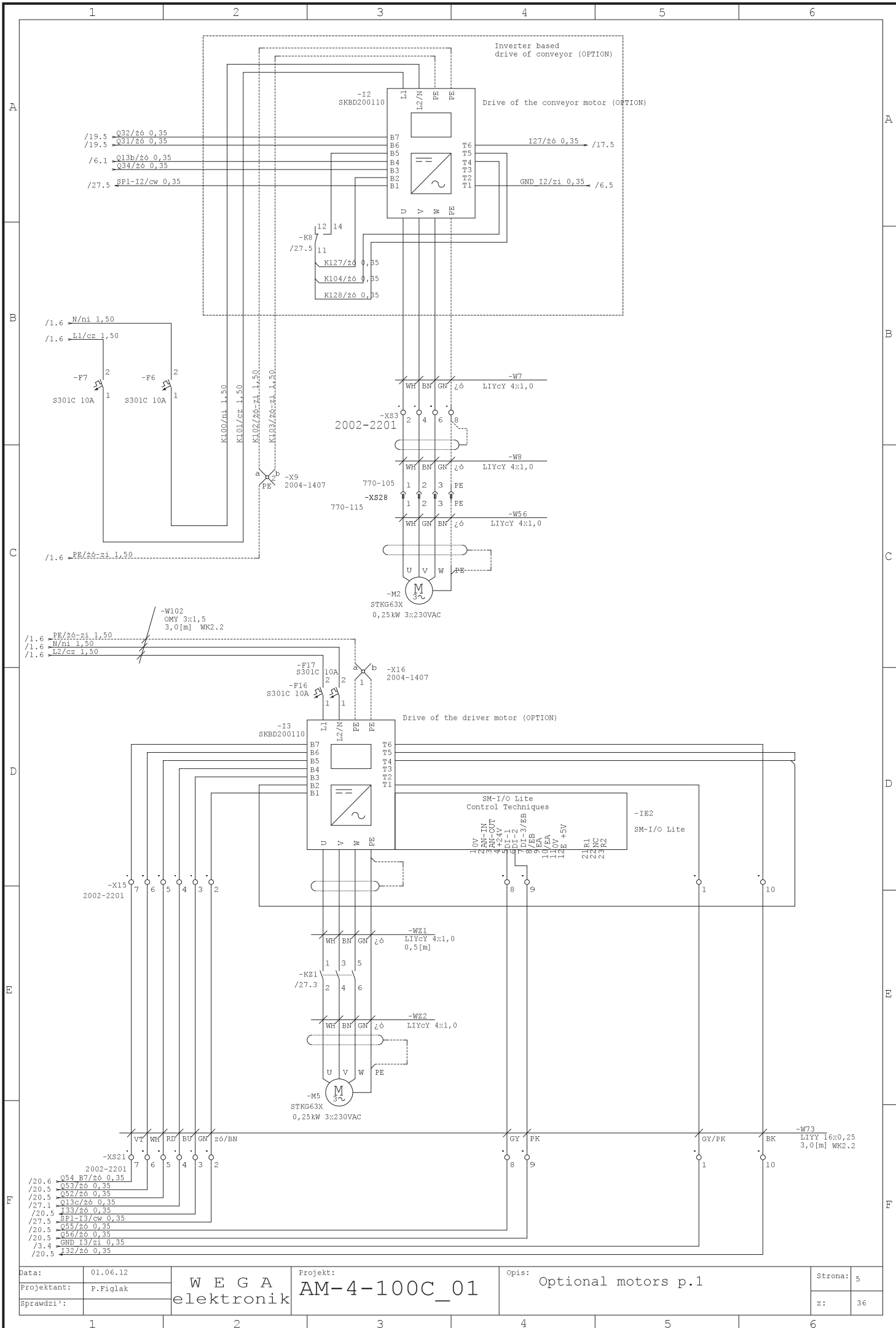
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3

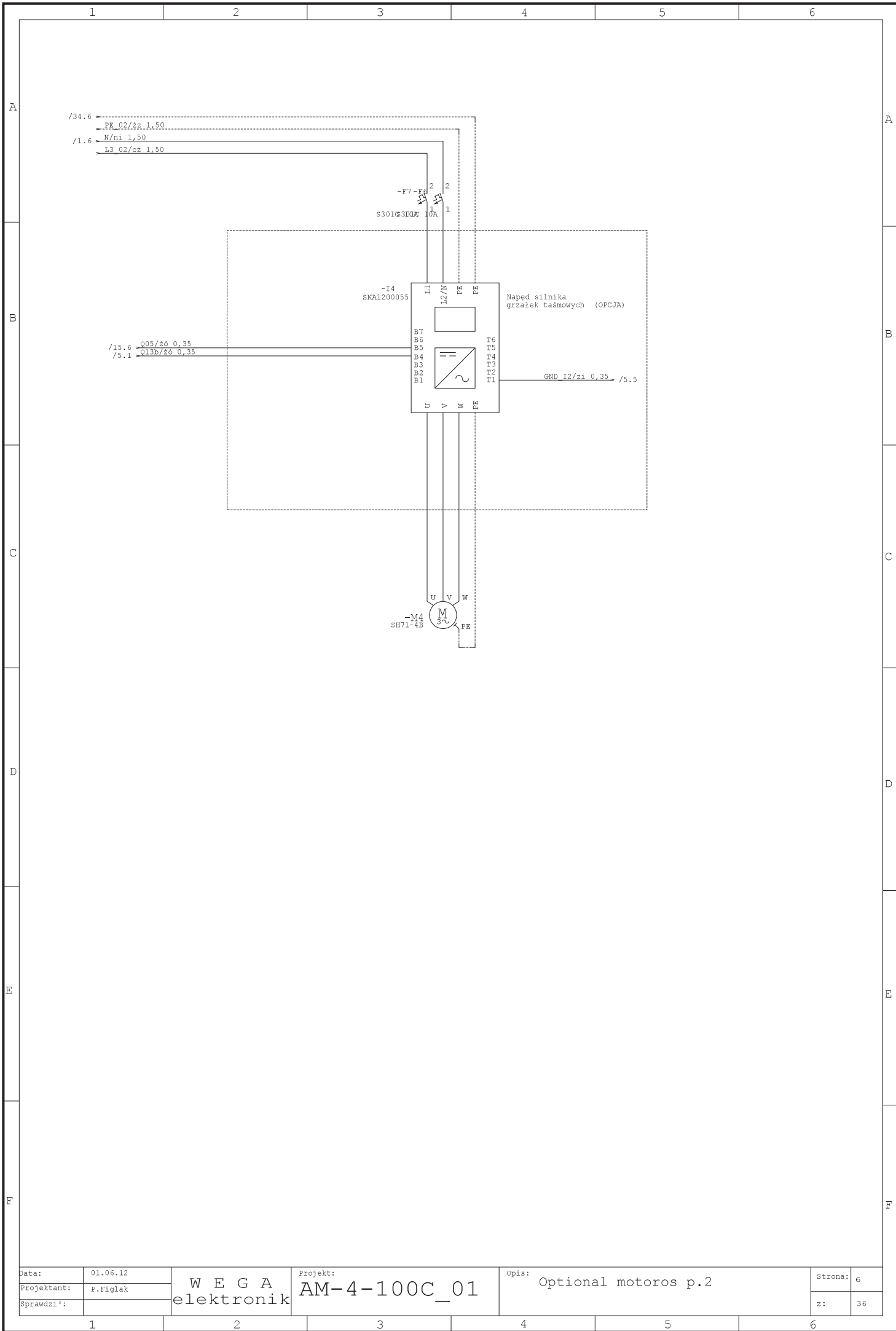
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5

6

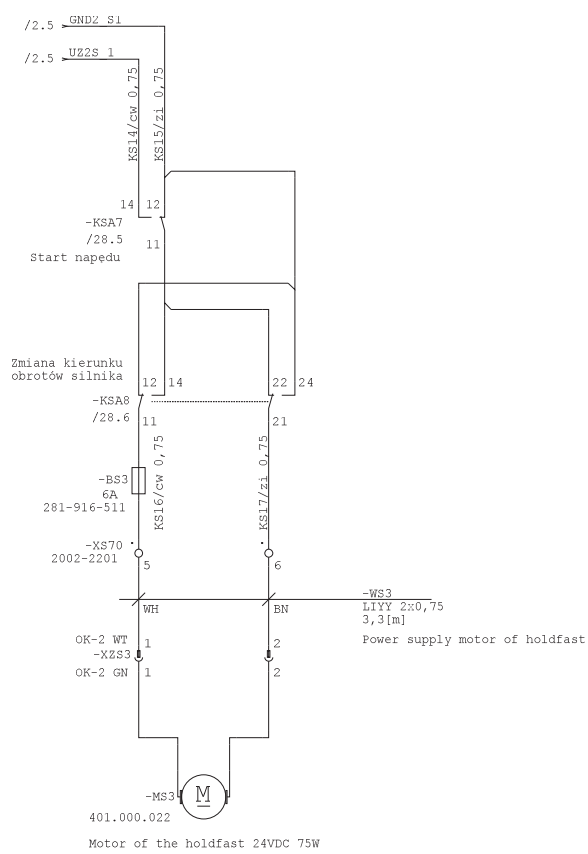
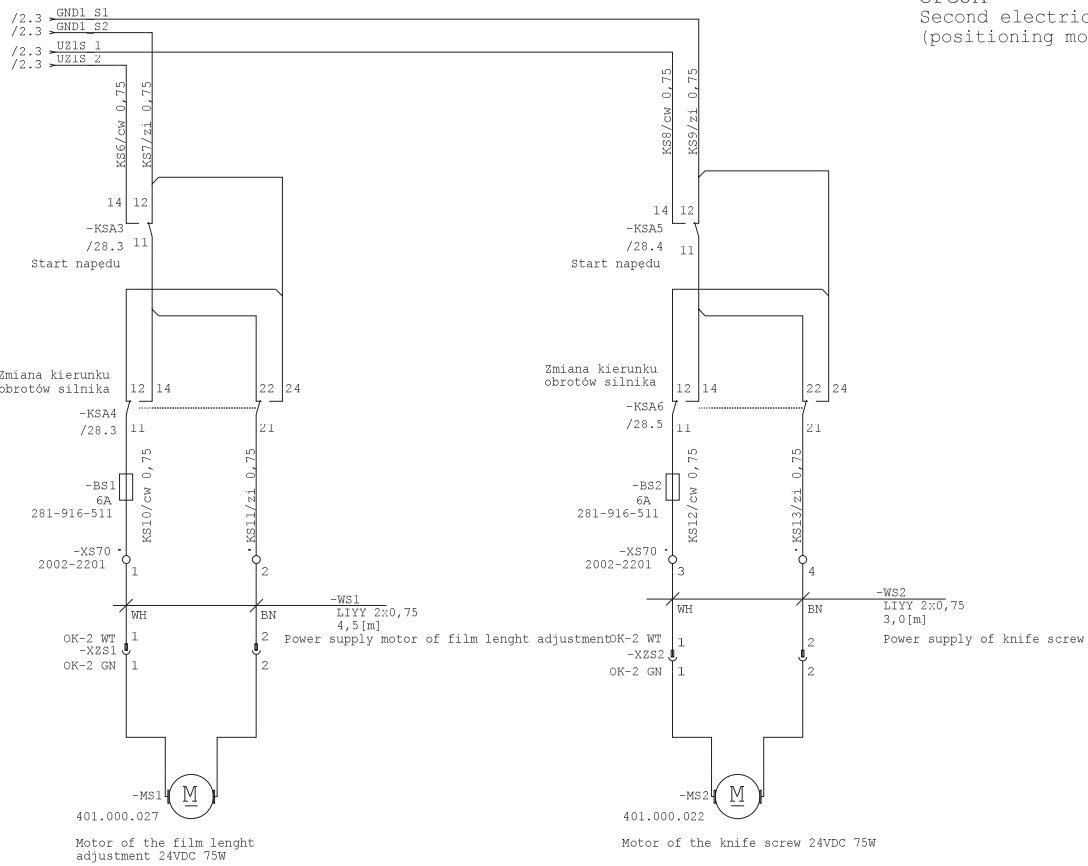


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|-------------|----------|-----------------------|----------|--------------|-------|---------------------|---------|---|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Optional motors p.1 | Strona: | 5 |
| Projektant: | P.Figlak | | z: | 36 | | | | |

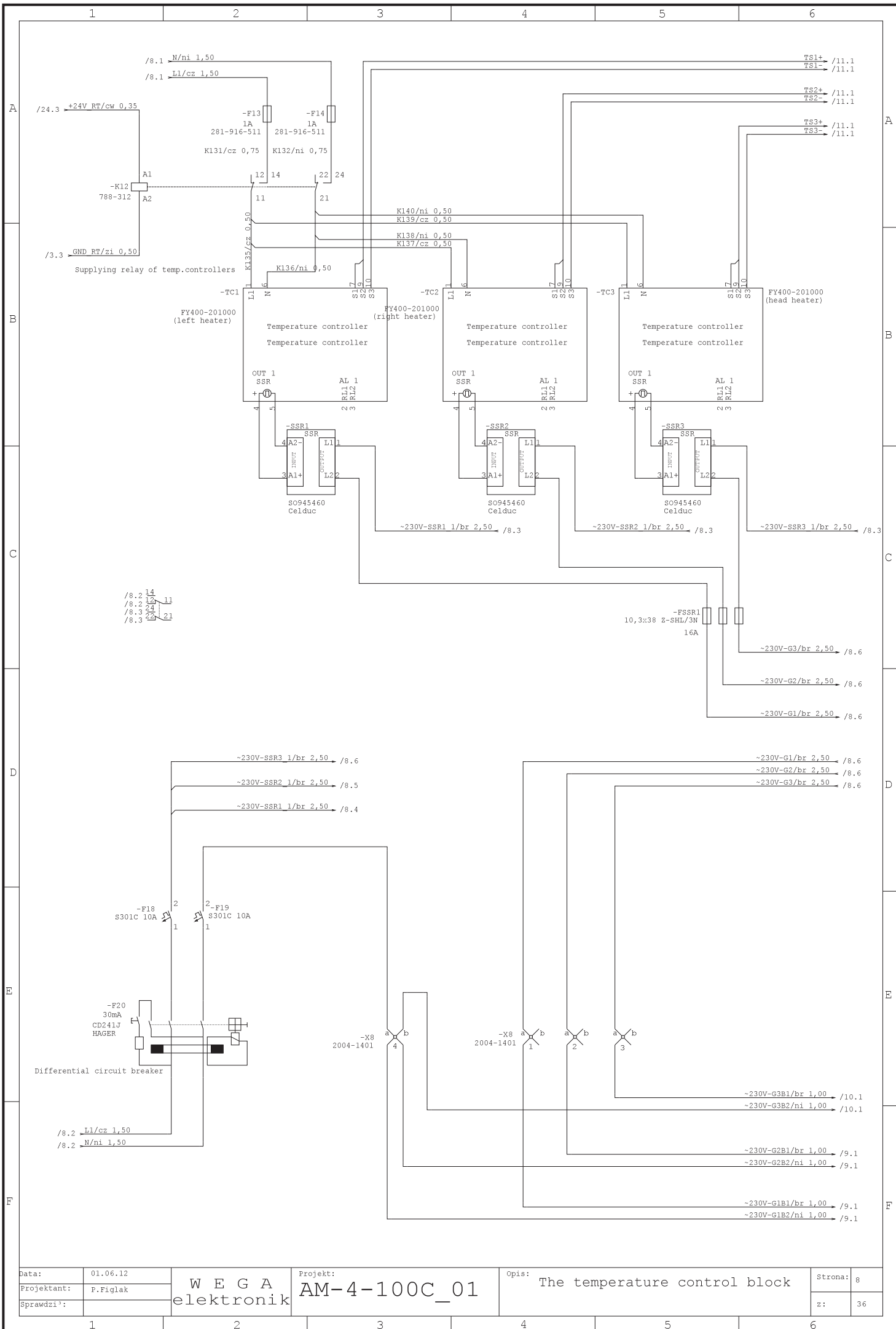


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|-------------|----------|-----------------------|----------|--------------|-------|----------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Optional motoros p.2 | Strona: | 6 |
| Projektant: | P.Figlak | | | | | | z: | 36 |
| Sprawdził: | | | | | | | | |

OPCJA
Second electric box
(positioning motor)



| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|---|---------|---|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Adjustment motor drive - option. equipment | Strona: | 7 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |



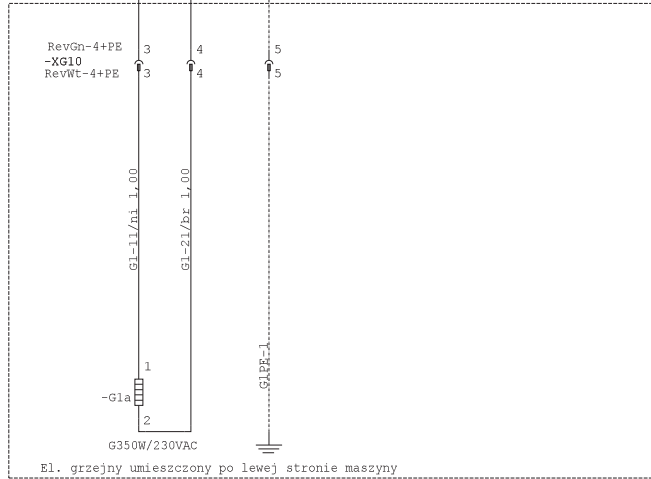
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|-------------|----------|-----------------------|----------|--------------|-------|-------------------------------|---------|---|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | The temperature control block | Strona: | 8 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |

/3.4 PE/26-zi 1,50

/8.6 ~230V-G1B1/br 1,00

/8.6 ~230V-G1B2/ni 1,00

-WG1
OMY 3x1,0
5,0 [m]

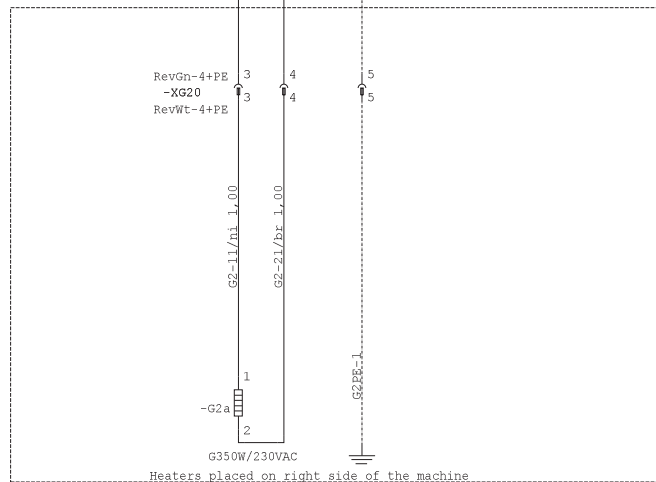


/10.1 PE/26-zi 1,50

/8.6 ~230V-G2B1/br 1,00

/8.6 ~230V-G2B2/ni 1,00

-WG2
OMY 3x1,0
5,0 [m]



Data: 01.06.12

Projektant: P.Figlak

Sprawdził:

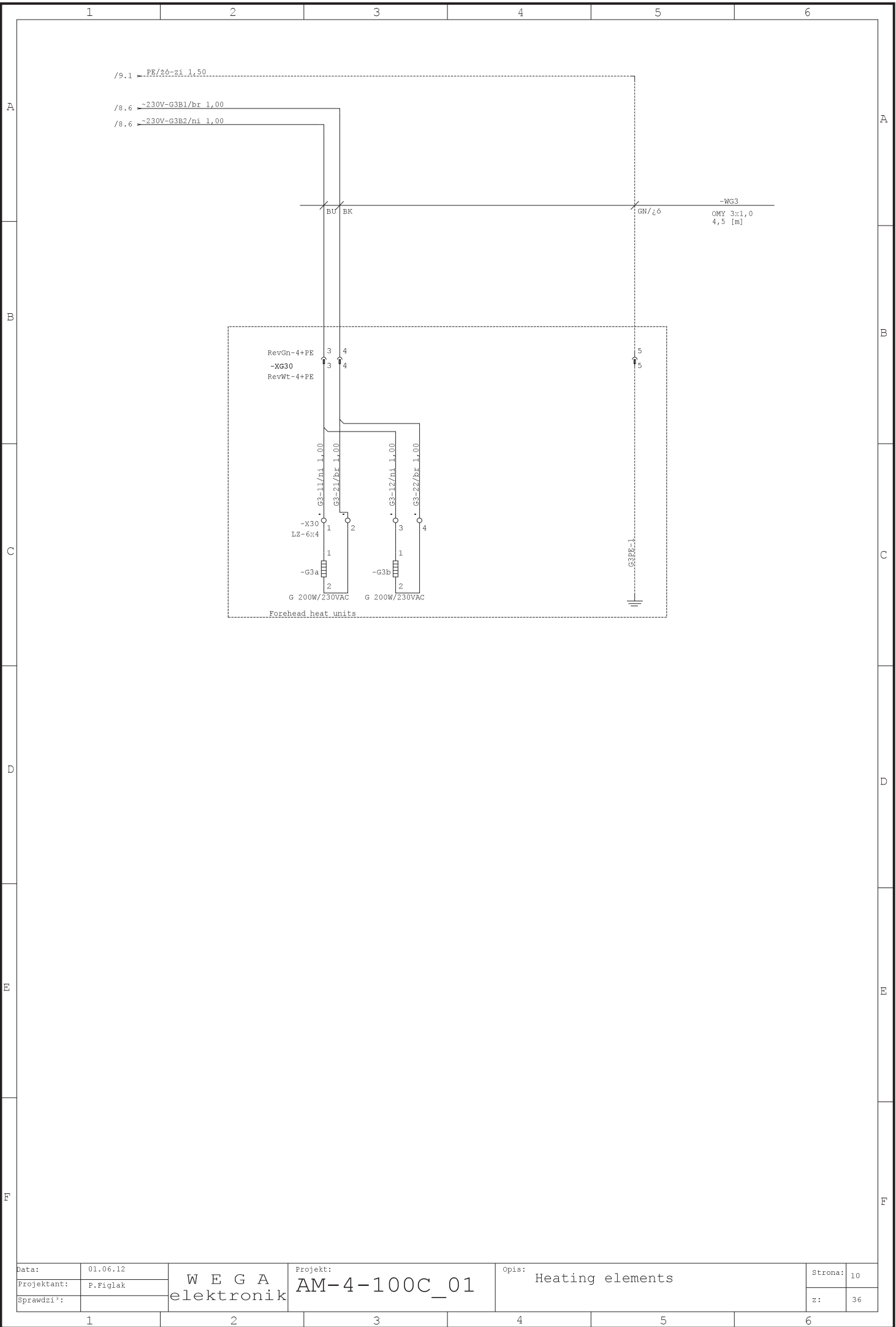
W E G A
elektronik

Projekt:
AM-4-100C_01

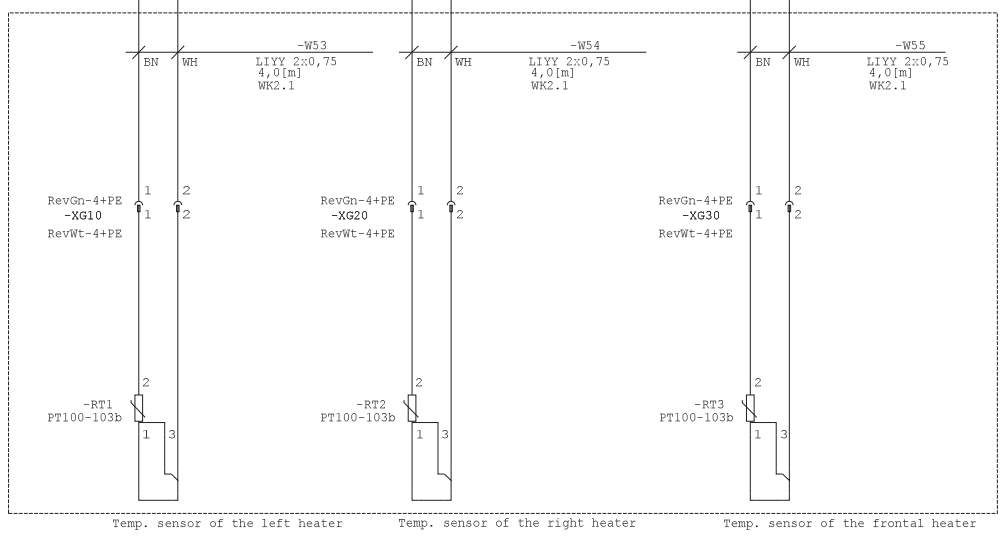
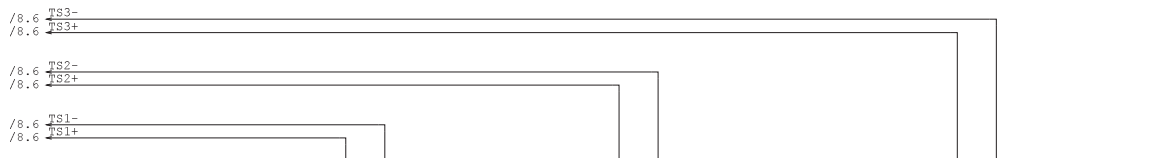
Opis:
Heating elements

Strona: 9

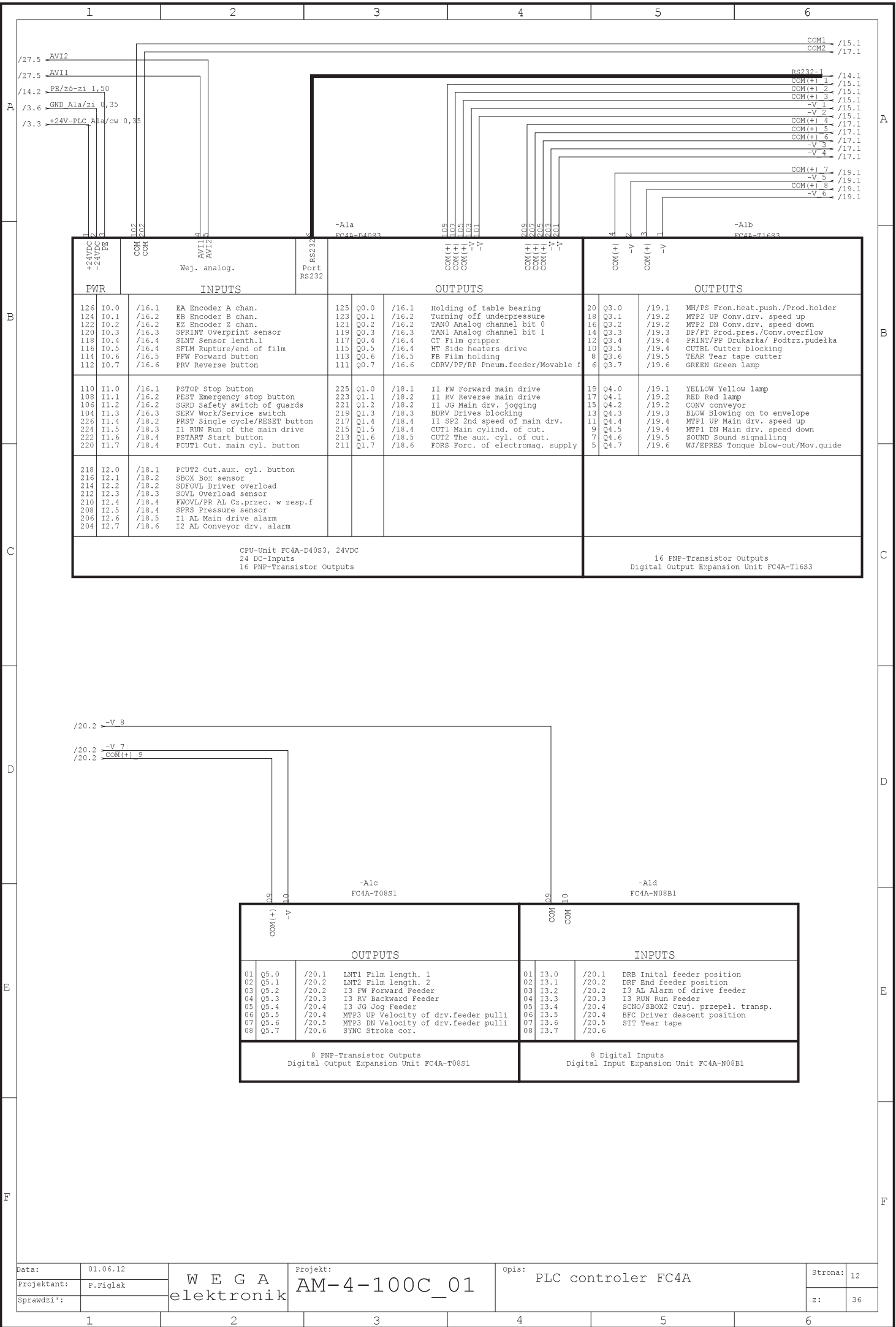
z: 36



| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Heating elements | Strona: | 10 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |



| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|--------------------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Temperature sensors of heaters | Strona: | 11 |
| Projektant: | P.Figlak | | | | | | z: | 36 |
| Sprawdził: | | | | | | | | |

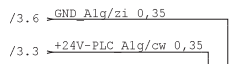


| PWR | | INPUTS | | OUTPUTS | | OUTPUTS | |
|---|------|--------|--------------------------------|---|------|---------|-----------------------------------|
| 126 | I0.0 | /16.1 | EA Encoder A chan. | 125 | Q0.0 | /16.1 | Holding of table bearing |
| 124 | I0.1 | /16.2 | EB Encoder B chan. | 123 | Q0.1 | /16.2 | Turning off underpressure |
| 122 | I0.2 | /16.2 | EZ Encoder Z chan. | 121 | Q0.2 | /16.2 | TAN0 Analog channel bit 0 |
| 120 | I0.3 | /16.3 | SPRINT Overprint sensor | 119 | Q0.3 | /16.3 | TAN1 Analog channel bit 1 |
| 118 | I0.4 | /16.4 | LNT Sensor lenth.1 | 117 | Q0.4 | /16.4 | CT Film gripper |
| 116 | I0.5 | /16.4 | SELM Rupture/end of film | 115 | Q0.5 | /16.4 | HT Side heaters drive |
| 114 | I0.6 | /16.5 | PFW Forward button | 113 | Q0.6 | /16.5 | FB Film holding |
| 112 | I0.7 | /16.6 | PRV Reverse button | 111 | Q0.7 | /16.6 | CDRV/PF/RP Pneum.feeder/Movable f |
| 110 | I1.0 | /16.1 | PSTOP Stop button | 225 | Q1.0 | /18.1 | I1 FW Forward main drive |
| 108 | I1.1 | /16.2 | PEST Emergency stop button | 223 | Q1.1 | /18.2 | I1 RV Reverse main drive |
| 106 | I1.2 | /16.2 | SGRD Safety switch of guards | 221 | Q1.2 | /18.2 | I1 JG Main drv. jogging |
| 104 | I1.3 | /16.3 | SERV Work/Service switch | 219 | Q1.3 | /18.3 | BDRV Drives blocking |
| 102 | I1.4 | /18.2 | PRST Single cycle/RESET button | 217 | Q1.4 | /18.4 | I1 SP2 2nd speed of main drv. |
| 224 | I1.5 | /18.3 | I1 RUN Run of the main drive | 215 | Q1.5 | /18.4 | CUT1 Main cylind. of cut. |
| 222 | I1.6 | /18.4 | PSTART Start button | 213 | Q1.6 | /18.5 | CUT2 The aux. cyl. of cut. |
| 220 | I1.7 | /18.4 | PCUT1 Cut. main cyl. button | 211 | Q1.7 | /18.6 | FOR3 Forc. of electromag. supply |
| 218 | I2.0 | /18.1 | PCUT2 Cut.aux. cyl. button | | | | |
| 216 | I2.1 | /18.2 | SBOX Box sensor | | | | |
| 214 | I2.2 | /18.2 | SPOVL Driver overload | | | | |
| 212 | I2.3 | /18.3 | SOVL Overload sensor | | | | |
| 210 | I2.4 | /18.4 | FWOVL/PR AL Cz.przec. w zesp.f | | | | |
| 208 | I2.5 | /18.4 | SPRS Pressure sensor | | | | |
| 206 | I2.6 | /18.5 | I1 AL Main drive alarm | | | | |
| 204 | I2.7 | /18.6 | I2 AL Conveyor drv. alarm | | | | |
| CPU-Unit FC4A-D40S3, 24VDC 24 DC-Inputs 16 PNP-Transistor Outputs | | | | 16 PNP-Transistor Outputs Digital Output Expansion Unit FC4A-T16S3 | | | |

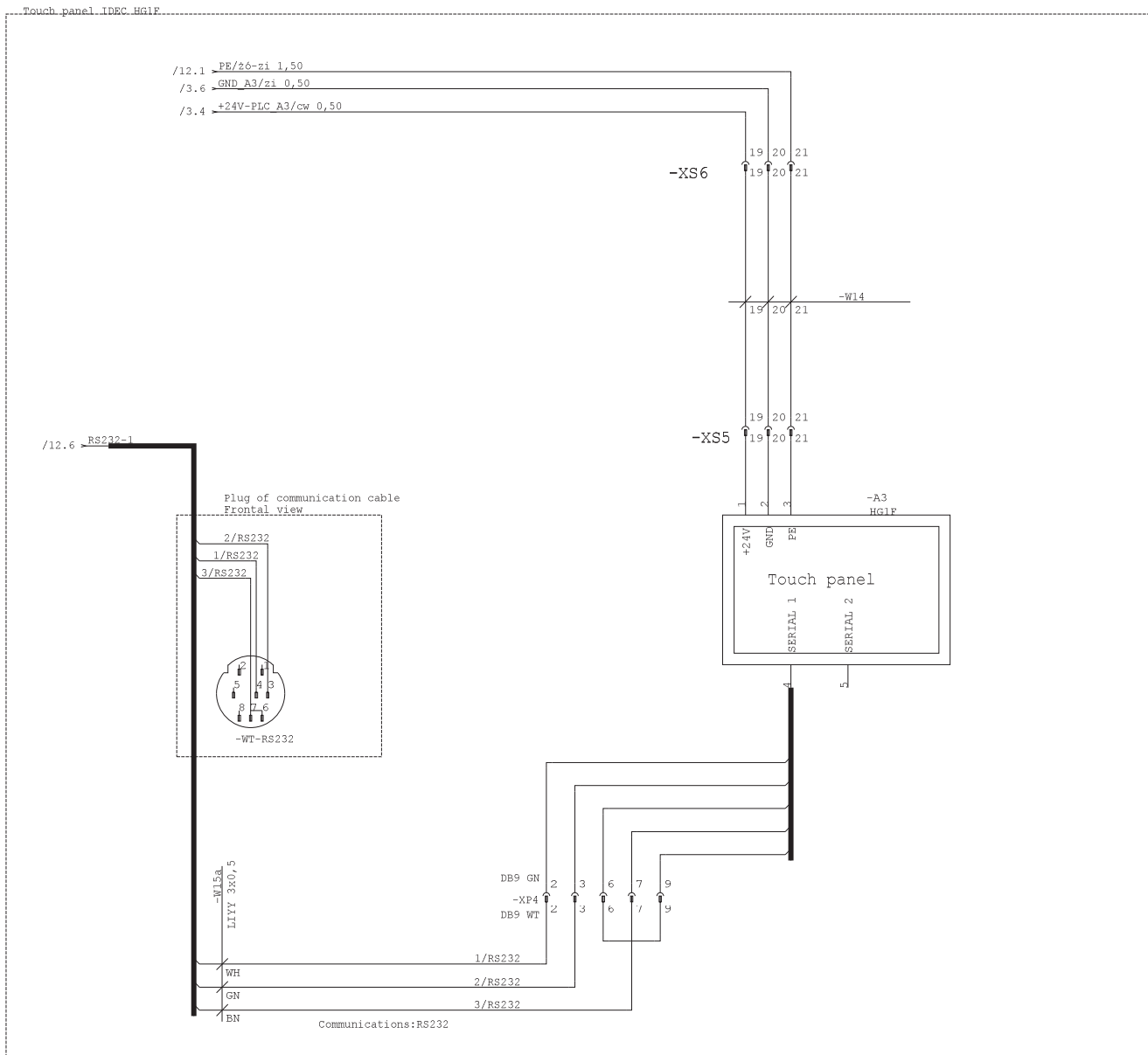
| COM(+) | | COM(-) | | COM(+) | | COM(-) | |
|--|------|--------|--------------------------------------|---|------|--------|-----------------------------------|
| 01 | Q5.0 | /20.1 | LNT1 Film length. 1 | 01 | I3.0 | /20.1 | DRB Inital feeder position |
| 02 | Q5.1 | /20.2 | LNT2 Film length. 2 | 02 | I3.1 | /20.2 | DRF End feeder position |
| 03 | Q5.2 | /20.2 | I3 FW Forward Feeder | 03 | I3.2 | /20.2 | I3 AL Alarm of drive feeder |
| 04 | Q5.3 | /20.3 | I3 RV Backward Feeder | 04 | I3.3 | /20.3 | I3 RUN Run Feeder |
| 05 | Q5.4 | /20.4 | I3 JG Jog Feeder | 05 | I3.4 | /20.4 | SCNO/SBOX2 Czuj. przepel. transp. |
| 06 | Q5.5 | /20.4 | MFP3 UP Velocity of drv.feeder pulli | 06 | I3.5 | /20.4 | BFC Driver descent position |
| 07 | Q5.6 | /20.5 | MFP3 DN Velocity of drv.feeder pulli | 07 | I3.6 | /20.5 | STT Tear tape |
| 08 | Q5.7 | /20.6 | SYNC Stroke cor. | 08 | I3.7 | /20.6 | |
| 8 PNP-Transistor Outputs Digital Output Expansion Unit FC4A-T08S1 | | | | 8 Digital Inputs Digital Input Expansion Unit FC4A-N08B1 | | | |



| -Aie | | | -Aif | | |
|--|------|-------------------------------------|---|------|---|
| COM(+) | | | COM(+) | | |
| -V | | | COM(+) | | |
| OUTPUTS | | | INPUTS | | |
| 01 | Q6.0 | /21.1 CHSP1 Speed ch. of drv. 1,2 | 01 | I4.0 | /21.1 Reserve |
| 02 | Q6.1 | /21.2 CHSP1 Speed ch. of drv. 3,4 | 02 | I4.1 | /21.2 Reserve |
| 03 | Q6.2 | /21.2 Drive motor of film lenght | 03 | I4.2 | /21.2 SFILM Położenie bazowe reg.dł.fol |
| 04 | Q6.3 | /21.3 Drive motor of film lenght | 04 | I4.3 | /21.3 Reserve |
| 05 | Q6.4 | /21.4 Knife drive - pulling up | 05 | I4.4 | /21.4 Reserve |
| 06 | Q6.5 | /21.4 Knife drive - pulling down | 06 | I4.5 | /21.4 SFHPOS Pozycja bazowa zespołu doc |
| 07 | Q6.6 | /21.5 Holdfast drive - pulling up | 07 | I4.6 | /21.5 SKPOS Knife base position |
| 08 | Q6.7 | /21.6 Holdfast drive - pulling down | 08 | I4.7 | /21.6 Reserve |
| 8 PNP-Transistor Outputs Digital Output Expansion Unit FC4A-T08S1 | | | 8 Digital Inputs Digital Input Expansion Unit FC4A-N08S1 | | |



| -Alg | | |
|---|-----|-----------------------------------|
| ANALOG INPUTS | | |
| 05 | IN0 | /32.3 Survey of knife position |
| 06 | | |
| 07 | IN1 | /32.5 Survey of holdfast position |
| 08 | | |
| 09 | IN2 | /32.3 Survey of film lenght |
| 10 | | |
| 11 | IN3 | |
| 12 | | |
| 13 | IN4 | |
| 14 | | |
| 15 | IN5 | |
| 16 | | |
| 17 | IN6 | |
| 18 | | |
| 19 | IN7 | |
| 20 | | |
| 8 Analog Inputs 4-20mA/0-10V Analog Input Expansion Unit FC4A-J8C1 | | |



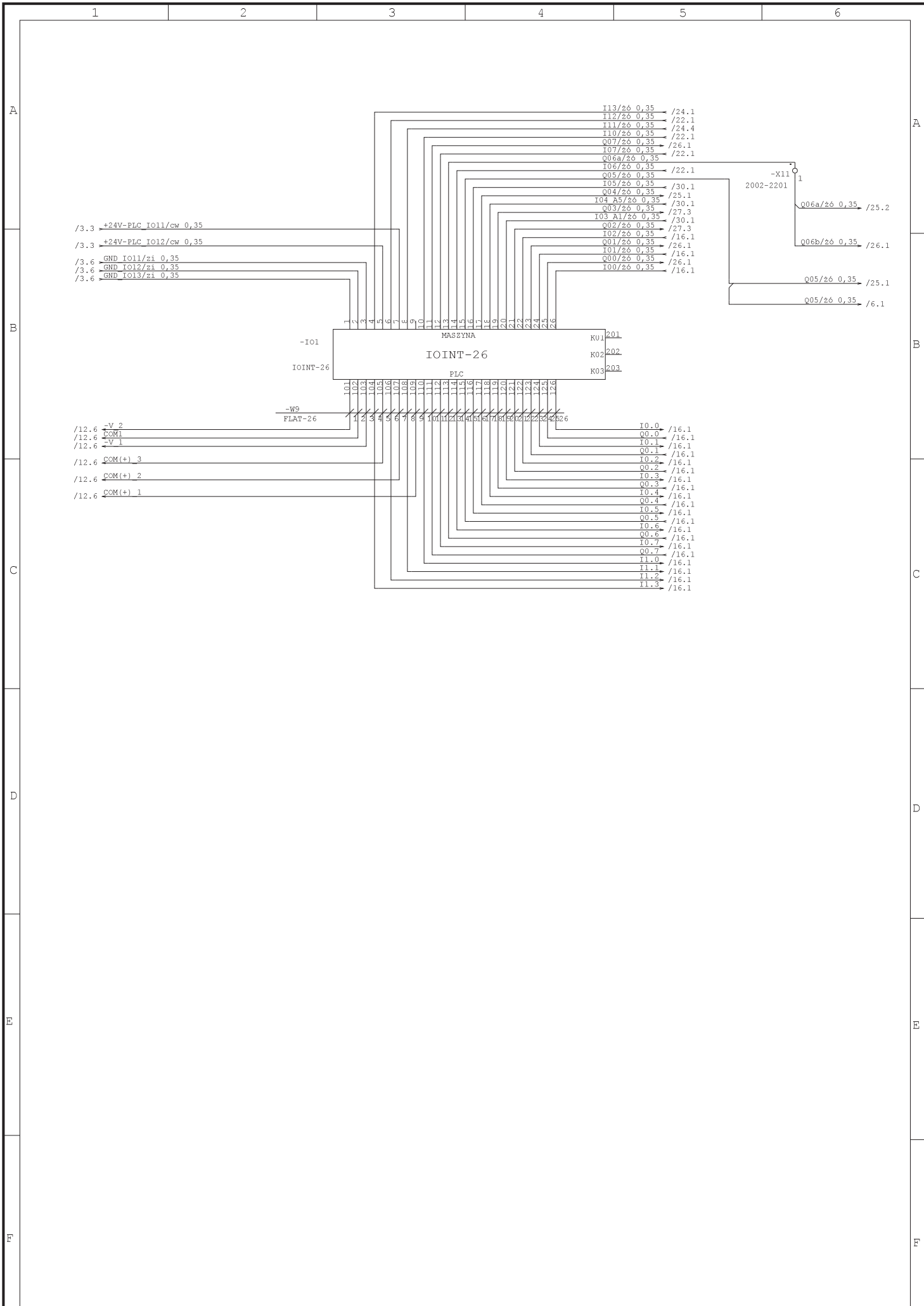
| | |
|-------------|----------|
| Data: | 01.06.12 |
| Projektant: | P.Figlak |
| Sprawdził: | |

W E G A
elektronik

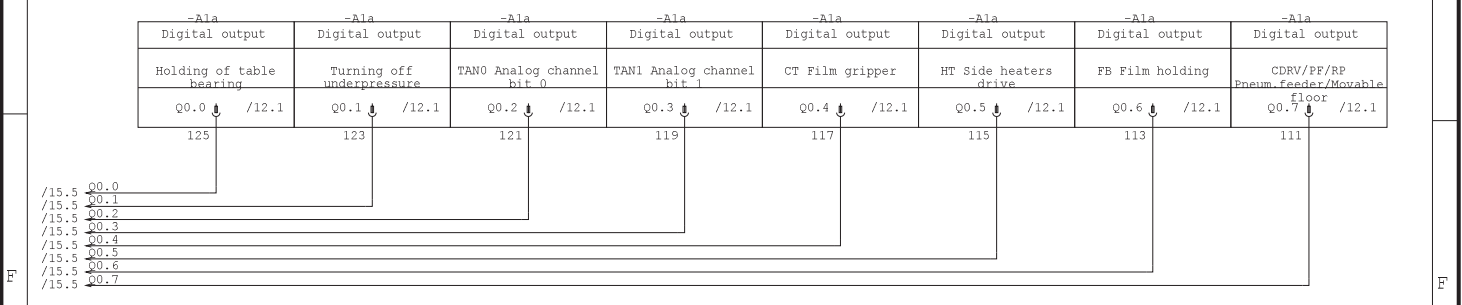
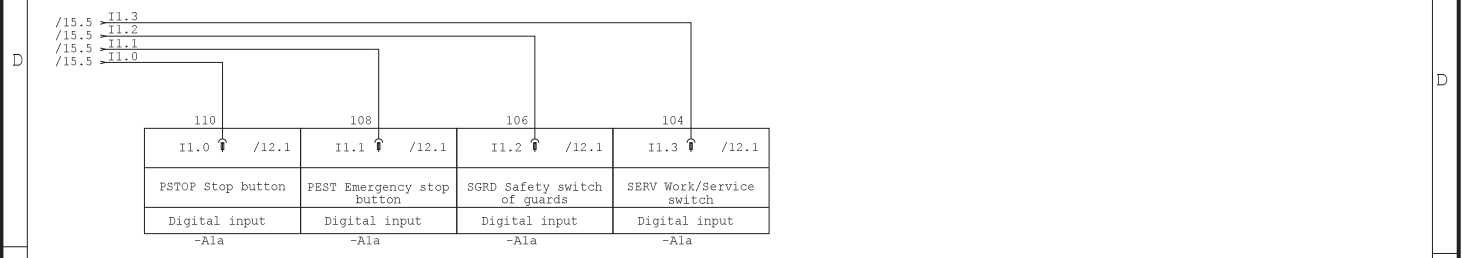
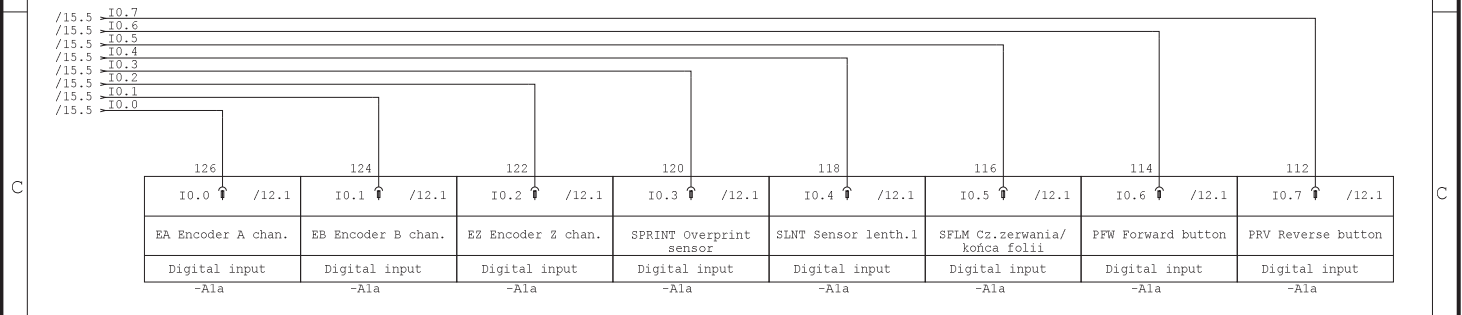
Projekt:
AM-4-100C_01

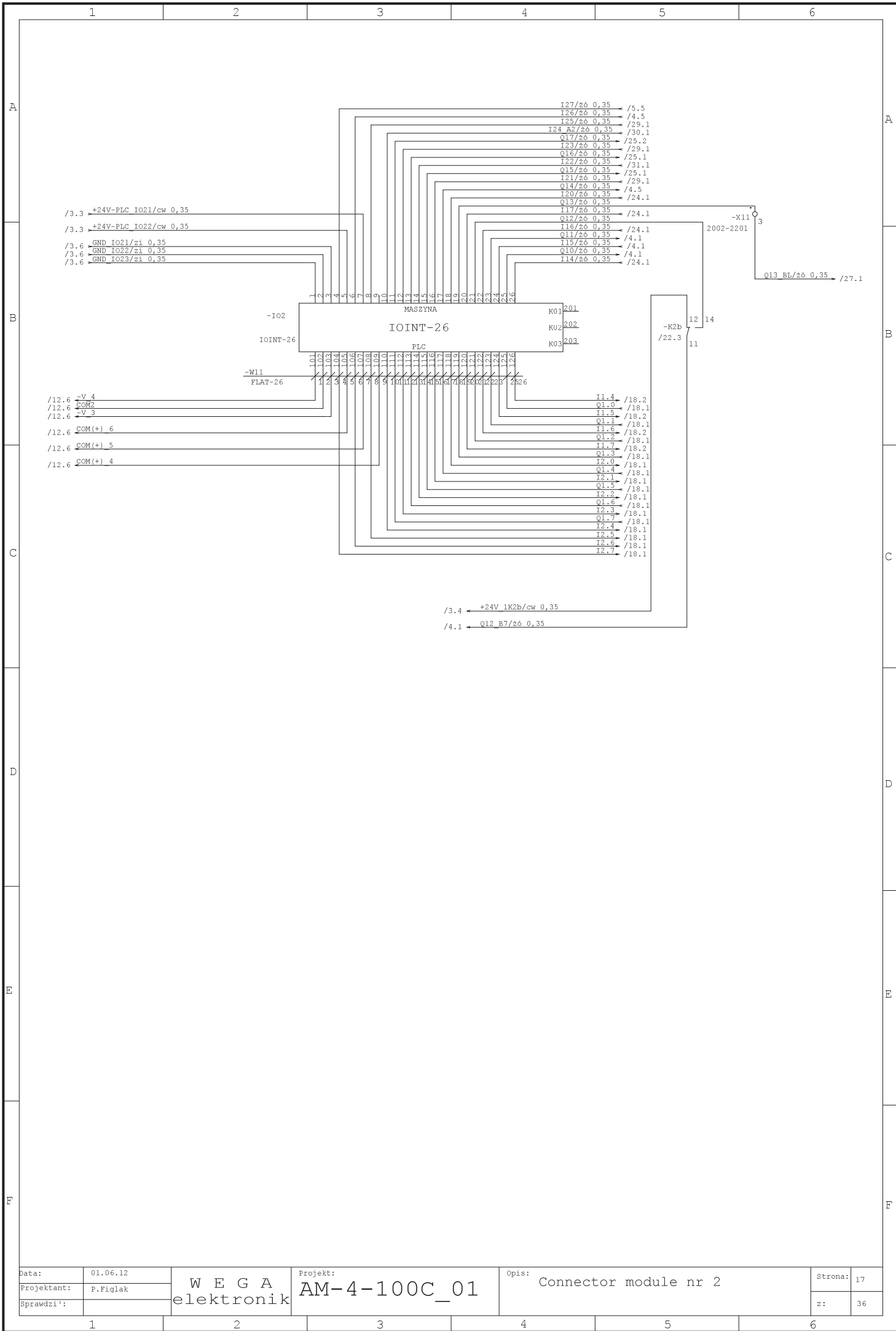
Opis:
User's touch screen

| | |
|---------|----|
| Strona: | 14 |
| z: | 36 |



| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|-----------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Connector module nr 1 | Strona: | 15 |
| Projektant: | P.Figlak | | | | | | z: | 36 |
| Sprawdził: | | | | | | | | |



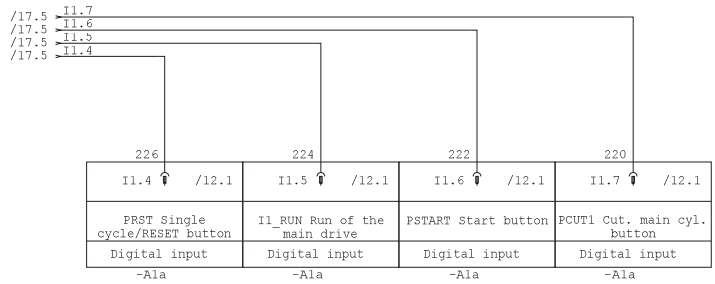


A

A

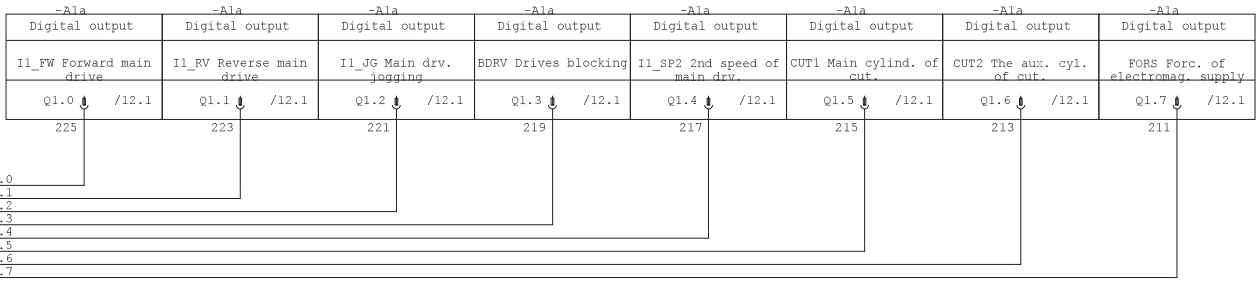
B

B



C

C

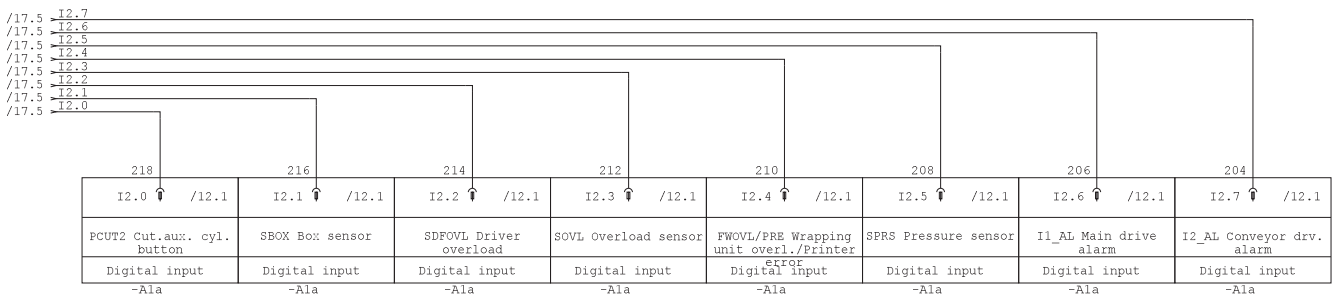


D

D

E

E



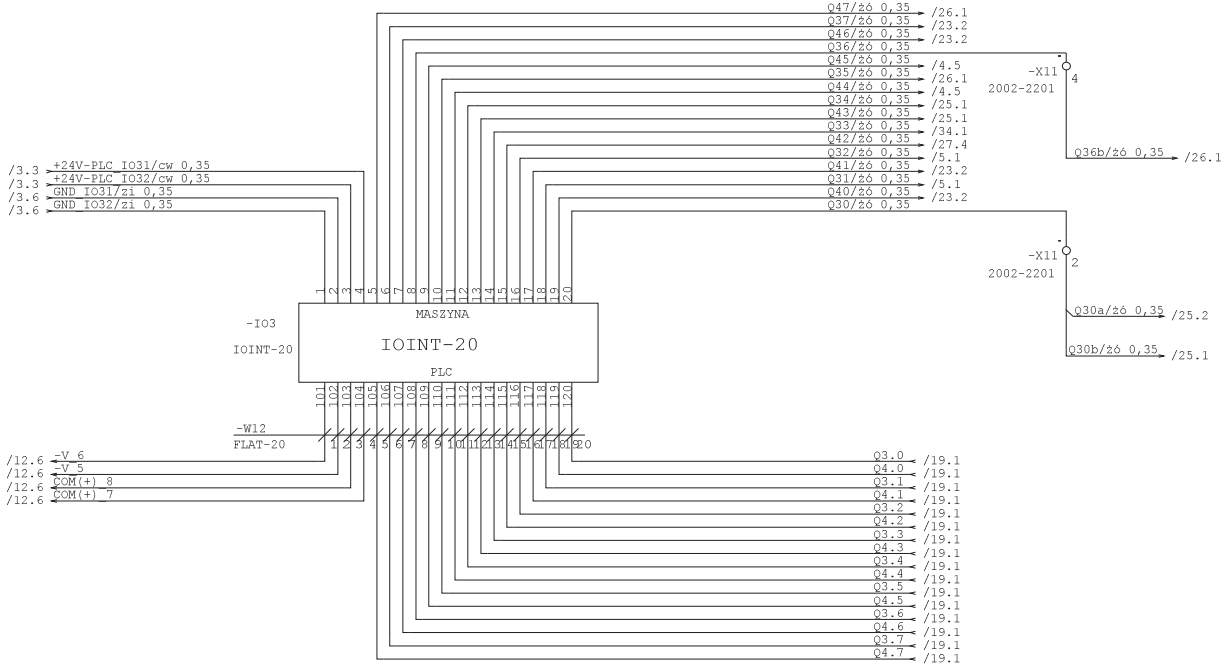
F

F

| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|-------------------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Connector signals of module 2 | Strona: | 18 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |

A

A

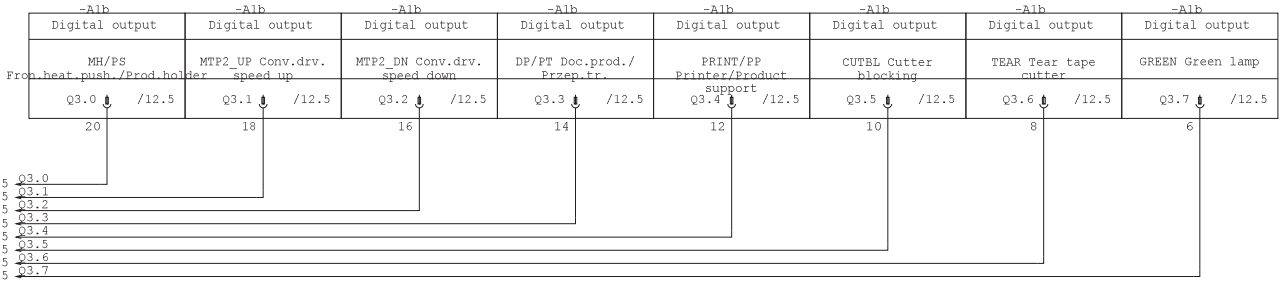


B

B

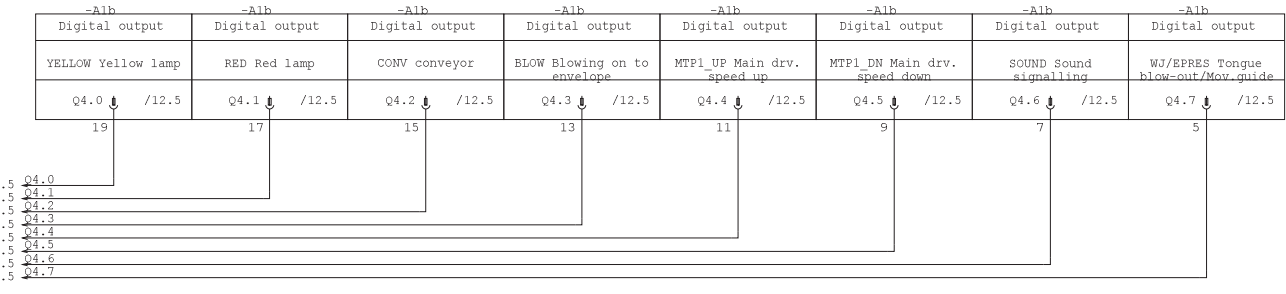
C

C



D

D

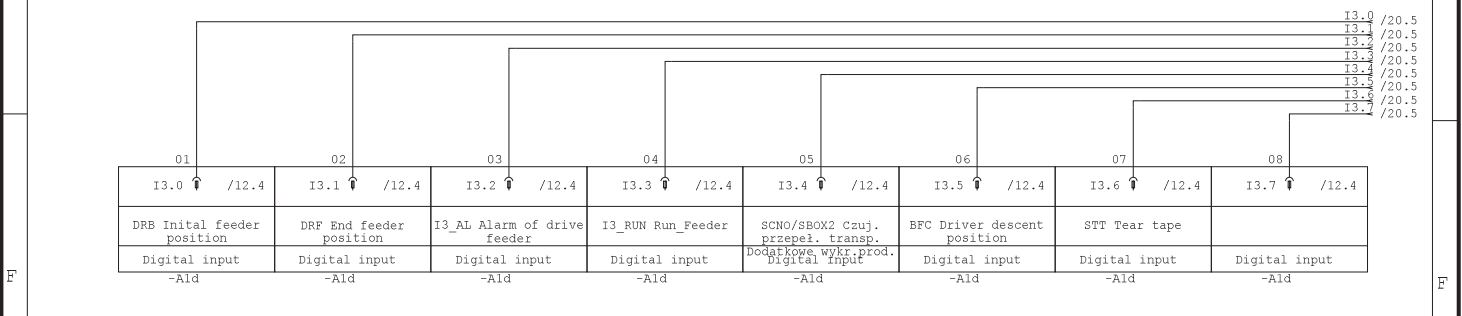
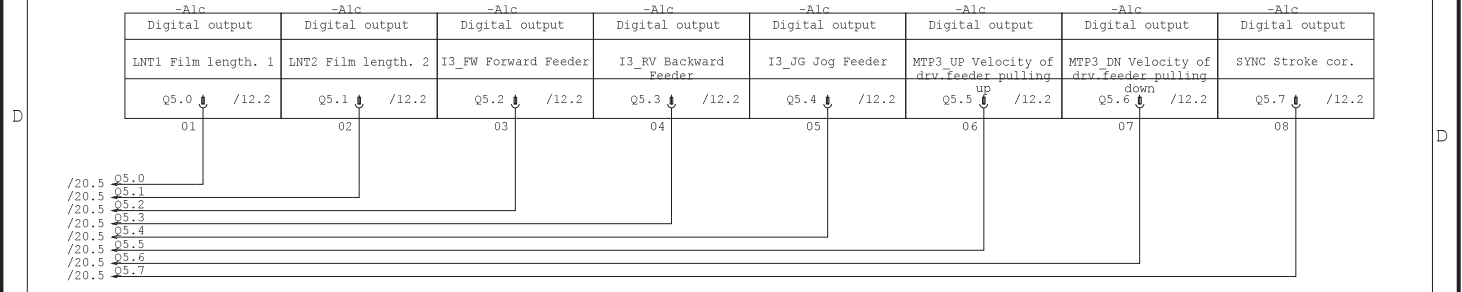
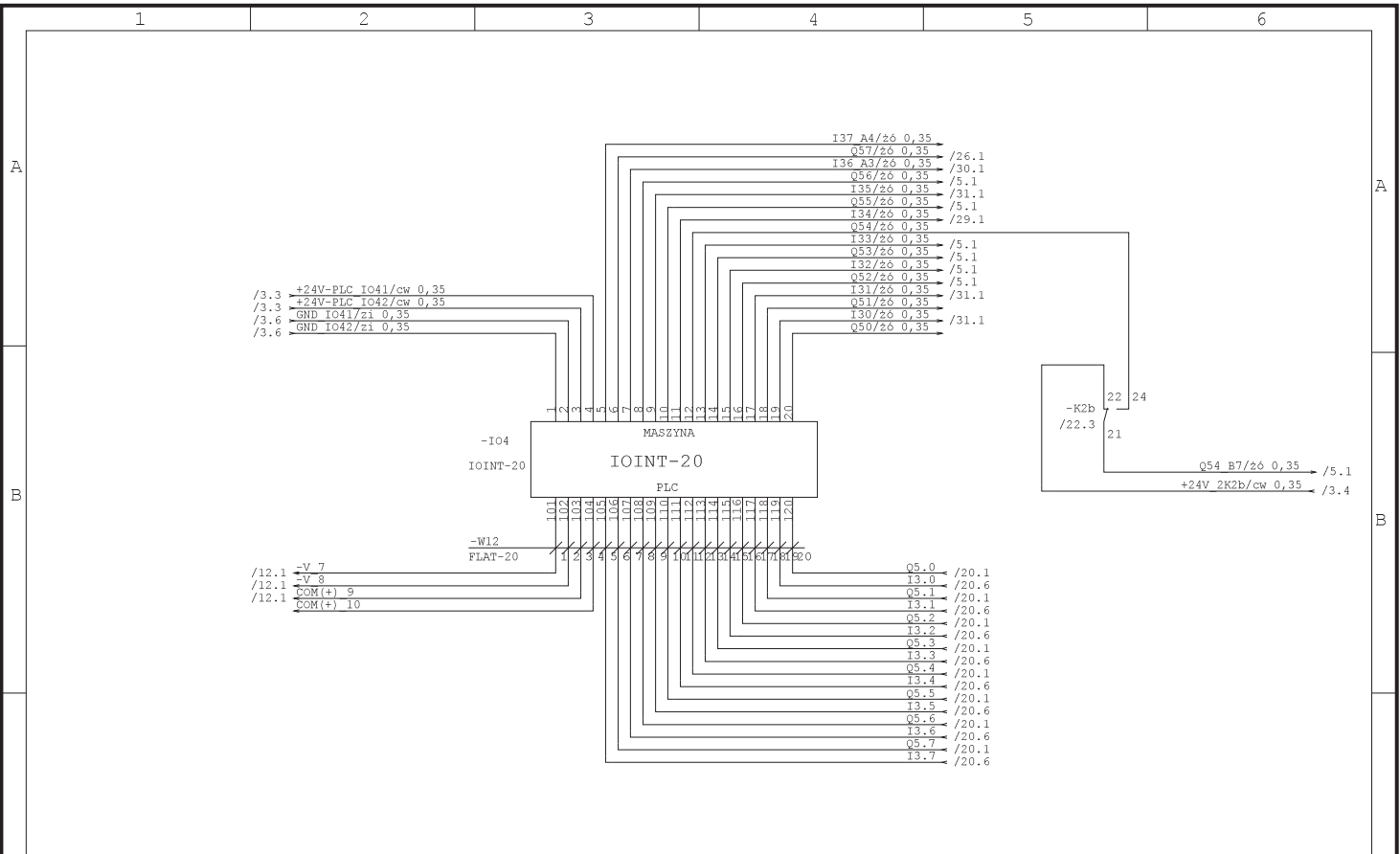


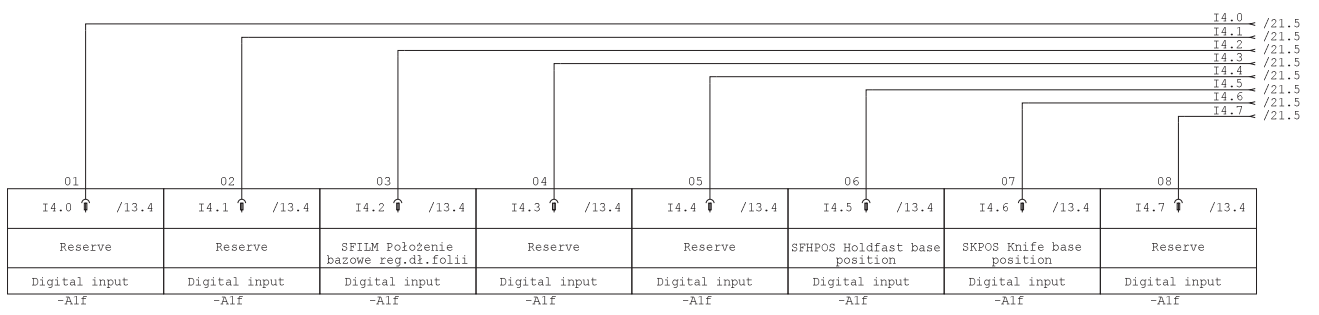
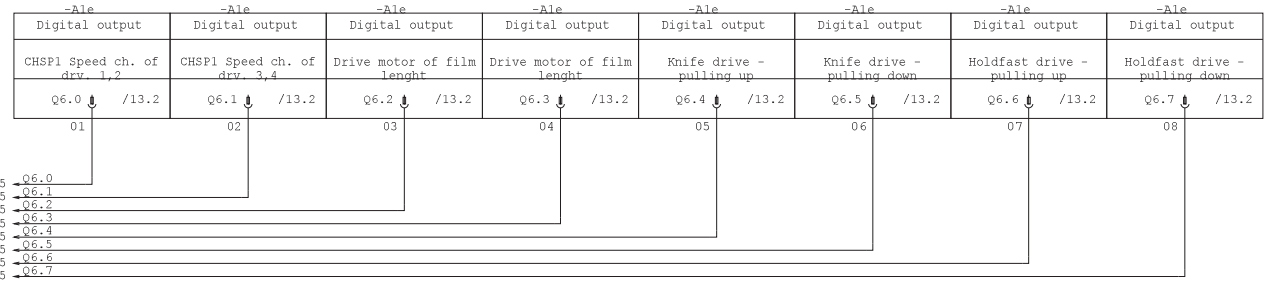
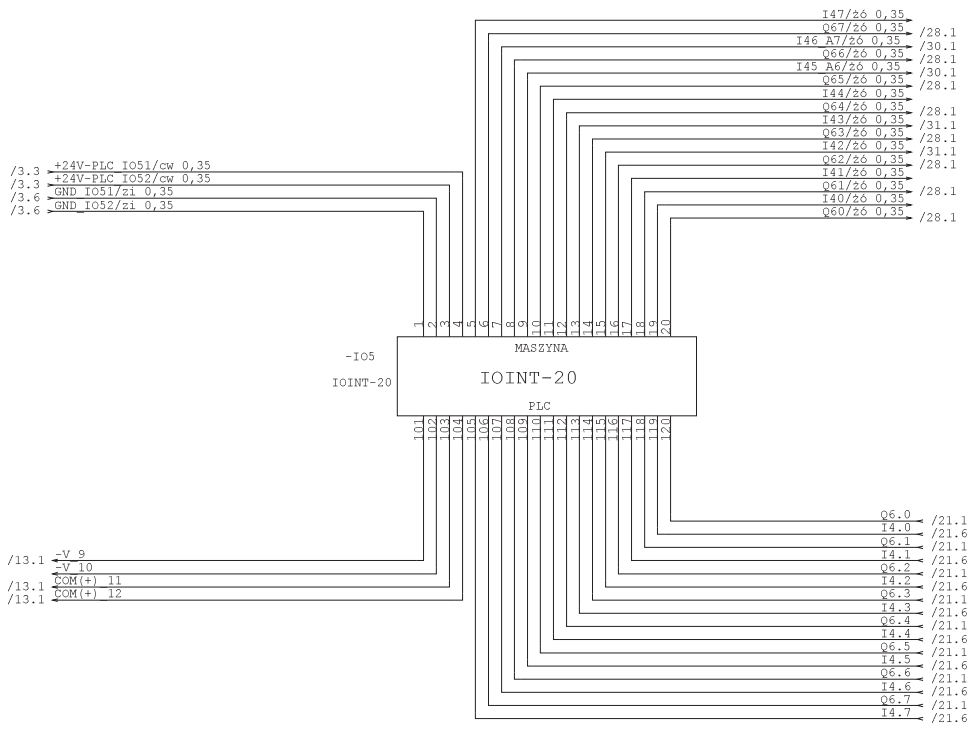
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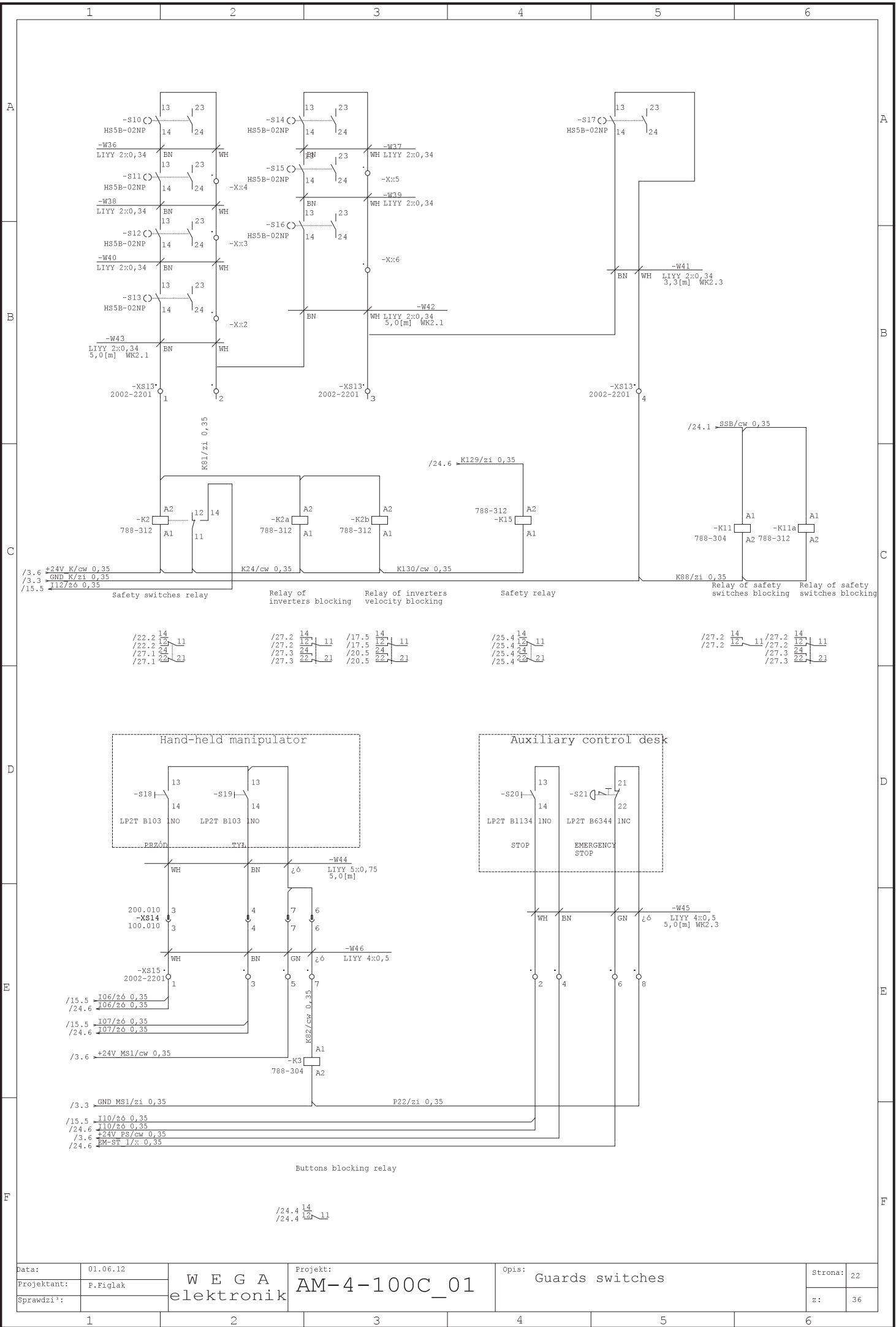
E

F

F







| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|-----------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Guards switches | Strona: | 22 |
| Projektant: | P.Figlak | | | | | | z: | 36 |
| Sprawdził: | | | | | | | | |

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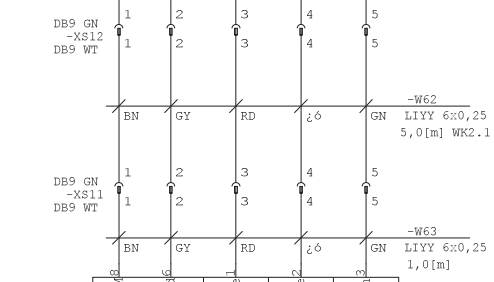
A

/19.5 Q37/26 0,35
 /19.5 Q40/26 0,35
 /19.5 Q41/26 0,35
 /19.5 Q46/26 0,35
 /3.3 GND KS/21 0,35

Q37/26 0,35 /34.1

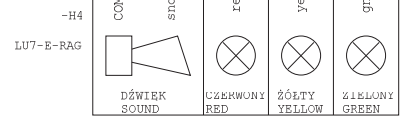
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B



C

C



D

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E

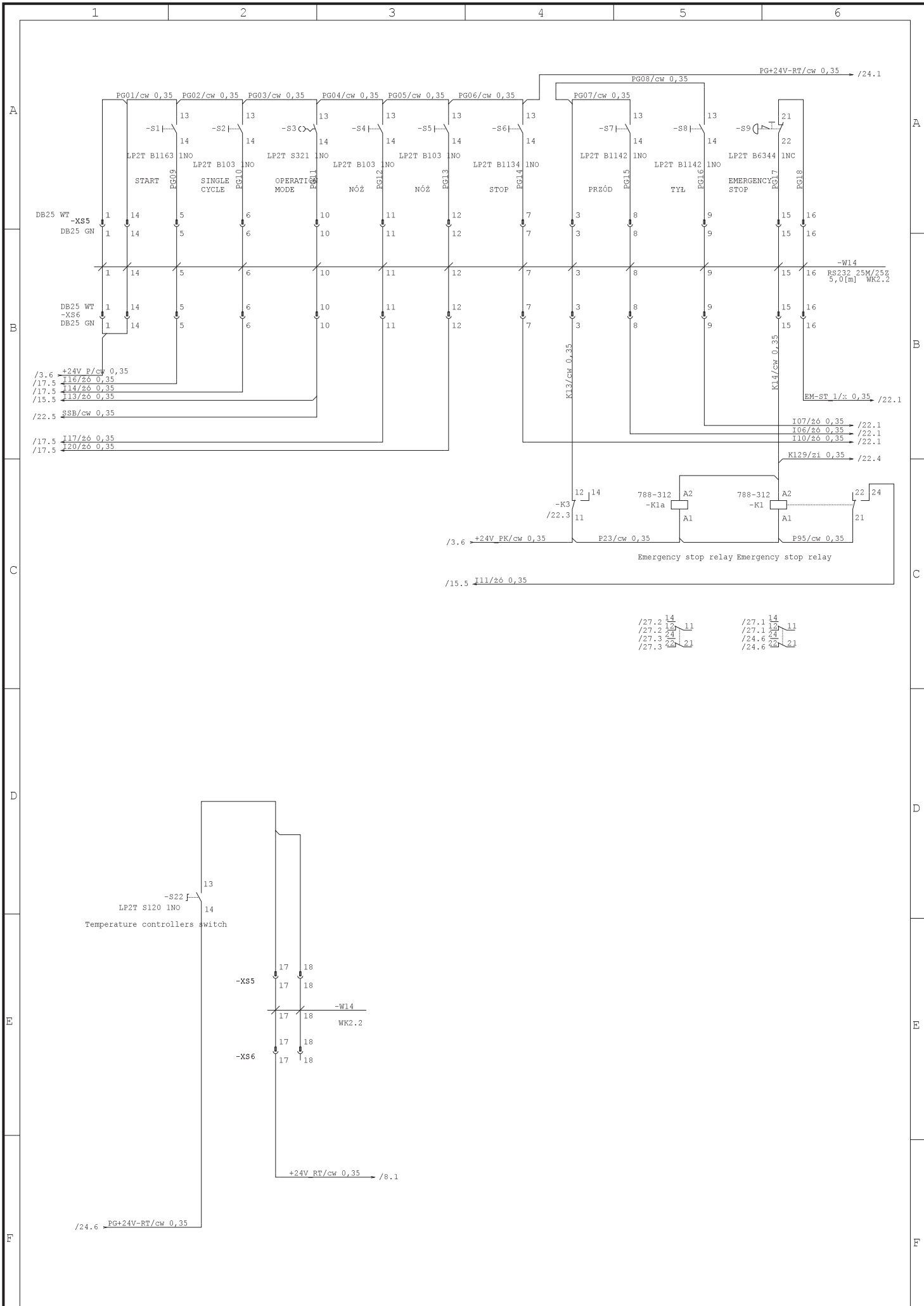
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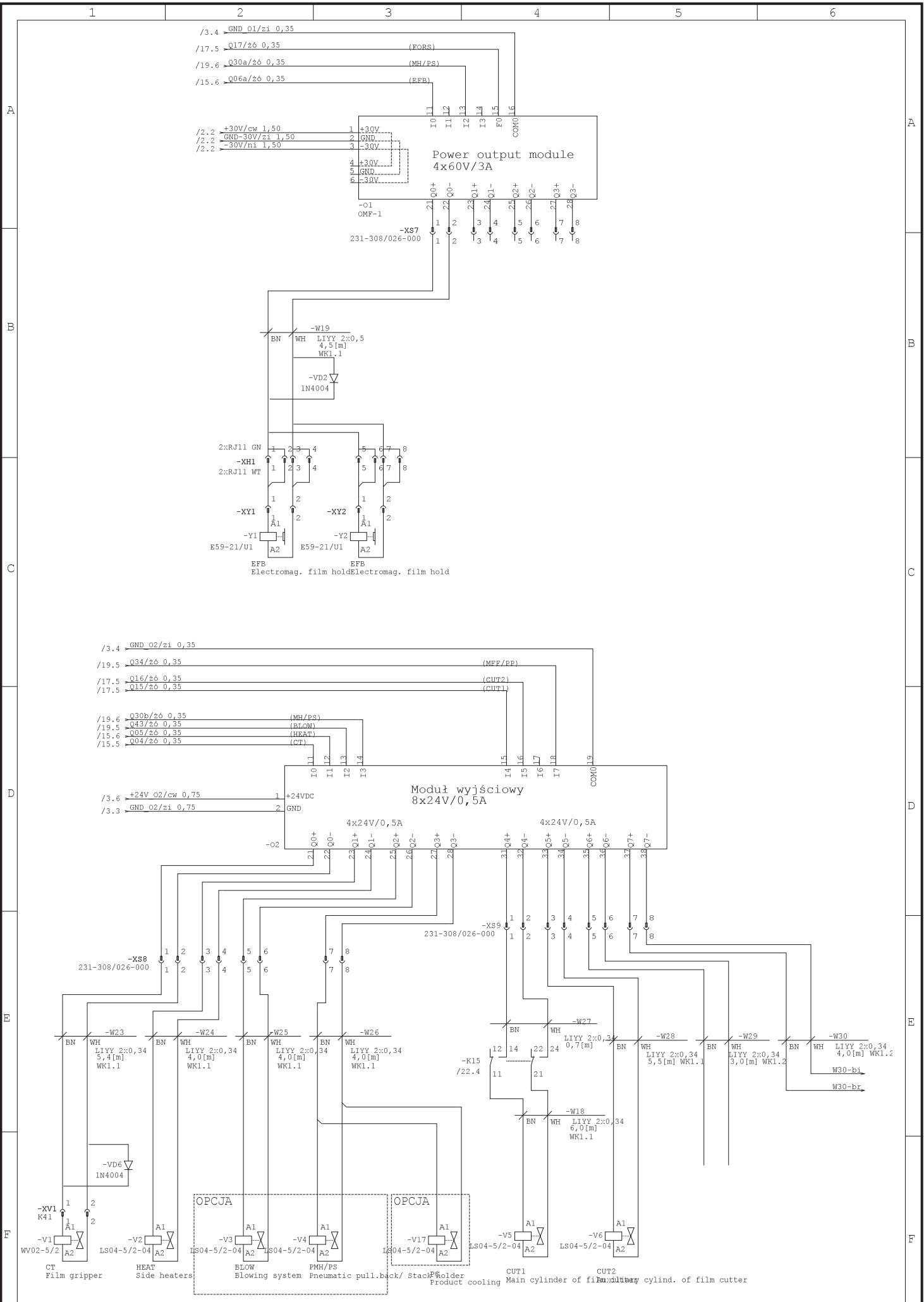
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| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Plant annunciator | Strona: | 23 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |

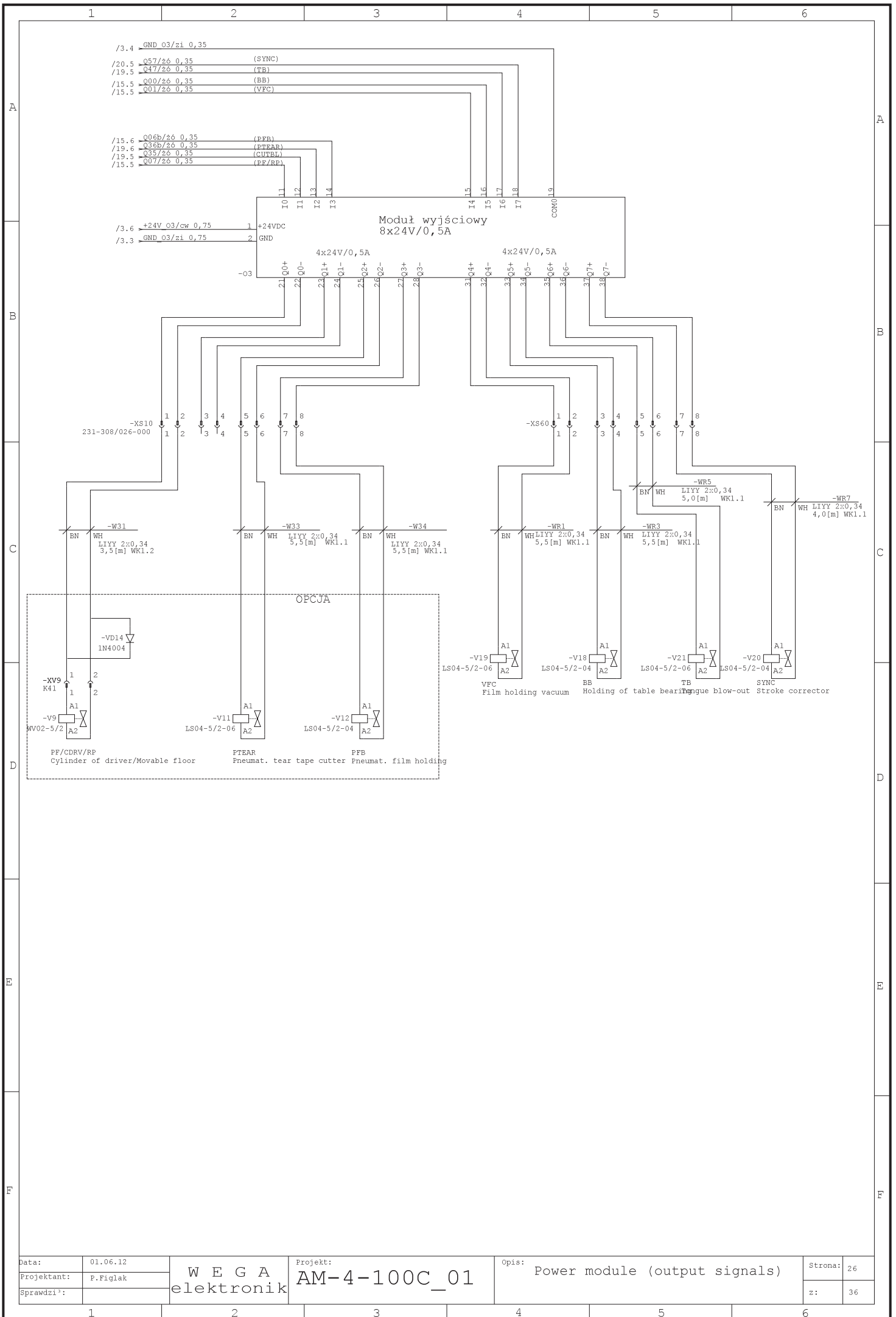
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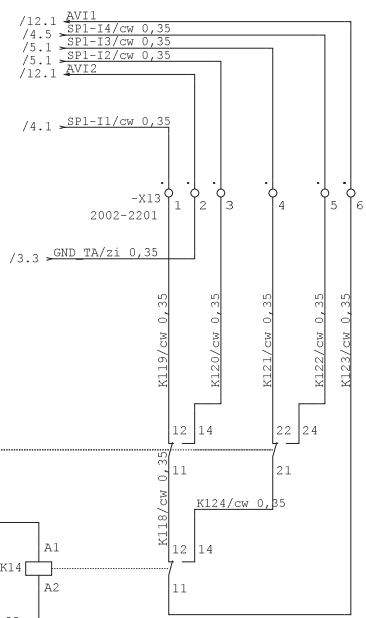
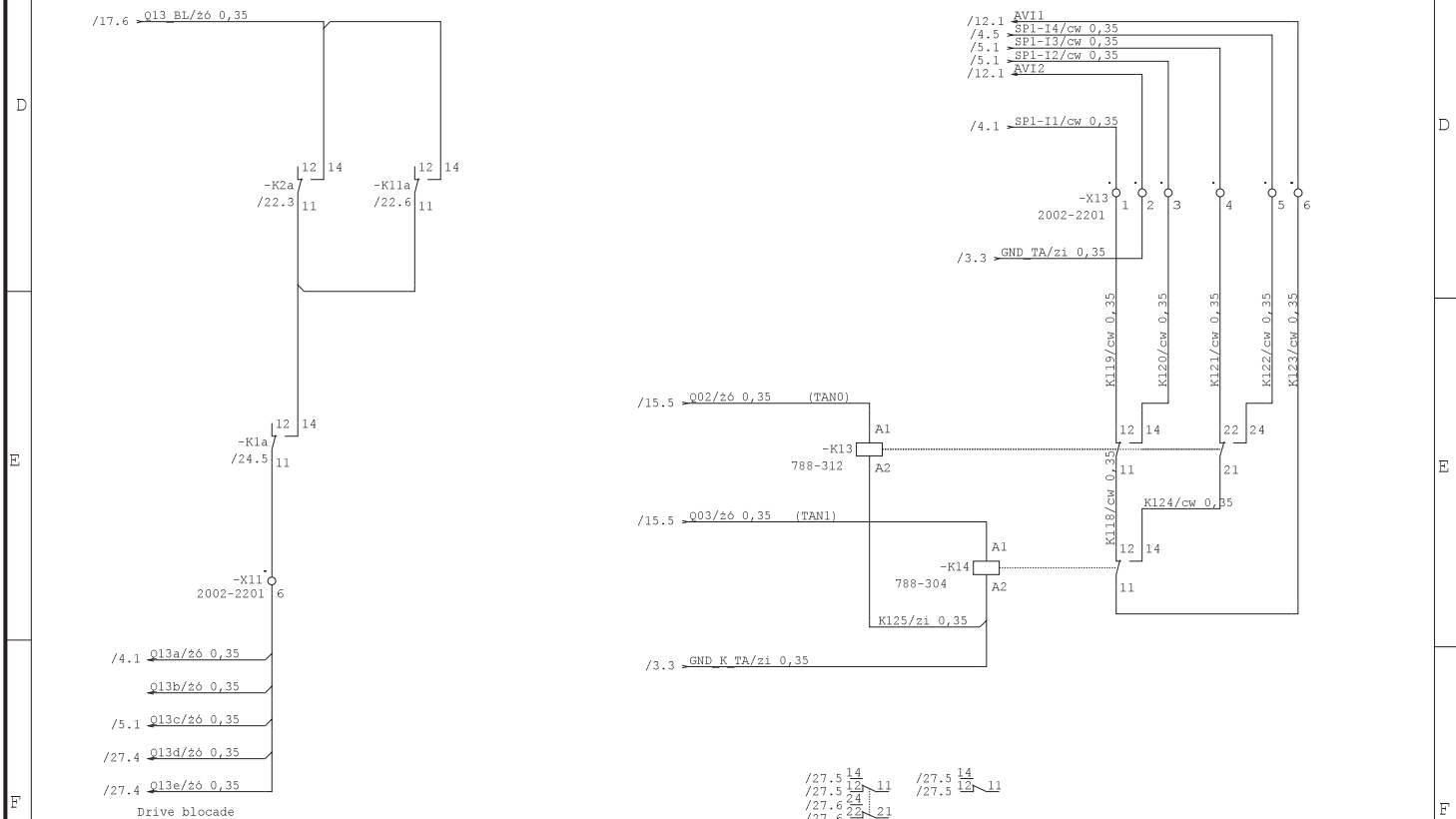
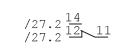
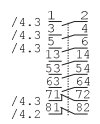
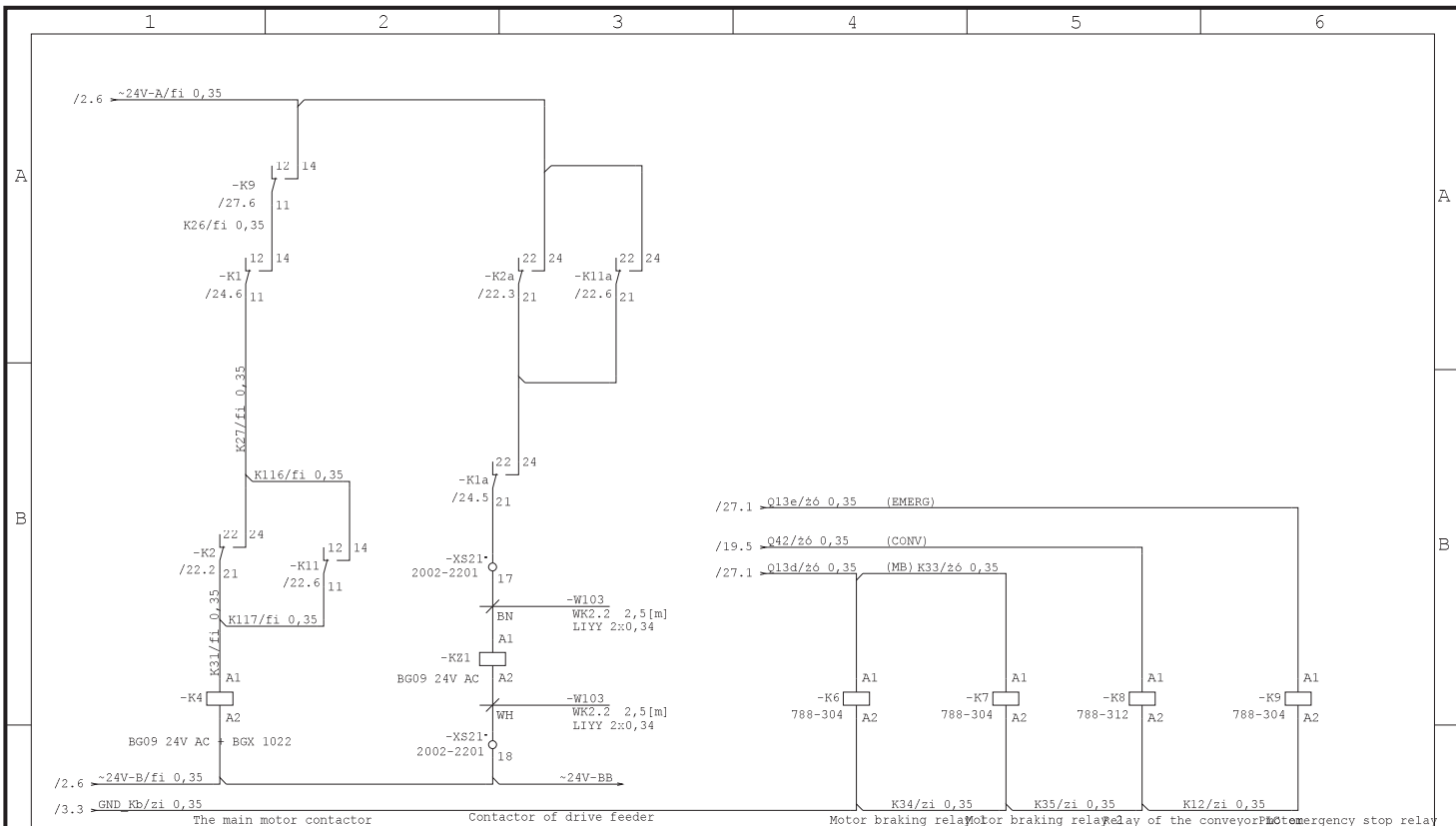
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|-------------|----------|-----------------------|----------|--------------|-------|-------------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Operator panel switches | Strona: | 24 |
| Projektant: | P.Figlak | | | | | | z: | 36 |
| Sprawdził: | | | | | | | | |



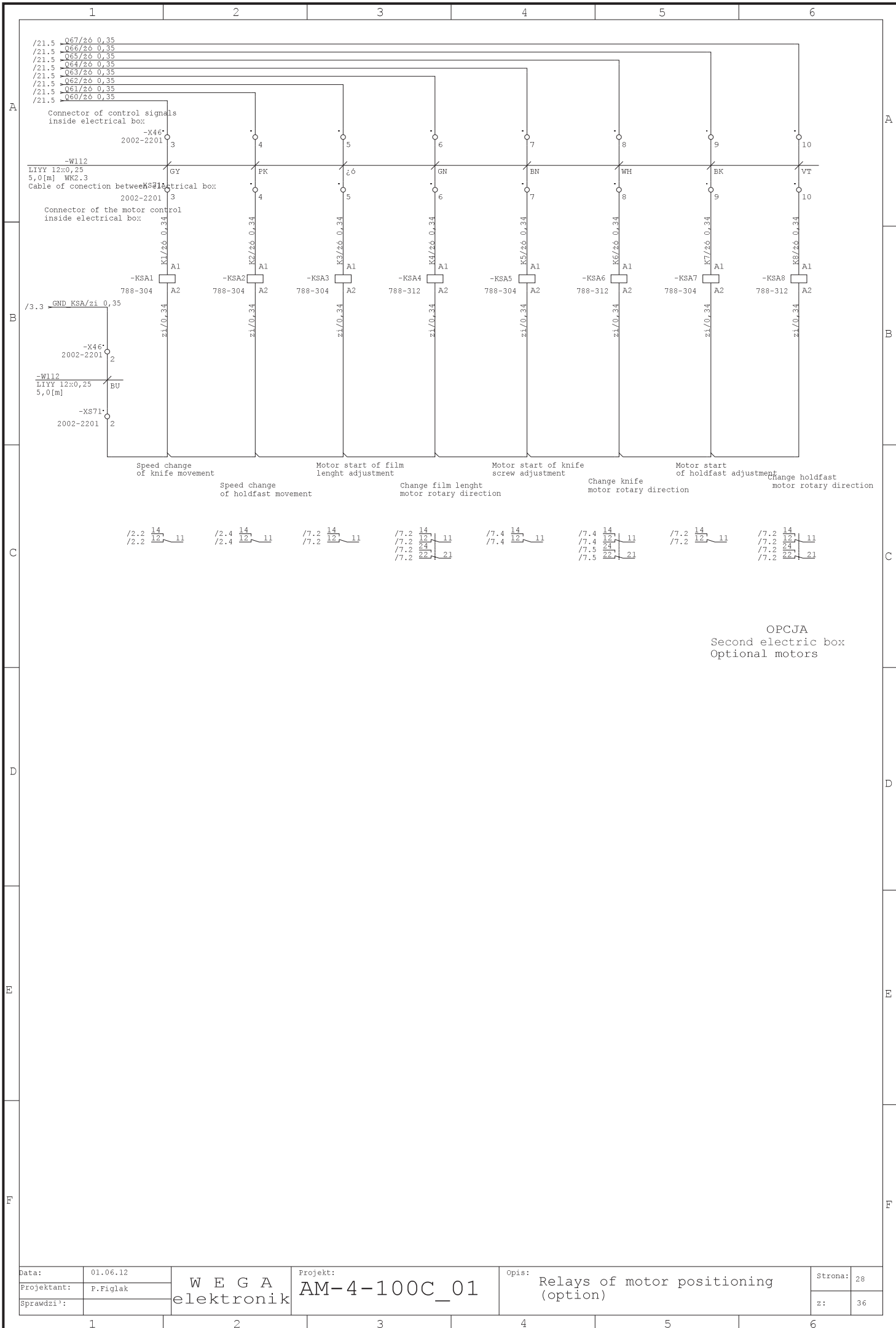
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| Projektant: | P.Figlak | | Sprawdził: | | | | z: | 36 |



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|-------------|----------|-----------------------|----------|--------------|-------|-------------------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Power module (output signals) | Strona: | 26 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |



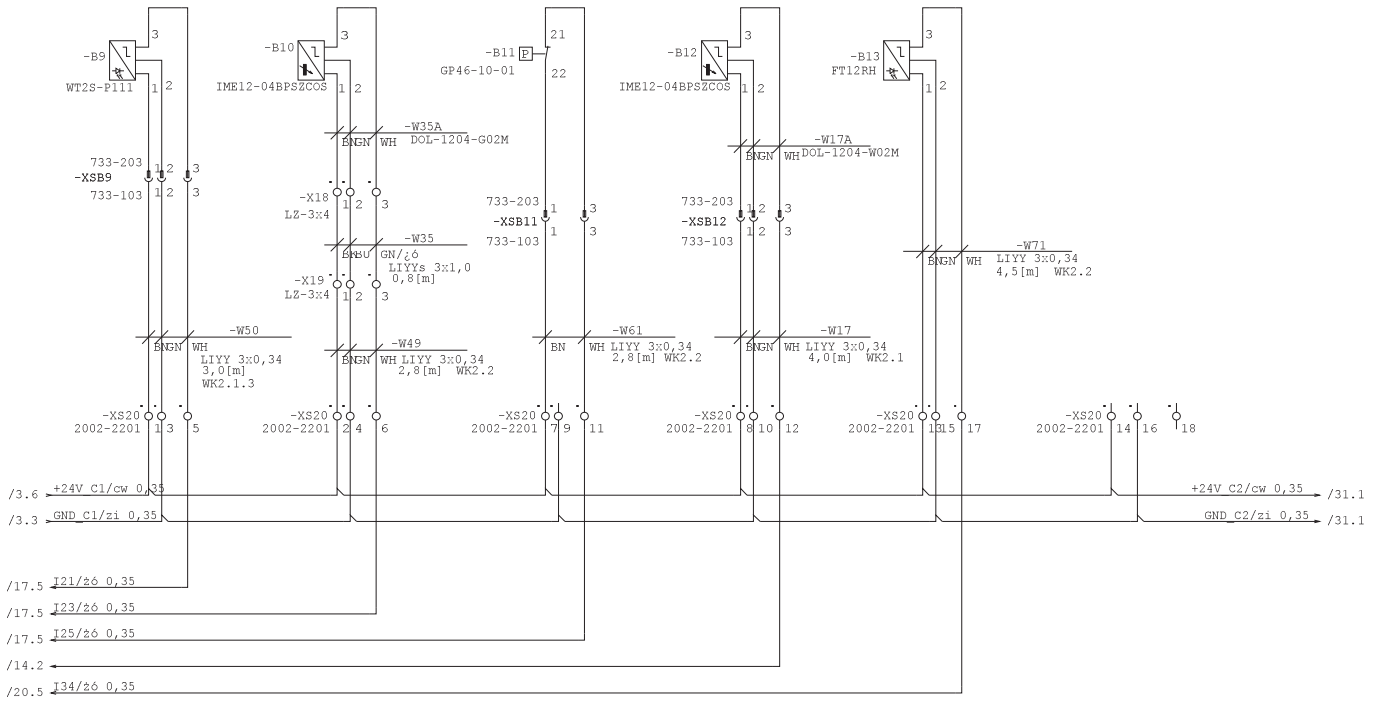
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| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Control relays | Strona: | 27 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |



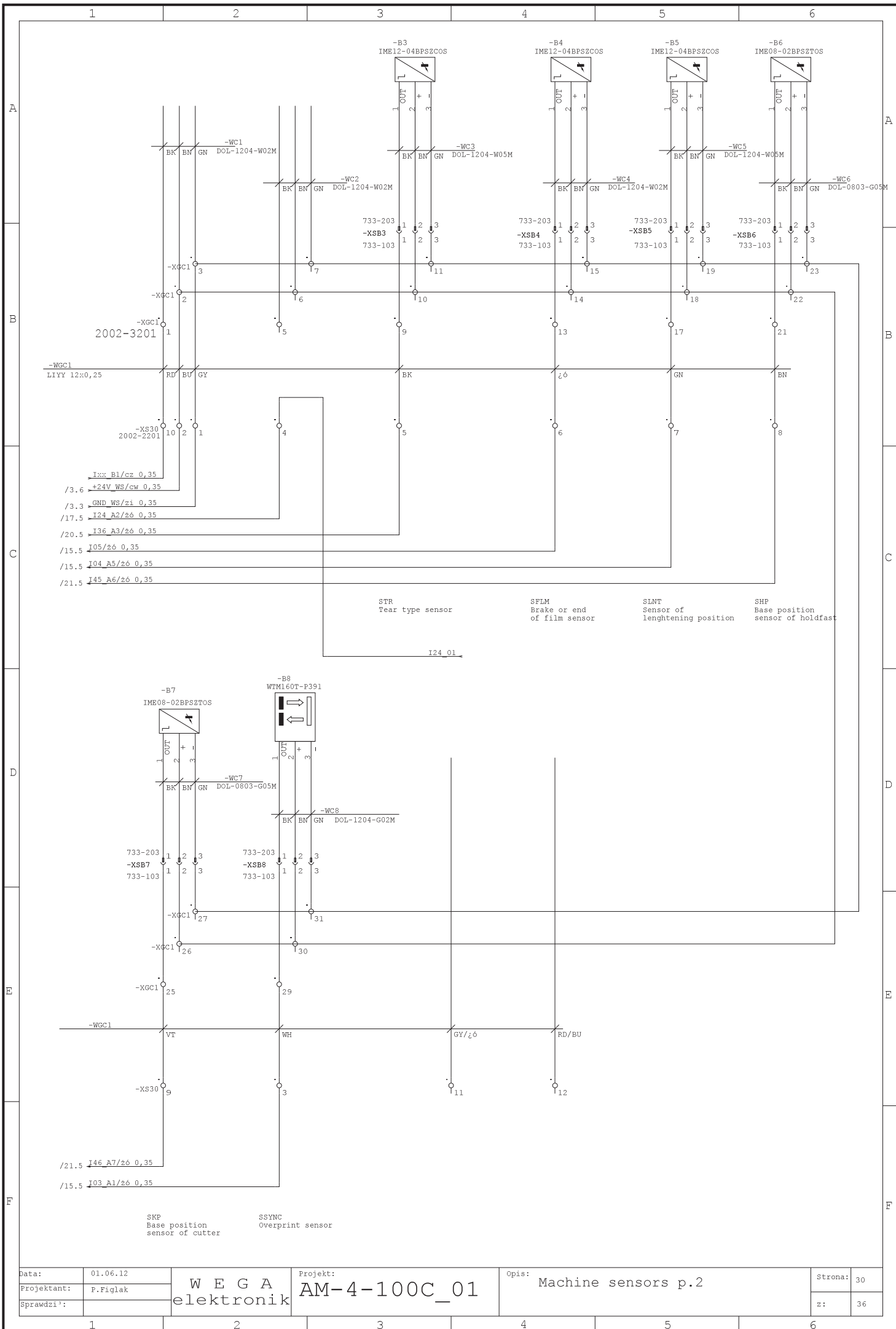
OPCJA
Second electric box
Optional motors

| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|---|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Relays of motor positioning (option) | Strona: | 28 |
| Projektant: | P.Figlak | | | | | | z: | 36 |
| Sprawdził: | | | | | | | | |

Base connection list



SBOX SOVL SPRS SCNO/SBOX2
 Box detecting sensor Mechanical overload sensor Manometer with pressure sensor Sensor of overflow belt conveyor



| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|---------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Machine sensors p.2 | Strona: | 30 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |

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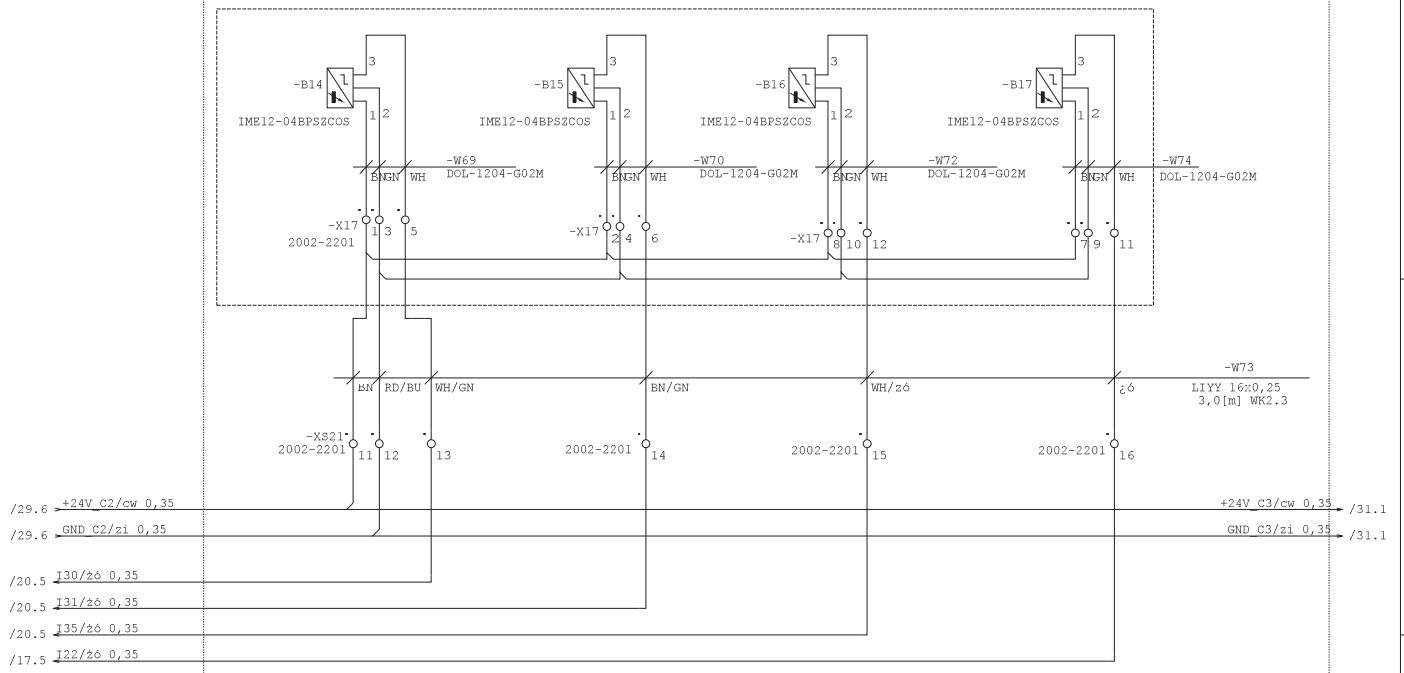
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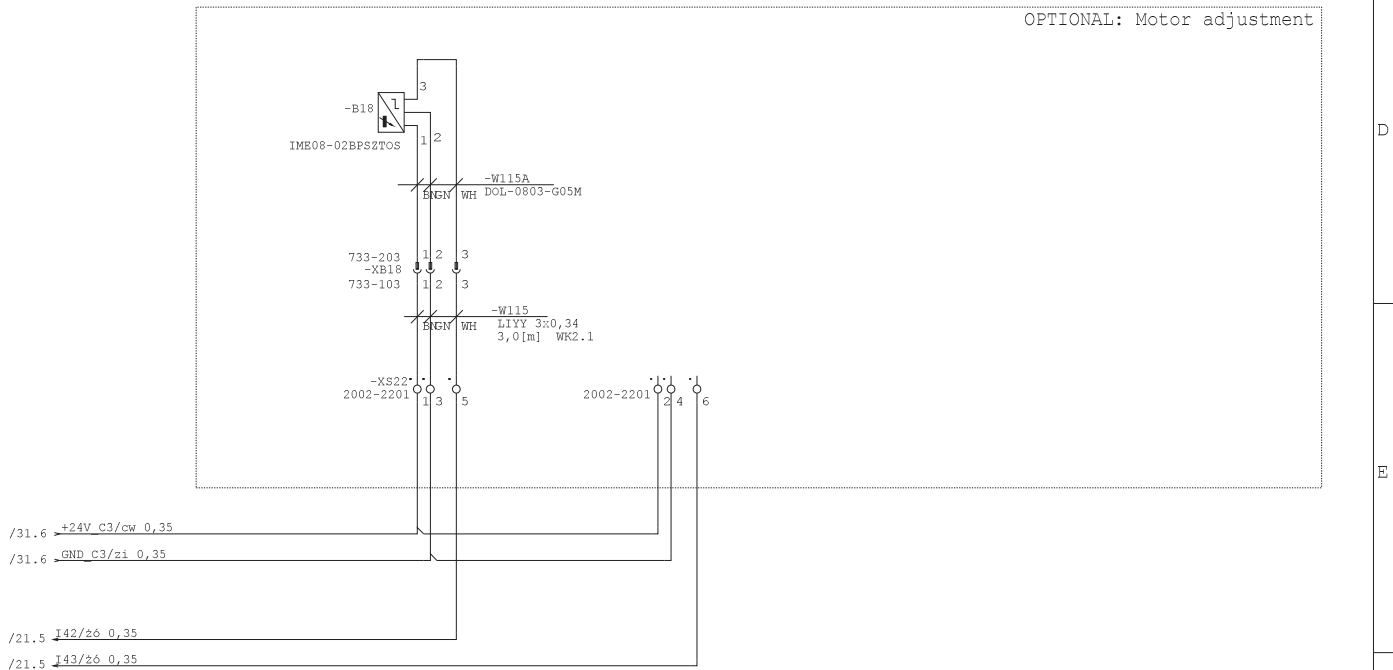
F

OPTIONAL: Drive feeder



DRB Initial position of the driver DRF Final position of the drive DEP Drive feeder stop position SDFOVL Driver overload

OPTIONAL: Motor adjustment



Base position of
film lenght adjustment

| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|---------------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Machine sensors p.3 | Strona: | 31 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |

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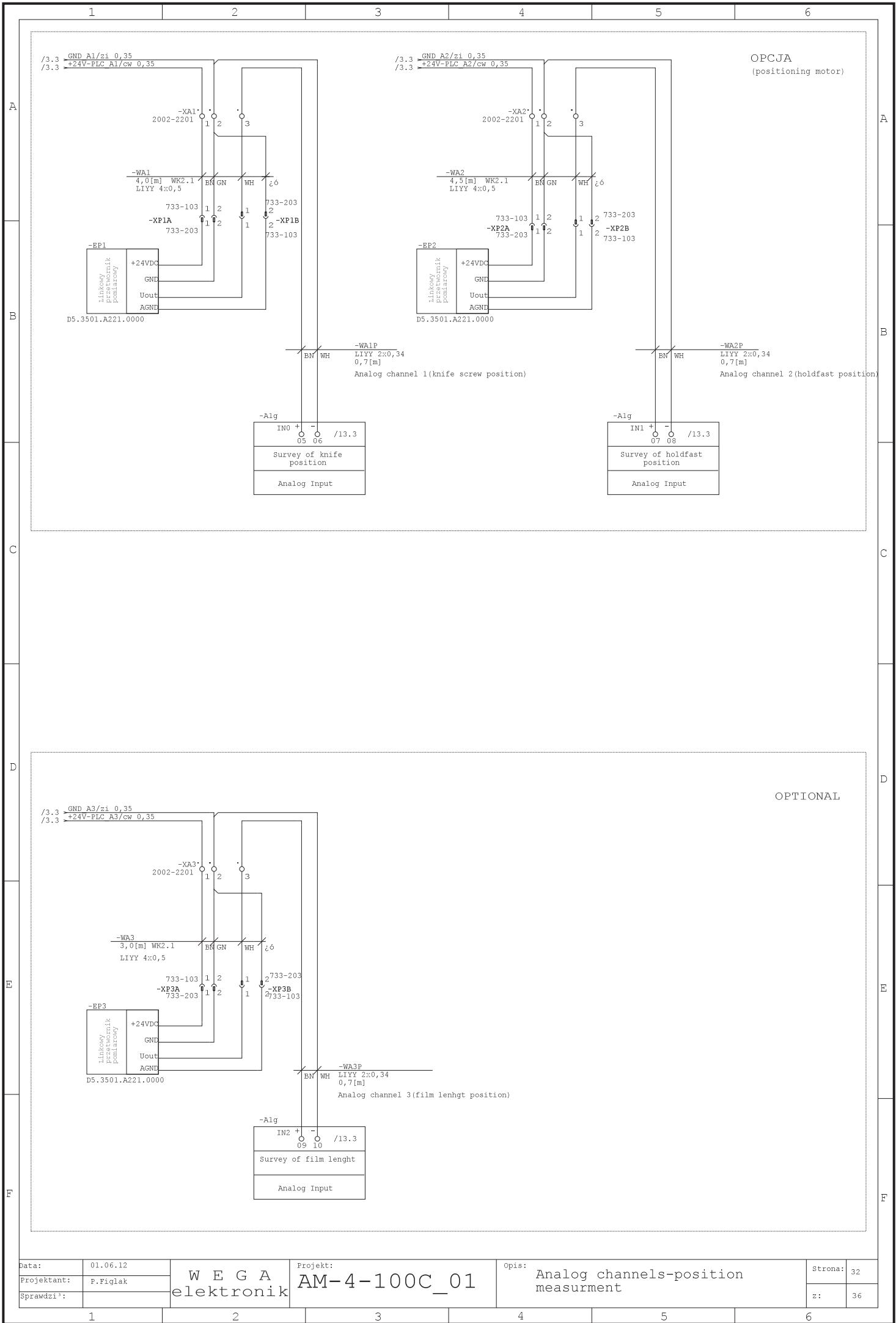
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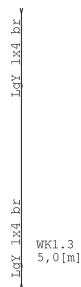
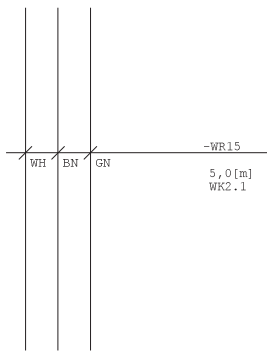
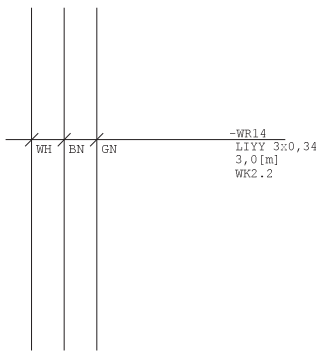
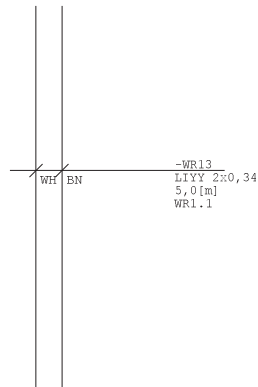
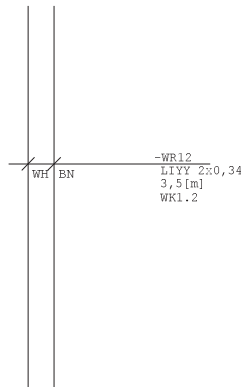
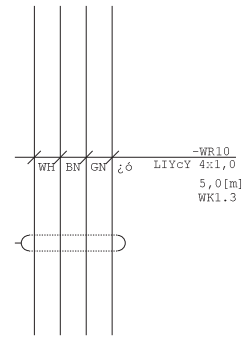
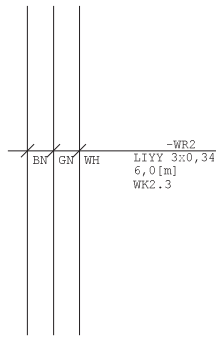
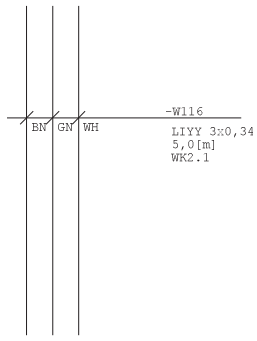


OPCJA
(positioning motor)

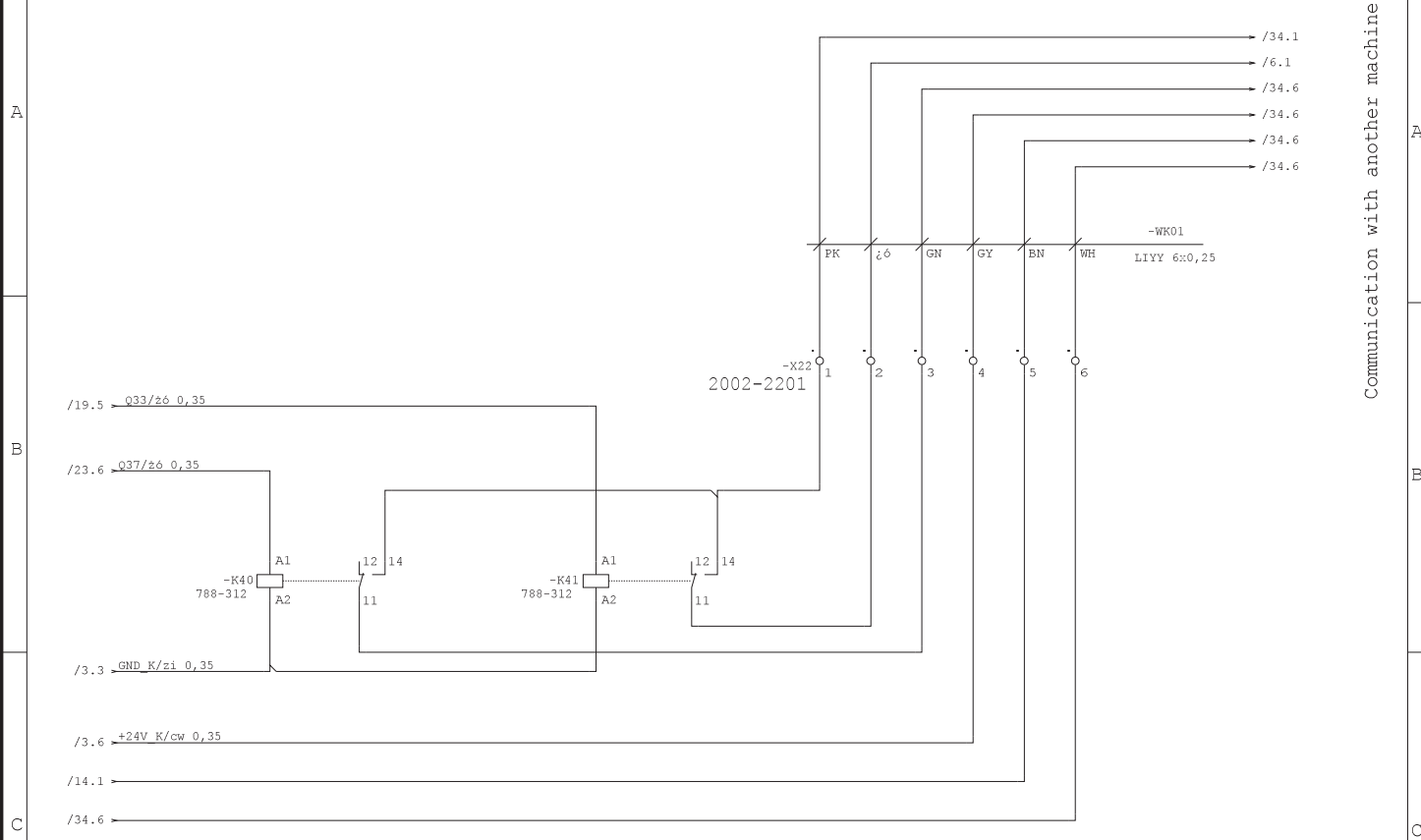
OPTIONAL

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|-------------|----------|-----------------------|----------|--------------|-------|--|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Analogue channels-position measurement | Strona: | 32 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |

Reserve cables



| | | | | | | | | |
|-------------|----------|-----------------------|----------|--------------|-------|----------------|---------|----|
| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Reserve cables | Strona: | 33 |
| Projektant: | P.Figlak | | z: | 36 | | | | |
| Sprawdził: | | | | | | | | |

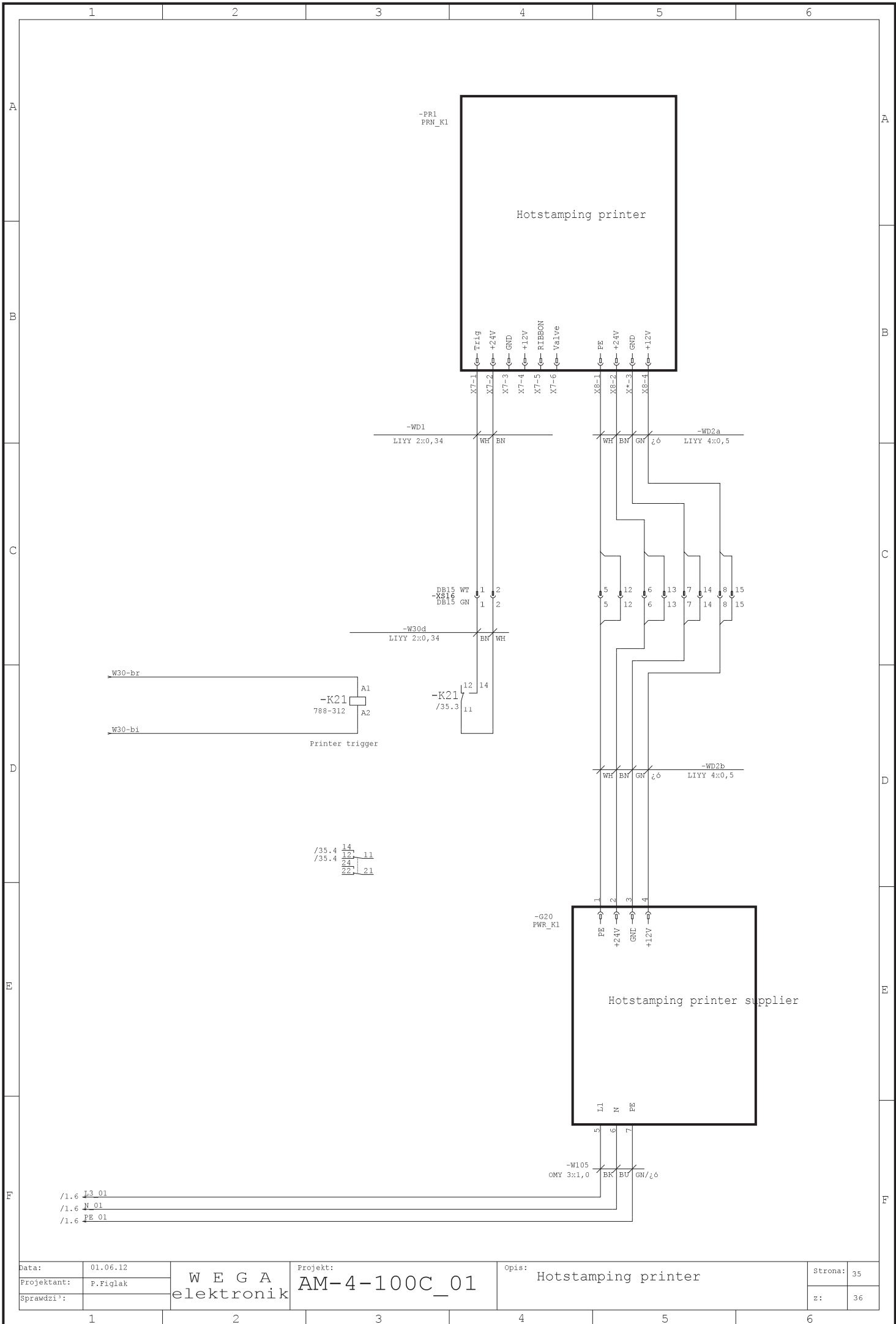


Communication with another machine

Machine readiness signalling Conveyor overflow signalling



D E F

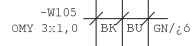
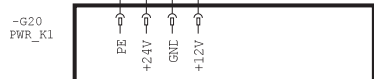
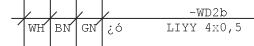
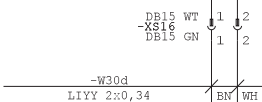
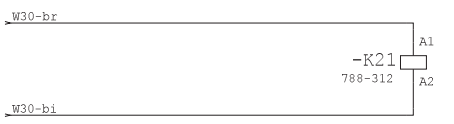


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| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Hotstamping printer | Strona: | 35 |
| Projektant: | P.Figlak | | | | | | z: | 36 |
| Sprawdził: | | | | | | | | |

/1.6 L3_01
/1.6 N_01
/1.6 PE_01

/35.4 14
/35.4 12 11
23
22 21

Printer trigger



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| Data: | 01.06.12 | W E G A elektronik | Projekt: | AM-4-100C_01 | Opis: | Strona: | 36 | |
| Projektant: | P.Figlak | | | | | | z: | 36 |
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| 1 | 2 | 3 | 4 | 5 | 6 |
| Plan SPS: -A1a | | | | | |
| A | B | C | D | E | F |
| Adres | Tekst symbolu | Comment | Ark./Połe | | |
| I0.0 | EA | EA Encoder A chan. | 15.1 | | |
| I0.1 | EB | EB Encoder B chan. | 15.2 | | |
| I0.2 | EZ | EZ Encoder Z chan. | 15.2 | | |
| I0.3 | SSYNC | SPRINT Overprint sensor | 15.3 | | |
| I0.4 | SLNT | SLNT Sensor lenth.1 | 15.4 | | |
| I0.5 | | SFLM Rupture/end of film | 15.4 | | |
| I0.6 | | PEW Forward button | 15.5 | | |
| I0.7 | | PRV Reverse button | 15.6 | | |
| I1.0 | | PSTOP Stop button | 15.1 | | |
| I1.1 | | PEST Emergency stop button | 15.2 | | |
| I1.2 | | SGRD Safety switch of guards | 15.2 | | |
| I1.3 | | SERV Work/Service switch | 15.3 | | |
| I1.4 | | PRST Single cycle/RESET button | 17.2 | | |
| I1.5 | | I1_RUN Run of the main drive | 17.3 | | |
| I1.6 | | PSTART Start button | 17.4 | | |
| I1.7 | | PCUT1 Cut. main cyl. button | 17.4 | | |
| I2.0 | | PCUT2 Cut.aux. cyl. button | 17.1 | | |
| I2.1 | | SBOX Box sensor | 17.2 | | |
| I2.2 | SDFOVL | SDFOVL Driver overload | 17.2 | | |
| I2.3 | | SOVL Overload sensor | 17.3 | | |
| I2.4 | | FWOVL/PRE Wrapping unit overl./Printer error | 17.4 | | |
| I2.5 | | SPRS Pressure sensor | 17.4 | | |
| I2.6 | | I1_AL Main drive alarm | 17.5 | | |
| I2.7 | | I2_AL Conveyor drv. alarm | 17.6 | | |
| Q0.0 | | Holding of table bearing | 15.1 | | |
| Q0.1 | | Turning off underpressure | 15.2 | | |
| Q0.2 | | TAN0 Analog channel bit 0 | 15.2 | | |
| Q0.3 | | TAN1 Analog channel bit 1 | 15.3 | | |
| Q0.4 | | CT Film gripper | 15.4 | | |
| Q0.5 | | HT Side heaters drive | 15.4 | | |
| Q0.6 | | FB Film holding | 15.5 | | |
| Q0.7 | | CDRV/EP/RP Pneum.feeder/Movable floor | 15.6 | | |
| Q1.0 | | I1_FW Forward main drive | 17.1 | | |
| A | B | C | D | E | F |
| Date: | 06.01.12 | Project: | W E G A | AM-4-100C 01 | Description: |
| Designer: | P.Figlak | Inspected by: | elektronik | 1 | Page: 1 |
| | | | | | from: 8 |
| 1 | 2 | 3 | 4 | 5 | 6 |

Plan SPS: -A1a

| Adres | Tekst symbolu | Comment | Ark./Pole |
|-------|----------------------------------|---------|-----------|
| Q1.1 | I1_RV Reverse main drive | | 17.2 |
| Q1.2 | I1_JG Main drv. jogging | | 17.2 |
| Q1.3 | BDRV Drives blocking | | 17.3 |
| Q1.4 | I1_SP2 2nd speed of main drv. | | 17.4 |
| Q1.5 | CUT1 Main cylind. of cut. | | 17.4 |
| Q1.6 | CUT2 The aux. cyl. of cut. | | 17.5 |
| Q1.7 | FORS Forc. of electromag. supply | | 17.6 |
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| Date: | 06.01.12 | Project: | AM-4-100C 01 | Description: | Page: | 2 |
| Designer: | P.Figlak | | | | from: | 8 |
| Inspected by: | | | | | | |

A 1 2 3 4 5 6

A B C D E F

1 2 3 4 5 6

1 2 3 4 5 6

A B C D E F

Plan SPS: -A1b

| Adres | Tekst symbolu | Comment | Ark./Pole |
|-------|------------------------------------|---------|-----------|
| Q3.0 | MH/PS Fron.heat.push./Prod.holder | | 18.1 |
| Q3.1 | MTP2_UP Conv.driv. speed up | | 18.2 |
| Q3.2 | MTP2_DN Conv.driv. speed down | | 18.2 |
| Q3.3 | DP/PT Prod.pres./Conv.overflow | | 18.3 |
| Q3.4 | PRINT/PP Printer/Product support | | 18.4 |
| Q3.5 | CUTBL Cutter blocking | | 18.4 |
| Q3.6 | TEAR Tear tape cutter | | 18.5 |
| Q3.7 | GREEN Green lamp | | 18.6 |
| Q4.0 | YELLOW Yellow lamp | | 18.1 |
| Q4.1 | RED Red lamp | | 18.2 |
| Q4.2 | CONV conveyor | | 18.2 |
| Q4.3 | BLOW Blowing on to envelope | | 18.3 |
| Q4.4 | MTP1_UP Main driv. speed up | | 18.4 |
| Q4.5 | MTP1_DN Main driv. speed down | | 18.4 |
| Q4.6 | SOUND Sound signalling | | 18.5 |
| Q4.7 | WJ/EPRES Tongue blow-out/Mov.guide | | 18.6 |
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| Date: | 06.01.12 | Project: | AM-4-100C 01 |
| Designer: | P.Figlak | Description: | |
| Inspected by: | | | |

Page: 3
from: 8

Plan SPS: -A1c

| Adres | Tekst symbolu | Comment | Ark./Połe |
|-------|---|---------|-----------|
| Q5.0 | LNT1 Film length. 1 | | 19.1 |
| Q5.1 | LNT2 Film length. 2 | | 19.2 |
| Q5.2 | I3_FW Forward Feeder | | 19.2 |
| Q5.3 | I3_RV Backward Feeder | | 19.3 |
| Q5.4 | I3_JG Jog Feeder | | 19.4 |
| Q5.5 | MTP3_Up Velocity of drv.feeder pulling up | | 19.4 |
| Q5.6 | MTP3_DN Velocity of drv.feeder pulling down | | 19.5 |
| Q5.7 | SYNC Stroke cor. | | 19.6 |
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Plan SPS: -A1e

| Adres | Tekst symbolu | Comment | Ark./Poje |
|-------|-------------------------------|---------|-----------|
| Q6.0 | CHSP1 Speed ch. of drv. 1,2 | | 20.1 |
| Q6.1 | CHSP1 Speed ch. of drv. 3,4 | | 20.2 |
| Q6.2 | Drive motor of film lenght | | 20.2 |
| Q6.3 | Drive motor of film lenght | | 20.3 |
| Q6.4 | Knife drive - pulling up | | 20.4 |
| Q6.5 | Knife drive - pulling down | | 20.4 |
| Q6.6 | Holdfast drive - pulling up | | 20.5 |
| Q6.7 | Holdfast drive - pulling down | | 20.6 |
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| Date: | 06.01.12 | Project: W E G A elektronik | AM-4-100C 01 | Description: | Page: 6 |
| Designer: | P.Figlak | | | | from: 8 |
| Inspected by: | | | | | |

Plan SPS: -A1f

| Adres | Tekst symbolu | Comment | Ark./Poie |
|-------|------------------------------------|---------|-----------|
| I4.0 | Reserve | | 20.1 |
| I4.1 | Reserve | | 20.2 |
| I4.2 | SFILM Pólzenie bazowe reg.dl.folii | | 20.2 |
| I4.3 | Reserve | | 20.3 |
| I4.4 | Reserve | | 20.4 |
| I4.5 | SFHPOS Holdfast base position | | 20.4 |
| I4.6 | SKPOS Knife base position | | 20.5 |
| I4.7 | Reserve | | 20.6 |
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| Date: 06.01.12 | Project: W E G A AM-4-100C 01 | Description: | Page: 7 |
| Designer: P.Figlak | elektronik | | from: 8 |
| Inspected by: | | | |

Plan SPS: -A1g

| Adres | Tekst symbolu | Comment | Ark./Pole |
|-------|-----------------------------|---------|-----------|
| IN0 | Survey of knife position | | 31.3 |
| IN1 | Survey of holdfast position | | 31.5 |
| IN2 | Survey of film lenght | | 31.3 |
| IN3 | | | |
| IN4 | | | |
| IN5 | | | |
| IN6 | | | |
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| Date: | 06.01.12 | Project: | Description: | Page: 8 |
| Designer: | P.Figlak | W E G A | AM-4-100C 01 | from: 8 |
| Inspected by: | | elektronik | | |

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| Bill of material: AM-4-100C_01 | | | | | | | | | | | | | | | | | |
| A | No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function | A | | | | | | | | |
| | 1 | -A1a | FC4A-D40S3 | 1 | 4713 | Idec | Programmable controller FC4A-D40S3 IDEC [4713] | PLC controller | | | | | | | | | |
| | 2 | -A1c | FC4A-T08S1 | 1 | 6650 | Idec | Output module FC4A-T08S1 IDEC [6650] | Digital output module of the controller | | | | | | | | | |
| | 3 | -A1d | FC4A-N08B1 | 1 | 6649 | Idec | Input module FC4A-N08B1 IDEC [6649] | Digital inputs module of the PLC | | | | | | | | | |
| | 4 | -A1b | FC4A-T16S3 | 1 | 4714 | Idec | Output module FC4A-T16S3 IDEC [4714] | Digital output module of the controller | | | | | | | | | |
| | 5 | -A1g | FC4A-J8C1 | 1 | 7980 | IDEC | Analog input module 8xAI 0-10V FC4A-J8C1 | Module of the analog lines 0-10V | | | | | | | | | |
| | 6 | -A1f | FC4A-N08B1 | 1 | 6649 | Idec | Input module FC4A-N08B1 IDEC [6649] | Digital input module | | | | | | | | | |
| | 7 | -A1e | FC4A-T08S1 | 1 | 6650 | Idec | Output module FC4A-T08S1 IDEC [6650] | Digital output module | | | | | | | | | |
| B | 8 | -A3 | HG1F | 1 | 8586 | Idec | Touch panel HG1F-SB22BF-W [8586] | Touch panel of the main control desk | | | | | | | | | |
| | 9 | -B3 | IME12-04BPSZCOS | 1 | 7666 | SICK | Inductive sensor SICK M12, IME12-04BPSZCOS [7666] | Tear type sensor | | | | | | | | | |
| | 10 | -B4 | IME12-04BPSZCOS | 1 | 7666 | SICK | Inductive sensor SICK M12, IME12-04BPSZCOS [7666] | Breaker or end of film sensor | | | | | | | | | |
| | 11 | -B5 | IME12-04BPSZCOS | 1 | 7666 | SICK | Inductive sensor SICK M12, IME12-04BPSZCOS [7666] | Sensor of lengthening position | | | | | | | | | |
| | 12 | -B6 | IME08-02BPSZTOS | 1 | 7665 | SICK | Inductive sensor SICK M8, IME08-02BPSZTOS [7665] | Base position sensor of holdfast | | | | | | | | | |
| | 13 | -B7 | IME08-02BPSZTOS | 1 | 7665 | SICK | Inductive sensor SICK M8, IME08-02BPSZTOS [7665] | Base position sensor of cutter | | | | | | | | | |
| | 14 | -B8 | WTM160T-P391 | 1 | 8824 | SICK | Mark sensor SICK WTM160T-P391 [8824] | Overprint sensor | | | | | | | | | |
| | 15 | -B9 | WT29-P111 | 1 | 7653 | SICK | Reflective sensor SICK WT29-P111 [7653] | Box detecting sensor | | | | | | | | | |
| C | 16 | -B10 | IME12-04BPSZCOS | 1 | 7666 | SICK | Inductive sensor SICK M12, IME12-04BPSZCOS [7666] | Mechanical overload sensor | | | | | | | | | |
| | 17 | -B11 | GP46-10-01 | 1 | 6052 | SMC | Manometer G46-10-01 [6052] | Manometer with pressure sensor | | | | | | | | | |
| | 18 | -B12 | IME12-04BPSZCOS | 1 | 7666 | SICK | Inductive sensor SICK M12, IME12-04BPSZCOS [7666] | Reserve | | | | | | | | | |
| | 19 | -B13 | FT12RH | 1 | 5014 | Sensopart | Reflective sensor FT12RH-PSL4 | Sensor of overflow belt conveyor | | | | | | | | | |
| | 20 | -B14 | IME12-04BPSZCOS | 1 | 7666 | SICK | Inductive sensor SICK M12, IME12-04BPSZCOS [7666] | Initial position of the driver | | | | | | | | | |
| | 21 | -B15 | IME12-04BPSZCOS | 1 | 7666 | SICK | Inductive sensor SICK M12, IME12-04BPSZCOS [7666] | Final position of the driver | | | | | | | | | |
| | 22 | -B16 | IME12-04BPSZCOS | 1 | 7666 | SICK | Inductive sensor SICK M12, IME12-04BPSZCOS [7666] | Drive feeder stop position | | | | | | | | | |
| D | 23 | -B17 | IME12-04BPSZCOS | 1 | 7666 | SICK | Inductive sensor SICK M12, IME12-04BPSZCOS [7666] | Driver overload | | | | | | | | | |
| | 24 | -B18 | IME08-02BPSZTOS | 1 | 7665 | SICK | Inductive sensor SICK M8, IME08-02BPSZTOS [7665] | Base position of film length adjustment | | | | | | | | | |
| | 25 | -BS1 | 281-916-511 | 1 | 6050 | Wago | Fuse terminal 281-916-511 [6050] | Fuse - reserve | | | | | | | | | |
| | 26 | -BS2 | 281-916-511 | 1 | 6050 | Wago | Fuse terminal 281-916-511 [6050] | Drive fuse of knife screw | | | | | | | | | |
| | 27 | -BS3 | 281-916-511 | 1 | 6050 | Wago | Fuse terminal 281-916-511 [6050] | Drive fuse of holdfast screw | | | | | | | | | |
| | 28 | -E1 | DKS40-E5K01000 | 1 | 10132 | Sick | Optical encoder DKS40-E5K01000 Sick [10132] | Optical encoder of the main propeller shaft | | | | | | | | | |
| | 29 | -EP1 | D5.3501.A221.0000 | 1 | 7490 | Kubler | Linear Measurement Converter 0-10V [7490] | Linear Measurement Converter of knife screw pos | | | | | | | | | |
| | 30 | -EP2 | D5.3501.A221.0000 | 1 | 7490 | Kubler | Linear Measurement Converter 0-10V [7490] | Linear Measurement Converter of holdfast positi | | | | | | | | | |
| E | 31 | -EP3 | D5.3501.A221.0000 | 1 | 7490 | Kubler | Linear Measurement Converter 0-10V [7490] | Linear Measurement Converter of film length | | | | | | | | | |
| | 32 | -F1 | S303C 20A | 1 | 4677 | Legrand | Switch fuse S-303C 20A [4677] | Main protection | | | | | | | | | |
| | 33 | -F2 | S301B 10A | 1 | 4546 | Legrand | Switch fuse S-301B 10A [4546] | Protection of DC supply | | | | | | | | | |
| | 34 | -F3 | S301B 10A | 1 | 4546 | Legrand | Switch fuse S-301B 10A [4546] | Protection of DC supply | | | | | | | | | |
| | 35 | -F4 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the main drive | | | | | | | | | |
| | 36 | -F5 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the main drive | | | | | | | | | |
| | 37 | -F6 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the conveyor drive | | | | | | | | | |
| F | 38 | -F6 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the conveyor drive | | | | | | | | | |
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| Designer: P.Figlak | | | | W E G A AM-4-100C 01 | | | | | | | | from: 11 | | | | | |
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| Bill of material: AM-4-100C_01 | | | | | | | | | | |
| A | No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function | A | |
| | 39 | -F7 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the conveyor drive | | |
| | 40 | -F7 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the conveyor drive | | |
| | 41 | -F11 | Fuse-B2 | 1 | 4553 | WEGA | Fuses board Fuse-B2 [4553] | The plate with fuses | | |
| | 42 | -F13 | 281-916-511 | 1 | 6050 | Wago | Fuse terminal 281-916-511 [6050] | Protection of the temperature controllers | | |
| | 43 | -F14 | 281-916-511 | 1 | 6050 | Wago | Fuse terminal 281-916-511 [6050] | Protection of the temperature controllers | | |
| | 44 | -F16 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the driver drive | | |
| | 45 | -F17 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the driver drive | | |
| | 46 | -F18 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the driver drive | | |
| | 47 | -F19 | S301C 10A | 1 | 4940 | Legrand | Switch fuse S-301C 10A [4940] | Protection of the driver drive | | |
| | 48 | -F20 | CD241J | 1 | 8583 | HAGER | Differential circuit breaker HAGER CD241J In=40A | Differential circuit breaker | | |
| | 49 | -FG | S301B 10A | 1 | 4546 | Legrand | Switch fuse S-301B 10A [4546] | Service socket fuse protection | | |
| | 50 | -FSSR1 | 10,3x38 Z-SHL/3N | 1 | 7931 | Moeller | Fuse 3x32A 10,3x38 Z-SHL/3N [7931] | Semiconductor relay output protection | | |
| | 51 | -FZ1 | S301B 10A | 1 | 4546 | Legrand | Switch fuse S-301B 10A [4546] | Protection of DC supply | | |
| | 52 | -FZ2 | S301B 10A | 1 | 4546 | Legrand | Switch fuse S-301B 10A [4546] | Protection of DC supply | | |
| | 53 | -G1a | G350W/230VAC | 1 | | WEGA | Heating plate 235x118x22 350W/230VAC [8470] | Heating element of left heater | | |
| | 54 | -G2a | G350W/230VAC | 1 | | WEGA | Heating plate 235x118x22 350W/230VAC [8470] | Heating element of right heater | | |
| | 55 | -G3b | G 200W/230VAC | 1 | 8491 | WEGA | Heating element 230VAC/200W 180x42mm [8491] | Heating element of frontal heater | | |
| | 56 | -G3a | G 200W/230VAC | 1 | 8491 | WEGA | Heating element 230VAC/200W 180x42mm [8491] | Heating element of frontal heater | | |
| | 57 | -G10 | VR-2 | 1 | 4655 | WEGA | Voltage regulator 2x30V/3A [4655] | DC supplier 2x30V | | |
| | 58 | -G11 | KBU6K | 1 | 830 | Taiwan | Bridge rectifier KBU6K 800V/6A [830] | Rectifier of the motor braking | | |
| | 59 | -G12 | PSSR-SD24 | 1 | 4711 | Idec | Voltage regulator PD5R-SD24 (2,5A) [4711] | 24V supplier of the executory elements | | |
| | 60 | -G13 | PSSR-SD24 | 1 | 4711 | Idec | Voltage regulator PD5R-SD24 (2,5A) [4711] | 24V supplier of the PLC controller | | |
| | 61 | -G20 | PWR_K1 | 1 | 11126 | Kert | Hotstamping printer K1 supplier [11126] | Hotstamping printer supplier | | |
| | 62 | -GS | GS | 1 | 7291 | HAGER | Service socket 230VAC for TS-35 mounting [7291] | Service socket 230VAC | | |
| | 63 | -H4 | LU7-E-RAG | 1 | 4905 | Patlite | Plant annunciator LU7-E-RAG [4905] | Plant annunciator | | |
| | 64 | -I1 | SKBD200110 | 1 | 4633 | Control Techniqu | Frequency inverter SKBD200110 1,1kW [4633] | Drive of the main motor | | |
| | 65 | -I2 | SKBD200110 | 1 | 4633 | Control Techniqu | Frequency inverter SKBD200110 1,1kW [4633] | Drive of the conveyor motor (OPTION) | | |
| | 66 | -I3 | SKBD200110 | 1 | 4633 | Control Techniqu | Frequency inverter SKBD200110 1,1kW [4633] | Drive of the driver motor (OPTION) | | |
| | 67 | -I4 | SKA1200055 | 1 | 9566 | Control Techniqu | Frequency inverter SKA1200055 0,55kW [9566] | Napęd silnika grzałek taśmowych (OFCJA) | | |
| | 68 | -IE1 | SM-I/O Lite | 1 | 6402 | Control Techniqu | I/O module SM-I/O Lite [6402] | Expansion module of the main drive | | |
| | 69 | -IE2 | SM-I/O Lite | 1 | 6402 | Control Techniqu | I/O module SM-I/O Lite [6402] | Expansion module of the driver drive | | |
| | 70 | -IO1 | IOINT-26 | 1 | 4593 | WEGA | Transient module FLAT26/26x0,35 [4593] | Transient module of the 1st PLC channel | | |
| | 71 | -IO2 | IOINT-26 | 1 | 4593 | WEGA | Transient module FLAT26/26x0,35 [4593] | Transient module of the 2nd PLC channel | | |
| | 72 | -IO3 | IOINT-20 | 1 | 4717 | WEGA | Transient module FLAT20/20x0,35 [4717] | Transient module of PLC's outputs | | |
| | 73 | -IO4 | IOINT-20 | 1 | 4717 | WEGA | Transient module FLAT20/20x0,35 [4717] | Transition module PLC | | |
| | 74 | -IO5 | IOINT-20 | 1 | 4717 | WEGA | Transient module FLAT20/20x0,35 [4717] | Transition module PLC | | |
| | 75 | -K1 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Emergency stop relay | | |
| | 76 | -K1a | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Emergency stop relay | | |
| B | | | | | | | | | | |
| C | | | | | | | | | | |
| D | | | | | | | | | | |
| E | | | | | | | | | | |
| F | | | | | | | | | | |
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| Bill of material: AM-4-100C_01 | | | | | | | | |
| A | No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function |
| | 77 | -K2a | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Relay of inverters blocking |
| | 78 | -K2 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Safety switches relay |
| | 79 | -K2b | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Relay of inverters velocity blocking |
| | 80 | -K3 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Buttons blocking relay |
| | 81 | -K4 | BG09 24V AC + BGX 1022 | 1 | 4673 | Lovato | Contacto 11BG09 24V AC 10A 4NO+2NC [4673] | The main motor contactor |
| | 82 | -K6 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Motor braking relay 1 |
| | 83 | -K7 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Motor braking relay 2 |
| B | 84 | -K8 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Relay of the conveyor motor |
| | 85 | -K9 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | PLC emergency stop relay |
| | 86 | -K11 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Relay of safety switches blocking |
| | 87 | -K11a | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Relay of safety switches blocking |
| | 88 | -K12 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Supplying relay of temp.controllers |
| | 89 | -K13 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Analog channel switch bit 0 |
| | 90 | -K14 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Analog channel switch bit 1 |
| C | 91 | -K15 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Safety relay |
| | 92 | -K21 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Printer trigger |
| | 93 | -K40 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Machine readiness signalling |
| | 94 | -K41 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Conveyor overflow signalling |
| | 95 | -KSA1 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Speed change of knife movement |
| | 96 | -KSA2 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Speed change of holdfast movement |
| | 97 | -KSA3 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Motor start of film lenght adjustment |
| D | 98 | -KSA4 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Change film lenght motor rotary direction |
| | 99 | -KSA5 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Motor start of knife screw adjustment |
| | 100 | -KSA6 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Change knife motor rotary direction |
| | 101 | -KSA7 | 788-304 | 1 | 6217 | Wago | Socket with relay 1p 24V DC 788-304 [6217] | Motor start of holdfast adjustment |
| | 102 | -KSA8 | 788-312 | 1 | 6218 | Wago | Socket with relay 2p 24V DC 788-312 [6218] | Change holdfast motor rotary direction |
| | 103 | -KZ1 | BG09 24V AC | 1 | 4346 | Lovato | Contacto 11BG09 24V AC 10A [4346] | Contacto of drive feeder |
| | 104 | -M1 | SKh90-4p | 1 | 4712 | Tamel | Motor SKh90-4S 1,1kW-3x230 4p [90S4] [4712] | Main driving motor |
| | 105 | -M2 | STKG63X | 1 | 4575 | Tamel | Motor STKG63X-4C2, 0,25kW, 220/380V 50Hz [7455] | Motor of the belt conveyor |
| E | 106 | -M3 | 200A XBT | 1 | 4945 | Sunon | Cooling fan SUNON AC 230VAC 120x120x38 [4945] | Cooling fan of the box |
| | 107 | -M4 | SH71-4B | 1 | 9565 | Tamel | Silnik Sh 71-4B, 0,37kW, 4P, 220/380V, 50Hz, 105/14 | Silnik napędu grzałek taśmowych |
| | 108 | -M5 | STKG63X | 1 | 4575 | Tamel | Motor STKG63X-4C2, 0,25kW, 220/380V 50Hz [7455] | Motor of the pneumatic driver |
| | 109 | -MS1 | 401.000.027 | 1 | 8055 | Polmozbyt | 24VDC Motor with motorgear | Motor of the film lenght adjustment 24VDC 75W |
| | 110 | -MS2 | 401.000.022 | 1 | 7330 | Polmozbyt | 24VDC Motor with motorgear 401.000.022 | Motor of the knife screw 24VDC 75W |
| | 111 | -MS3 | 401.000.022 | 1 | 7330 | Polmozbyt | 24VDC Motor with motorgear 401.000.022 | Motor of the holdfast 24VDC 75W |
| | 112 | -O1 | OMF-1 | 1 | 4645 | WEGA | Power output module 4x5A/70V [4645] | Electrovalve output module |
| | 113 | -O2 | OMF8-01 | 1 | 8342 | WEGA | Power output module 8x24VDC [8342] | Output module 8x24VDC |
| F | 114 | -O3 | OMF8-01 | 1 | 8342 | WEGA | Power output module 8x24VDC [8342] | Output module 8x24VDC |
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|-----|-------|----------------|-----|---------|--------------|--|---|
| 115 | -PR1 | PRN K1 | 1 | 8829 | KERT | Hot stamping printer K1 (Kert) [8829] | Hotstamping printer |
| 116 | -Q1 | 4G16-10-US25 | 1 | 833 | Apator | Power switch 4G-16-10-US25 [833] | Master switch |
| 117 | -RT1 | PT100-103b | 1 | 653 | ThermoPlus | Temp. sensor T-103b-0,35-3-B-Pt100-1-300C [6042] | Temp. sensor of the left heater |
| 118 | -RT2 | PT100-103b | 1 | 653 | ThermoPlus | Temp. sensor T-103b-0,35-3-B-Pt100-1-300C [6042] | Temp. sensor of the right heater |
| 119 | -RT3 | PT100-103b | 1 | 653 | ThermoPlus | Temp. sensor T-103b-0,35-3-B-Pt100-1-300C [6042] | Temp. sensor of the frontal heater |
| 120 | -S1 | LP2T B1163 1NO | 1 | 4661 | Lovato | Control button START 8 LP2T B1163 (Lovato) [4350] | START |
| 121 | -S2 | LP2T B103 1NO | 1 | 4669 | Lovato | Control button green LP2T B103 1NO [4669] | CYKL POJED. |
| 122 | -S3 | LP2T S321 1NO | 1 | 4860 | Lovato | Switch with key 8 LP2T S321 1NO [4860] | TRYB PRACY |
| 123 | -S4 | LP2T B103 1NO | 1 | 4669 | Lovato | Control button green LP2T B103 1NO [4669] | NÓZ |
| 124 | -S5 | LP2T B103 1NO | 1 | 4669 | Lovato | Control button green LP2T B103 1NO [4669] | NÓZ |
| 125 | -S6 | LP2T B1134 1NO | 1 | 4859 | Lovato | Control button STOP 8 LP2T B1134 1NO [4859] | STOP |
| 126 | -S7 | LP2T B1142 1NO | 1 | 4862 | Lovato | Control button with arrow 8 LP2T B1142 1NO [4862] | PRZÓD |
| 127 | -S8 | LP2T B1142 1NO | 1 | 4862 | Lovato | Control button with arrow 8 LP2T B1142 1NO [4862] | TYŁ |
| 128 | -S9 | LP2T B6344 1NC | 1 | 4672 | Lovato | Safety push button 8 LP2T B6344 1NC [4672] | STOP AWARYJNY |
| 129 | -S10 | HS5B-02NP | 1 | 4344 | Idec | Safety switch HS5B-02NP (Idec) [4344] | Safety switch of bottom guard |
| 130 | -S11 | HS5B-02NP | 1 | 4344 | Idec | Safety switch HS5B-02NP (Idec) [4344] | Safety switch of bottom guard |
| 131 | -S12 | HS5B-02NP | 1 | 4344 | Idec | Safety switch HS5B-02NP (Idec) [4344] | Safety switch of bottom guard |
| 132 | -S13 | HS5B-02NP | 1 | 4344 | Idec | Safety switch HS5B-02NP (Idec) [4344] | Safety switch of bottom guard |
| 133 | -S14 | HS5B-02NP | 1 | 4344 | Idec | Safety switch HS5B-02NP (Idec) [4344] | Safety switch of upper guard |
| 134 | -S15 | HS5B-02NP | 1 | 4344 | Idec | Safety switch HS5B-02NP (Idec) [4344] | Safety switch of upper guard |
| 135 | -S16 | HS5B-02NP | 1 | 4344 | Idec | Safety switch HS5B-02NP (Idec) [4344] | Safety switch of upper guard |
| 136 | -S17 | HS5B-02NP | 1 | 4344 | Idec | Safety switch HS5B-02NP (Idec) [4344] | Safety switch of upper guard |
| 137 | -S18 | LP2T B103 1NO | 1 | 4669 | Lovato | Control button green LP2T B103 1NO [4669] | Safety switch of reclining guard |
| 138 | -S19 | LP2T B103 1NO | 1 | 4669 | Lovato | Control button green LP2T B103 1NO [4669] | PRZÓD |
| 139 | -S20 | LP2T B1134 1NO | 1 | 4859 | Lovato | Control button STOP 8 LP2T B1134 1NO [4859] | TYŁ |
| 140 | -S21 | LP2T B6344 1NC | 1 | 4672 | Lovato | Safety push button 8 LP2T B6344 1NC [4672] | STOP AWARYJNY |
| 141 | -S22 | LP2T S120 1NO | 1 | 4921 | Lovato | Rotated switch 8 LP2T S120 1NO [4921] | Temperature controllers switch |
| 142 | -SSR1 | S0945460 | 1 | 7709 | Celduc | Solid relay Celduc S0945460 [7709] | Semiconductor relay of left heater |
| 143 | -SSR2 | S0945460 | 1 | 7709 | Celduc | Solid relay Celduc S0945460 [7709] | Semiconductor relay of right heater |
| 144 | -SSR3 | S0945460 | 1 | 7709 | Celduc | Solid relay Celduc S0945460 [7709] | Semiconductor relay of frontal heater |
| 145 | -T1 | TST 150/012 | 1 | 4357 | Indel | Toroidal transformer 2x24V 150VA(TST 150/012) [4357] | Transformer of 2x30V supplier |
| 146 | -T2 | TST 100/013 | 1 | 4353 | Indel | Toroidal transformer 1x24V 100VA(TST 100/013) [4353] | Transformer of motor braking |
| 147 | -TC1 | FY400-201000 | 1 | 7708 | TAIE | Digital Temperature PID Controller FY400-2010000 [| Temperature regulator |
| 148 | -TC2 | FY400-201000 | 1 | 7708 | TAIE | Digital Temperature PID Controller FY400-2010000 [| Temperature regulator |
| 149 | -TC3 | FY400-201000 | 1 | 7708 | TAIE | Digital Temperature PID Controller FY400-2010000 [| Temperature regulator |
| 150 | -TZ1 | TST 100/006 | 1 | 4355 | Indel | Toroidal transformer 2x14V 100VA(TST 100/006) [4355] | Transformer of power supply of positioning driv |
| 151 | -TZ2 | TST 100/006 | 1 | 4355 | Indel | Toroidal transformer 2x14V 100VA(TST 100/006) [4355] | Transformer of power supply of positioning driv |
| 152 | -V1 | WV02-5/2 | 1 | 12018 | Bosch | Electric valve WV02-5/2AS-024DC (0820038126) [1201] | Film gripper |

Date: 06.01.12

Designer: P.Figlak

Inspected by:

Project:

W E G A
elektronik

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Material list

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| No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function |
|-----|-------|---------------|-----|---------|----------------|---|---|
| 153 | -V2 | LS04-5/2-04 | 1 | 12305 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 [R422101308] | [1] Side heaters |
| 154 | -V3 | LS04-5/2-04 | 1 | 12305 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 [R422101308] | [1] Blowing system |
| 155 | -V4 | LS04-5/2-04 | 1 | 12305 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 [R422101308] | [1] Pneumatic pull.back/ Stack holder |
| 156 | -V5 | LS04-5/2-04 | 1 | 12305 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 [R422101308] | [1] Main cylinder of film cutter |
| 157 | -V6 | LS04-5/2-04 | 1 | 12305 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 [R422101308] | [1] Auxiliary cylind. of film cutter |
| 158 | -V9 | WV02-5/2 | 1 | 12018 | Bosch | Electric valve WV02-5/2AS-024DC [0820038126] | [1201] Cylinder of driver/Movable floor |
| 159 | -V11 | LS04-5/2-06 | 1 | 12306 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D6 [R422101309] | [1] Pneumat. tear tape cutter |
| 160 | -V12 | LS04-5/2-04 | 1 | 12305 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 [R422101308] | [1] Pneumat. film holding |
| 161 | -V17 | LS04-5/2-04 | 1 | 12305 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 [R422101308] | [1] Product cooling |
| 162 | -V18 | LS04-5/2-04 | 1 | 12305 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 [R422101308] | [1] Holding of table bearing |
| 163 | -V19 | LS04-5/2-06 | 1 | 12306 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D6 [R422101309] | [1] Film holding vacuum |
| 164 | -V20 | LS04-5/2-04 | 1 | 12305 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D4 [R422101308] | [1] Stroke corrector |
| 165 | -V21 | LS04-5/2-06 | 1 | 12306 | Bosch | Valve LS04-5/2SR-024DC-VTS-D-SW-D6 [R422101309] | [1] Tongue blow-out |
| 166 | -VD2 | 1N4004 | 1 | 4952 | Różni | Rectifying diode 400V/1A [4952] | |
| 167 | -VD6 | 1N4004 | 1 | 4952 | Różni | Rectifying diode 400V/1A [4952] | |
| 168 | -VD14 | 1N4004 | 1 | 4952 | Różni | Rectifying diode 400V/1A [4952] | |
| 169 | -W1 | Opd 5x1,5zo | 1 | 1325 | Elektrim-Kable | Cable Opd 5x1,5zo [1325] | 3x400V power supply |
| 170 | -W2 | Opd 5x1,5zo | 1 | 1325 | Elektrim-Kable | Cable Opd 5x1,5zo [1325] | 3x400V power supply |
| 171 | -W4 | LIYCY 4x1,0 | 1 | 4721 | Technokabel | Cable LIYCY 4x1,0 [4721] | Output of the main driver drive |
| 172 | -W5 | LIYCY 4x1,0 | 1 | 4721 | Technokabel | Cable LIYCY 4x1,0 [4721] | Supplying cable of the main motor |
| 173 | -W6 | LIYCY 4x1,0 | 1 | 4721 | Technokabel | Cable LIYCY 4x1,0 [4721] | Contact output of the main drive |
| 174 | -W7 | LIYCY 4x1,0 | 1 | 4721 | Technokabel | Cable LIYCY 4x1,0 [4721] | Conveyor intermediate cable 1 |
| 175 | -W8 | LIYCY 4x1,0 | 1 | 4721 | Technokabel | Cable LIYCY 4x1,0 [4721] | Conveyor intermediate cable 2 |
| 176 | -W9 | FLAT-26 | 1 | 4718 | Keen Top | Flat cable FLAT-26 [4718] | Flat cable of the 1st PLC channel |
| 177 | -W10 | LIYCY 5x0,14 | 1 | 1328 | Technokabel | Cable LIYCY 5x0,14 [1328] | Extension cord of encoder |
| 178 | -W11 | FLAT-26 | 1 | 4718 | Keen Top | Flat cable FLAT-26 [4718] | Flat cable of the 2nd PLC channel |
| 179 | -W12 | FLAT-20 | 1 | 1453 | Keen Top | Flat cable FLAT-20 [1453] | Flat cable of PLC output module |
| 180 | -W14 | RS232 25M/25Z | 1 | 4914 | Różni | RS 232 cable 25M/25F 3,0m 25 wires 1:1 | |
| 181 | -W15a | LIYY 3x0,5 | 1 | 1348 | Technokabel | Cable LIYY 3x0,5 [1348] | Communication cable RS232 |
| 182 | -W17 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Sensor of table bearing |
| 183 | -W17A | DOL-1204-W02M | 1 | 7658 | SICK | Cable Angle Plug 2m M12 DOL-1204-W02M [7658] | Reserve sensor |
| 184 | -W18 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Main electrovalve of cutter |
| 185 | -W19 | LIYY 2x0,5 | 1 | 1326 | Technokabel | Cable LIYY 2x0,5 [1326] | Electromag. film hold |
| 186 | -W23 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Film gripper |
| 187 | -W24 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Side heaters |
| 188 | -W25 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Blowing system |
| 189 | -W26 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Pneumatic pull.back fr.heater |
| 190 | -W27 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Main electrovalve of cutter |

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| No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function |
|-----|-------|---------------|-----|---------|----------------|--|--|
| 191 | -W28 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Auxiliary electrovalve of cutter |
| 192 | -W29 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Movable box guide |
| 193 | -W30d | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Printer trigger |
| 194 | -W30 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Movable film guide |
| 195 | -W31 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Cylinder of driver/Movable floor |
| 196 | -W33 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Pneumat. tear tape cutter |
| 197 | -W34 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Pneumat. film hold |
| 198 | -W35A | DOL-1204-G02M | 1 | 7657 | SICK | Cable, standard plug 2m M12 DOL-1204-G02M [7657] | Sensor of mechanical overload |
| 199 | -W35 | LIYs 3x1,0 | 1 | 6655 | Elifa | 3-wires helical cable 3x1,0mm2 [6655] | Sensor of mechanical overload |
| 200 | -W36 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Safety switch of bottom guard |
| 201 | -W37 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Safety switch of sliding guard |
| 202 | -W38 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Safety switch of bottom guard |
| 203 | -W39 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Safety switch of sliding guard |
| 204 | -W40 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Safety switch of bottom guard |
| 205 | -W41 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Safety switch of reclining guard |
| 206 | -W42 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Safety switch of sliding guard |
| 207 | -W43 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Safety switch of bottom guard |
| 208 | -W44 | LIYY 5x0,75 | 1 | 11059 | Technokabel | Cable LIYY 5x0,75 [11059] | Cable of hand-held manipulator |
| 209 | -W45 | LIYY 4x0,5 | 1 | 1329 | Technokabel | Cable LIYY 4x0,5 [1329] | Cable of auxiliary control desk |
| 210 | -W46 | LIYY 4x0,5 | 1 | 1329 | Technokabel | Cable LIYY 4x0,5 [1329] | Transient cable of hand-held manipulator |
| 211 | -W49 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Sensor of mechanical overload |
| 212 | -W50 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Product detection sensor |
| 213 | -W53 | LIYY 2x0,75 | 1 | 6207 | Technokabel | Cable LIYY 2x0,75 [6207] | Ext. cable of temp. sensor of left heater |
| 214 | -W54 | LIYY 2x0,75 | 1 | 6207 | Technokabel | Cable LIYY 2x0,75 [6207] | Ext. cable of temp. sensor of right heater |
| 215 | -W55 | LIYY 2x0,75 | 1 | 6207 | Technokabel | Cable LIYY 2x0,75 [6207] | Ext. cable of temp. sensor of frontal heater |
| 216 | -W56 | LIYcy 4x1,0 | 1 | 4721 | Technokabel | Cable LIYcy 4x1,0 [4721] | Conveyor supplying |
| 217 | -W61 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Air pressure sensor |
| 218 | -W62 | LIYY 6x0,25 | 1 | 8325 | Technokabel | Cable LIYY 6x0,25 [8325] | Extension cord of plant annunciator |
| 219 | -W63 | LIYY 6x0,25 | 1 | 8325 | Technokabel | Cable LIYY 6x0,25 [8325] | Plant annunciator |
| 220 | -W65 | LIYY 3x0,5 | 1 | 1348 | Technokabel | Cable LIYY 3x0,5 [1348] | Supplying cable of first fan |
| 221 | -W69 | DOL-1204-G02M | 1 | 7657 | SICK | Cable, standard plug 2m M12 DOL-1204-G02M [7657] | Connection cable |
| 222 | -W70 | DOL-1204-G02M | 1 | 7657 | SICK | Cable, standard plug 2m M12 DOL-1204-G02M [7657] | Connection cable |
| 223 | -W71 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Cable of transporter overflow |
| 224 | -W72 | DOL-1204-G02M | 1 | 7657 | SICK | Cable, standard plug 2m M12 DOL-1204-G02M [7657] | Driver stop position |
| 225 | -W73 | LIYY 16x0,25 | 1 | 8271 | Technokabel | Cable LIYY 16x0,25 [8271] | Signal of drive feeder |
| 226 | -W74 | DOL-1204-G02M | 1 | 7657 | SICK | Cable, standard plug 2m M12 DOL-1204-G02M [7657] | Driver overload |
| 227 | -W102 | OMY 3x1,5 | 1 | 1349 | Elektrim-Kable | Cable OMY 3x1,5 [1349] | Drive feeder power supply |
| 228 | -W103 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Power supply of the driver contactor relay |

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| A | No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function |
| | 229 | -W105 | OMY 3x1,0 | 1 | 8169 | Elektrim-Kable | Cable OMY 3x1,0 [8169] | Supply cable of printer supplier |
| | 230 | -W110 | OMY 3x1,0 | 1 | 8169 | Elektrim-Kable | Cable OMY 3x1,0 [8169] | The power supply cabinet of positioning drives |
| | 231 | -W112 | LIYY 12x0,25 | 1 | 7481 | Technokabel | Cable LIYY 12x0,25 [7481] | Cable of connection between electrical box |
| | 232 | -W115A | DOL-0803-G05M | 1 | 7661 | SICK | Cable, Straight plug 5m, M8 DOL-0803-G05M [7661] | Base position of film length adjustment |
| | 233 | -W115 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Cable of film length position |
| | 234 | -W116 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Cable reserve |
| | 235 | -WA1P | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Analog channel 1(knife screw position) |
| B | 236 | -WA1 | LIYY 4x0,5 | 1 | 1329 | Technokabel | Cable LIYY 4x0,5 [1329] | Analog converter 1 |
| | 237 | -WA2P | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Analog channel 2(holdfast position) |
| | 238 | -WA2 | LIYY 4x0,5 | 1 | 1329 | Technokabel | Cable LIYY 4x0,5 [1329] | Analog converter 2 |
| | 239 | -WA3P | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Analog channel 3(film length position) |
| | 240 | -WA3 | LIYY 4x0,5 | 1 | 1329 | Technokabel | Cable LIYY 4x0,5 [1329] | Analog converter 3 |
| | 241 | -WC1 | DOL-1204-W02M | 1 | 7658 | SICK | Cable Angle Plug 2m M12 DOL-1204-W02M [7658] | Connection cable |
| | 242 | -WC2 | DOL-1204-W02M | 1 | 7658 | SICK | Cable Angle Plug 2m M12 DOL-1204-W02M [7658] | Connection cable |
| | 243 | -WC3 | DOL-1204-W05M | 1 | 7660 | SICK | Cable, angle Plug 5m M12 DOL-1204-W05M [7660] | Sensor of tear-tape break |
| C | 244 | -WC4 | DOL-1204-W02M | 1 | 7658 | SICK | Cable Angle Plug 2m M12 DOL-1204-W02M [7658] | Sensor of film break |
| | 245 | -WC5 | DOL-1204-W05M | 1 | 7660 | SICK | Cable, angle Plug 5m M12 DOL-1204-W05M [7660] | Connection cable |
| | 246 | -WC6 | DOL-0803-G05M | 1 | 7661 | SICK | Cable, Straight plug 5m, M8 DOL-0803-G05M [7661] | Base sensor of holdfast |
| | 247 | -WC7 | DOL-0803-G05M | 1 | 7661 | SICK | Cable, Straight plug 5m, M8 DOL-0803-G05M [7661] | Base sensor of cutter |
| | 248 | -WC8 | DOL-1204-G02M | 1 | 7657 | SICK | Cable, standard plug 2m M12 DOL-1204-G02M [7657] | Overprint sensor |
| | 249 | -WD1 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Signal cable of the hotstamping printer |
| | 250 | -WD2a | LIYY 4x0,5 | 1 | 1329 | Technokabel | Cable LIYY 4x0,5 [1329] | Supplying cable of the hotstamping printer |
| | 251 | -WD2b | LIYY 4x0,5 | 1 | 1329 | Technokabel | Cable LIYY 4x0,5 [1329] | Supplying cable of the hotstamping printer |
| D | 252 | -WE1 | LIYY 5x0,14 | 1 | 1328 | Technokabel | Cable LIYY 5x0,14 [1328] | Supplying cable of the hotstamping printer |
| | 253 | -WG1 | OMY 3x1,0 | 1 | 8169 | Elektrim-Kable | Cable OMY 3x1,0 [8169] | Supplying of the left heater |
| | 254 | -WG2 | OMY 3x1,0 | 1 | 8169 | Elektrim-Kable | Cable OMY 3x1,0 [8169] | Supplying of the right heater |
| | 255 | -WG3 | OMY 3x1,0 | 1 | 8169 | Elektrim-Kable | Cable OMY 3x1,0 [8169] | Supplying of the frontal heater |
| | 256 | -WGC1 | LIYY 12x0,25 | 1 | 7481 | Technokabel | Cable LIYY 12x0,25 [7481] | Sensors signal |
| | 257 | -WK01 | LIYY 6x0,25 | 1 | 8325 | Technokabel | Cable LIYY 6x0,25 [8325] | Communication with another machine |
| E | 258 | -WR1 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Film holding vacuum |
| | 259 | -WR2 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Cable reserve |
| | 260 | -WR3 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Holding of table bearing |
| | 261 | -WR5 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Tongue blow-out |
| | 262 | -WR7 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Electrovalve cable of the stroke corrector |
| | 263 | -WR10 | LIYY 4x1,0 | 1 | 4721 | Technokabel | Cable LIYY 4x1,0 [4721] | Motor cable reserve |
| | 264 | -WR12 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Cable reserve |
| | 265 | -WR13 | LIYY 2x0,34 | 1 | 1327 | Technokabel | Cable LIYY 2x0,34 [1327] | Cable reserve |
| F | 266 | -WR14 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Cable reserve |
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| | | | | 2 | | | 3 | |
| | | | | 1 | | | 4 | |
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| A | No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function |
| | 267 | -WR15 | LIYY 3x0,34 | 1 | 4929 | Technokabel | Cable LIYY 3x0,34 [4929] | Cable reserve |
| | 268 | -WS1 | LIYY 2x0,75 | 1 | 6207 | Technokabel | Cable LIYY 2x0,75 [6207] | Power supply cable motor of film lenght |
| | 269 | -WS2 | LIYY 2x0,75 | 1 | 6207 | Technokabel | Cable LIYY 2x0,75 [6207] | Power supply of knife screw |
| | 270 | -WS3 | LIYY 2x0,75 | 1 | 6207 | Technokabel | Cable LIYY 2x0,75 [6207] | Power supply motor of holdfast |
| | 271 | WT-RS23 | CA-MAC8/8 | 1 | 8603 | WEGA | Communication cable MiniDIN CA-MAC8/8 [8603] | Plug of communication cable RS232 |
| | 272 | -WZ1 | LIYCY 4x1,0 | 1 | 4721 | Technokabel | Cable LIYCY 4x1,0 [4721] | Power supply drive feeder |
| | 273 | -WZ2 | LIYCY 4x1,0 | 1 | 4721 | Technokabel | Cable LIYCY 4x1,0 [4721] | Power supply drive feeder |
| B | 274 | -X1 | WT 3P+N+J/16A | 1 | 829 | Walther | Male plug 16A IP-44 5-ways [829] | 3-fazowy wtyk zasilajacy |
| | 275 | -X2 | 2004-1401 | 3 | 4681 | Wago | 4-conductor gray terminal block (2004-1401) [4681] | Terminal block of 3x400V |
| | 276 | -X2 | 2004-1404 | 2 | 4680 | Wago | 4-conductor blue terminal block (2004-1404) [4680] | Terminal block of 3x400V |
| | 277 | -X2 | 2004-1407 | 3 | 4682 | Wago | 4-conductor earth terminal block (2004-1407) [4682] | Terminal block of 3x400V |
| | 278 | -X3 | 2004-1404 | 1 | 4680 | Wago | 4-conductor blue terminal block (2004-1404) [4680] | Terminal of neutral cable |
| | 279 | -X3 | 2004-1407 | 1 | 4682 | Wago | 4-conductor earth terminal block (2004-1407) [4682] | Terminal of ground cable |
| | 280 | -X4 | 2002-2201 | 5 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminals of -T1 and -T2 transformers |
| | 281 | -X6 | 2004-1201 | 4 | 4679 | Wago | 2-conductor gray terminal block (2004-1201) [4679] | Terminals of -G11 rectifier |
| C | 282 | -X7 | 2004-1401 | 7 | 4681 | Wago | 4-conductor gray terminal block (2004-1401) [4681] | Terminals of +24V voltage |
| | 283 | -X8 | 2004-1401 | 4 | 4681 | Wago | 4-conductor gray terminal block (2004-1401) [4681] | Terminals of heaters supplying voltage |
| | 284 | -X9 | 2004-1407 | 2 | 4682 | Wago | 4-conductor earth terminal block (2004-1407) [4682] | Ground terminal |
| | 285 | -X11 | 2002-2201 | 3 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Auxiliary terminal |
| | 286 | -X13 | 2002-2201 | 4 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block of analog signals |
| | 287 | -X15 | 2002-2201 | 5 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block of driver drive |
| | 288 | -X16 | 2004-1407 | 1 | 4682 | Wago | 4-conductor earth terminal block (2004-1407) [4682] | Ground terminal of driver drive |
| | 289 | -X17 | 2002-2201 | 5 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block of sensors |
| D | 290 | -X18 | LZ-3x4 | 1 | 6654 | Różni | Terminal block 3x4,0 [6654] | Conector of the overload sensor |
| | 291 | -X19 | LZ-3x4 | 1 | 6654 | Różni | Terminal block 3x4,0 [6654] | Conector of the overload sensor |
| | 292 | -X21 | 2004-1401 | 4 | 4681 | Wago | 4-conductor gray terminal block (2004-1401) [4681] | Terminals of +24V voltage |
| | 293 | -X21 | 2004-1407 | 1 | 4682 | Wago | 4-conductor earth terminal block (2004-1407) [4682] | Terminals of +24V voltage |
| | 294 | -X22 | 2002-2201 | 6 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Communication with another machine |
| | 295 | -X30 | LZ-6x4 | 1 | 4926 | Różni | Terminal block 6x4,0 [4926] | Terminal strip on the frontal heater (no 3) |
| | 296 | -X46 | 2002-2201 | 9 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Conector of control signals inside electrical |
| E | 297 | -XA1 | 2002-2201 | 3 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block position of screw knife |
| | 298 | -XA2 | 2002-2201 | 3 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block position of holdfast |
| | 299 | -XA3 | 2002-2201 | 3 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block position of screw knife |
| | 300 | -XB18 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Sensor plug of vertical carriage position |
| | 301 | -XB18 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Sensor female plug of the vertical carriage pos |
| | 302 | -XG10 | RevGn-4+PE | 1 | 9578 | Wieland | Gniazdo 4x2,5mm2+PE Revos 73.300.0453.0 [9578] | left heater |
| | 303 | -XG10 | RevWt-4+PE | 1 | 9577 | Wieland | Wtyk 4x2,5mm2+PE Revos 73.310.0453.0 [9577] | left heater |
| F | 304 | -XG20 | RevWt-4+PE | 1 | 9577 | Wieland | Wtyk 4x2,5mm2+PE Revos 73.310.0453.0 [9577] | right heater |
| Date: | | 06.01.12 | | Project: | | | Material list | |
| Designer: | | P.Figlak | | W E G A | | | AM-4-100C_01 | |
| Inspected by: | | | | elektronik | | | | |
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Bill of material: AM-4-100C 01

| No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function |
|-----|-------|-----------------|-----|---------|--------------|--|---|
| 305 | -XG20 | RevGn-4+PE | 1 | 9578 | Wieland | Gniazdo 4x2,5mm2+PE Revos 73.300.0453.0 [9578] | right heater |
| 306 | -XG30 | RevGn-4+PE | 1 | 9578 | Wieland | Gniazdo 4x2,5mm2+PE Revos 73.300.0453.0 [9578] | Frontal heater |
| 307 | -XG30 | RevWt-4+PE | 1 | 9577 | Wieland | Wtyk 4x2,5mm2+PE Revos 73.310.0453.0 [9577] | Frontal heater |
| 308 | -XGC1 | 2002-3201 | 24 | 9464 | Wago | Złączka TopJobs 3-prt. 2,5(4)mm2 szara (2002-3201) | Terminal of sensors |
| 309 | -XH1 | 2xRJ11 WT | 1 | 4954 | Różni | Male plug 2x4pin 6P4c RJ-11 [4954] | Male plug of helical cable of film hold |
| 310 | -XH1 | 2xRJ11 GN | 1 | 4953 | Różni | Female plug 2x4p PN6-4 [4953] | Socket of electromag. film holdings |
| 311 | -XP1B | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Analog signal of the converter 1 |
| 312 | -XP1B | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Analog signal of the converter 1 |
| 313 | -XPLA | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Supply of analog converter 1 |
| 314 | -XPLA | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Supply of analog converter 1 |
| 315 | -XP2B | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Analog signal of the converter 2 |
| 316 | -XP2A | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Supply of analog converter 1 |
| 317 | -XP2A | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Supply of analog converter 1 |
| 318 | -XP2B | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Analog signal of the converter 2 |
| 319 | -XP3B | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Analog signal of the converter 3 |
| 320 | -XP3B | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Analog signal of the converter 3 |
| 321 | -XP3A | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Supply of analog converter 3 |
| 322 | -XP3A | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Supply of analog converter 3 |
| 323 | -XP4 | DB9 GN | 1 | 1338 | Różni | Canon female plug DB9 GN [1338] | DB-9 female plug of the operator panel |
| 324 | -XP4 | DB9 WT | 1 | 1339 | Różni | Canon male plug DB9 WT [1339] | Plug of operator panel |
| 325 | -XS2 | DB9 WT | 1 | 1339 | Różni | Canon male plug DB9 WT [1339] | Plug of ext. cord of encoder |
| 326 | -XS2 | DB9 GN | 1 | 1338 | Różni | Canon female plug DB9 GN [1338] | Socket of extension cord of encoder |
| 327 | -XS3 | 2002-2201 | 8 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Motor connector |
| 328 | -XS5 | DB25 GN | 1 | 1344 | Różni | Canon female plug DB25 GN [1344] | |
| 329 | -XS5 | DB25 WT FLAT | 1 | 1443 | Różni | Canon male plug DB25 WT for flat cable [1443] | |
| 330 | -XS6 | DB25 GN | 1 | 1344 | Różni | Canon female plug DB25 GN [1344] | Socket of the main control desk |
| 331 | -XS6 | DB25 GN | 1 | 1344 | Różni | Canon female plug DB25 GN [1344] | |
| 332 | -XS7 | 231-308/026-000 | 1 | 4904 | Wago | Female plug 8x1mm2 (231-308/026-000) [4904] | Output plug of -01 module |
| 333 | -XS7 | 231-308/026-000 | 1 | 4904 | Wago | Female plug 8x1mm2 (231-308/026-000) [4904] | Output plug of -02 module |
| 334 | -XS9 | 231-308/026-000 | 1 | 4904 | Wago | Female plug 8x1mm2 (231-308/026-000) [4904] | Output plug of -03 module |
| 335 | -XS10 | 231-308/026-000 | 1 | 4904 | Wago | Female plug 8x1mm2 (231-308/026-000) [4904] | Output plug of -04 module |
| 336 | -XS11 | DB9 WT | 1 | 1339 | Różni | Canon male plug DB9 WT [1339] | Plug of plant annunciator |
| 337 | -XS11 | DB9 GN | 1 | 1338 | Różni | Canon female plug DB9 GN [1338] | Socket of extension cord of plant annunciator |
| 338 | -XS12 | DB9 WT | 1 | 1339 | Różni | Canon male plug DB9 WT [1339] | Plug of ext. cord of plant annunciator |
| 339 | -XS12 | DB9 GN | 1 | 1338 | Różni | Canon female plug DB9 GN [1338] | Socket of plant annunciator |
| 340 | -XS13 | 2002-2201 | 4 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block of guard switches |
| 341 | -XS14 | 100.010 | 1 | 1352 | Dunaj | Socket SWW 1135-812 (200.010) | Ext. socket of the hand-held manipulator |
| 342 | -XS14 | 200.010 | 1 | 1385 | Dunaj | Male plug SWW 1135-812 (200.010) | Ext. plug of hand-held manipulator |

Date: 06.01.12

Designer: P.Figlak

Inspected by:

Project:

W E G A
elektronik

AM-4-100C 01

Material list

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| | | | | | | | | | | |
|--------------------------------|----------|----------|-----------------|--------------|---------------|--------------|--|--|---|--|
| 1 | 2 | | 3 | | 4 | | 5 | | 6 | |
| Bill of material: AM-4-100C_01 | | | | | | | | | | |
| A | No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function | A | |
| | 343 | -XS15 | 2002-2201 | 4 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Connector of the manipulators | | |
| | 344 | -XS16 | DB15 WT | 1 | 1342 | Różni | Canon male plug DB15 WT [1342] | Printer plug | | |
| | 345 | -XS16 | DB15 GN | 1 | 1345 | Różni | Canon female plug DB15 GN [1345] | Printer socket | | |
| | 346 | -XS20 | 2002-2201 | 18 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Base signals terminal block | | |
| | 347 | -XS21 | 2002-2201 | 18 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Drive feeder terminal block | | |
| | 348 | -XS22 | 2002-2201 | 6 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Motor adjustment terminal block | | |
| | 349 | -XS27 | 2004-1201 | 3 | 4679 | Wago | 2-conductor gray terminal block (2004-1201) [4679] | Terminal block of the fans | | |
| B | 350 | -XS28 | 770-115 | 1 | 6203 | Wago | 5-ways, 2-wires female plug (770-115) [6203] | Plug of conveyor motor | | |
| | 351 | -XS28 | 770-105 | 1 | 6204 | Wago | 5-ways, 2-wires male plug (770-105) [6204] | Socket of conveyor motor | | |
| | 352 | -XS29 | DB9 GN | 1 | 1338 | Różni | Canon female plug DB9 GN [1338] | Female plug of the optical encoder | | |
| | 353 | -XS29 | DB9 WT | 1 | 1339 | Różni | Canon male plug DB9 WT [1339] | Plug of ext. cord of encoder | | |
| | 354 | -XS30 | 2002-2201 | 12 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal of sensors | | |
| | 355 | -XS60 | 231-308/026-000 | 1 | 4904 | Wago | Female plug 8x1mm2 (231-308/026-000) [4904] | Output plug of -05 module | | |
| | 356 | -XS60 | 231-338/001-000 | 1 | 4692 | Wago | PCB header 8x1mm2 (231-338/001-000) [4692] | Female plug of the 05 module | | |
| C | 357 | -XS70 | 2002-2201 | 6 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block of motors power supply | | |
| | 358 | -XS71 | 2002-2201 | 9 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block of the motor control relays | | |
| | 359 | -XSB3 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Sensor of tear-tape break | | |
| | 360 | -XSB3 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Sensor of tear-tape break | | |
| | 361 | -XSB4 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Sensor of film break | | |
| | 362 | -XSB4 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Sensor of film break | | |
| | 363 | -XSB5 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Pos.sensor of the lengthening | | |
| | 364 | -XSB5 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Pos.sensor of the lengthening | | |
| D | 365 | -XSB6 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Base sensor of holdfast | | |
| | 366 | -XSB6 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Base sensor of holdfast | | |
| | 367 | -XSB7 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Base sensor of cutter | | |
| | 368 | -XSB7 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Base sensor of cutter | | |
| | 369 | -XSB8 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Overprint sensor | | |
| | 370 | -XSB8 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Overprint sensor | | |
| | 371 | -XSB9 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Product detection sensor | | |
| | 372 | -XSB9 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Product detection sensor | | |
| E | 373 | -XSB11 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Air pressure sensor | | |
| | 374 | -XSB11 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Air pressure sensor | | |
| | 375 | -XSB12 | 733-203 | 1 | 8341 | WAGO | Spring plug 733-203/032-000 [8341] | Reserve sensor | | |
| | 376 | -XSB12 | 733-103 | 1 | 8340 | WAGO | Spring socket 733-103/032-000 [8340] | Reserve sensor | | |
| | 377 | -XTZ1 | 2002-2201 | 6 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block of the transformer | | |
| | 378 | -XTZ2 | 2002-2201 | 6 | 4678 | Wago | Double deck gray terminal block (2002-2201) [4678] | Terminal block of the transformer | | |
| | 379 | -XV1 | K41 | 1 | 4948 | SMC | Valve female plug K41 [4948] | Connector of the side heaters electrovalve | | |
| F | 380 | -XV9 | K41 | 1 | 4948 | SMC | Valve female plug K41 [4948] | Conn.of the pneumatic feeder electrovalve | | |
| Date: | 06.01.12 | Project: | W E G A | AM-4-100C_01 | Material list | Page: | 10 | | | |
| Designer: | P.Figlak | | elektronik | | | from: | 11 | | | |
| Inspected by: | | | | | | | | | | |
| 1 | 2 | | 3 | | 4 | | 5 | | 6 | |

Bill of material: AM-4-100C_01

| No | Dsg. | Type | Qty | WEGA ID | Manufacturer | Name | Function |
|-----|-------|-----------|-----|---------|--------------|--|---|
| 381 | -XY1 | WT 2PT1,5 | 1 | 4950 | WEGA | 2-wires male plug 1,5mm2 [4950] | Conector of the film break electromagnet |
| 382 | -XY1 | GN 2PT1,5 | 1 | 4951 | WEGA | 2-wires female plug 1,5mm2 [4951] | Connector of the film break spiral cable |
| 383 | -XY2 | GN 2PT1,5 | 1 | 4951 | WEGA | 2-wires female plug 1,5mm2 [4951] | Connector of the film break spiral cable |
| 384 | -XY2 | WT 2PT1,5 | 1 | 4950 | WEGA | 2-wires male plug 1,5mm2 [4950] | Conector of the film break electromagnet |
| 385 | -XZS | 2004-1201 | 2 | 4679 | Wago | 2-conductor gray terminal block (2004-1201) [4679] | Złącze zasilania szafy napędów regulacyjnych |
| 386 | -XZS1 | OK-2 GN | 1 | 7479 | Różni | 2-wires female plug OK-2 GN [7479] | OK-2 female plug of the motor power supply |
| 387 | -XZS1 | OK-2 WT | 1 | 7478 | Różni | 3-wires male plug OK-2 WT [7478] | OK-2 plug of motor supplying |
| 388 | -XZS2 | OK-2 WT | 1 | 7478 | Różni | 3-wires male plug OK-2 WT [7478] | OK-2 plug of motor of knife screw |
| 389 | -XZS2 | OK-2 GN | 1 | 7479 | Różni | 2-wires female plug OK-2 GN [7479] | Socket OK-2 for power suppling motor of knife s |
| 390 | -XZS3 | OK-2 WT | 1 | 7478 | Różni | 3-wires male plug OK-2 WT [7478] | OK-2 plug of motor of hold-fast screw |
| 391 | -XZS3 | OK-2 GN | 1 | 7479 | Różni | 2-wires female plug OK-2 GN [7479] | Socket OK-2 for power suppling motor of holdfas |
| 392 | -Y1 | E59-21/U1 | 1 | 583 | WEGA | Universal electromagnet E59/21-U1 [583] | Electromag. film hold |
| 393 | -Y2 | E59-21/U1 | 1 | 583 | WEGA | Universal electromagnet E59/21-U1 [583] | Electromag. film hold |
| 394 | -ZS1 | VR-2 | 1 | 4655 | WEGA | Voltage regulator 2x30V/3A [4655] | DC supplier 2x30V |
| 395 | -ZS2 | VR-2 | 1 | 4655 | WEGA | Voltage regulator 2x30V/3A [4655] | DC supplier 2x30V |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak

Drive Name: Napęd g³ówny (Commander SK)

Drive Mode: Open loop

Drive Address: 1

Menu 0: Basic setup

| Parameter | Description | Default | Memory | Units |
|-----------|--------------------------------------|---------|----------|------------|
| 00.01 | Minimum set speed | 0,0 | 5,0 | Hz |
| 00.02 | Maximum set speed | 50,0 | 60,0 | Hz |
| 00.03 | Acceleration rate 1 | 5,0 | 0,5 | s/100 Hz |
| 00.04 | Deceleration rate 1 | 10,0 | 0,3 | s/100 Hz |
| 00.05 | Drive configuration | AI.AV | Pr | |
| 00.06 | Motor rated current | 0,00 | 5,00 | A |
| 00.07 | Motor rated full load rpm | 1500 | 1380 | RPM |
| 00.08 | Motor rated voltage | 230 | 230 | V |
| 00.09 | Motor rated power factor | 0,85 | 0,85 | |
| 00.10 | Security status | L1 | L3 | |
| 00.11 | Start / stop logic select | 0 | 0 | |
| 00.12 | Brake controller enable | diS | diS | |
| 00.15 | Jog reference | 1,5 | 0,0 | Hz |
| 00.16 | Analog input 1 mode (terminal T2) | 4-.20 | VoLt | |
| 00.17 | Allow negative references | OFF | OFF | |
| 00.18 | Preset speed 1 | 0,0 | 56,0 | Hz |
| 00.19 | Preset speed 2 | 0,0 | 5,0 | Hz |
| 00.20 | Preset speed 3 | 0,0 | 9,0 | Hz |
| 00.21 | Preset speed 4 | 0,0 | 0,0 | Hz |
| 00.22 | Load display units | Ld | Ld | |
| 00.23 | Speed display units | Fr | Fr | |
| 00.24 | Customer defined scaling | 1,000 | 1,000 | |
| 00.25 | User security code | 0 | 0 | |
| 00.27 | Power-up keypad reference | 0 | 0 | |
| 00.28 | Parameter cloning | no | no | |
| 00.29 | Load defaults | no | no | |
| 00.30 | Ramp mode select | Std | Std | |
| 00.31 | Stopping mode select | 1 | 1 | |
| 00.32 | Dynamic V to f select | OFF | OFF | |
| 00.33 | Catch a spinning motor select | 0 | 0 | |
| 00.34 | Terminal B7 mode select | dig | dig | |
| 00.35 | Digital output control (terminal B3) | n=0 | n=0 | |
| 00.36 | Analog output control (terminal B1) | Fr | USEr | |
| 00.37 | Maximum switching frequency | 3 | 3 | kHz |
| 00.38 | Auto-tune | 0 | 0 | |
| 00.39 | Motor rated frequency | 50,0 | 50,0 | Hz |
| 00.40 | Number of motor poles | Auto | Auto | |
| 00.41 | Voltage mode select | Ur I | Ur I | |
| 00.42 | Low frequency voltage boost | 3,0 | 3,0 | % |
| 00.43 | Serial comms baud rate | 19.2 | 19.2 | |
| 00.44 | Serial comms address | 1 | 1 | |
| 00.45 | Software version | 0,00 | 1,08 | |
| 00.46 | Brake release current threshold | 50 | 50 | % |
| 00.47 | Brake apply current threshold | 10 | 10 | % |
| 00.48 | Brake release frequency | 1,0 | 1,0 | Hz |
| 00.49 | Brake apply frequency | 2,0 | 2,0 | Hz |
| 00.50 | Pre-brake release delay | 1,0 | 1,0 | s |
| 00.51 | Post brake release delay | 1,0 | 1,0 | s |
| 00.52 | Current loop loss indicator | OFF | OFF | |
| 00.53 | Terminal T5 digital input 1 state | OFF | OFF | |
| 00.54 | Terminal T7 digital input 3 state | OFF | OFF | |
| 00.55 | Last Trip | no trip | SL.dF | |
| 00.56 | Trip 1 | no trip | no trip | |
| 00.57 | Trip 2 | no trip | no trip | |
| 00.58 | Trip 3 | no trip | no trip | |
| 00.59 | PLC ladder program enable | Halt | Run/Clip | |
| 00.60 | PLC ladder program status | 0 | 2 | |
| 00.61 | Threshold detector 1 level | 0,0 | 85,0 | % |
| 00.71 | Parameter 61 set-up | 0,00 | 12,04 | menu.param |
| 00.72 | Parameter 62 set-up | 0,00 | 0,00 | menu.param |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak

Drive Name: Napęd g³ówny (Commander SK)

Drive Mode: Open loop

Drive Address: 1

Menu 0: Basic setup

| Parameter | Description | Default | Memory | Units |
|-----------|------------------------------------|---------|--------|------------|
| 00.73 | Parameter 63 set-up | 0,00 | 0,00 | menu.param |
| 00.74 | Parameter 64 set-up | 0,00 | 0,00 | menu.param |
| 00.75 | Parameter 65 set-up | 0,00 | 0,00 | menu.param |
| 00.76 | Parameter 66 set-up | 0,00 | 0,00 | menu.param |
| 00.77 | Parameter 67 set-up | 0,00 | 0,00 | menu.param |
| 00.78 | Parameter 68 set-up | 0,00 | 0,00 | menu.param |
| 00.79 | Parameter 69 set-up | 0,00 | 0,00 | menu.param |
| 00.80 | Parameter 70 set-up | 0,00 | 0,00 | menu.param |
| 00.81 | Frequency reference selected | 0,0 | 56,0 | Hz |
| 00.82 | Pre ramp reference | 0,0 | 0,0 | Hz |
| 00.83 | Post ramp reference | 0,0 | 0,0 | Hz |
| 00.84 | DC bus voltage | 0 | 298 | V |
| 00.85 | Motor frequency | 0,0 | 0,0 | Hz |
| 00.86 | Motor voltage | 0 | 11 | V |
| 00.87 | Motor speed | 0 | 0 | RPM |
| 00.88 | Current magnitude (motor current) | 0,00 | 2,28 | A |
| 00.89 | Motor active current | 0,00 | -0,02 | A |
| 00.90 | Digital I/O read word | 0 | 2 | |
| 00.91 | Reference enabled indicator | OFF | On | |
| 00.92 | Reverse selected indicator | OFF | OFF | |
| 00.93 | Jog selected indicator | OFF | On | |
| 00.94 | Analog input 1 level (terminal T2) | 0,0 | 0,0 | % |
| 00.95 | Analog input 2 level (terminal T4) | 0,0 | 100,0 | % |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napęd g³ówny (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|-------------------------------------|---------|--------|----------|
| 01.00 | Parameter 0 | 0 | 0 | |
| 01.01 | Frequency reference selected | 0,0 | 56,0 | Hz |
| 01.02 | Pre skip filter reference | 0,0 | 0,0 | Hz |
| 01.03 | Pre ramp reference | 0,0 | 0,0 | Hz |
| 01.04 | Reference offset | 0,0 | 0,0 | Hz |
| 01.05 | Jog reference | 1,5 | 0,0 | Hz |
| 01.06 | Maximum set speed | 50,0 | 60,0 | Hz |
| 01.07 | Minimum set speed | 0,0 | 5,0 | Hz |
| 01.09 | Reference offset select | OFF | OFF | |
| 01.10 | Allow negative references | OFF | OFF | |
| 01.11 | Reference enabled indicator | OFF | On | |
| 01.12 | Reverse selected indicator | OFF | OFF | |
| 01.13 | Jog selected indicator | OFF | On | |
| 01.14 | Reference selector | A1.A2 | Pr | |
| 01.15 | Preset speed selector | 0 | 0 | |
| 01.17 | Keypad reference | 0,0 | 5,0 | Hz |
| 01.18 | Precision reference coarse | 0,0 | 0,0 | Hz |
| 01.19 | Precision reference fine | 0,000 | 0,000 | Hz |
| 01.20 | Precision reference update disable | OFF | OFF | |
| 01.21 | Preset speed 1 | 0,0 | 56,0 | Hz |
| 01.22 | Preset speed 2 | 0,0 | 5,0 | Hz |
| 01.23 | Preset speed 3 | 0,0 | 9,0 | Hz |
| 01.24 | Preset speed 4 | 0,0 | 0,0 | Hz |
| 01.25 | Preset speed 5 | 0,0 | 0,0 | Hz |
| 01.26 | Preset speed 6 | 0,0 | 0,0 | Hz |
| 01.27 | Preset speed 7 | 0,0 | 0,0 | Hz |
| 01.28 | Preset speed 8 | 0,0 | 0,0 | Hz |
| 01.29 | Skip reference 1 | 0,0 | 0,0 | Hz |
| 01.30 | Skip reference band 1 | 0,5 | 0,5 | Hz |
| 01.31 | Skip reference 2 | 0,0 | 0,0 | Hz |
| 01.32 | Skip reference band 2 | 0,5 | 0,5 | Hz |
| 01.33 | Skip reference 3 | 0,0 | 0,0 | Hz |
| 01.34 | Skip reference band 3 | 0,5 | 0,5 | Hz |
| 01.35 | Reference in rejection zone | OFF | OFF | |
| 01.36 | Analog reference 1 | 0,0 | 5,0 | Hz |
| 01.37 | Analog reference 2 | 0,0 | 0,0 | Hz |
| 01.38 | Percentage trim | 0,0 | 0,0 | % |
| 01.41 | Analog reference 2 select | OFF | OFF | |
| 01.42 | Preset reference select | OFF | OFF | |
| 01.43 | Keypad reference select | OFF | OFF | |
| 01.44 | Precision reference select | OFF | OFF | |
| 01.45 | Preset select bit 0 | OFF | On | |
| 01.46 | Preset select bit 1 | OFF | OFF | |
| 01.47 | Preset select bit 2 | OFF | OFF | |
| 01.49 | Reference selected indicator | 0 | 3 | |
| 01.50 | Preset reference selected indicator | 0 | 2 | |
| 01.51 | Power-up keypad reference | 0 | 0 | |
| 02.00 | Parameter 0 | 0 | 0 | |
| 02.01 | Post ramp reference | 0,0 | 0,0 | Hz |
| 02.03 | Ramp hold | OFF | OFF | |
| 02.04 | Ramp mode select | Std | Std | |
| 02.06 | S ramp enable | OFF | OFF | |
| 02.07 | S ramp acceleration limit | 3,1 | 0,5 | s/100Hz |
| 02.08 | Standard ramp voltage | 375 | 375 | V |
| 02.10 | Acceleration rate selector | 0 | 0 | |
| 02.11 | Acceleration rate 1 | 5,0 | 0,5 | s/100 Hz |
| 02.12 | Acceleration rate 2 | 5,0 | 5,0 | s/100 Hz |
| 02.13 | Acceleration rate 3 | 5,0 | 5,0 | s/100 Hz |
| 02.14 | Acceleration rate 4 | 5,0 | 5,0 | s/100 Hz |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napęd g³ówny (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|--|----------|----------|----------|
| 02.15 | Acceleration rate 5 | 5,0 | 5,0 | s/100 Hz |
| 02.16 | Acceleration rate 6 | 5,0 | 5,0 | s/100 Hz |
| 02.17 | Acceleration rate 7 | 5,0 | 5,0 | s/100 Hz |
| 02.18 | Acceleration rate 8 | 5,0 | 5,0 | s/100 Hz |
| 02.19 | Jog acceleration rate | 0,2 | 0,2 | s/100 Hz |
| 02.20 | Deceleration rate selector | 0 | 0 | |
| 02.21 | Deceleration rate 1 | 10,0 | 0,3 | s/100 Hz |
| 02.22 | Deceleration rate 2 | 10,0 | 10,0 | s/100 Hz |
| 02.23 | Deceleration rate 3 | 10,0 | 10,0 | s/100 Hz |
| 02.24 | Deceleration rate 4 | 10,0 | 10,0 | s/100 Hz |
| 02.25 | Deceleration rate 5 | 10,0 | 10,0 | s/100 Hz |
| 02.26 | Deceleration rate 6 | 10,0 | 10,0 | s/100 Hz |
| 02.27 | Deceleration rate 7 | 10,0 | 10,0 | s/100 Hz |
| 02.28 | Deceleration rate 8 | 10,0 | 10,0 | s/100 Hz |
| 02.29 | Jog deceleration rate | 0,2 | 0,2 | s/100 Hz |
| 02.30 | Acceleration selected indicator | 0 | 1 | |
| 02.31 | Deceleration selected indicator | 0 | 1 | |
| 02.32 | Acceleration select bit 0 | OFF | OFF | |
| 02.33 | Acceleration select bit 1 | OFF | OFF | |
| 02.34 | Acceleration select bit 2 | OFF | OFF | |
| 02.35 | Deceleration select bit 0 | OFF | OFF | |
| 02.36 | Deceleration select bit 1 | OFF | OFF | |
| 02.37 | Deceleration select bit 2 | OFF | OFF | |
| 02.39 | Ramp rate units | s/100 Hz | s/100 Hz | |
| 03.00 | Parameter 0 | 0 | 0 | |
| 03.05 | Zero speed threshold | 1,0 | 1,0 | Hz |
| 03.06 | At speed window | 1,0 | 1,0 | Hz |
| 03.17 | Frequency output or PWM output scaling | 1,000 | 1,000 | |
| 03.18 | Maximum output frequency | 5 | 5 | kHz |
| 03.22 | Hard frequency reference | 0,0 | 0,0 | |
| 03.23 | Hard frequency reference selector | OFF | OFF | |
| 03.29 | Position | 0 | 0 | |
| 03.32 | Position counter reset | OFF | OFF | |
| 03.33 | Position scaling numerator | 1,000 | 1,000 | |
| 03.34 | Position scaling denominator | 1,0 | 1,0 | |
| 03.43 | Maximum reference frequency | 10,0 | 10,0 | kHz |
| 03.44 | Frequency reference scaling | 1,000 | 1,000 | |
| 03.45 | Frequency reference | 0,0 | 0,0 | % |
| 04.00 | Parameter 0 | 0 | 0 | |
| 04.01 | Current magnitude (motor current) | 0,00 | 2,28 | A |
| 04.02 | Motor active current | 0,00 | -0,02 | A |
| 04.04 | Current demand | 0,0 | 0,0 | % |
| 04.07 | Symmetrical current limit | 165,0 | 165,0 | % |
| 04.08 | Torque reference | 0,0 | 0,0 | % |
| 04.11 | Torque mode selector | Speed | Speed | |
| 04.13 | Current controller Kp gain | 20 | 20 | |
| 04.14 | Current controller Ki gain | 40 | 40 | |
| 04.15 | Motor thermal time constant | 89 | 89 | |
| 04.16 | Motor thermal protection mode | OFF | OFF | |
| 04.17 | Reactive current | 0,00 | 0,00 | A |
| 04.18 | Overriding current limit | 0,0 | 165,0 | % |
| 04.19 | Motor overload accumulator | 0,0 | 0,0 | % |
| 04.20 | Percentage load | 0,0 | 0,0 | % |
| 04.21 | Load display units | Ld | Ld | |
| 04.24 | User current maximum scaling | 165,0 | 165,0 | % |
| 04.25 | Low speed thermal protection mode | OFF | OFF | |
| 04.26 | Percentage torque | 0,0 | 0,0 | % |
| 05.00 | Parameter 0 | 0 | 0 | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napęd g³ówny (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---|---------|--------|---------|
| 05.01 | Motor frequency | 0,0 | 0,0 | Hz |
| 05.02 | Motor voltage | 0 | 11 | V |
| 05.03 | Output power | 0,00 | 0,04 | kW |
| 05.04 | Motor speed | 0 | 0 | RPM |
| 05.05 | DC bus voltage | 0 | 298 | V |
| 05.06 | Motor rated frequency | 50,0 | 50,0 | Hz |
| 05.07 | Motor rated current | 0,00 | 5,00 | A |
| 05.08 | Motor rated full load rpm | 1500 | 1380 | RPM |
| 05.09 | Motor rated voltage | 230 | 230 | V |
| 05.10 | Motor rated power factor | 0,85 | 0,85 | |
| 05.11 | Number of motor poles | Auto | Auto | |
| 05.12 | Auto-tune | 0 | 0 | |
| 05.13 | Dynamic V to f select | OFF | OFF | |
| 05.14 | Voltage mode select | Ur I | Ur I | |
| 05.15 | Low frequency voltage boost | 3,0 | 3,0 | % |
| 05.17 | Stator resistance | 0,000 | 2,585 | Ohm |
| 05.18 | Maximum switching frequency | 3 | 3 | kHz |
| 05.19 | High stability space vector modulation | OFF | OFF | |
| 05.20 | Over modulation enable | OFF | OFF | |
| 05.23 | Voltage offset | 0,0 | 1,7 | V |
| 05.24 | Transient inductance (?Ls) | 0,00 | 0,00 | mH |
| 05.27 | Enable slip compensation | On | On | |
| 05.34 | Speed display units | Fr | Fr | |
| 05.35 | Disable auto switching frequency change | OFF | OFF | |
| 05.37 | Actual switching frequency | 3 | 3 | kHz |
| 05.50 | Security unlock | 0 | 0 | |
| 06.00 | Parameter 0 | 0 | 0 | |
| 06.01 | Stopping mode select | 1 | 1 | |
| 06.03 | Mains loss mode | diS | diS | |
| 06.04 | Start / stop logic select | 0 | 0 | |
| 06.06 | Injection braking level | 100,0 | 150,0 | % |
| 06.07 | Injection braking time | 1,0 | 0,1 | s |
| 06.09 | Catch a spinning motor select | 0 | 0 | |
| 06.10 | Low DC bus operation | OFF | OFF | |
| 06.11 | Remote LED keypad function key status | OFF | OFF | |
| 06.12 | Enable stop key | OFF | OFF | |
| 06.13 | Function key mode | 0 | 0 | |
| 06.14 | Disable auto reset on enable | OFF | OFF | |
| 06.15 | Drive enable | On | On | |
| 06.16 | Electricity cost per kWh | 0,0 | 0,0 | L / kWh |
| 06.17 | Reset energy meter | OFF | OFF | |
| 06.22 | Run time log: years.days | 0,000 | 0,000 | y.ddd |
| 06.23 | Run time log: hours.minutes | 0,00 | 0,14 | hh.mm |
| 06.24 | Energy meter: MWh | 0,0 | 0,0 | MWh |
| 06.25 | Energy meter: kWh | 0,00 | 0,00 | kWh |
| 06.26 | Running cost | 0 | 0 | |
| 06.29 | Hardware enable | On | OFF | |
| 06.30 | Sequencing bit: Run forward | OFF | OFF | |
| 06.31 | Sequencing bit: Jog forward | OFF | On | |
| 06.32 | Sequencing bit: Run reverse | OFF | OFF | |
| 06.33 | Sequencing bit: Fwd /Rev | OFF | OFF | |
| 06.34 | Sequencing bit: Run | OFF | OFF | |
| 06.35 | Forward limit switch | OFF | OFF | |
| 06.36 | Reverse limit switch | OFF | OFF | |
| 06.37 | Sequencing bit: Jog reverse | OFF | OFF | |
| 06.39 | Sequencing bit: Not stop | OFF | OFF | |
| 06.40 | Enable sequencer latching | OFF | OFF | |
| 06.42 | Control word | 0 | 0 | |
| 06.43 | Control word enable | OFF | OFF | |
| 06.45 | Force cooling fan to run at full speed | OFF | OFF | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napęd g³ówny (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---|---------|--------|------------|
| 07.00 | Parameter 0 | 0 | 0 | |
| 07.01 | Analog input 1 level (terminal T2) | 0,0 | 0,0 | % |
| 07.02 | Analog input 2 level (terminal T4) | 0,0 | 100,0 | % |
| 07.04 | Heatsink temperature | 0 | 27 | °C |
| 07.05 | Power circuit temperature 2 | 0 | 0 | °C |
| 07.06 | Analog input 1 mode (terminal T2) | 4-.20 | VoLt | |
| 07.08 | Analog input 1 scaling | 1,000 | 1,000 | |
| 07.09 | Analog input 1 invert | OFF | OFF | |
| 07.10 | Analog input 1 destination | 1,36 | 1,36 | menu.param |
| 07.11 | Analog input 2 mode (terminal T4) | VoLt | dig | |
| 07.12 | Analog input 2 scaling | 1,000 | 1,000 | |
| 07.13 | Analog input 2 invert | OFF | OFF | |
| 07.14 | Analog input 2 destination | 1,37 | 6,31 | menu.param |
| 07.19 | Analog output 1 source | 2,01 | 1,21 | menu.param |
| 07.20 | Analog output 1 scaling | 1,000 | 1,000 | |
| 07.28 | Current loop loss indicator | OFF | OFF | |
| 07.30 | Analog input 1 offset | 0,0 | 0,0 | % |
| 07.31 | Analog input 2 offset | 0,0 | 0,0 | % |
| 07.33 | Analog output control (terminal B1) | Fr | USEr | |
| 07.34 | IGBT junction temperature | 0 | 27 | °C |
| 07.35 | Drive thermal protection accumulator | 0 | 18 | % |
| 07.36 | Power circuit temperature 3 | 0 | 0 | °C |
| 08.00 | Parameter 0 | 0 | 0 | |
| 08.01 | Terminal B3 digital input/output state | OFF | OFF | |
| 08.02 | Terminal B4 digital input state | OFF | OFF | |
| 08.03 | Terminal B5 digital input state | OFF | OFF | |
| 08.04 | Terminal B6 digital input state | OFF | OFF | |
| 08.05 | Terminal B7 digital input state | OFF | On | |
| 08.07 | Status relay state (terminals T5 & T6) | OFF | OFF | |
| 08.11 | Terminal B3 digital input/output invert | OFF | On | |
| 08.12 | Terminal B4 digital input invert | OFF | OFF | |
| 08.13 | Terminal B5 digital input invert | OFF | OFF | |
| 08.14 | Terminal B6 digital input invert | OFF | OFF | |
| 08.15 | Terminal B7 digital input invert | On | OFF | |
| 08.17 | Status relay invert | OFF | OFF | |
| 08.20 | Digital I/O read word | 0 | 2 | |
| 08.21 | Terminal B3 digital input destination/output source | 10,03 | 10,03 | menu.param |
| 08.22 | Terminal B4 digital input destination | 6,29 | 6,29 | menu.param |
| 08.23 | Terminal B5 digital input destination | 6,30 | 6,30 | menu.param |
| 08.24 | Terminal B6 digital input destination | 6,32 | 6,32 | menu.param |
| 08.25 | Terminal B7 digital input destination | 1,41 | 1,45 | menu.param |
| 08.27 | Status relay source | 10,01 | 9,01 | menu.param |
| 08.31 | Terminal B3 mode select | out | out | |
| 08.35 | Terminal B7 mode select | dig | dig | |
| 08.41 | Digital output control (terminal B3) | n=0 | n=0 | |
| 09.00 | Parameter 0 | 0 | 0 | |
| 09.01 | Logic function 1 output | OFF | OFF | |
| 09.02 | Logic function 2 output | OFF | OFF | |
| 09.03 | Motorised pot output | 0,0 | 0,0 | % |
| 09.04 | Logic function 1 source 1 | 0,00 | 12,01 | menu.param |
| 09.05 | Logic function 1 source 1 invert | OFF | On | |
| 09.06 | Logic function 1 source 2 | 0,00 | 10,01 | menu.param |
| 09.07 | Logic function 1 source 2 invert | OFF | OFF | |
| 09.08 | Logic function 1 output invert | OFF | On | |
| 09.09 | Logic function 1 delay | 0,0 | 0,0 | s |
| 09.10 | Logic function 1 destination | 0,00 | 8,27 | menu.param |
| 09.14 | Logic function 2 source 1 | 0,00 | 0,00 | menu.param |
| 09.15 | Logic function 2 source 1 invert | OFF | OFF | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napęd g³ówny (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---------------------------------------|---------|---------|------------|
| 09.16 | Logic function 2 source 2 | 0,00 | 0,00 | menu.param |
| 09.17 | Logic function 2 source 2 invert | OFF | OFF | |
| 09.18 | Logic function 2 output invert | OFF | OFF | |
| 09.19 | Logic function 2 delay | 0,0 | 0,0 | s |
| 09.20 | Logic function 2 destination | 0,00 | 0,00 | menu.param |
| 09.21 | Motorised pot mode | 2 | 1 | |
| 09.22 | Motorised pot bipolar select | OFF | OFF | |
| 09.23 | Motorised pot rate | 20 | 5 | s |
| 09.24 | Motorised pot scale factor | 1,000 | 1,000 | |
| 09.25 | Motorised pot destination | 0,00 | 0,00 | menu.param |
| 09.26 | Motorised pot up | OFF | OFF | |
| 09.27 | Motorised pot down | OFF | OFF | |
| 09.28 | Motorised pot reset | OFF | OFF | |
| 09.29 | Binary sum ones input | OFF | OFF | |
| 09.30 | Binary sum twos input | OFF | OFF | |
| 09.31 | Binary sum fours input | OFF | OFF | |
| 09.32 | Binary sum output | 0 | 0 | |
| 09.33 | Binary sum destination | 0,00 | 0,00 | menu.param |
| 09.34 | Binary sum offset | 0 | 0 | |
| 10.00 | Parameter 0 | 0 | 0 | |
| 10.01 | Drive healthy | OFF | On | |
| 10.02 | Drive active | OFF | OFF | |
| 10.03 | Zero speed | OFF | On | |
| 10.04 | Running at or below minimum speed | OFF | OFF | |
| 10.05 | Below set speed | OFF | OFF | |
| 10.06 | At speed | OFF | OFF | |
| 10.07 | Above set speed | OFF | OFF | |
| 10.08 | Load reached | OFF | OFF | |
| 10.09 | Drive output is at current limit | OFF | OFF | |
| 10.10 | Regenerating | OFF | OFF | |
| 10.11 | Dynamic brake active | OFF | OFF | |
| 10.12 | Braking resistor alarm | OFF | OFF | |
| 10.13 | Direction commanded | Forward | Forward | |
| 10.14 | Direction running | Forward | Forward | |
| 10.15 | Mains loss detected | OFF | OFF | |
| 10.17 | Overload alarm | OFF | OFF | |
| 10.18 | Drive temperature alarm | OFF | OFF | |
| 10.19 | General drive alarm | OFF | OFF | |
| 10.20 | Last Trip | no trip | SL.dF | |
| 10.21 | Trip 1 | no trip | no trip | |
| 10.22 | Trip 2 | no trip | no trip | |
| 10.23 | Trip 3 | no trip | no trip | |
| 10.24 | Trip 4 | no trip | UP udf | |
| 10.25 | Trip 5 | no trip | UP udf | |
| 10.26 | Trip 6 | no trip | UP udf | |
| 10.27 | Trip 7 | no trip | C.Acc | |
| 10.28 | Trip 8 | no trip | UP udf | |
| 10.29 | Trip 9 | no trip | UP udf | |
| 10.30 | Full power braking time | 0,00 | 0,00 | s |
| 10.31 | Full power braking period | 0,0 | 0,0 | s |
| 10.32 | External trip | OFF | OFF | |
| 10.33 | Drive reset | OFF | OFF | |
| 10.34 | No. of auto-reset attempts | 0 | 0 | |
| 10.35 | Auto reset delay | 1,0 | 1,0 | s |
| 10.36 | Hold drive healthy until last attempt | OFF | OFF | |
| 10.37 | Action on trip detection | 0 | 0 | |
| 10.38 | User trip | 0 | 100 | |
| 10.39 | Braking energy overload accumulator | 0,0 | 0,0 | % |
| 10.40 | Status word | 0 | 5 | |
| 11.00 | Parameter 0 | 0 | 0 | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napęd g³ówny (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---|---------|----------|------------|
| 11.01 | Parameter 61 set-up | 0,00 | 12,04 | menu.param |
| 11.02 | Parameter 62 set-up | 0,00 | 0,00 | menu.param |
| 11.03 | Parameter 63 set-up | 0,00 | 0,00 | menu.param |
| 11.04 | Parameter 64 set-up | 0,00 | 0,00 | menu.param |
| 11.05 | Parameter 65 set-up | 0,00 | 0,00 | menu.param |
| 11.06 | Parameter 66 set-up | 0,00 | 0,00 | menu.param |
| 11.07 | Parameter 67 set-up | 0,00 | 0,00 | menu.param |
| 11.08 | Parameter 68 set-up | 0,00 | 0,00 | menu.param |
| 11.09 | Parameter 69 set-up | 0,00 | 0,00 | menu.param |
| 11.10 | Parameter 70 set-up | 0,00 | 0,00 | menu.param |
| 11.21 | Customer defined scaling | 1,000 | 1,000 | |
| 11.22 | Parameter displayed at power-up | OFF | OFF | |
| 11.23 | Serial comms address | 1 | 1 | |
| 11.24 | Modbus RTU / user serial mode | 1 | 1 | |
| 11.25 | Serial comms baud rate | 19.2 | 19.2 | |
| 11.26 | Silent period extension | 2 | 2 | ms |
| 11.27 | Drive configuration | AI.AV | Pr | |
| 11.29 | Software version | 0,00 | 1,08 | |
| 11.30 | User security code | 0 | 0 | |
| 11.32 | Maximum heavy duty drive current rating | 0,00 | 5,20 | A |
| 11.33 | Drive voltage rating | 200 | 200 | V |
| 11.34 | Software sub-version | 0 | 0 | |
| 11.35 | DSP software version | 0,0 | 3,6 | |
| 11.41 | Status mode timeout | 240 | 240 | s |
| 11.42 | Parameter cloning | no | no | |
| 11.43 | Load defaults | no | no | |
| 11.44 | Security status | L1 | L3 | |
| 11.45 | Select motor 2 parameters | OFF | OFF | |
| 11.46 | Defaults previously loaded | 0 | 1 | |
| 11.47 | PLC ladder program enable | Halt | Run/Clip | |
| 11.48 | PLC ladder program status | 0 | 2 | |
| 11.50 | PLC ladder program maximum scan time | 0 | 0 | ms |
| 12.00 | Parameter 0 | 0 | 0 | |
| 12.01 | Threshold detector 1 output | OFF | OFF | |
| 12.02 | Threshold detector 2 output | OFF | OFF | |
| 12.03 | Threshold detector 1 source | 0,00 | 4,01 | menu.param |
| 12.04 | Threshold detector 1 level | 0,0 | 85,0 | % |
| 12.05 | Threshold detector 1 hysteresis | 0,0 | 4,0 | % |
| 12.06 | Threshold detector 1 output invert | OFF | OFF | |
| 12.07 | Threshold detector 1 destination | 0,00 | 9,04 | menu.param |
| 12.08 | Variable selector 1 source 1 | 0,00 | 0,00 | menu.param |
| 12.09 | Variable selector 1 source 2 | 0,00 | 0,00 | menu.param |
| 12.10 | Variable selector 1 mode | 0 | 0 | |
| 12.11 | Variable selector 1 destination | 0,00 | 0,00 | menu.param |
| 12.12 | Variable selector 1 output | 0,0 | 0,0 | % |
| 12.13 | Variable selector 1 source 1 scaling | 1,000 | 1,000 | |
| 12.14 | Variable selector 1 source 2 scaling | 1,000 | 1,000 | |
| 12.15 | Variable selector 1 control | 0,00 | 0,00 | |
| 12.23 | Threshold detector 2 source | 0,00 | 0,00 | menu.param |
| 12.24 | Threshold detector 2 level | 0,0 | 0,0 | % |
| 12.25 | Threshold detector 2 hysteresis | 0,0 | 0,0 | % |
| 12.26 | Threshold detector 2 output invert | OFF | OFF | |
| 12.27 | Threshold detector 2 destination | 0,00 | 0,00 | menu.param |
| 12.28 | Variable selector 2 source 1 | 0,00 | 0,00 | menu.param |
| 12.29 | Variable selector 2 source 2 | 0,00 | 0,00 | menu.param |
| 12.30 | Variable selector 2 mode | 0 | 0 | |
| 12.31 | Variable selector 2 destination | 0,00 | 0,00 | menu.param |
| 12.32 | Variable selector 2 output | 0,0 | 0,0 | % |
| 12.33 | Variable selector 2 source 1 scaling | 1,000 | 1,000 | |
| 12.34 | Variable selector 2 source 2 scaling | 1,000 | 1,000 | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napęd g³ówny (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---------------------------------|---------|--------|------------|
| 12.35 | Variable selector 2 control | 0,00 | 0,00 | |
| 12.40 | Brake release indicator | OFF | OFF | |
| 12.41 | Brake controller enable | diS | diS | |
| 12.42 | Brake release current threshold | 50 | 50 | % |
| 12.43 | Brake apply current threshold | 10 | 10 | % |
| 12.44 | Brake release frequency | 1,0 | 1,0 | Hz |
| 12.45 | Brake apply frequency | 2,0 | 2,0 | Hz |
| 12.46 | Pre-brake release delay | 1,0 | 1,0 | s |
| 12.47 | Post brake release delay | 1,0 | 1,0 | s |
| 14.00 | Parameter 0 | 0 | 0 | |
| 14.01 | PID output | 0,0 | 0,0 | % |
| 14.02 | PID main reference source | 0,00 | 0,00 | menu.param |
| 14.03 | PID reference source | 0,00 | 0,00 | menu.param |
| 14.04 | PID feedback source | 0,00 | 0,00 | menu.param |
| 14.05 | PID reference source invert | OFF | OFF | |
| 14.06 | PID feedback source invert | OFF | OFF | |
| 14.07 | PID reference slew rate limit | 0,0 | 0,0 | s |
| 14.08 | PID enable | OFF | OFF | |
| 14.09 | Optional PID enable source | 0,00 | 0,00 | menu.param |
| 14.10 | PID proportional gain | 1,000 | 1,000 | |
| 14.11 | PID integral gain | 0,500 | 0,500 | |
| 14.12 | PID derivative gain | 0,000 | 0,000 | |
| 14.13 | PID high limit | 100,0 | 100,0 | % |
| 14.14 | PID lower limit | -100,0 | -100,0 | % |
| 14.15 | PID scaling | 1,000 | 1,000 | |
| 14.16 | PID output destination | 0,00 | 0,00 | menu.param |
| 14.17 | PID hold integrator | OFF | OFF | |
| 14.18 | Select symmetrical limit on PID | OFF | OFF | |
| 14.19 | PID main reference | 0,0 | 0,0 | % |
| 14.20 | PID reference | 0,0 | 0,0 | % |
| 14.21 | PID feedback | 0,0 | 0,0 | % |
| 14.22 | PID error | 0,0 | 0,0 | % |

(Note: Option module parameters are shown at the end of the listing)

| | | | | |
|-------|---|---|--------|--|
| 18.00 | Parameter 0 | 0 | 0 | |
| 18.01 | Application menu 1 power-down saved integer | 0 | 0 | |
| 18.02 | Application menu 1 read-only integer | 0 | 0 | |
| 18.03 | Application menu 1 read-only integer | 0 | 0 | |
| 18.04 | Application menu 1 read-only integer | 0 | 0 | |
| 18.05 | Application menu 1 read-only integer | 0 | 0 | |
| 18.06 | Application menu 1 read-only integer | 0 | 0 | |
| 18.07 | Application menu 1 read-only integer | 0 | 0 | |
| 18.08 | Application menu 1 read-only integer | 0 | 0 | |
| 18.09 | Application menu 1 read-only integer | 0 | 0 | |
| 18.10 | Application menu 1 read-only integer | 0 | 0 | |
| 18.11 | Application menu 1 read-write integer | 0 | 500 | |
| 18.12 | Application menu 1 read-write integer | 0 | -8000 | |
| 18.13 | Application menu 1 read-write integer | 0 | -8000 | |
| 18.14 | Application menu 1 read-write integer | 0 | -19500 | |
| 18.15 | Application menu 1 read-write integer | 0 | -19500 | |
| 18.16 | Application menu 1 read-write integer | 0 | 0 | |
| 18.17 | Application menu 1 read-write integer | 0 | 0 | |
| 18.18 | Application menu 1 read-write integer | 0 | 0 | |
| 18.19 | Application menu 1 read-write integer | 0 | 0 | |
| 18.20 | Application menu 1 read-write integer | 0 | 0 | |
| 18.21 | Application menu 1 read-write integer | 0 | 0 | |
| 18.22 | Application menu 1 read-write integer | 0 | 0 | |
| 18.23 | Application menu 1 read-write integer | 0 | 0 | |
| 18.24 | Application menu 1 read-write integer | 0 | 0 | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
Drive Name: Napęd g³ówny (Commander SK)
Drive Mode: Open loop
Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|--------------------|--|---------|--------|---------|
| 18.25 | Application menu 1 read-write integer | 0 | 0 | |
| 18.26 | Application menu 1 read-write integer | 0 | 0 | |
| 18.27 | Application menu 1 read-write integer | 0 | 0 | |
| 18.28 | Application menu 1 read-write integer | 0 | 0 | |
| 18.29 | Application menu 1 read-write integer | 0 | 0 | |
| 18.30 | Application menu 1 read-write integer | 0 | 0 | |
| 18.31 | Application menu 1 read-write bit | OFF | OFF | |
| 18.32 | Application menu 1 read-write bit | OFF | OFF | |
| 18.33 | Application menu 1 read-write bit | OFF | OFF | |
| 18.34 | Application menu 1 read-write bit | OFF | OFF | |
| 18.35 | Application menu 1 read-write bit | OFF | OFF | |
| 18.36 | Application menu 1 read-write bit | OFF | OFF | |
| 18.37 | Application menu 1 read-write bit | OFF | OFF | |
| 18.38 | Application menu 1 read-write bit | OFF | OFF | |
| 18.39 | Application menu 1 read-write bit | OFF | OFF | |
| 18.40 | Application menu 1 read-write bit | OFF | OFF | |
| 18.41 | Application menu 1 read-write bit | OFF | OFF | |
| 18.42 | Application menu 1 read-write bit | OFF | OFF | |
| 18.43 | Application menu 1 read-write bit | OFF | OFF | |
| 18.44 | Application menu 1 read-write bit | OFF | OFF | |
| 18.45 | Application menu 1 read-write bit | OFF | OFF | |
| 18.46 | Application menu 1 read-write bit | OFF | OFF | |
| 18.47 | Application menu 1 read-write bit | OFF | OFF | |
| 18.48 | Application menu 1 read-write bit | OFF | OFF | |
| 18.49 | Application menu 1 read-write bit | OFF | OFF | |
| 18.50 | Application menu 1 read-write bit | OFF | OFF | |
| 20.00 | Parameter 0 | 0 | 0 | |
| 20.21 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.22 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.23 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.24 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.25 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.26 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.27 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.28 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.29 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.30 | Application menu 2 read-write long integer | 0 | 0 | |
| 21.00 | Parameter 0 | 0 | 0 | |
| 21.01 | Motor 2 maximum set speed | 50,0 | 50,0 | Hz |
| 21.02 | Motor 2 minimum set speed | 0,0 | 0,0 | Hz |
| 21.03 | Motor 2 reference selector | A1.A2 | A1.A2 | |
| 21.04 | Motor 2 acceleration rate | 5,0 | 5,0 | s/100Hz |
| 21.05 | Motor 2 deceleration rate | 10,0 | 10,0 | s/100Hz |
| 21.06 | Motor 2 rated frequency | 50,0 | 50,0 | Hz |
| 21.07 | Motor 2 rated current | 0,00 | 5,20 | A |
| 21.08 | Motor 2 rated full load rpm | 1500 | 1500 | RPM |
| 21.09 | Motor 2 motor rated voltage | 230 | 230 | V |
| 21.10 | Motor 2 motor rated power factor | 0,85 | 0,85 | |
| 21.11 | Motor 2 number of motor poles | Auto | Auto | |
| 21.12 | Motor 2 stator resistance | 0,000 | 0,000 | Ohm |
| 21.13 | Motor 2 voltage offset | 0,0 | 0,0 | V |
| 21.14 | Motor 2 transient inductance (?Ls) | 0,00 | 0,00 | mH |
| 21.15 | Motor 2 active | OFF | OFF | |
| 21.16 | Motor 2 thermal time constant | 89 | 89 | |
| 21.29 | Motor 2 symmetrical current limit | 165,0 | 165,0 | % |
| SM-I/O Lite | | | | |
| 15.00 | Parameter 0 | 0 | 0 | |
| 15.01 | Solutions module identification code | 207 | 207 | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
Drive Name: Napęd g³ówny (Commander SK)
Drive Mode: Open loop
Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|--|---------|--------|-------|
| 15.02 | Solutions Module main software version | 0,00 | 1,02 | |
| 15.03 | Current loop loss indicator | OFF | OFF | |
| 15.04 | Terminal T5 digital input 1 state | OFF | OFF | |
| 15.05 | Terminal T6 digital input 2 state | OFF | OFF | |
| 15.06 | Terminal T7 digital input 3 state | OFF | OFF | |
| 15.07 | Relay 1 state (terminals T21 & T23) | OFF | OFF | |
| 15.14 | Terminal T5 digital input 1 invert | OFF | OFF | |
| 15.15 | Terminal T6 digital input 2 invert | OFF | OFF | |
| 15.16 | Terminal T7 digital input 3 invert | OFF | OFF | |
| 15.17 | Relay invert | OFF | OFF | |
| 15.20 | Digital I/O read word | 0 | 0 | |
| 15.24 | Terminal T5 digital input 1 destination | 0,00 | 0,00 | |
| 15.25 | Terminal T6 digital input 2 destination | 0,00 | 0,00 | |
| 15.26 | Terminal T7 digital input 3 destination | 0,00 | 1,46 | |
| 15.27 | Terminal T21/T23 relay source | 0,00 | 0,00 | |
| 15.38 | Analog input 1 mode (terminal T2) | 0-20 | 0-20 | |
| 15.39 | Analog output 1 mode (terminal T3) | 0-20 | VOIt | |
| 15.40 | Analog input 1 level (terminal T2) | 0,0 | 0,0 | % |
| 15.41 | Analog input 1 scaling (terminal T2) | 1,000 | 1,000 | |
| 15.42 | Analog input 1 invert (terminal T2) | OFF | OFF | |
| 15.43 | Analog input 1 destination (terminal T2) | 0,00 | 0,00 | |
| 15.48 | Analog output 1 source (terminal T3) | 0,00 | 1,23 | |
| 15.49 | Analog output 1 scaling (terminal T3) | 1,000 | 1,000 | |
| 15.50 | Solutions Module error status | 0 | 0 | |
| 15.51 | Solutions Module software sub-version | 0 | 4 | |
| 15.52 | Drive encoder lines / revolution | 1024 | 1024 | |
| 15.53 | Drive encoder revolution counter | 0 | 0 | rev |
| 15.54 | Drive encoder position | 0 | 0 | |
| 15.55 | Drive encoder speed feedback | 0 | 0 | RPM |
| 15.56 | Max. drive encoder reference | 1500 | 1500 | RPM |
| 15.57 | Drive encoder reference level | 0,0 | 0,0 | % |
| 15.58 | Drive encoder reference scaling | 1,000 | 1,000 | |
| 15.59 | Drive encoder reference destination | 0,00 | 0,00 | |
| 15.60 | Encoder reset | 0 | 0 | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak

Drive Name: Napêd transporter (Commander SK)

Drive Mode: Open loop

Drive Address: 1

Menu 0: Basic setup

| Parameter | Description | Default | Memory | Units |
|-----------|---------------------------------------|---------|---------|------------|
| 00.01 | Minimum set speed | 0,0 | 5,0 | Hz |
| 00.02 | Maximum set speed | 50,0 | 60,0 | Hz |
| 00.03 | Acceleration rate 1 | 5,0 | 10,0 | s/100 Hz |
| 00.04 | Deceleration rate 1 | 10,0 | 0,5 | s/100 Hz |
| 00.05 | Drive configuration | AI.AV | E.Pot | |
| 00.06 | Motor rated current | 0,00 | 1,65 | A |
| 00.07 | Motor rated full load rpm | 1500 | 1400 | RPM |
| 00.08 | Motor rated voltage | 230 | 230 | V |
| 00.09 | Motor rated power factor | 0,85 | 0,85 | |
| 00.10 | Security status | L1 | L3 | |
| 00.11 | Start / stop logic select | 0 | 0 | |
| 00.12 | Brake controller enable | diS | diS | |
| 00.15 | Jog reference | 1,5 | 0,0 | Hz |
| 00.16 | Analog input 1 mode (terminal T2) | 4-.20 | VoLt | |
| 00.17 | Allow negative references | OFF | OFF | |
| 00.18 | Preset speed 1 | 0,0 | 39,7 | Hz |
| 00.19 | Preset speed 2 | 0,0 | 0,0 | Hz |
| 00.20 | Preset speed 3 | 0,0 | 0,0 | Hz |
| 00.21 | Preset speed 4 | 0,0 | 0,0 | Hz |
| 00.22 | Load display units | Ld | Ld | |
| 00.23 | Speed display units | Fr | Fr | |
| 00.24 | Customer defined scaling | 1,000 | 1,000 | |
| 00.25 | User security code | 0 | 0 | |
| 00.27 | Power-up keypad reference | 0 | 0 | |
| 00.28 | Parameter cloning | no | no | |
| 00.29 | Load defaults | no | no | |
| 00.30 | Ramp mode select | Std | Std | |
| 00.31 | Stopping mode select | 1 | 2 | |
| 00.32 | Dynamic V to f select | OFF | OFF | |
| 00.33 | Catch a spinning motor select | 0 | 0 | |
| 00.34 | Terminal B7 mode select | dig | dig | |
| 00.35 | Digital output control (terminal B3) | n=0 | USEr | |
| 00.36 | Analog output control (terminal B1) | Fr | USEr | |
| 00.37 | Maximum switching frequency | 3 | 3 | kHz |
| 00.38 | Auto-tune | 0 | 0 | |
| 00.39 | Motor rated frequency | 50,0 | 50,0 | Hz |
| 00.40 | Number of motor poles | Auto | Auto | |
| 00.41 | Voltage mode select | Ur I | Ur I | |
| 00.42 | Low frequency voltage boost | 3,0 | 3,0 | % |
| 00.43 | Serial comms baud rate | 19.2 | 19.2 | |
| 00.44 | Serial comms address | 1 | 1 | |
| 00.45 | Software version | 0,00 | 1,08 | |
| 00.46 | Brake release current threshold | 50 | 50 | % |
| 00.47 | Brake apply current threshold | 10 | 10 | % |
| 00.48 | Brake release frequency | 1,0 | 1,0 | Hz |
| 00.49 | Brake apply frequency | 2,0 | 2,0 | Hz |
| 00.50 | Pre-brake release delay | 1,0 | 1,0 | s |
| 00.51 | Post brake release delay | 1,0 | 1,0 | s |
| 00.55 | Last Trip | no trip | no trip | |
| 00.56 | Trip 1 | no trip | no trip | |
| 00.57 | Trip 2 | no trip | no trip | |
| 00.58 | Trip 3 | no trip | no trip | |
| 00.59 | PLC ladder program enable | Halt | Halt | |
| 00.60 | PLC ladder program status | 0 | 3 | |
| 00.61 | Threshold detector 1 level | 0,0 | 25,0 | % |
| 00.62 | Terminal B5 digital input destination | 6,30 | 6,30 | menu.param |
| 00.63 | Terminal B6 digital input destination | 6,32 | 9,26 | menu.param |
| 00.64 | Terminal B7 digital input destination | 1,41 | 9,27 | menu.param |
| 00.71 | Parameter 61 set-up | 0,00 | 12,04 | menu.param |
| 00.72 | Parameter 62 set-up | 0,00 | 8,23 | menu.param |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak

Drive Name: Napêd transportera (Commander SK)

Drive Mode: Open loop

Drive Address: 1

Menu 0: Basic setup

| Parameter | Description | Default | Memory | Units |
|-----------|------------------------------------|---------|--------|------------|
| 00.73 | Parameter 63 set-up | 0,00 | 8,24 | menu.param |
| 00.74 | Parameter 64 set-up | 0,00 | 8,25 | menu.param |
| 00.75 | Parameter 65 set-up | 0,00 | 0,00 | menu.param |
| 00.76 | Parameter 66 set-up | 0,00 | 0,00 | menu.param |
| 00.77 | Parameter 67 set-up | 0,00 | 0,00 | menu.param |
| 00.78 | Parameter 68 set-up | 0,00 | 0,00 | menu.param |
| 00.79 | Parameter 69 set-up | 0,00 | 0,00 | menu.param |
| 00.80 | Parameter 70 set-up | 0,00 | 0,00 | menu.param |
| 00.81 | Frequency reference selected | 0,0 | 39,7 | Hz |
| 00.82 | Pre ramp reference | 0,0 | 0,0 | Hz |
| 00.83 | Post ramp reference | 0,0 | 0,0 | Hz |
| 00.84 | DC bus voltage | 0 | 299 | V |
| 00.85 | Motor frequency | 0,0 | 0,0 | Hz |
| 00.86 | Motor voltage | 0 | 12 | V |
| 00.87 | Motor speed | 0 | 0 | RPM |
| 00.88 | Current magnitude (motor current) | 0,00 | 0,76 | A |
| 00.89 | Motor active current | 0,00 | -0,15 | A |
| 00.90 | Digital I/O read word | 0 | 3 | |
| 00.91 | Reference enabled indicator | OFF | On | |
| 00.92 | Reverse selected indicator | OFF | On | |
| 00.93 | Jog selected indicator | OFF | On | |
| 00.94 | Analog input 1 level (terminal T2) | 0,0 | 0,0 | % |
| 00.95 | Analog input 2 level (terminal T4) | 0,0 | 100,0 | % |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napéd transporter (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|-------------------------------------|---------|--------|-----------------------|
| 01.00 | Parameter 0 | 0 | 0 | |
| 01.01 | Frequency reference selected | 0,0 | 39,7 | Hz |
| 01.02 | Pre skip filter reference | 0,0 | 0,0 | Hz |
| 01.03 | Pre ramp reference | 0,0 | 0,0 | Hz |
| 01.04 | Reference offset | 0,0 | 0,0 | Hz |
| 01.05 | Jog reference | 1,5 | 0,0 | Hz |
| 01.06 | Maximum set speed | 50,0 | 60,0 | Hz |
| 01.07 | Minimum set speed | 0,0 | 5,0 | Hz |
| 01.09 | Reference offset select | OFF | OFF | |
| 01.10 | Allow negative references | OFF | OFF | |
| 01.11 | Reference enabled indicator | OFF | On | |
| 01.12 | Reverse selected indicator | OFF | On | |
| 01.13 | Jog selected indicator | OFF | On | |
| 01.14 | Reference selector | A1.A2 | Pr | |
| 01.15 | Preset speed selector | 0 | 0 | |
| 01.17 | Keypad reference | 0,0 | 5,0 | Hz |
| 01.18 | Precision reference coarse | 0,0 | 0,0 | Hz |
| 01.19 | Precision reference fine | 0,000 | 0,000 | Hz |
| 01.20 | Precision reference update disable | OFF | OFF | |
| 01.21 | Preset speed 1 | 0,0 | 39,7 | Hz |
| 01.22 | Preset speed 2 | 0,0 | 0,0 | Hz |
| 01.23 | Preset speed 3 | 0,0 | 0,0 | Hz |
| 01.24 | Preset speed 4 | 0,0 | 0,0 | Hz |
| 01.25 | Preset speed 5 | 0,0 | 0,0 | Hz |
| 01.26 | Preset speed 6 | 0,0 | 0,0 | Hz |
| 01.27 | Preset speed 7 | 0,0 | 0,0 | Hz |
| 01.28 | Preset speed 8 | 0,0 | 0,0 | Hz |
| 01.29 | Skip reference 1 | 0,0 | 0,0 | Hz |
| 01.30 | Skip reference band 1 | 0,5 | 0,5 | Hz |
| 01.31 | Skip reference 2 | 0,0 | 0,0 | Hz |
| 01.32 | Skip reference band 2 | 0,5 | 0,5 | Hz |
| 01.33 | Skip reference 3 | 0,0 | 0,0 | Hz |
| 01.34 | Skip reference band 3 | 0,5 | 0,5 | Hz |
| 01.35 | Reference in rejection zone | OFF | OFF | |
| 01.36 | Analog reference 1 | 0,0 | 5,0 | Hz |
| 01.37 | Analog reference 2 | 0,0 | 0,0 | Hz |
| 01.38 | Percentage trim | 0,0 | 0,0 | % |
| 01.41 | Analog reference 2 select | OFF | OFF | |
| 01.42 | Preset reference select | OFF | OFF | |
| 01.43 | Keypad reference select | OFF | OFF | |
| 01.44 | Precision reference select | OFF | OFF | |
| 01.45 | Preset select bit 0 | OFF | OFF | |
| 01.46 | Preset select bit 1 | OFF | OFF | |
| 01.47 | Preset select bit 2 | OFF | OFF | |
| 01.49 | Reference selected indicator | 0 | 3 | |
| 01.50 | Preset reference selected indicator | 0 | 1 | |
| 01.51 | Power-up keypad reference | 0 | 0 | |
| 02.00 | Parameter 0 | 0 | 0 | |
| 02.01 | Post ramp reference | 0,0 | 0,0 | Hz |
| 02.03 | Ramp hold | OFF | OFF | |
| 02.04 | Ramp mode select | Std | Std | |
| 02.06 | S ramp enable | OFF | OFF | |
| 02.07 | S ramp acceleration limit | 3,1 | 3,1 | s ² /100Hz |
| 02.08 | Standard ramp voltage | 375 | 375 | V |
| 02.10 | Acceleration rate selector | 0 | 0 | |
| 02.11 | Acceleration rate 1 | 5,0 | 10,0 | s/100 Hz |
| 02.12 | Acceleration rate 2 | 5,0 | 5,0 | s/100 Hz |
| 02.13 | Acceleration rate 3 | 5,0 | 5,0 | s/100 Hz |
| 02.14 | Acceleration rate 4 | 5,0 | 5,0 | s/100 Hz |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napéd transporter (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|--|----------|----------|----------|
| 02.15 | Acceleration rate 5 | 5,0 | 5,0 | s/100 Hz |
| 02.16 | Acceleration rate 6 | 5,0 | 5,0 | s/100 Hz |
| 02.17 | Acceleration rate 7 | 5,0 | 5,0 | s/100 Hz |
| 02.18 | Acceleration rate 8 | 5,0 | 5,0 | s/100 Hz |
| 02.19 | Jog acceleration rate | 0,2 | 0,2 | s/100 Hz |
| 02.20 | Deceleration rate selector | 0 | 0 | |
| 02.21 | Deceleration rate 1 | 10,0 | 0,5 | s/100 Hz |
| 02.22 | Deceleration rate 2 | 10,0 | 10,0 | s/100 Hz |
| 02.23 | Deceleration rate 3 | 10,0 | 10,0 | s/100 Hz |
| 02.24 | Deceleration rate 4 | 10,0 | 10,0 | s/100 Hz |
| 02.25 | Deceleration rate 5 | 10,0 | 10,0 | s/100 Hz |
| 02.26 | Deceleration rate 6 | 10,0 | 10,0 | s/100 Hz |
| 02.27 | Deceleration rate 7 | 10,0 | 10,0 | s/100 Hz |
| 02.28 | Deceleration rate 8 | 10,0 | 10,0 | s/100 Hz |
| 02.29 | Jog deceleration rate | 0,2 | 0,2 | s/100 Hz |
| 02.30 | Acceleration selected indicator | 0 | 1 | |
| 02.31 | Deceleration selected indicator | 0 | 1 | |
| 02.32 | Acceleration select bit 0 | OFF | OFF | |
| 02.33 | Acceleration select bit 1 | OFF | OFF | |
| 02.34 | Acceleration select bit 2 | OFF | OFF | |
| 02.35 | Deceleration select bit 0 | OFF | OFF | |
| 02.36 | Deceleration select bit 1 | OFF | OFF | |
| 02.37 | Deceleration select bit 2 | OFF | OFF | |
| 02.39 | Ramp rate units | s/100 Hz | s/100 Hz | |
| 03.00 | Parameter 0 | 0 | 0 | |
| 03.05 | Zero speed threshold | 1,0 | 1,0 | Hz |
| 03.06 | At speed window | 1,0 | 1,0 | Hz |
| 03.17 | Frequency output or PWM output scaling | 1,000 | 1,000 | |
| 03.18 | Maximum output frequency | 5 | 5 | kHz |
| 03.22 | Hard frequency reference | 0,0 | 0,0 | |
| 03.23 | Hard frequency reference selector | OFF | OFF | |
| 03.29 | Position | 0 | 0 | |
| 03.32 | Position counter reset | OFF | OFF | |
| 03.33 | Position scaling numerator | 1,000 | 1,000 | |
| 03.34 | Position scaling denominator | 1,0 | 1,0 | |
| 03.43 | Maximum reference frequency | 10,0 | 10,0 | kHz |
| 03.44 | Frequency reference scaling | 1,000 | 1,000 | |
| 03.45 | Frequency reference | 0,0 | 0,0 | % |
| 04.00 | Parameter 0 | 0 | 0 | |
| 04.01 | Current magnitude (motor current) | 0,00 | 0,76 | A |
| 04.02 | Motor active current | 0,00 | -0,15 | A |
| 04.04 | Current demand | 0,0 | 0,0 | % |
| 04.07 | Symmetrical current limit | 165,0 | 165,0 | % |
| 04.08 | Torque reference | 0,0 | 0,0 | % |
| 04.11 | Torque mode selector | Speed | Speed | |
| 04.13 | Current controller Kp gain | 20 | 20 | |
| 04.14 | Current controller Ki gain | 40 | 40 | |
| 04.15 | Motor thermal time constant | 89 | 89 | |
| 04.16 | Motor thermal protection mode | OFF | OFF | |
| 04.17 | Reactive current | 0,00 | 0,67 | A |
| 04.18 | Overriding current limit | 0,0 | 165,0 | % |
| 04.19 | Motor overload accumulator | 0,0 | 13,9 | % |
| 04.20 | Percentage load | 0,0 | -2,5 | % |
| 04.21 | Load display units | Ld | Ld | |
| 04.24 | User current maximum scaling | 165,0 | 165,0 | % |
| 04.25 | Low speed thermal protection mode | OFF | OFF | |
| 04.26 | Percentage torque | 0,0 | -2,5 | % |
| 05.00 | Parameter 0 | 0 | 0 | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napéd transporterá (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---|---------|--------|---------|
| 05.01 | Motor frequency | 0,0 | 0,0 | Hz |
| 05.02 | Motor voltage | 0 | 12 | V |
| 05.03 | Output power | 0,00 | 0,01 | kW |
| 05.04 | Motor speed | 0 | 0 | RPM |
| 05.05 | DC bus voltage | 0 | 299 | V |
| 05.06 | Motor rated frequency | 50,0 | 50,0 | Hz |
| 05.07 | Motor rated current | 0,00 | 1,65 | A |
| 05.08 | Motor rated full load rpm | 1500 | 1400 | RPM |
| 05.09 | Motor rated voltage | 230 | 230 | V |
| 05.10 | Motor rated power factor | 0,85 | 0,85 | |
| 05.11 | Number of motor poles | Auto | Auto | |
| 05.12 | Auto-tune | 0 | 0 | |
| 05.13 | Dynamic V to f select | OFF | OFF | |
| 05.14 | Voltage mode select | Ur I | Ur I | |
| 05.15 | Low frequency voltage boost | 3,0 | 3,0 | % |
| 05.17 | Stator resistance | 0,000 | 9,570 | Ohm |
| 05.18 | Maximum switching frequency | 3 | 3 | kHz |
| 05.19 | High stability space vector modulation | OFF | OFF | |
| 05.20 | Over modulation enable | OFF | OFF | |
| 05.23 | Voltage offset | 0,0 | 1,4 | V |
| 05.24 | Transient inductance (?Ls) | 0,00 | 0,00 | mH |
| 05.27 | Enable slip compensation | On | On | |
| 05.34 | Speed display units | Fr | Fr | |
| 05.35 | Disable auto switching frequency change | OFF | OFF | |
| 05.37 | Actual switching frequency | 3 | 3 | kHz |
| 05.50 | Security unlock | 0 | 0 | |
| 06.00 | Parameter 0 | 0 | 0 | |
| 06.01 | Stopping mode select | 1 | 2 | |
| 06.03 | Mains loss mode | diS | diS | |
| 06.04 | Start / stop logic select | 0 | 0 | |
| 06.06 | Injection braking level | 100,0 | 100,0 | % |
| 06.07 | Injection braking time | 1,0 | 0,1 | s |
| 06.09 | Catch a spinning motor select | 0 | 0 | |
| 06.10 | Low DC bus operation | OFF | OFF | |
| 06.11 | Remote LED keypad function key status | OFF | OFF | |
| 06.12 | Enable stop key | OFF | OFF | |
| 06.13 | Function key mode | 0 | 0 | |
| 06.14 | Disable auto reset on enable | OFF | OFF | |
| 06.15 | Drive enable | On | On | |
| 06.16 | Electricity cost per kWh | 0,0 | 0,0 | L / kWh |
| 06.17 | Reset energy meter | OFF | OFF | |
| 06.22 | Run time log: years.days | 0,000 | 0,000 | y.ddd |
| 06.23 | Run time log: hours.minutes | 0,00 | 0,04 | hh.mm |
| 06.24 | Energy meter: MWh | 0,0 | 0,0 | MWh |
| 06.25 | Energy meter: kWh | 0,00 | 0,00 | kWh |
| 06.26 | Running cost | 0 | 0 | |
| 06.29 | Hardware enable | On | On | |
| 06.30 | Sequencing bit: Run forward | OFF | OFF | |
| 06.31 | Sequencing bit: Jog forward | OFF | OFF | |
| 06.32 | Sequencing bit: Run reverse | OFF | OFF | |
| 06.33 | Sequencing bit: Fwd /Rev | OFF | OFF | |
| 06.34 | Sequencing bit: Run | OFF | OFF | |
| 06.35 | Forward limit switch | OFF | OFF | |
| 06.36 | Reverse limit switch | OFF | OFF | |
| 06.37 | Sequencing bit: Jog reverse | OFF | On | |
| 06.39 | Sequencing bit: Not stop | OFF | OFF | |
| 06.40 | Enable sequencer latching | OFF | OFF | |
| 06.42 | Control word | 0 | 0 | |
| 06.43 | Control word enable | OFF | OFF | |
| 06.45 | Force cooling fan to run at full speed | OFF | OFF | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napéd transporter (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---|---------|--------|------------|
| 07.00 | Parameter 0 | 0 | 0 | |
| 07.01 | Analog input 1 level (terminal T2) | 0,0 | 0,0 | % |
| 07.02 | Analog input 2 level (terminal T4) | 0,0 | 100,0 | % |
| 07.04 | Heatsink temperature | 0 | 24 | °C |
| 07.05 | Power circuit temperature 2 | 0 | 0 | °C |
| 07.06 | Analog input 1 mode (terminal T2) | 4-.20 | VoLt | |
| 07.08 | Analog input 1 scaling | 1,000 | 1,000 | |
| 07.09 | Analog input 1 invert | OFF | OFF | |
| 07.10 | Analog input 1 destination | 1,36 | 1,36 | menu.param |
| 07.11 | Analog input 2 mode (terminal T4) | VoLt | dig | |
| 07.12 | Analog input 2 scaling | 1,000 | 1,000 | |
| 07.13 | Analog input 2 invert | OFF | OFF | |
| 07.14 | Analog input 2 destination | 1,37 | 6,37 | menu.param |
| 07.19 | Analog output 1 source | 2,01 | 1,21 | menu.param |
| 07.20 | Analog output 1 scaling | 1,000 | 1,000 | |
| 07.28 | Current loop loss indicator | OFF | OFF | |
| 07.30 | Analog input 1 offset | 0,0 | 0,0 | % |
| 07.31 | Analog input 2 offset | 0,0 | 0,0 | % |
| 07.33 | Analog output control (terminal B1) | Fr | USEr | |
| 07.34 | IGBT junction temperature | 0 | 27 | °C |
| 07.35 | Drive thermal protection accumulator | 0 | 16 | % |
| 07.36 | Power circuit temperature 3 | 0 | 0 | °C |
| 08.00 | Parameter 0 | 0 | 0 | |
| 08.01 | Terminal B3 digital input/output state | OFF | On | |
| 08.02 | Terminal B4 digital input state | OFF | On | |
| 08.03 | Terminal B5 digital input state | OFF | OFF | |
| 08.04 | Terminal B6 digital input state | OFF | OFF | |
| 08.05 | Terminal B7 digital input state | OFF | OFF | |
| 08.07 | Status relay state (terminals T5 & T6) | OFF | OFF | |
| 08.11 | Terminal B3 digital input/output invert | OFF | OFF | |
| 08.12 | Terminal B4 digital input invert | OFF | OFF | |
| 08.13 | Terminal B5 digital input invert | OFF | OFF | |
| 08.14 | Terminal B6 digital input invert | OFF | OFF | |
| 08.15 | Terminal B7 digital input invert | On | OFF | |
| 08.17 | Status relay invert | OFF | OFF | |
| 08.20 | Digital I/O read word | 0 | 3 | |
| 08.21 | Terminal B3 digital input destination/output source | 10,03 | 10,03 | menu.param |
| 08.22 | Terminal B4 digital input destination | 6,29 | 6,29 | menu.param |
| 08.23 | Terminal B5 digital input destination | 6,30 | 6,30 | menu.param |
| 08.24 | Terminal B6 digital input destination | 6,32 | 9,26 | menu.param |
| 08.25 | Terminal B7 digital input destination | 1,41 | 9,27 | menu.param |
| 08.27 | Status relay source | 10,01 | 9,01 | menu.param |
| 08.31 | Terminal B3 mode select | out | out | |
| 08.35 | Terminal B7 mode select | dig | dig | |
| 08.41 | Digital output control (terminal B3) | n=0 | USEr | |
| 09.00 | Parameter 0 | 0 | 0 | |
| 09.01 | Logic function 1 output | OFF | OFF | |
| 09.02 | Logic function 2 output | OFF | OFF | |
| 09.03 | Motorised pot output | 0,0 | 41,8 | % |
| 09.04 | Logic function 1 source 1 | 0,00 | 12,01 | menu.param |
| 09.05 | Logic function 1 source 1 invert | OFF | On | |
| 09.06 | Logic function 1 source 2 | 0,00 | 10,01 | menu.param |
| 09.07 | Logic function 1 source 2 invert | OFF | OFF | |
| 09.08 | Logic function 1 output invert | OFF | On | |
| 09.09 | Logic function 1 delay | 0,0 | 0,0 | s |
| 09.10 | Logic function 1 destination | 0,00 | 8,27 | menu.param |
| 09.14 | Logic function 2 source 1 | 0,00 | 0,00 | menu.param |
| 09.15 | Logic function 2 source 1 invert | OFF | OFF | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napéd transporter (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---------------------------------------|---------|---------|------------|
| 09.16 | Logic function 2 source 2 | 0,00 | 0,00 | menu.param |
| 09.17 | Logic function 2 source 2 invert | OFF | OFF | |
| 09.18 | Logic function 2 output invert | OFF | OFF | |
| 09.19 | Logic function 2 delay | 0,0 | 0,0 | s |
| 09.20 | Logic function 2 destination | 0,00 | 0,00 | menu.param |
| 09.21 | Motorised pot mode | 2 | 1 | |
| 09.22 | Motorised pot bipolar select | OFF | OFF | |
| 09.23 | Motorised pot rate | 20 | 20 | s |
| 09.24 | Motorised pot scale factor | 1,000 | 1,000 | |
| 09.25 | Motorised pot destination | 0,00 | 1,21 | menu.param |
| 09.26 | Motorised pot up | OFF | OFF | |
| 09.27 | Motorised pot down | OFF | OFF | |
| 09.28 | Motorised pot reset | OFF | OFF | |
| 09.29 | Binary sum ones input | OFF | OFF | |
| 09.30 | Binary sum twos input | OFF | OFF | |
| 09.31 | Binary sum fours input | OFF | OFF | |
| 09.32 | Binary sum output | 0 | 0 | |
| 09.33 | Binary sum destination | 0,00 | 0,00 | menu.param |
| 09.34 | Binary sum offset | 0 | 0 | |
| 10.00 | Parameter 0 | 0 | 0 | |
| 10.01 | Drive healthy | OFF | On | |
| 10.02 | Drive active | OFF | On | |
| 10.03 | Zero speed | OFF | On | |
| 10.04 | Running at or below minimum speed | OFF | On | |
| 10.05 | Below set speed | OFF | OFF | |
| 10.06 | At speed | OFF | On | |
| 10.07 | Above set speed | OFF | OFF | |
| 10.08 | Load reached | OFF | OFF | |
| 10.09 | Drive output is at current limit | OFF | OFF | |
| 10.10 | Regenerating | OFF | OFF | |
| 10.11 | Dynamic brake active | OFF | OFF | |
| 10.12 | Braking resistor alarm | OFF | OFF | |
| 10.13 | Direction commanded | Forward | Forward | |
| 10.14 | Direction running | Forward | Forward | |
| 10.15 | Mains loss detected | OFF | OFF | |
| 10.17 | Overload alarm | OFF | OFF | |
| 10.18 | Drive temperature alarm | OFF | OFF | |
| 10.19 | General drive alarm | OFF | OFF | |
| 10.20 | Last Trip | no trip | no trip | |
| 10.21 | Trip 1 | no trip | no trip | |
| 10.22 | Trip 2 | no trip | no trip | |
| 10.23 | Trip 3 | no trip | no trip | |
| 10.24 | Trip 4 | no trip | no trip | |
| 10.25 | Trip 5 | no trip | no trip | |
| 10.26 | Trip 6 | no trip | no trip | |
| 10.27 | Trip 7 | no trip | no trip | |
| 10.28 | Trip 8 | no trip | no trip | |
| 10.29 | Trip 9 | no trip | no trip | |
| 10.30 | Full power braking time | 0,00 | 0,00 | s |
| 10.31 | Full power braking period | 0,0 | 0,0 | s |
| 10.32 | External trip | OFF | OFF | |
| 10.33 | Drive reset | OFF | OFF | |
| 10.34 | No. of auto-reset attempts | 0 | 0 | |
| 10.35 | Auto reset delay | 1,0 | 1,0 | s |
| 10.36 | Hold drive healthy until last attempt | OFF | OFF | |
| 10.37 | Action on trip detection | 0 | 0 | |
| 10.38 | User trip | 0 | 0 | |
| 10.39 | Braking energy overload accumulator | 0,0 | 0,0 | % |
| 10.40 | Status word | 0 | 47 | |
| 11.00 | Parameter 0 | 0 | 0 | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napéd transporterá (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---|---------|--------|------------|
| 11.01 | Parameter 61 set-up | 0,00 | 12,04 | menu.param |
| 11.02 | Parameter 62 set-up | 0,00 | 8,23 | menu.param |
| 11.03 | Parameter 63 set-up | 0,00 | 8,24 | menu.param |
| 11.04 | Parameter 64 set-up | 0,00 | 8,25 | menu.param |
| 11.05 | Parameter 65 set-up | 0,00 | 0,00 | menu.param |
| 11.06 | Parameter 66 set-up | 0,00 | 0,00 | menu.param |
| 11.07 | Parameter 67 set-up | 0,00 | 0,00 | menu.param |
| 11.08 | Parameter 68 set-up | 0,00 | 0,00 | menu.param |
| 11.09 | Parameter 69 set-up | 0,00 | 0,00 | menu.param |
| 11.10 | Parameter 70 set-up | 0,00 | 0,00 | menu.param |
| 11.21 | Customer defined scaling | 1,000 | 1,000 | |
| 11.22 | Parameter displayed at power-up | OFF | OFF | |
| 11.23 | Serial comms address | 1 | 1 | |
| 11.24 | Modbus RTU / user serial mode | 1 | 1 | |
| 11.25 | Serial comms baud rate | 19.2 | 19.2 | |
| 11.26 | Silent period extension | 2 | 2 | ms |
| 11.27 | Drive configuration | AI.AV | E.Pot | |
| 11.29 | Software version | 0,00 | 1,08 | |
| 11.30 | User security code | 0 | 0 | |
| 11.32 | Maximum heavy duty drive current rating | 0,00 | 5,20 | A |
| 11.33 | Drive voltage rating | 200 | 200 | V |
| 11.34 | Software sub-version | 0 | 0 | |
| 11.35 | DSP software version | 0,0 | 3,6 | |
| 11.41 | Status mode timeout | 240 | 240 | s |
| 11.42 | Parameter cloning | no | no | |
| 11.43 | Load defaults | no | no | |
| 11.44 | Security status | L1 | L3 | |
| 11.45 | Select motor 2 parameters | OFF | OFF | |
| 11.46 | Defaults previously loaded | 0 | 1 | |
| 11.47 | PLC ladder program enable | Halt | Halt | |
| 11.48 | PLC ladder program status | 0 | 3 | |
| 11.50 | PLC ladder program maximum scan time | 0 | 0 | ms |
| 12.00 | Parameter 0 | 0 | 0 | |
| 12.01 | Threshold detector 1 output | OFF | OFF | |
| 12.02 | Threshold detector 2 output | OFF | OFF | |
| 12.03 | Threshold detector 1 source | 0,00 | 4,01 | menu.param |
| 12.04 | Threshold detector 1 level | 0,0 | 25,0 | % |
| 12.05 | Threshold detector 1 hysteresis | 0,0 | 3,0 | % |
| 12.06 | Threshold detector 1 output invert | OFF | OFF | |
| 12.07 | Threshold detector 1 destination | 0,00 | 9,04 | menu.param |
| 12.08 | Variable selector 1 source 1 | 0,00 | 0,00 | menu.param |
| 12.09 | Variable selector 1 source 2 | 0,00 | 0,00 | menu.param |
| 12.10 | Variable selector 1 mode | 0 | 0 | |
| 12.11 | Variable selector 1 destination | 0,00 | 0,00 | menu.param |
| 12.12 | Variable selector 1 output | 0,0 | 0,0 | % |
| 12.13 | Variable selector 1 source 1 scaling | 1,000 | 1,000 | |
| 12.14 | Variable selector 1 source 2 scaling | 1,000 | 1,000 | |
| 12.15 | Variable selector 1 control | 0,00 | 0,00 | |
| 12.23 | Threshold detector 2 source | 0,00 | 0,00 | menu.param |
| 12.24 | Threshold detector 2 level | 0,0 | 0,0 | % |
| 12.25 | Threshold detector 2 hysteresis | 0,0 | 0,0 | % |
| 12.26 | Threshold detector 2 output invert | OFF | OFF | |
| 12.27 | Threshold detector 2 destination | 0,00 | 0,00 | menu.param |
| 12.28 | Variable selector 2 source 1 | 0,00 | 0,00 | menu.param |
| 12.29 | Variable selector 2 source 2 | 0,00 | 0,00 | menu.param |
| 12.30 | Variable selector 2 mode | 0 | 0 | |
| 12.31 | Variable selector 2 destination | 0,00 | 0,00 | menu.param |
| 12.32 | Variable selector 2 output | 0,0 | 0,0 | % |
| 12.33 | Variable selector 2 source 1 scaling | 1,000 | 1,000 | |
| 12.34 | Variable selector 2 source 2 scaling | 1,000 | 1,000 | |

Parameter Listing

Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napéd transporter (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|---------------------------------|---------|--------|------------|
| 12.35 | Variable selector 2 control | 0,00 | 0,00 | |
| 12.40 | Brake release indicator | OFF | OFF | |
| 12.41 | Brake controller enable | diS | diS | |
| 12.42 | Brake release current threshold | 50 | 50 | % |
| 12.43 | Brake apply current threshold | 10 | 10 | % |
| 12.44 | Brake release frequency | 1,0 | 1,0 | Hz |
| 12.45 | Brake apply frequency | 2,0 | 2,0 | Hz |
| 12.46 | Pre-brake release delay | 1,0 | 1,0 | s |
| 12.47 | Post brake release delay | 1,0 | 1,0 | s |
| 14.00 | Parameter 0 | 0 | 0 | |
| 14.01 | PID output | 0,0 | 0,0 | % |
| 14.02 | PID main reference source | 0,00 | 0,00 | menu.param |
| 14.03 | PID reference source | 0,00 | 0,00 | menu.param |
| 14.04 | PID feedback source | 0,00 | 0,00 | menu.param |
| 14.05 | PID reference source invert | OFF | OFF | |
| 14.06 | PID feedback source invert | OFF | OFF | |
| 14.07 | PID reference slew rate limit | 0,0 | 0,0 | s |
| 14.08 | PID enable | OFF | OFF | |
| 14.09 | Optional PID enable source | 0,00 | 0,00 | menu.param |
| 14.10 | PID proportional gain | 1,000 | 1,000 | |
| 14.11 | PID integral gain | 0,500 | 0,500 | |
| 14.12 | PID derivative gain | 0,000 | 0,000 | |
| 14.13 | PID high limit | 100,0 | 100,0 | % |
| 14.14 | PID lower limit | -100,0 | -100,0 | % |
| 14.15 | PID scaling | 1,000 | 1,000 | |
| 14.16 | PID output destination | 0,00 | 0,00 | menu.param |
| 14.17 | PID hold integrator | OFF | OFF | |
| 14.18 | Select symmetrical limit on PID | OFF | OFF | |
| 14.19 | PID main reference | 0,0 | 0,0 | % |
| 14.20 | PID reference | 0,0 | 0,0 | % |
| 14.21 | PID feedback | 0,0 | 0,0 | % |
| 14.22 | PID error | 0,0 | 0,0 | % |

(Note: Option module parameters are shown at the end of the listing)

| | | | | |
|-------|---|---|---|--|
| 18.00 | Parameter 0 | 0 | 0 | |
| 18.01 | Application menu 1 power-down saved integer | 0 | 0 | |
| 18.02 | Application menu 1 read-only integer | 0 | 0 | |
| 18.03 | Application menu 1 read-only integer | 0 | 0 | |
| 18.04 | Application menu 1 read-only integer | 0 | 0 | |
| 18.05 | Application menu 1 read-only integer | 0 | 0 | |
| 18.06 | Application menu 1 read-only integer | 0 | 0 | |
| 18.07 | Application menu 1 read-only integer | 0 | 0 | |
| 18.08 | Application menu 1 read-only integer | 0 | 0 | |
| 18.09 | Application menu 1 read-only integer | 0 | 0 | |
| 18.10 | Application menu 1 read-only integer | 0 | 0 | |
| 18.11 | Application menu 1 read-write integer | 0 | 0 | |
| 18.12 | Application menu 1 read-write integer | 0 | 0 | |
| 18.13 | Application menu 1 read-write integer | 0 | 0 | |
| 18.14 | Application menu 1 read-write integer | 0 | 0 | |
| 18.15 | Application menu 1 read-write integer | 0 | 0 | |
| 18.16 | Application menu 1 read-write integer | 0 | 0 | |
| 18.17 | Application menu 1 read-write integer | 0 | 0 | |
| 18.18 | Application menu 1 read-write integer | 0 | 0 | |
| 18.19 | Application menu 1 read-write integer | 0 | 0 | |
| 18.20 | Application menu 1 read-write integer | 0 | 0 | |
| 18.21 | Application menu 1 read-write integer | 0 | 0 | |
| 18.22 | Application menu 1 read-write integer | 0 | 0 | |
| 18.23 | Application menu 1 read-write integer | 0 | 0 | |
| 18.24 | Application menu 1 read-write integer | 0 | 0 | |

Parameter Listing

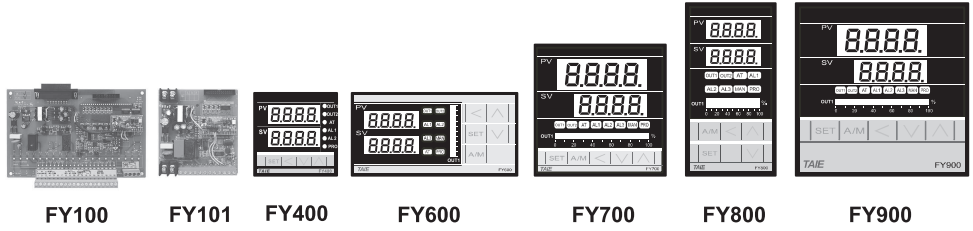
Project: AM-45_010-2xmtp : Figlak
 Drive Name: Napéd transporter (Commander SK)
 Drive Mode: Open loop
 Drive Address: 1

| Parameter | Description | Default | Memory | Units |
|-----------|--|---------|--------|---------|
| 18.25 | Application menu 1 read-write integer | 0 | 0 | |
| 18.26 | Application menu 1 read-write integer | 0 | 0 | |
| 18.27 | Application menu 1 read-write integer | 0 | 0 | |
| 18.28 | Application menu 1 read-write integer | 0 | 0 | |
| 18.29 | Application menu 1 read-write integer | 0 | 0 | |
| 18.30 | Application menu 1 read-write integer | 0 | 0 | |
| 18.31 | Application menu 1 read-write bit | OFF | OFF | |
| 18.32 | Application menu 1 read-write bit | OFF | OFF | |
| 18.33 | Application menu 1 read-write bit | OFF | OFF | |
| 18.34 | Application menu 1 read-write bit | OFF | OFF | |
| 18.35 | Application menu 1 read-write bit | OFF | OFF | |
| 18.36 | Application menu 1 read-write bit | OFF | OFF | |
| 18.37 | Application menu 1 read-write bit | OFF | OFF | |
| 18.38 | Application menu 1 read-write bit | OFF | OFF | |
| 18.39 | Application menu 1 read-write bit | OFF | OFF | |
| 18.40 | Application menu 1 read-write bit | OFF | OFF | |
| 18.41 | Application menu 1 read-write bit | OFF | OFF | |
| 18.42 | Application menu 1 read-write bit | OFF | OFF | |
| 18.43 | Application menu 1 read-write bit | OFF | OFF | |
| 18.44 | Application menu 1 read-write bit | OFF | OFF | |
| 18.45 | Application menu 1 read-write bit | OFF | OFF | |
| 18.46 | Application menu 1 read-write bit | OFF | OFF | |
| 18.47 | Application menu 1 read-write bit | OFF | OFF | |
| 18.48 | Application menu 1 read-write bit | OFF | OFF | |
| 18.49 | Application menu 1 read-write bit | OFF | OFF | |
| 18.50 | Application menu 1 read-write bit | OFF | OFF | |
| 20.00 | Parameter 0 | 0 | 0 | |
| 20.21 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.22 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.23 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.24 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.25 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.26 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.27 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.28 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.29 | Application menu 2 read-write long integer | 0 | 0 | |
| 20.30 | Application menu 2 read-write long integer | 0 | 0 | |
| 21.00 | Parameter 0 | 0 | 0 | |
| 21.01 | Motor 2 maximum set speed | 50,0 | 50,0 | Hz |
| 21.02 | Motor 2 minimum set speed | 0,0 | 0,0 | Hz |
| 21.03 | Motor 2 reference selector | A1.A2 | A1.A2 | |
| 21.04 | Motor 2 acceleration rate | 5,0 | 5,0 | s/100Hz |
| 21.05 | Motor 2 deceleration rate | 10,0 | 10,0 | s/100Hz |
| 21.06 | Motor 2 rated frequency | 50,0 | 50,0 | Hz |
| 21.07 | Motor 2 rated current | 0,00 | 1,70 | A |
| 21.08 | Motor 2 rated full load rpm | 1500 | 1500 | RPM |
| 21.09 | Motor 2 motor rated voltage | 230 | 230 | V |
| 21.10 | Motor 2 motor rated power factor | 0,85 | 0,85 | |
| 21.11 | Motor 2 number of motor poles | Auto | Auto | |
| 21.12 | Motor 2 stator resistance | 0,000 | 0,000 | Ohm |
| 21.13 | Motor 2 voltage offset | 0,0 | 0,0 | V |
| 21.14 | Motor 2 transient inductance (?Ls) | 0,00 | 0,00 | mH |
| 21.15 | Motor 2 active | OFF | OFF | |
| 21.16 | Motor 2 thermal time constant | 89 | 89 | |
| 21.29 | Motor 2 symmetrical current limit | 165,0 | 165,0 | % |

User's Manual

TAIE FY series

Digital PID Temperature Controller Process Controller



1 Notice

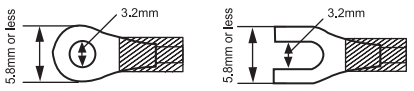
Please confirm the specification of controllers is to totally with your requirement before using it, also read this user's manual in detail.

Danger

1. Danger ! Electric Shock !
DON'T touch AC power wiring terminal when controller has been powered !
Keep the power off until all of the wiring are completed !

Warning

1. Please confirm the AC power wiring to controller is correct, otherwise it would be caused aggravated damage on controller. (FY400 connecting with Pin 1 and 6, FY100/101/600/700/800/900 with Pin 1 and 2).
2. Be sure to use the rated power supply (AC85~265V or DC24V), otherwise it would be caused aggravated damage on controller.
3. Please confirm wires are connected with correct terminal (Input, Output).
4. Use M3 screw-compatible crimp-on terminals with an insulation sleeve, as shown below



Torque : 0.4 N.m (4kgf.cm)

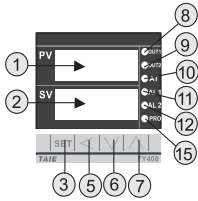
5. Avoid to install controller in following spaces:
 - I. A place where the ambient temperature may reach beyond the range from 0 to 50°C
 - II. A place where the ambient humidity may reach beyond the range from 50 to 85% RH.
 - III. A place where the controller likely to come into contact with water, oil, chemicals, steam and vapor.
 - IV. A place where the controller is subject to interface with static electricity, magnetism and noise.
6. For thermocouple (TC) input, use shield compensating lead wire.
7. For RTD input, use shield wires which have low resistance and no resistance difference between the 3 wires.

2 External Dimension and Panel Cutout < Unit : mm >

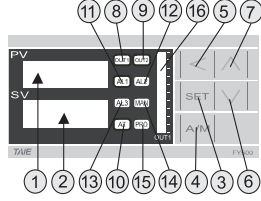
| | | | |
|-------------------------|--|--|--|
| FY400 | | | |
| FY600 | | | |
| FY700 | | | |
| FY800 | | | |
| FY900 | | | |
| FY100/ FY101 | | | |

3 Parts Description

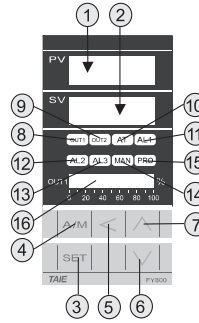
FY400



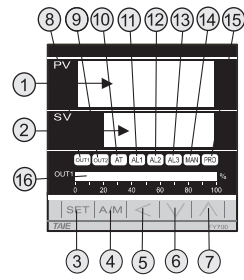
FY600



FY800



FY700/900 FY100/101 External Interface Unit.

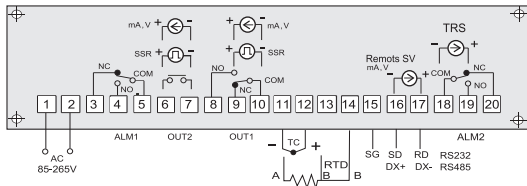


| SYMBOL | NAME | FUNCTION |
|--------|----------------------------|--|
| PV ① | Measured value (PV)display | Displays PV or various parameter symbols(Red) |
| SV ② | Setting value (SV)display | Displays SV or various parameter set values(Green) |
| SET ③ | Set Key | Used for parameter calling up and set value registration |
| A/M ④ | Auto/Manual key | Switches between Auto(PID) output mode and Manual output |
| < ⑤ | Shift Key | Shift digits when settings are changed |
| ∨ ⑥ | Down Key (*Program Hold) | Decrease numbers (*Only for programmable controller) |
| ∧ ⑦ | Up Key (*Program Run) | Increase numbers (*Only for programmable controller) |

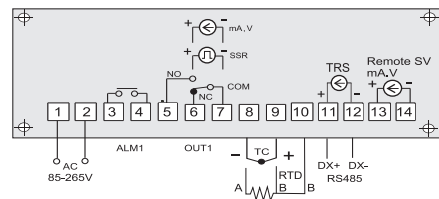
| SYMBOL | NAME | FUNCTION |
|---------|----------------------------|--|
| OUT1 ⑧ | OUT1 lamp | Lights when OUT1 is on(Green) |
| OUT2 ⑨ | OUT2 lamp | Lights when OUT2 is on(Green) |
| AT ⑩ | Autotuning lamp | Lights when Autotuning is activated(Orange) |
| AL1 ⑪ | Alarm 1 lamp | Lights when Alarm 1 is activated(Red) |
| AL2 ⑫ | Alarm 2 lamp | Lights when Alarm 2 is activated(Red) |
| AL3 ⑬ | Alarm 3 lamp | Lights when Alarm 3 is activated(Red) |
| MAN ⑭ | Manual output lamp | Lights when manual output is activated (Orange) |
| PRO ⑮ | *Program Running lamp | *Flush when program running (Only for programmable controller) |
| OUT1% ⑯ | Output1% Bar-Graph display | Output 1% is displayed on 10-dot LEDs |

4 Terminal Arrangement

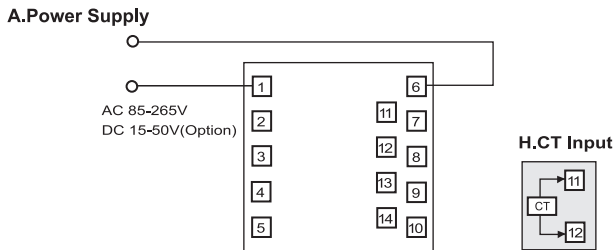
FY100



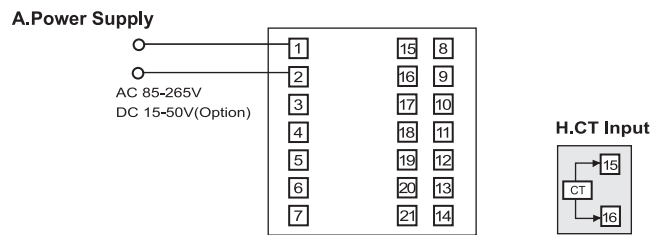
FY101



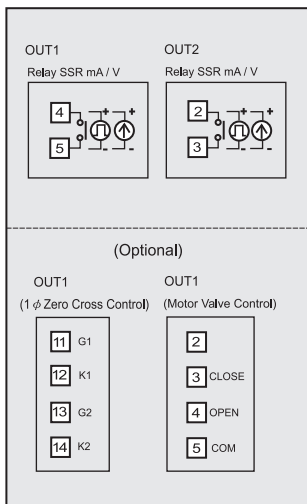
FY400



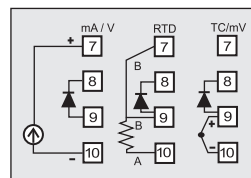
FY700



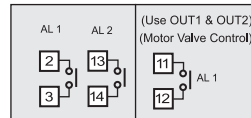
B.Control Output



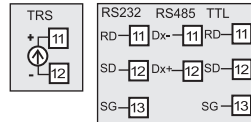
C.Input



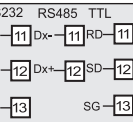
D.Alarm



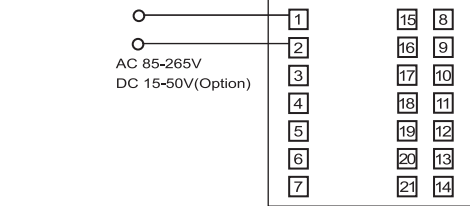
E.Transmission



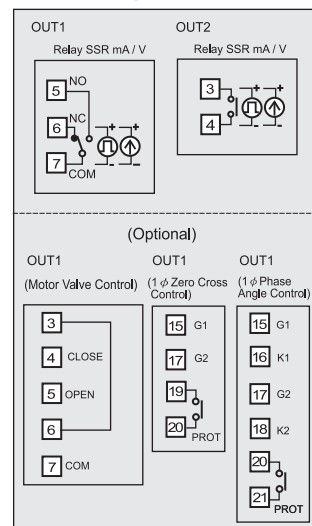
G.Communication



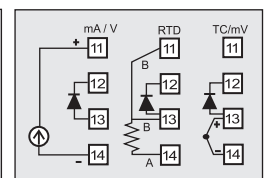
A.Power Supply



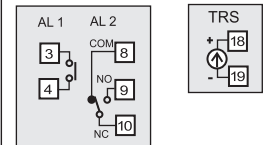
B.Control Output



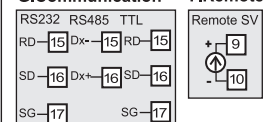
C.Input



D.Alarm



G.Communication



E.Transmission

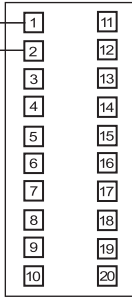


F.Remote



A. Power Supply

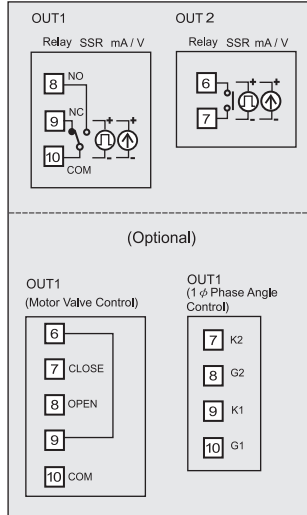
AC 85-265V
DC 15-50V(Option)



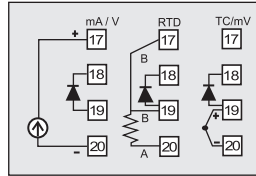
H. CT Input



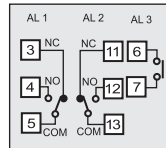
B. Control Output



C. Input



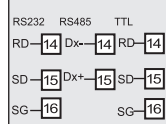
D. Alarm



E. Transmission



G. Communication

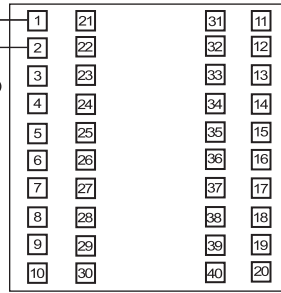


F. Remote



A. Power Supply

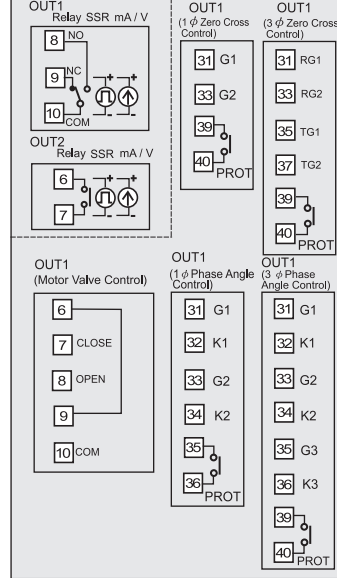
AC 85-265V
DC 15-50V(Option)



H. CT Input



B. Control Output



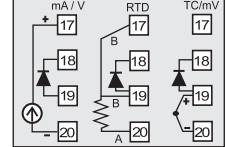
E. Transmission



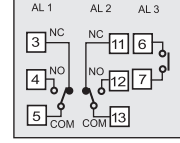
F. Remote



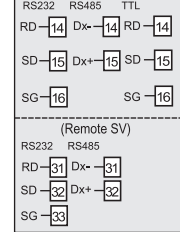
C. Input



D. Alarm

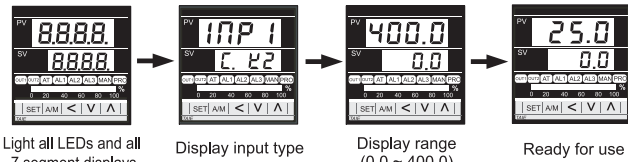


G. Communication



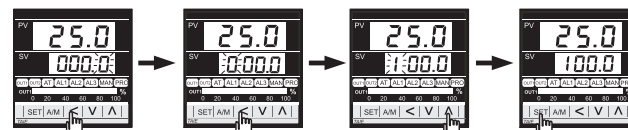
5 Operations

1. Power ON: Controller will display as following



Light all LEDs and all 7 segment displays Display input type Display range (0.0 ~ 400.0) Ready for use

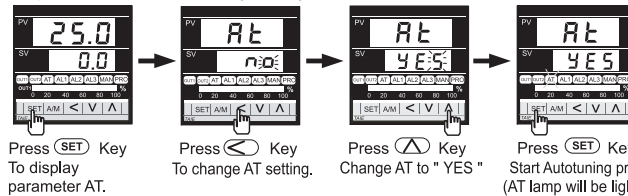
2. Change the Set Value(SV): Change SV from 0.0 to 100.0



Press < Key Press < Key Press < Key Press (SET) Key
To change the SV number started to flash. The flashing digit indicates which digit can be set. To select the hundreds digit, To change the number to 1. To store the new set value.

3. Autotuning (AT):

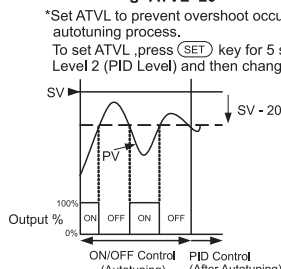
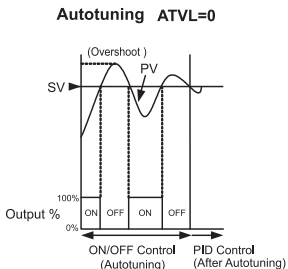
Use AT function to automatically calculate and set the optimize PID value for your system.



Press (SET) Key Press < Key Press < Key Press (SET) Key
To display parameter AT. To change AT setting. Change AT to "YES" Start Autotuning process (AT lamp will be lighted on)

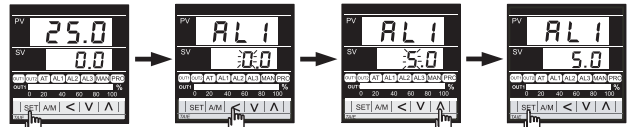
Autotuning ATVL=0

*Set ATVL to prevent overshoot occurred during autotuning process. To set ATVL, press (SET) key for 5 seconds to enter Level 2 (PID Level) and then change the value.



4. Change the Alarm value:

Change AL1 value to "5.0" (AL1 active, if PV exceeds SV over 5.0)



Press (SET) Key Press < Key Press < Key Press (SET) Key
To display parameter AL1 To change AL1 value Increase AL1 value Store the new value of AL1

* There are total 16 alarm mode types, referenced as below:
* To change Alarm mode, press (SET) + < key 5 seconds to enter Level 3 (Input Level) and then change the value of ALD1/ALD2/ALD3.

5. Alarm mode type (Referenced for ALD1/ALD2/ALD3)

(▲ : SV △ : Alarm set value)

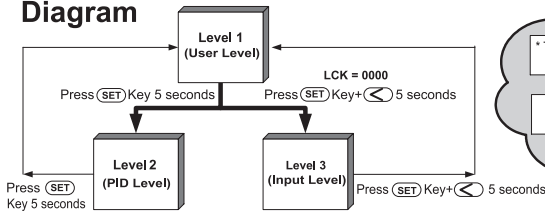
| | | | | | |
|----|--|----|--------------------------------------|-------|--|
| 01 | Deviation high alarm with hold action* | 04 | Band alarm | 07 | Segment End alarm (Only for Programmable controller) (1) ALD1-3, set 07 (2) ALD1-3=Alarm Segment (3) ALT1-3 defines as follows: 0 = flicker alarm 99.99 = continued alarm others = alarm ON time |
| 11 | Deviation high alarm | 05 | Process high alarm with hold action* | 17 | Program Run alarm (Only for Programmable controller) Run Stop ON OFF AL |
| 02 | Deviation low alarm with hold action* | 15 | Process high alarm | 08 | System failed alarm* (ON) Normal Failed OFF ON AL |
| 12 | Deviation low alarm | 06 | Process low alarm with hold action* | 18 | System failed alarm* (OFF) Normal Failed ON OFF AL |
| 03 | Deviation high/low alarm with hold action* | 16 | Process low alarm | 09 | Heater Break Alarm (HBA) ON OFF AL |
| 13 | Deviation high/low alarm | | | 00/10 | No alarm |

*Hold action: When Hold action is ON, the alarm action is suppressed at start-up until the measured value(PV) enters the non-alarm range.

*System failed: It means that the controller display error message with one of following : "UUU1" or "NNN1" or "CJCE"

6 Parameter List

Levels Diagram



* The controller returns to Level 1 if there is no key operation within 60 seconds.
 * In any Level, press (AM) key twice will return to Level 1.

Level 1 (User Level)

- Process Value Set Value: P1, 5.1
- Output Limit: OUL, 1000
- Autotuning: Rt, YES/NO
- Alarm 1 set value: AL1, 0.0
- Heater current display (HBA set value): c.00, 0.0
- Alarm 2 set value: AL2, 0.0
- Alarm 3 set value: AL3, 0.0

Level 2 (PID Level)

- Proportional band 1 (For output 1): P1, 3.0
- Integral time 1 (For output 1): I1, 240
- Derivative time 1 (For output 1): D1, 60
- Dead-band time: db1, 0
- Auto tuning offset value: At.L, 0
- Output 1 cycle time: CYT1, 10
- Hysteresis for output 1 ON/OFF control: HYS1, 1
- Proportional band 2 (For output 2): P2, 3.0
- Integral time 2 (For output 2): I2, 240
- Derivative time 2 (For output 2): D2, 60
- Output 2 Cycle time: CYT2, 10
- Hysteresis for output 2 ON/OFF control: HYS2, 1
- Control gap 1 (For output 1): GAP1, 0
- Control gap 2 (For output 2): GAP2, 0
- Function lock: LCK, 0000

Level 3 (Input Level)

- Input type selection: INP1, 42
- Analog input low limit calibration (Used for mA and V input): ARL1, 0
- Analog input high limit calibration (Used for mA and V input): ARH1, 5000
- Decimal point position (Available for mA and V input): dP, 0000
- Lower Set-Point Limit: LSPL, 0.0
- Upper Set-Point Limit: USPL, 400.0
- Remote input low limit calibration: ARL2, 0
- Remote input high limit calibration: ARH2, 5000
- Alarm mode of AL1: ALd1, 11
- Alarm time of AL1: ALt1, 99.99
- Alarm mode of AL2: ALd2, 0
- Alarm time of AL2: ALt2, 99.99
- Alarm mode of AL3: ALd3, 0
- Alarm time of AL3: ALt3, 99.99
- Hysteresis of all Alarm: HYSR, 0.0
- Output 1 low limit calibration (Used for mA and V output): CLO1, 230
- Output 1 high limit calibration (Used for mA and V output): CHO1, 3600
- Output 2 low limit calibration (Used for mA and V output): CLO2, 230
- Output 2 high limit calibration (Used for mA and V output): CHO2, 3600
- Retransmission low limit calibration: CLO3, 0
- Retransmission high limit calibration: CHO3, 5000
- Full run time of proportional motor (Used for proportional motor valve control output): rULY, 5
- Used for programmable controller to wait continued operation: GRtE, 0.0
- Communication Protocol Selection: PSL, rTU
- Communication Bits Configuration: b.tS, 0.81
- ID number: Id.NO, 1
- Baudrate: bAUD, 384
- SV compensation: S.VOS, 0.0
- PV compensation: P.VOS, 0.0
- Unit of PV & SV: UNIt, C
- PV Filter: P.VFL, 200
- Reserved: CRSC, 0.0
- Action mode: Uud, HEAt
- Control algorithm: OPRd, P,d
- Frequency: H=, 60Hz

* it will show, when HBA function enable
 Display if output2 is provided
 Display if P2=0

| LCK | Levels entering available | | | Parameters which can be changed |
|------|---------------------------|---------------------|-----------------------|------------------------------------|
| | Level 1 (User Level) | Level 2 (PID Level) | Level 3 (Input Level) | |
| 0000 | ⊙ | ⊙ | ⊙ | All parameters (Factory set value) |
| 1111 | ⊙ | ⊙ | --- | All parameters |
| 0100 | ⊙ | ⊙ | --- | All parameters except Level 3 |
| 0110 | ⊙ | ⊙ | --- | Parameters in Level 1 |
| 0001 | ⊙ | ⊙ | --- | SV" and "LCK" |
| 0101 | ⊙ | ⊙ | --- | Only "LCK" |

7 Error Displays

| | |
|------|---|
| IN1E | IN1E : Input 1 Error Check whether input loop is opened or wiring incorrect. |
| CJCE | CJCE :Cold Junction Compensation Failed Check the compensation diode outside controller. |
| UUU1 | UUU1 : PV is above USPL Check whether the input value is correct or not. |
| NNN1 | NNN1 : PV is below LSPL Check whether the input value is correct or not. |
| AdCF | AdCF :A/D Convert Failed Controller needs to be repaired. |
| RAMF | RAMF :RAM Failed Controller needs to be repaired. |

Return to "INP1"

8 Specifications

Standard Spec.

| Model | FY400 | FY600 | FY700 | FY800 | FY900 | FY100 | FY101 |
|-----------------------|---|------------------|--------------------|------------------|--------------------|-------------|------------|
| Dimension | 48X48mm | 96X48mm | 72X72mm | 48X96mm | 96X96mm | 175X110mm | 90X90mm |
| Supply voltage | AC 85~265V , DC24V (Optional) | | | | | AC 85~265V | |
| Frequency | 50/60 HZ | | | | | | |
| Power Consumption | approx 3VA | approx 4VA | approx 3VA | approx 4VA | approx 4VA | approx 4VA | approx 3VA |
| Memory | Non-volatile memory E ² PROM | | | | | | |
| Input | Accuracy : 0.2%FS, Sample time : 250ms | | | | | | |
| TC | K , J , R , S , B , E , N , T , W5Re/W26Re , PL2 , U , L | | | | | | |
| RTD | PT100 , JPT100 , JPT50 | | | | | | |
| mA dc | 4~20mA , 0~20mA | | | | | | |
| Voltage dc | 0~1V , 0~5V , 0~10V , 1~5V , 2~10V -10~10mV , 0~10mV , 0~20mV , 0~50mV , 10~50mV | | | | | | |
| DP Position | 0000 , 000.0 , 00.00 , 0.000 (available for mA or Voltage dc input) | | | | | | |
| Output 1 | Main control output | | | | | | |
| Relay | SPST type | SPDT type | SPDT type | SPDT type | SPDT type | SPDT type | SPDT type |
| Voltage Pulse | 8A , 220V , electrical life : 100,000 times or more(under the rated load). | | | | | | |
| mA dc | For SSR drive. ON:24V , OFF:0V , maximum load current:20mA. | | | | | | |
| Voltage dc | 4~20mA , 0~20mA ° maximum load resistance: 560 Ω. | | | | | | |
| Alarm 1 | SPST type | SPDT type | SPST type | SPDT type | SPDT type | SPDT type | SPST type |
| Control algorithms | 3A , 220V , electrical life : 100,000 times or more(under the rated load). | | | | | | |
| PID range | PID , P , PI , PD , ON/OFF(P=0) , FUZZY | | | | | | |
| Isolation | P : 0~200% , I : 0~3600 Secs , D : 0~900 Secs | | | | | | |
| Isolated resistance | Output terminal (control output , alarm ,transmission) and Input terminal are isolated separately. | | | | | | |
| Dielectric strength | 10M Ω or more between input terminals and case(ground) at DC 500V 10M Ω or more between output terminals and case(ground) at DC 500V | | | | | | |
| Operating temperature | 1000V AC for 1 minute between input terminals and case(ground) 1500V AC for 1 minute between output terminals and case(ground) | | | | | | |
| Humidity range | 0~65°C / 0~50°C | | | | | | |
| Weight (approx) | approx 150g | approx 225g | approx 225g | approx 225g | approx 300g | approx 130g | approx 80g |
| Display Height | PV:8mm SV:8mm | PV:7mm SV:7mm | PV:14mm SV:10mm | PV:8mm SV:8mm | PV:14mm SV:10mm | — | — |

Optional Spec.

| Model | FY400 | FY600 | FY700 | FY800 | FY900 | FY100 | FY101 |
|--------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|
| RAMP/SOAK Program | 2 Patterns with 8 segments each . The 2 patterns can be linked together as 16 segments use | | | | | | |
| Output 2 | For heating and cooling control use | | | | | | |
| Relay | SPST type | SPST type | SPST type | SPST type | SPST type | SPST type | SPST type |
| Voltage Pulse | For SSR drive. ON:24V , OFF:0V , maximum load current:20mA. | | | | | | |
| mA dc | 4~20mA , 0~20mA ° maximum load resistance : 560 Ω. | | | | | | |
| Voltage dc | 0~5V , 0~10V , 1~5V , 2~10V ° maximum load current:20mA. | | | | | | |
| Alarm 2 | SPST type | SPDT type | SPDT type | SPDT type | SPDT type | SPDT type | — |
| Alarm 3 | — | SPST type | SPST type | SPST type | SPST type | SPST type | — |
| Heater Break Alarm (HBA) | Display Range of Heater Current:0.0~99.9A , Accuracy : 1%FS Included CT :SC-80-T (5.8mm dia , 0.0~80.0A) or SC-100-T(12mm dia , 0.0~99.9A) Alarm Relay : AL1 | | | | | | |
| Transmission | Available for PV or SV transmission | | | | | | |
| mA dc | 4~20mA , 0~20mA ° maximum load resistance :560 Ω. | | | | | | |
| Voltage dc | 0~5V , 0~10V , 1~5V , 2~10V ° maximum load current : 20mA . | | | | | | |
| Remote SV Input | 4~20mA , 0~20mA , 0~5V , 0~10V , 1~5V , 2~10V are available. | | | | | | |
| Communication | Protocol : MODBUS RTU,MODBUS ASCII, TAIE Interface : RS232 , RS485 , TTL Baudrate : 38400 , 19200 , 9600 , 4800 , 2400 bps. 8 bit , Start bit : 1 bit , Parity : Odd or Even , Stop bit : 1 or 2 bit | | | | | | |
| WaterProof/DustProof | IP65 | | | | | — | — |

* — Not available

9 Order Information

Model & Suffix codes

| Model | Output1 | Output2 | Alarm | TRS | Remote SV | Communication | Input Type | Power | Water/Dust Proof |
|--------------------------|-----------|-------------------------------|-------------------------------|---------------|-----------|----------------|-----------------|--------------|------------------|
| FY400 | 1 | 0 | 1 | 0 | 0 | 0 | 02 | A | N |
| FY400 | 48x48mm | 0 None | 0 None | 0 None | 0 None | 0 None | See Input Codes | A AC 85~265V | N None |
| FY600 | 96x48mm | 1 Relay | 1 Relay | 1 1 Set | 1 4~20mA | 1 RS232 | | D DC 24V | W IP65 |
| FY700 | 72x72mm | 2 Voltage Pulse (SSR Drive) | 2 Voltage Pulse (SSR Drive) | 2 2 Sets | 2 0~20mA | 2 RS485 | | | |
| FY800 | 48x96mm | 3 4~20mA | 3 4~20mA | 3 3 Sets | A 0~5V | 3 TTL | | | |
| FY900 | 96x96mm | 4 0~20mA | 4 0~20mA | A HBA* | B 0~10V | A RS232_MODBUS | NEW | | |
| FY100 | 175x110mm | 5 1 φ SCR zero cross control | 5 1 φ SCR zero cross control | B HBA+AL2 | C 1~5V | B RS485_MODBUS | | | |
| FY101 | 90x90mm | 6 3 φ SCR zero cross control | 6 3 φ SCR zero cross control | C HBA+AL2+AL3 | D 2~10V | | | | |
| (STANDARD) | | A 0~5V | A 0~5V | | | | | | |
| PFY400 | 48x48mm | B 0~10V | B 0~10V | | | | | | |
| PFY600 | 96x48mm | C 1~5V | C 1~5V | | | | | | |
| PFY700 | 72x72mm | D 2~10V | D 2~10V | | | | | | |
| PFY800 | 48x96mm | 7 Motor valve control | 7 Motor valve control | | | | | | |
| PFY900 | 96x96mm | 8 1 φ SCR phase angle control | 8 1 φ SCR phase angle control | | | | | | |
| PFY100 | 175x110mm | 9 3 φ SCR phase angle control | 9 3 φ SCR phase angle control | | | | | | |
| PFY101 | 90x90mm | | | | | | | | |
| (RAMP/SOAK Programmable) | | | | | | | | | |

| | |
|--------------|----------------------------------|
| FY100 | AN Fixed terminals, AC 85~265V |
| | BN Plug in terminals, AC 85~265V |
| FY101 | AN Fixed terminals, AC 85~265V |

* Block means optional functions with additional charge
* HBA : Heater Break Alarm(HBA must use AL1 as alarm relay)

Combination of options and models

| Options Model | RAMP/SOAK PROGRAM | Output 1 | | | | | Output2 | Alarm2 | Alarm3 | HBA | Transmission | Remote SV | Communication | DC 24V Power |
|---------------|-------------------|-----------|-----------|---------------------|-----------|-----------|---------|--------|--------|-----|--------------|-----------|---------------|--------------|
| | | 1 φ SCR_Z | 3 φ SCR_Z | Motor valve control | 1 φ SCR_P | 3 φ SCR_P | | | | | | | | |
| FY400 | ○ | ○ | — | ○ | — | — | ○ | ○ | — | ○ | ○ | ○ | ○ | ○ |
| FY600 | ○ | — | — | ○ | ○ | — | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| FY700 | ○ | ○ | — | ○ | ○ | — | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| FY800 | ○ | — | — | ○ | ○ | — | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| FY900 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| FY100 | ○ | — | — | ○ | ○ | — | ○ | ○ | ○ | ○ | ○ | ○ | ○ | — |
| FY101 | ○ | — | — | ○ | — | — | ○ | — | — | ○ | ○ | ○ | ○ | — |

○ Available — Not available

* Remote SV function is not available, if HBA Function has been specified.

Input type table

| | TYPE | CODE | RANGE | | TYPE | CODE | RANGE | | TYPE | CODE | RANGE | | |
|-----|---------|-------------------------|-------------------------|----------------|-------------------------|-------------------------|-----------------|-------------------------|-------------------------|------|--------|---------|----------|
| | | | TYPE | RANGE | | | TYPE | RANGE | | | TYPE | RANGE | |
| TC | K | K1 01 | 0.0~200.0°C(392.0°F) | | K2 02 | 0.0~400.0°C(752.0°F) | | K3 03 | 0~600°C(1112°F) | | LINEAR | AN1 61 | -10~10mV |
| | | K4 04 | 0~800°C(1472°F) | | K5 05 | 0~1000°C(1832°F) | | K6 06 | 0~1200°C(2192°F) | | | AN1 62 | -2~2V |
| | J | J1 07 | 0.0~200.0°C(392.0°F) | | J2 08 | 0.0~400.0°C(752.0°F) | | J3 09 | 0~600°C(1112°F) | | | AN1 63 | -5~5V |
| | | J4 10 | 0~800°C(1472°F) | | J5 11 | 0~1000°C(1832°F) | | J6 12 | 0~1200°C(2192°F) | | | AN1 64 | -10~10V |
| | R | R1 13 | 0~1600°C(2912°F) | | R2 14 | 0~1769°C(3216°F) | | | | | | AN2 71 | 0~10mV |
| | S | S1 15 | 0~1600°C(2912°F) | | S2 16 | 0~1769°C(3216°F) | | | | | | AN3 76 | 0~20mV |
| | B | B1 17 | 0~1820°C(3308°F) | | | | | | | | | AN4 81 | 0~50mV |
| | E | E1 18 | 0~800°C(1472°F) | | E2 19 | 0~900°C(1652°F) | | | | | | AN4 82 | 0~20mA |
| | N | N1 20 | 0~1200°C(2192°F) | | N2 21 | 0~1300°C(2372°F) | | | | | | AN4 83 | 0~1V |
| | T | T1 22 | -199.9~400.0°C(752.0°F) | | T2 23 | -199.9~200.0°C(392.0°F) | | T3 24 | 0.0~350.0°C(662.0°F) | | | AN4 84 | 0~5V |
| | W | W1 25 | 0~2000°C(3632°F) | | W2 26 | 0~2320°C(4208°F) | | | | | | AN4 85 | 0~10V |
| | PLII | PL1 27 | 0~1300°C(2372°F) | | PL2 28 | 0~1390°C(2534°F) | | | | | | AN4 86 | 0~5K ohm |
| RTD | U | U1 29 | -199.9~600.0°C(999.9°F) | | U2 30 | -199.9~200.0°C(392.0°F) | | U3 31 | 0.0~400.0°C(752.0°F) | | AN4 87 | 0~2V | |
| | | L | L1 32 | 0~400°C(752°F) | | L2 33 | 0~800°C(1472°F) | | | | AN5 91 | 10~50mV | |
| | JPT | JP1 41 | -199.9~600.0°C(999.9°F) | | JP2 42 | -199.9~400.0°C(752.0°F) | | JP3 43 | -199.9~200.0°C(392.0°F) | | AN5 92 | 4~20mA | |
| | 100 | JP4 44 | 0~200°C(392°F) | | JP5 45 | 0~400°C(752°F) | | JP6 46 | 0~600°C(1112°F) | | AN5 93 | 1~5V | |
| | PT | DP1 47 | -199.9~600.0°C(999.9°F) | | DP2 48 | -199.9~400.0°C(752.0°F) | | DP3 49 | -199.9~200.0°C(392.0°F) | | AN5 94 | 2~10V | |
| | 100 | DP4 50 | 0~200°C(392°F) | | DP5 51 | 0~400°C(752°F) | | DP6 52 | 0~600°C(1112°F) | | | | |
| JPT | JP.1 53 | -199.9~600.0°C(999.9°F) | | JP.2 54 | -199.9~400.0°C(752.0°F) | | JP.3 55 | -199.9~200.0°C(392.0°F) | | | | | |
| 50 | JP.4 56 | 0~200°C(392°F) | | JP.5 57 | 0~400°C(752°F) | | JP.6 58 | 0~600°C(1112°F) | | | | | |



FY Series Digital PID Controller

FY400 (48mm x 48mm)

Application: Control temperature, humidity,

FY series controllers are microprocessor based controllers.

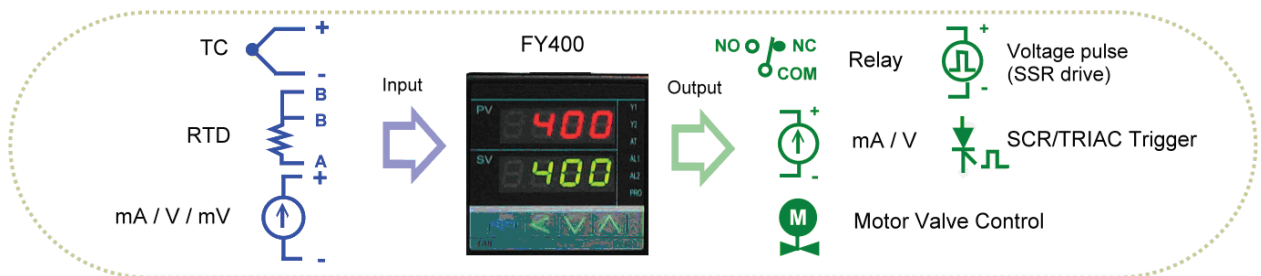
Which have been

Designed with high accuracy input, various output selection, useful options and good reliability at a competitive price.



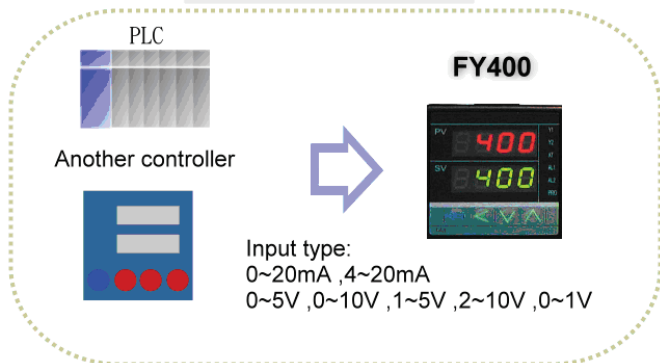
Features

Various I/O Types

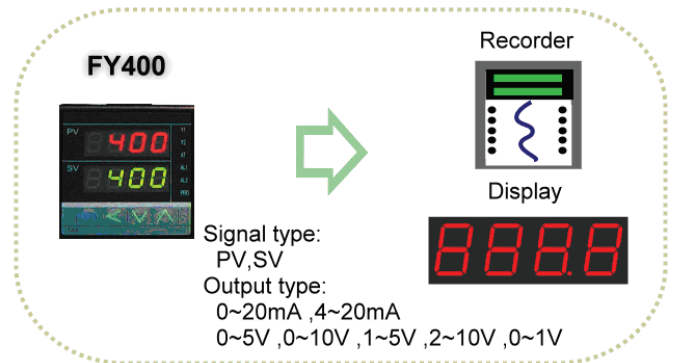


Peripheral Option

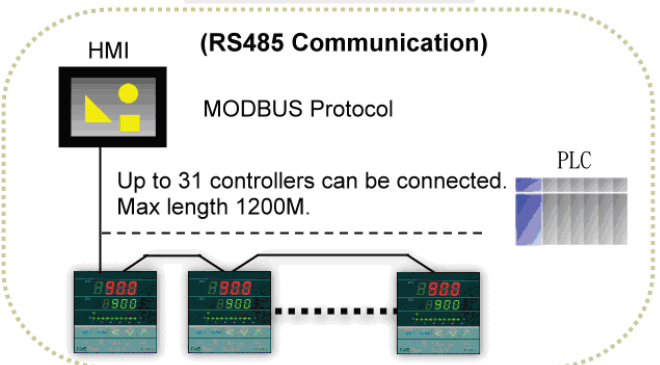
Remote SV



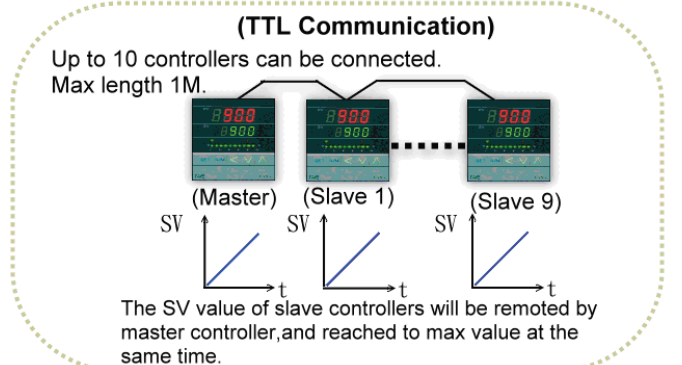
Transmission



Communication



Communication



Specifications
Standard spec.

| Model | | FY400 |
|-----------------------|---|---|
| Dimension | | 48X48mm |
| Supply voltage | | AC 85~265V · DC 15~50V (Option) |
| Frequency | | 50 / 60 HZ |
| Power consumption | | approx 3VA |
| Input | Accuracy | 0.2 % FS ± 1digit |
| | Sample time | 250ms |
| | TC | K , J , R , S , B , E , N , T , W5Re/W26Re , PLII , U , L |
| | RTD | PT100,JPT100,JPT50 |
| | mA dc | 4~20mA , 0~20mA |
| | mV / V dc | 0~1V,0~5V,0~10V,1~5V,2~10V -10~10mV,0~10mV,0~20mV,0~50mV,10~50mV |
| | Decimal point position | 0000 , 000.0 , 00.00 , 0.000 Available for linear input (mA / mV / V) |
| Output 1 | Relay | SPST type 3A , 220V , electrical life:100,000 times or more (under rated load) |
| | Voltage pulse | For SSR drive. ON : 24V , OFF : 0V , max load current : 20mA |
| | mA dc | 4~20mA , 0~20mA. Maximum load resistance:560 Ω |
| | Voltage dc | 0~5V , 0~10V , 1~5V , 2~10V . Max load current:20mA |
| Alarm 1 | 3A , 220V , electrical life:100,000 times or more (under rated load) | |
| Control algorithm | PID , PI , PD , P , ON / OFF(P=0) , FUZZY ◦ | |
| PID range | P: 0.0 ~ 200.0 % , I: 0~3600s , D: 0~900s | |
| Isolation | Output terminals(control output , alarm , transmission) and input terminals are isolated separately | |
| Isolated resistance | 10MΩ or more between input and case (ground) at DC 500 V 10MΩ or more between output and case (ground) at DC 500 V | |
| Dielectric strength | 1000V AC for 1 minute between input terminal and case (ground) 1500V AC for 1 minute between output terminal and case (ground) | |
| Operating temperature | 0~50℃ | |
| Humidity range | 20~90%RH | |
| Weight | 150g | |
| Display Height | PV:7mm SV:7mm | |

- **Optional Spec.**

| Model | FY400 |
|---------------------------------|--|
| Output 2 | For heating and cooling control use. Relay , SSR , 4~20mA , 0~20mA , 0~5V , 0~10V , 1~5V , 2~10V |
| Alarm 2 | SPST type 3A , 220V , electrical life:100,000 times or more (under rated load) |
| Alarm 3 | Not available |
| Heater Break Alarm (HBA) | Display range of heater current : 0.0~99.9A , Accuracy : 1%FS Included CT : SC-80-T (5.8mm dia , 0.0~80.0A) or SC-100-T (12mm dia , 0.0~99.9A) Alarm relay : AL1 |
| Transmission | Available for PV or SV transmission 4~20mA , 0~20mA , 0~1V , 0~5V , 0~10V , 1~5V , 2~10V |
| Remote SV | 4~20mA , 0~20mA , 0~1V , 0~5V , 0~10V , 1~5V , 2~10V |
| Communication | Protocol : MODBUS RTU , MODBUS ASCII , TAIE RS232 , RS485 , TTL Baud rate: 2400 , 4800 , 9600 , 19200 , 38400 bps. Data bits : 8 , Stop bit : 1 or 2bit , Odd or Even parity. |
| Water/Dust proof | IP65 |

- **Special control output (OUT1)**

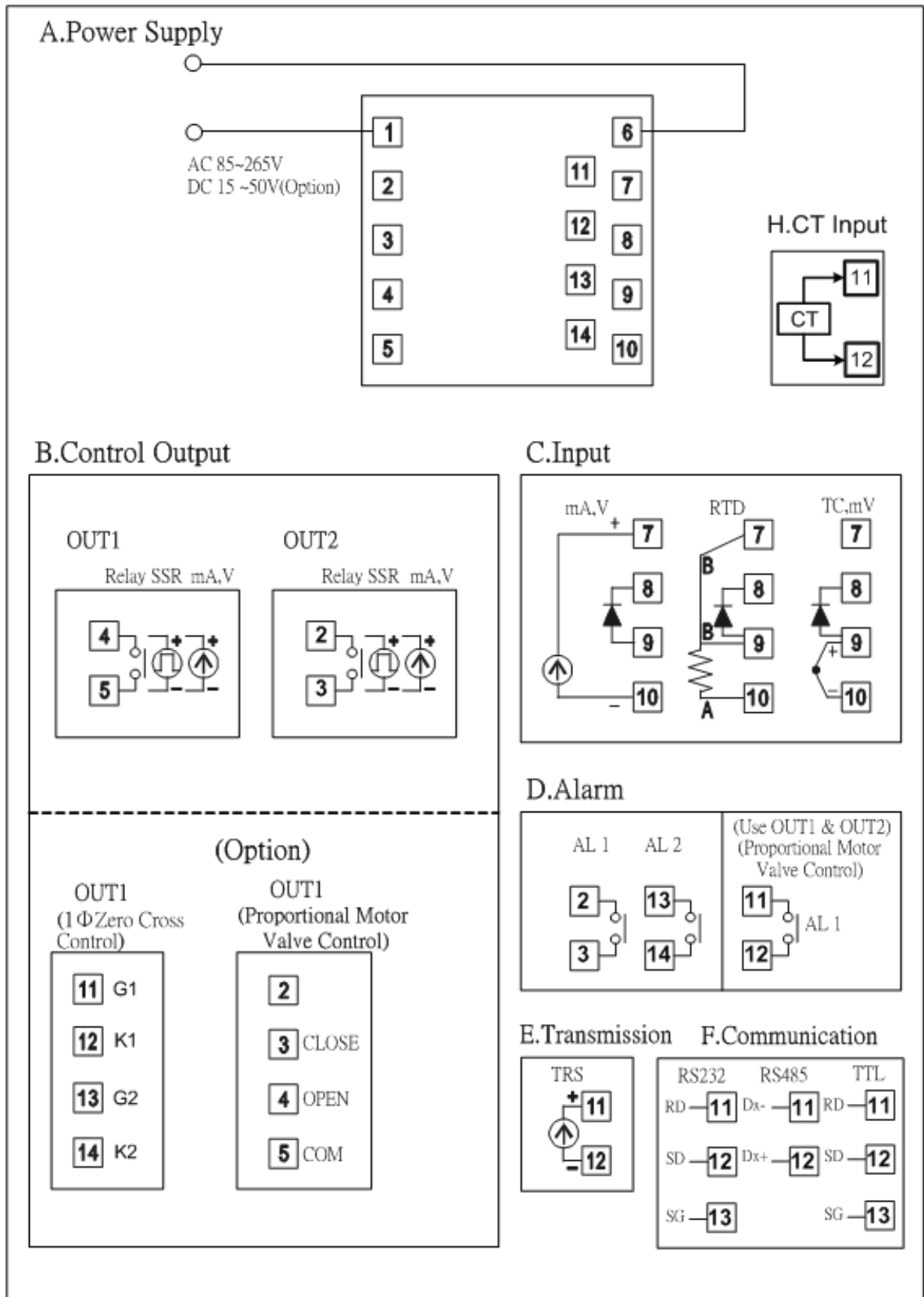
| Model | FY400 |
|--|-----------|
| 1φ zero crossing control(1φSSR) | Available |
| Motor valve control | Available |

- **Programmable RAMP/SOAK**

| Model | PFY400 |
|-------------------------------|---|
| Programmable RAMP/SOAK | 2 patterns with 8 segments each. The 2 patterns can be linked together as 16 segments use. |

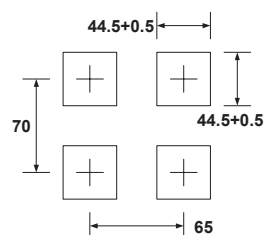
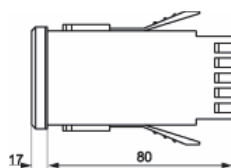
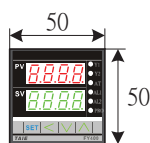
Terminal arrangement

FY400 Terminals (48mm x 48mm , DIN 1/16)

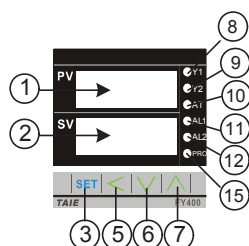


External dimension and panel cutout \langle Unit : mm \rangle

FY400



Parts description

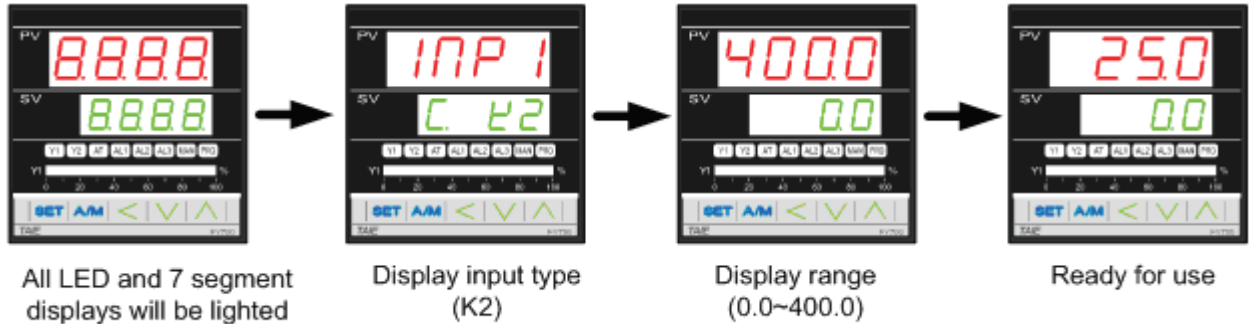


| SYMBOL | NAME | | FUNCTION |
|--------------|------|-----------------------------------|--|
| PV | ① | Measured value (PV) display | Displays PV or various parameter symbols (Red) |
| SV | ② | Set value (SV) display | Displays SV or various parameter set values (Green) |
| SET | ③ | Set key | Used for parameter calling up and set value registration |
| A/M | ④ | Auto/Manual key | Switches between Auto(PID) output mode and Manual output mode. |
| \leftarrow | ⑤ | Shift key | Shift digits when settings are changed |
| ∇ | ⑥ | Down key <i>* Program hold</i> | Decrease numbers (-1000,-100,-10,-1) <i>* Program hold \langleProgrammable controller \rangle</i> |
| \wedge | ⑦ | Up key <i>* Program run</i> | Decrease numbers (+1000,+100,+10,+1) <i>* Program run \langleProgrammable controller \rangle</i> |
| OUT1 | ⑧ | OUT1 lamp | Lights when OUT1 is activated (Green) |
| OUT2 | ⑨ | OUT2 lamp | Lights when OUT2 is activated (Green) ◦ |
| AT | ⑩ | Auto tuning lamp | Lights when Auto tuning is activated (Orange) |
| AL1 | ⑪ | Alarm 1 lamp | Lights when Alarm 1 is activated (Red) |
| AL2 | ⑫ | Alarm 2 lamp | Lights when Alarm 2 is activated (Red) |
| AL3 | ⑬ | Alarm 3 lamp | Lights when Alarm 3 is activated (Red) |
| PRO | ⑮ | <i>* Program running lamp</i> | <i>* Flashes when program is running \langleProgrammable controller \rangle ◦</i> |

Operations

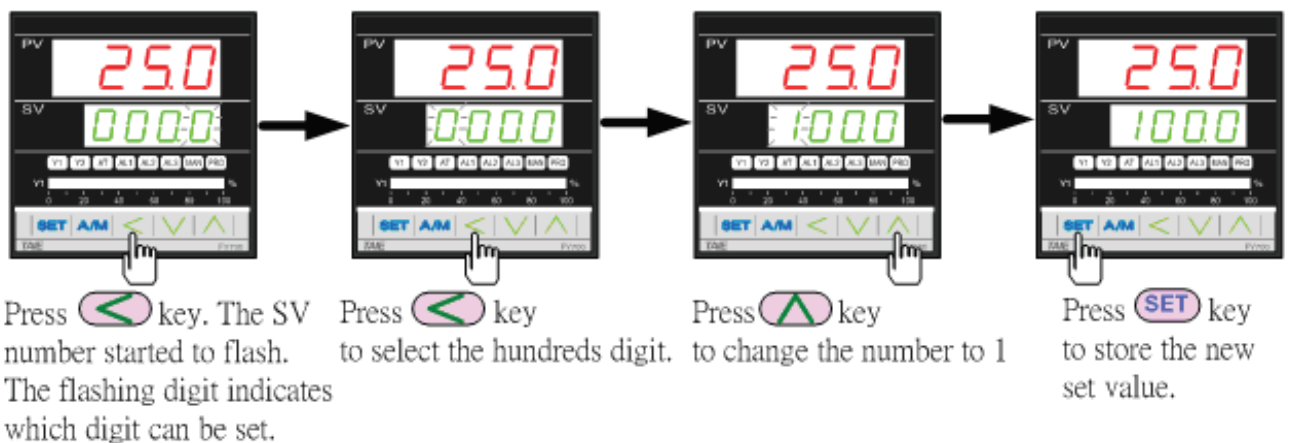
Power On

Controller will display as below



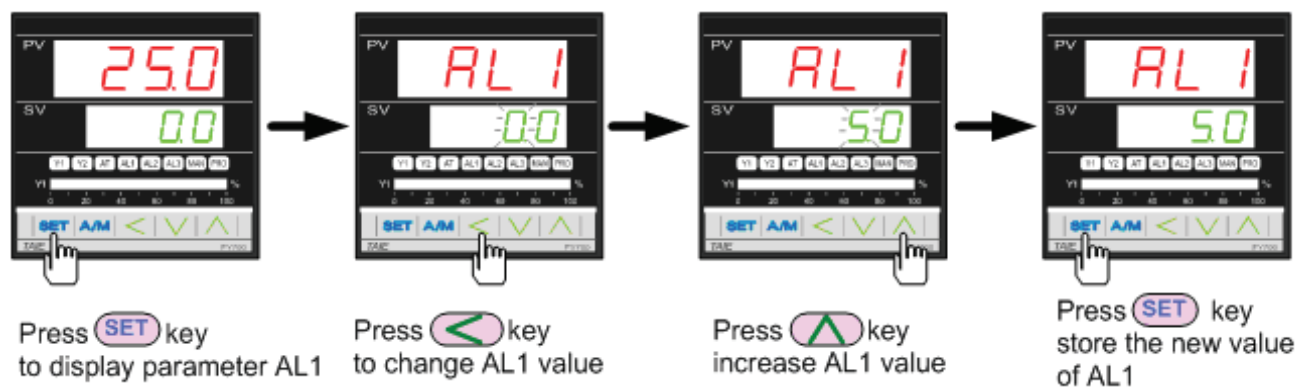
Change the Set Value (SV)

Change SV from 0.0 to 100.0



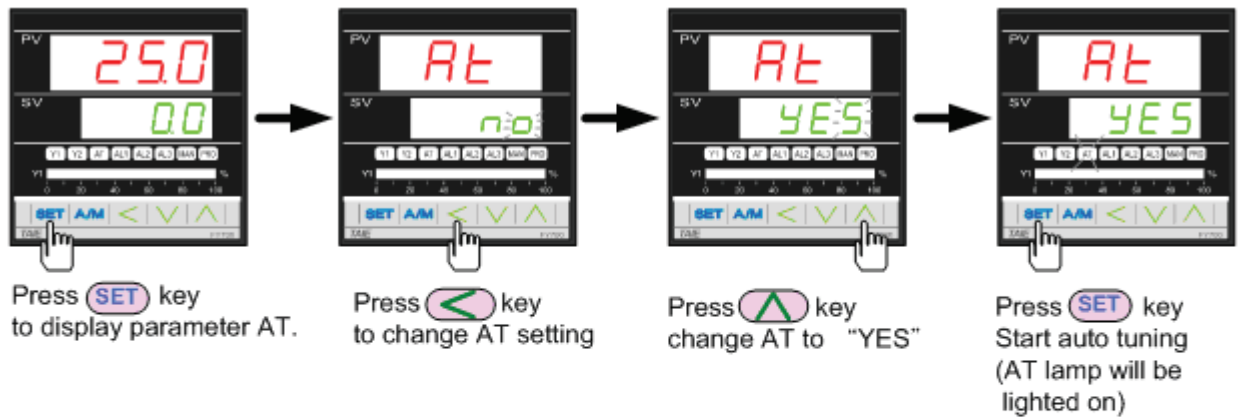
Change the Alarm Value

Change AL1 value to "5.0" (AL1 active, if PV exceeds SV over 5.0)

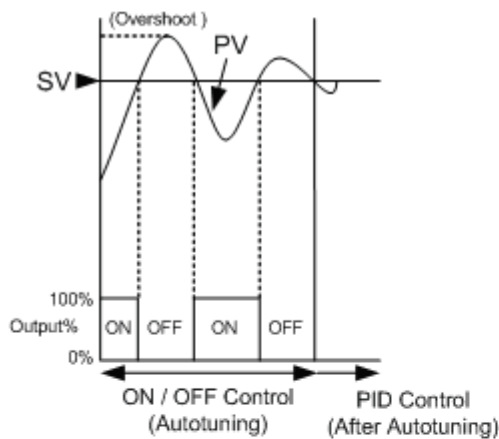


Autotuning (AT)

Use AT function to automatically calculate and set the optimize PID value for your system.



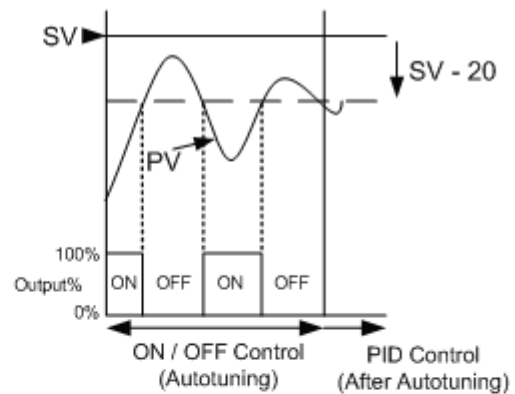
Autotuning
ATVL=0



Autotuning
ATVL=20

*Set ATVL to prevent overshoot occurred during autotuning process.

To set ATVL ,press **SET** key 5 seconds to enter Level 2 (PID Level) and then change the value.



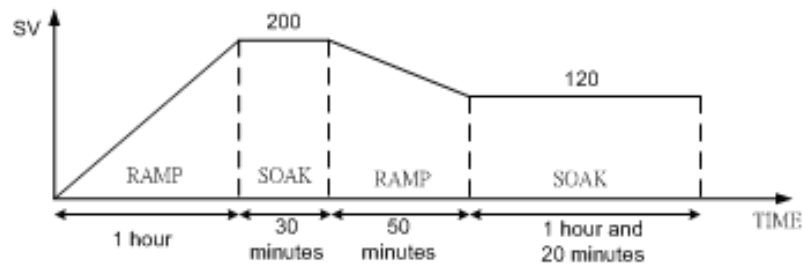
Autotuning failure

- Possible cause 1 : ATVL is too big. (If not sure · set ATVL=0)
- Possible cause 2 : Calculation time is too long. (Set PID parameter manually)

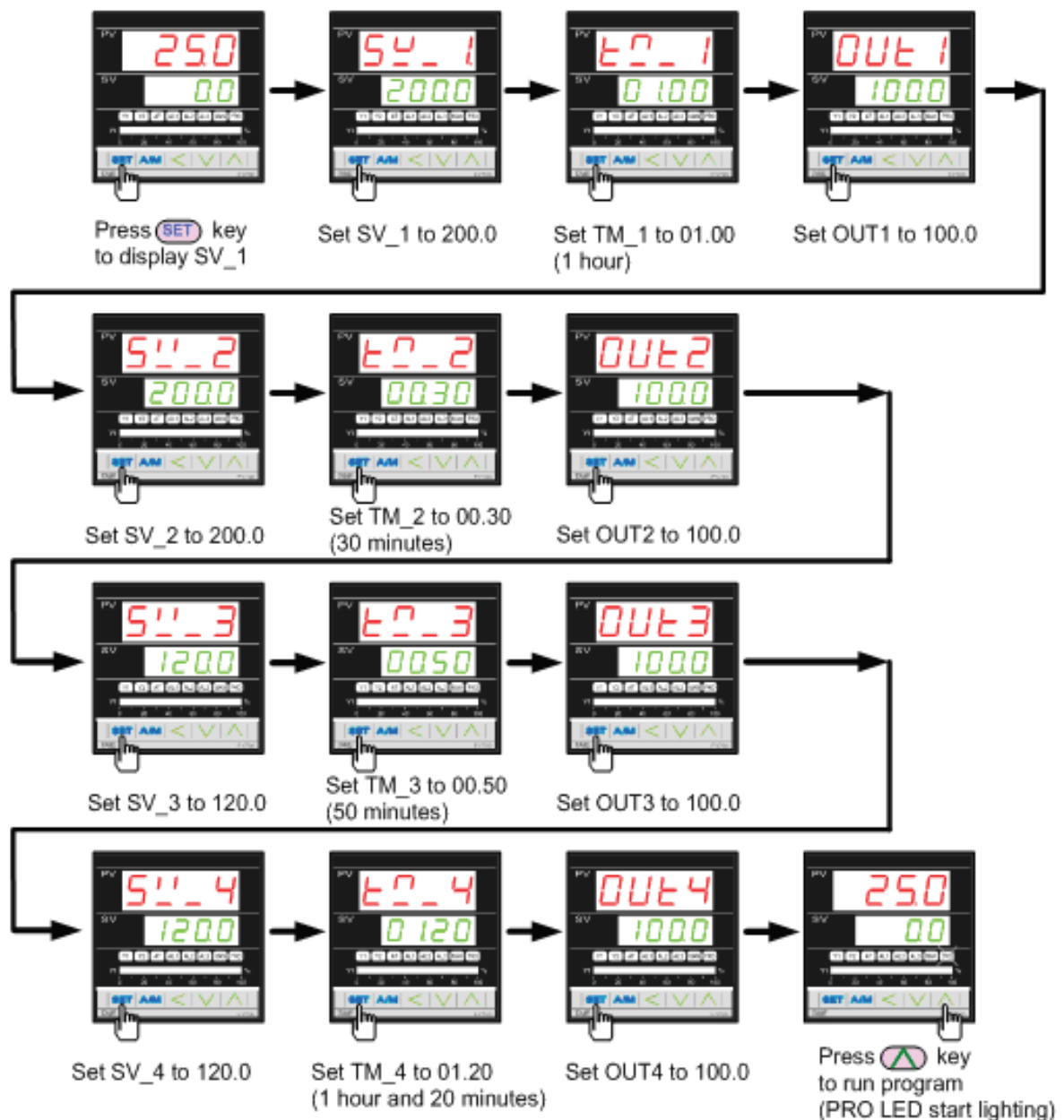
Programmable RAMP / SOAK (Only available for PFY model)

*For detail of the programmable instruction, please refer with page 21.

Assume the temperature profile is as below (use total 4 segments)

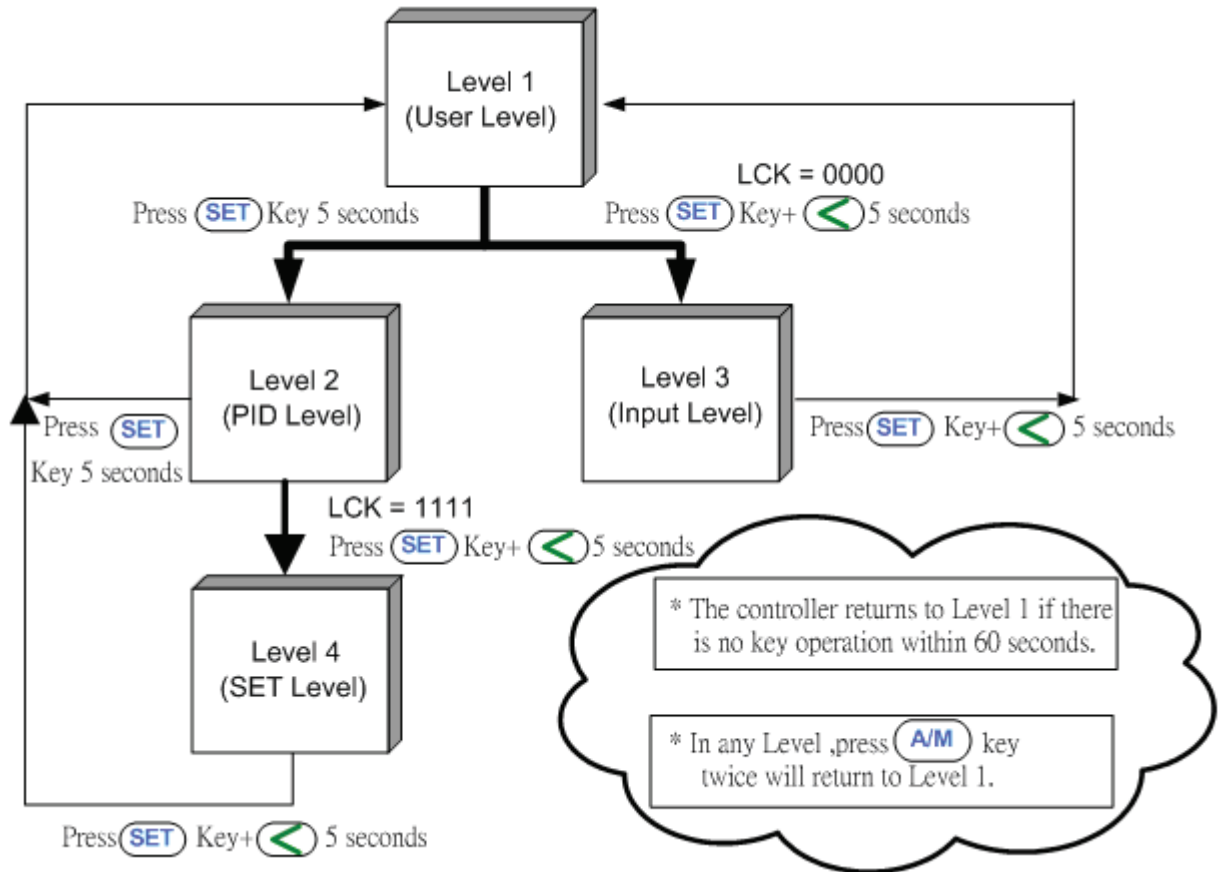


Please operate controller as following steps:



Operation levels

Levels diagram



Lock function

To use lock function, please set parameter "LCK" in level 2.

| LCK | Levels entering available | | | | Parameters which can be changed |
|------|---------------------------|------------------|--------------------|------------------|---------------------------------------|
| | Level 1 (User) | Level 2 (PID) | Level 3 (Input) | Level 4 (SET) | |
| 0000 | ⊙ | ⊙ | ⊙ | ----- | All parameters (Factory set value) |
| 1111 | ⊙ | ⊙ | ----- | ⊙ | All parameters |
| 0100 | ⊙ | ⊙ | ----- | ----- | All parameters except level 3 |
| 0110 | ⊙ | ⊙ | ----- | ----- | Parameters in level 1 |
| 0001 | ⊙ | ⊙ | ----- | ----- | "SV" and "LCK" |
| 0101 | ⊙ | ⊙ | ----- | ----- | Only "LCK" |

Tabela hasel do maszyny AM-4/100C, AM-5/100C
Passwords table for AM-4/100C, AM-5/100C machine
Таблица паролей для машин AM-4/100C, AM-5/100C

| Użytkownik/ User/ Исползователь | Hasło/ Password/ Пароль |
|--|--------------------------------|
| Admin | 2222 |
| User | 1111 |
| Master | 660802 |
| Operator | 201302 |
| Normal | 4321 |