

Geniox Core Control system 42.04.02 (Pre-heat)

Documents listed on pages below:

- Project cover sheet: page 1
- Quick Guide: page 2
- General Description: page 3-4
- External connections: page 10-17
- Circuit Diagram: page 18-27
- Modbus Guide: page 23
- Modbus address list: page 30
- Cable plan: page 100-117

Units with internal cabinet:
Cabinet is always inside the unit.

AHU unit data.

- Heat exchanger type:
See data in the attached annex - Technial data
- Heat coil type:
See data in the attached annex - Technial data
- Cooling coil type:
See data in the attached annex - Technial data
- Heat pump type:
See data in the attached annex - Technial data

- Electrical data:
- | | |
|-----------------------------------|---------------------|
| Total consumed power: | Watch printed order |
| Fan fuse size: | Watch printed order |
| Supply air fan cable resistance: | Watch printed order |
| Extract air fan cable resistance: | Watch printed order |
| Max pre-fuse: | Watch printed order |
| Ik max on fuse in unit: | 6 kA |

Manufacturer:

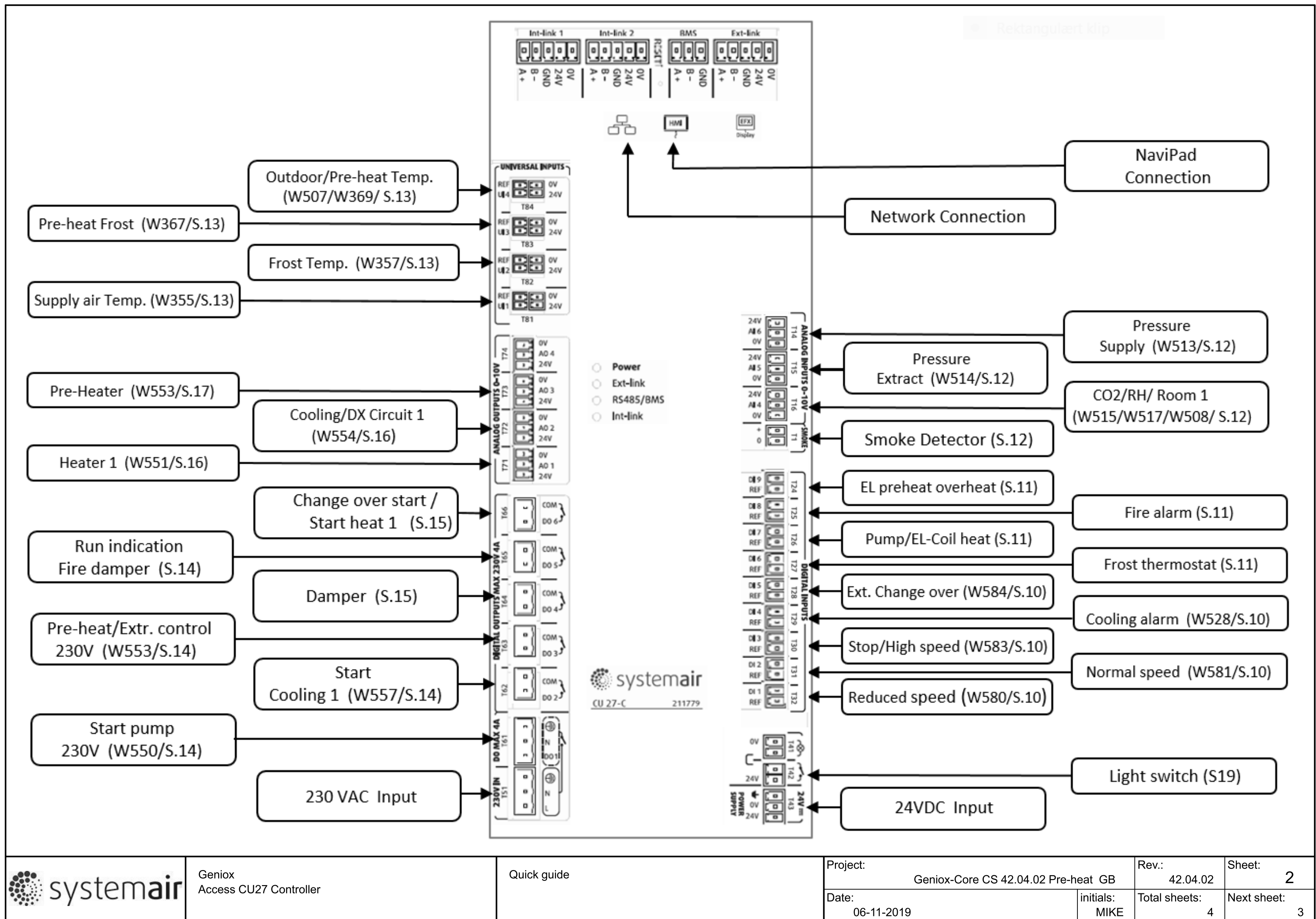
Systemair A/S, Denmark
Ved Milepælen 7
8361 Hasselager



Geniox
Access CU27 Controller

Frontpage

Project:	Geniox-Core CS 42.04.02 Pre-heat GB		Rev.: 42.04.02	Sheet: 1
Date:	07-08-2020	initials: MIKE	Total sheets: 4	Next sheet: 2



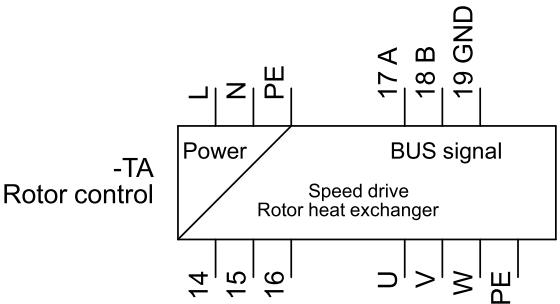
Symbols are according to IEC 60617.
On the following 2 pages there are descriptions of used symbols in the project.

Wire Colour code
Black - BK
Brown - BN
Red - RD
Orange - OG
Yellow - YE
Green - GN
Blue - BU
Violet - VT
Gray - GY
White - WH
Pink - PK
Transparent - TP
Green/Yellow - PE

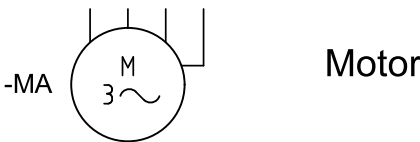
L1:1 > References

-X2:1 ⚡ Terminal

-EA ⦿ Lamp

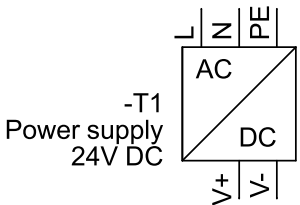


Rotary heat exchanger

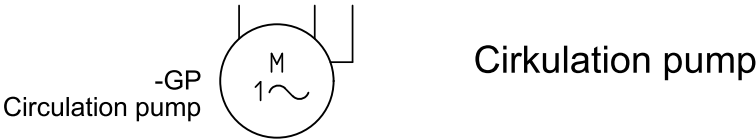


Motor

-SF ⚡ Switchgear

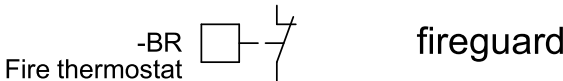


Power supply



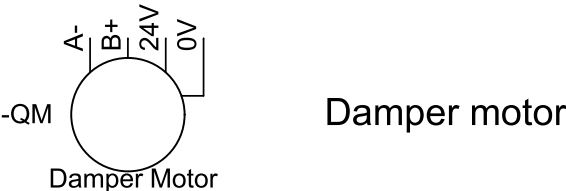
Cirkulation pump

-BP ⦿ Pressure transmitter



fireguard

-BP ⦿ Pressure Switch



Damper motor

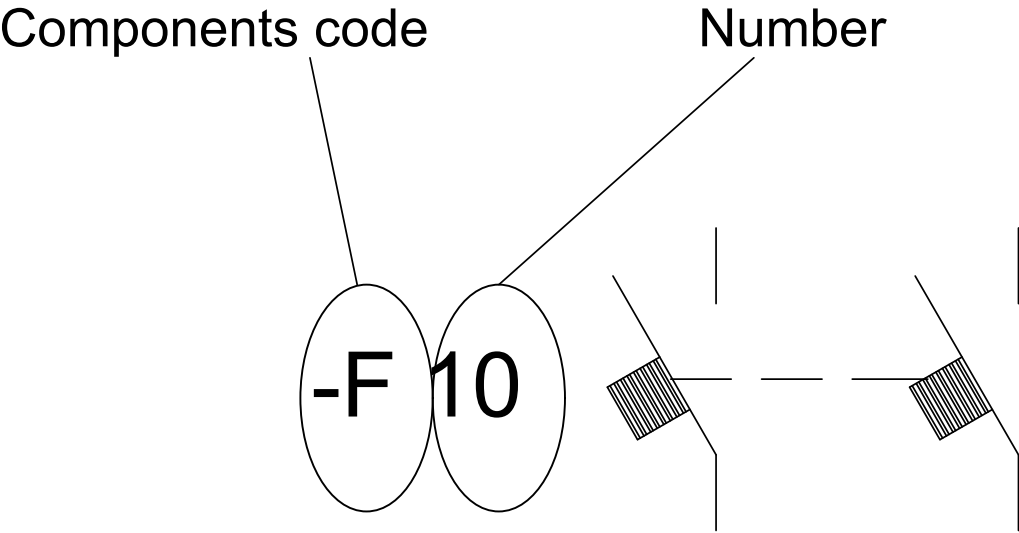
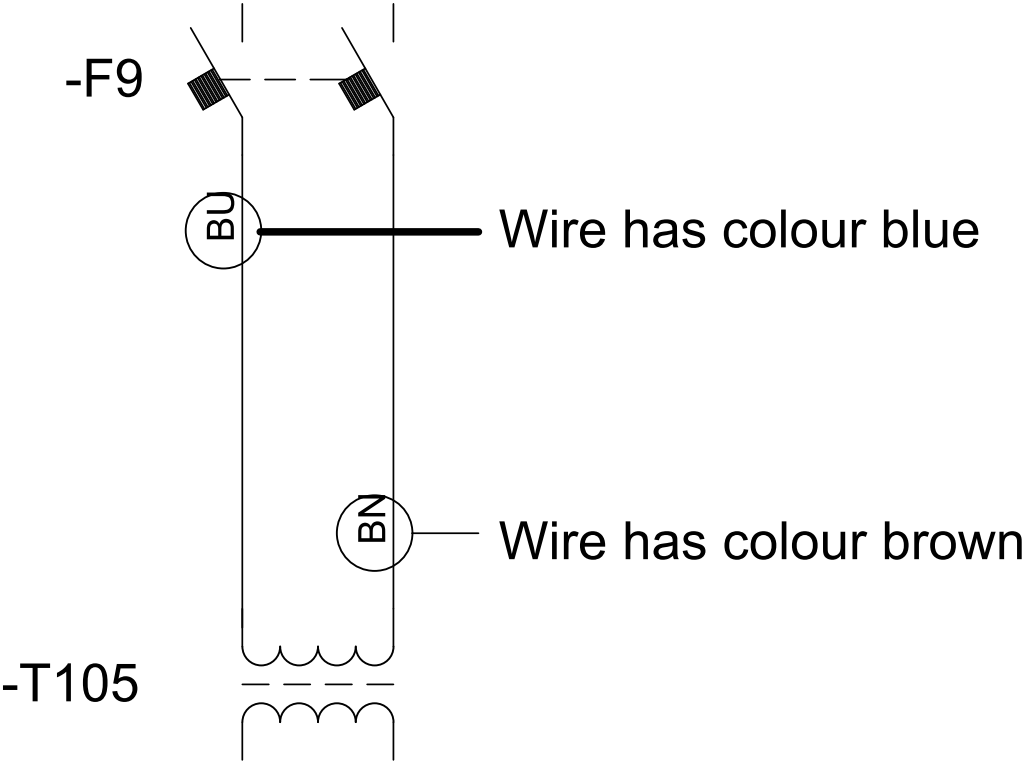
-F ⚡ Automatic tripping,

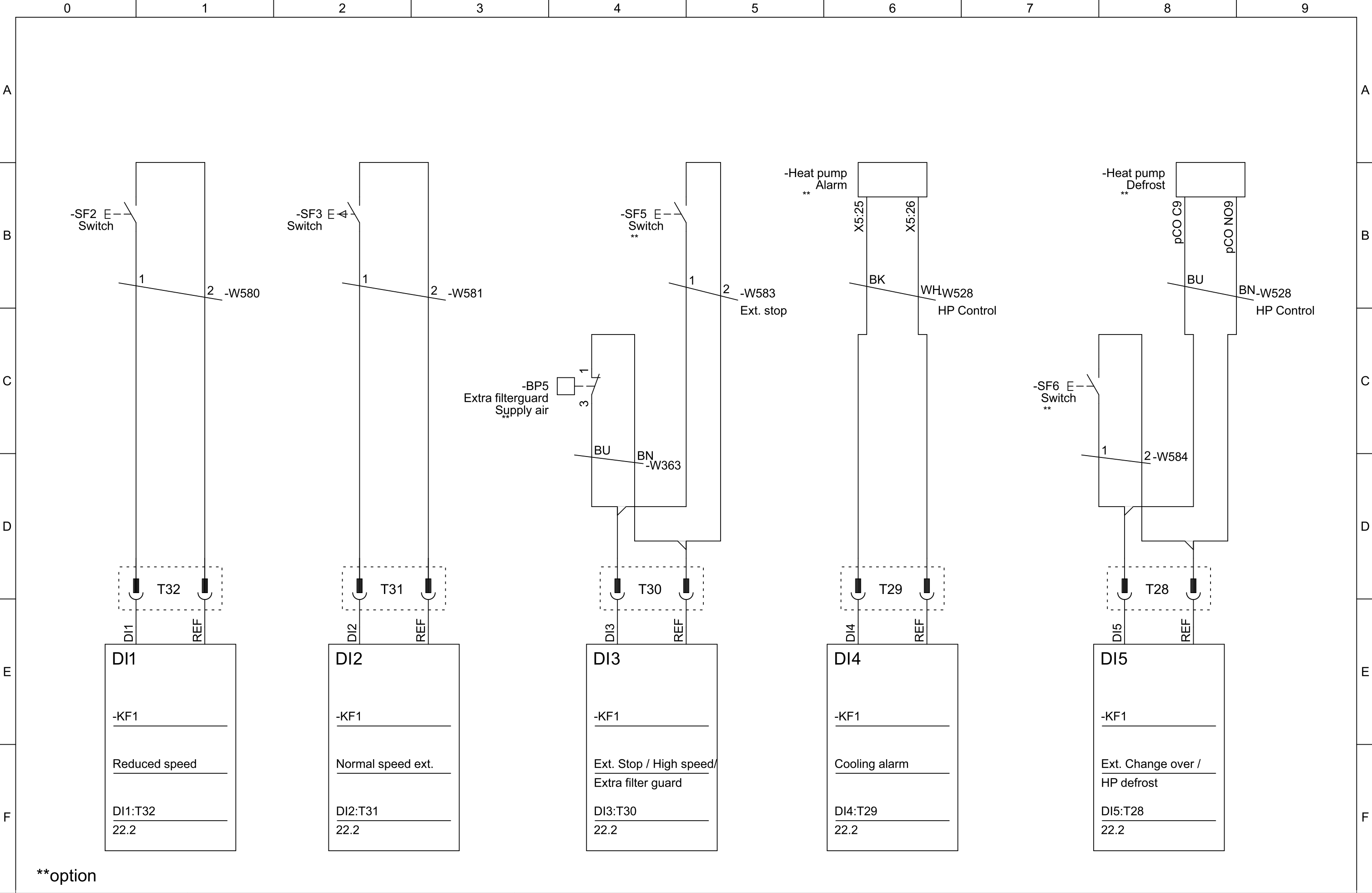


Temperature (measuring)

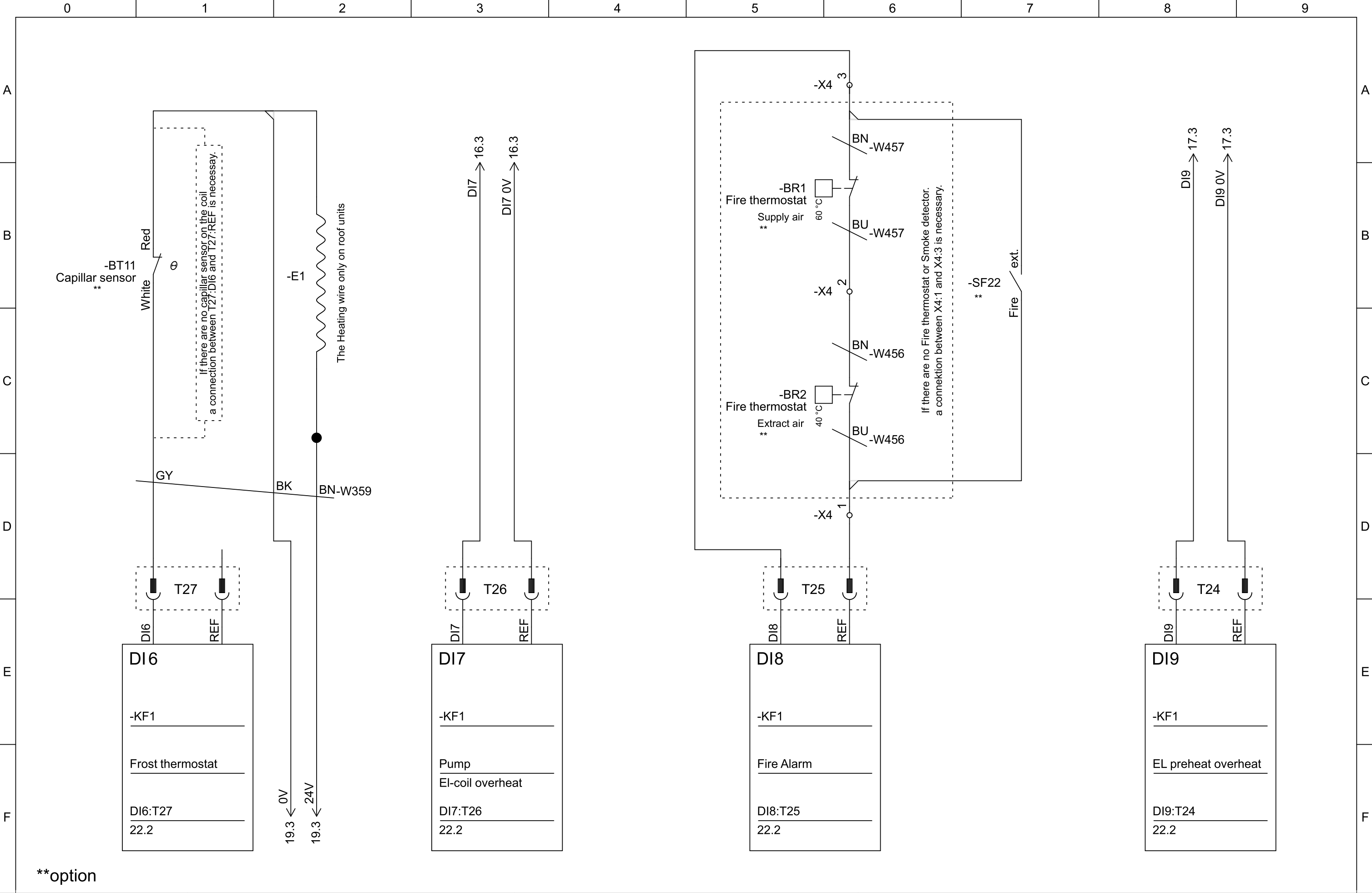
Labeling of wires
are marked with
terminal name

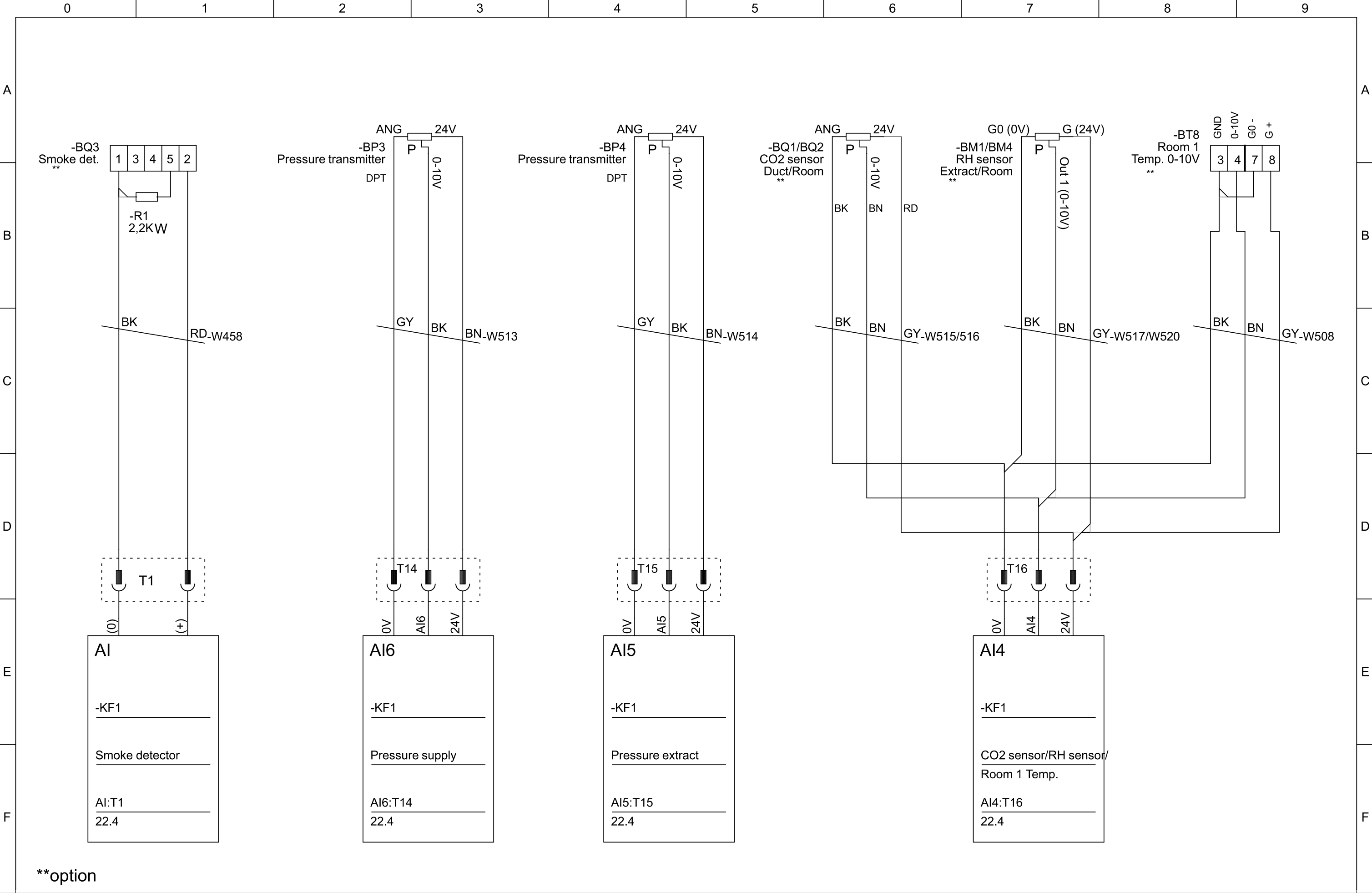
Components are marked with component codes
followed by a number according to IEC 61346-1 Chart 1



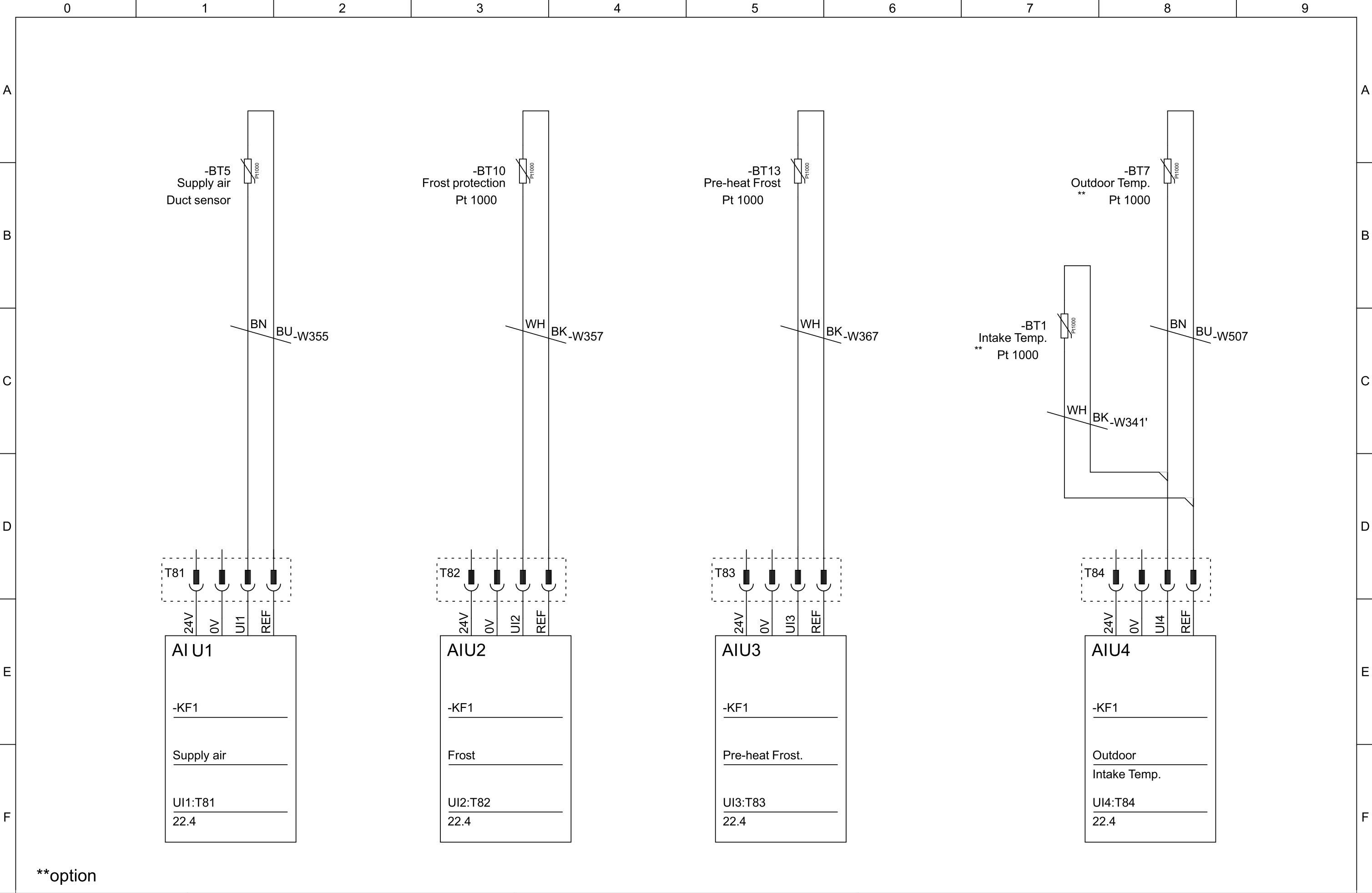


**option

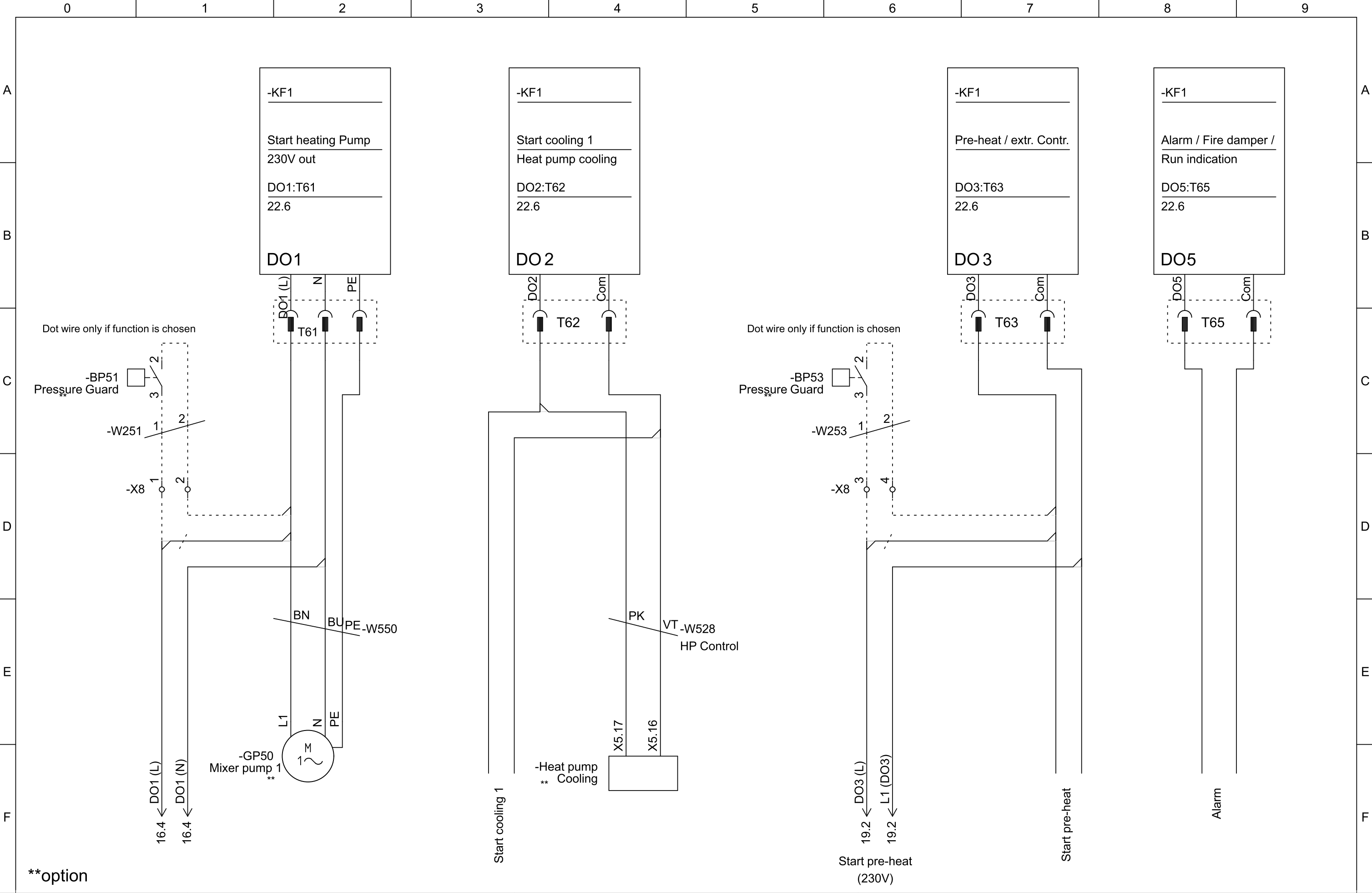




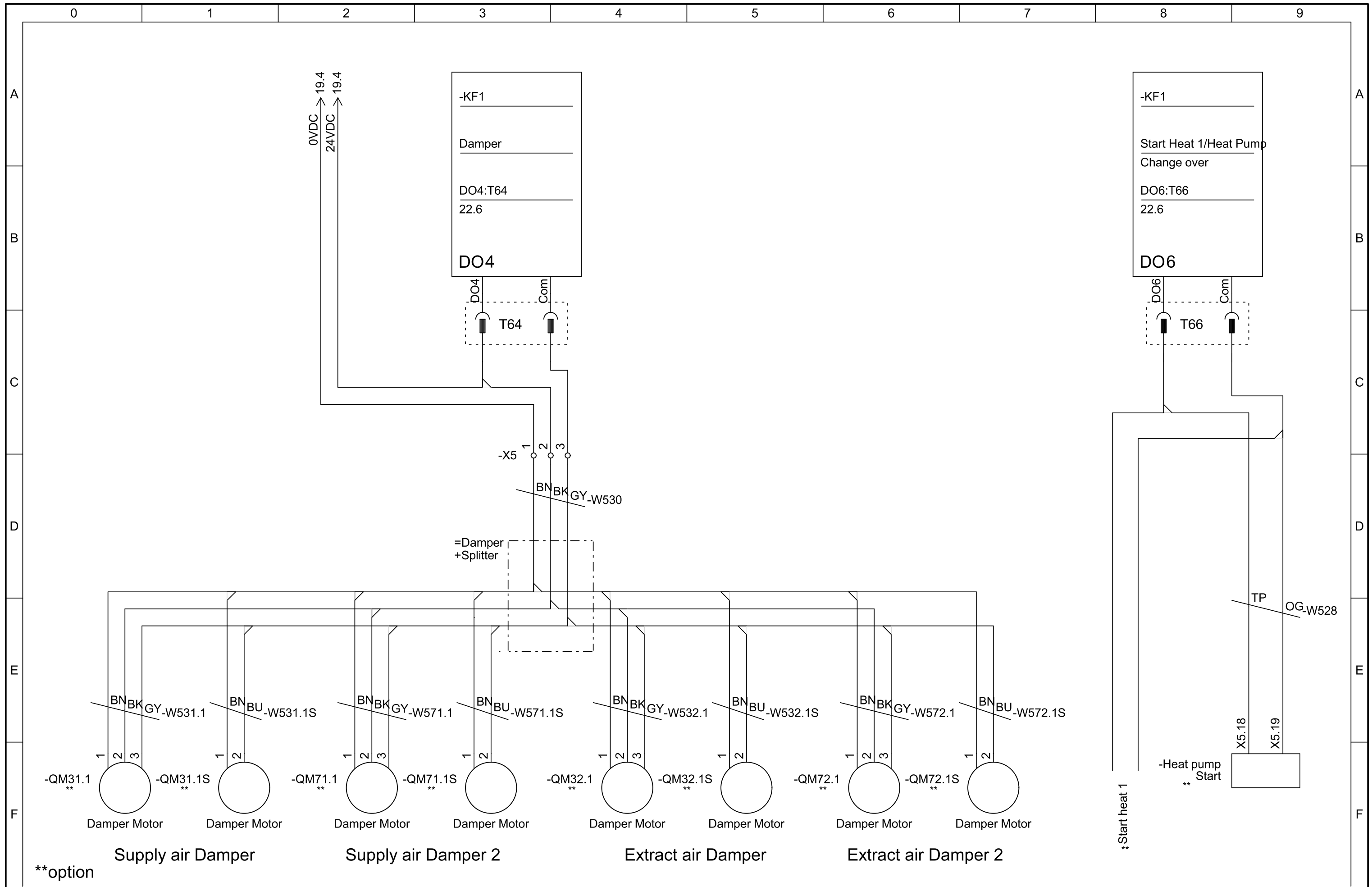
**option

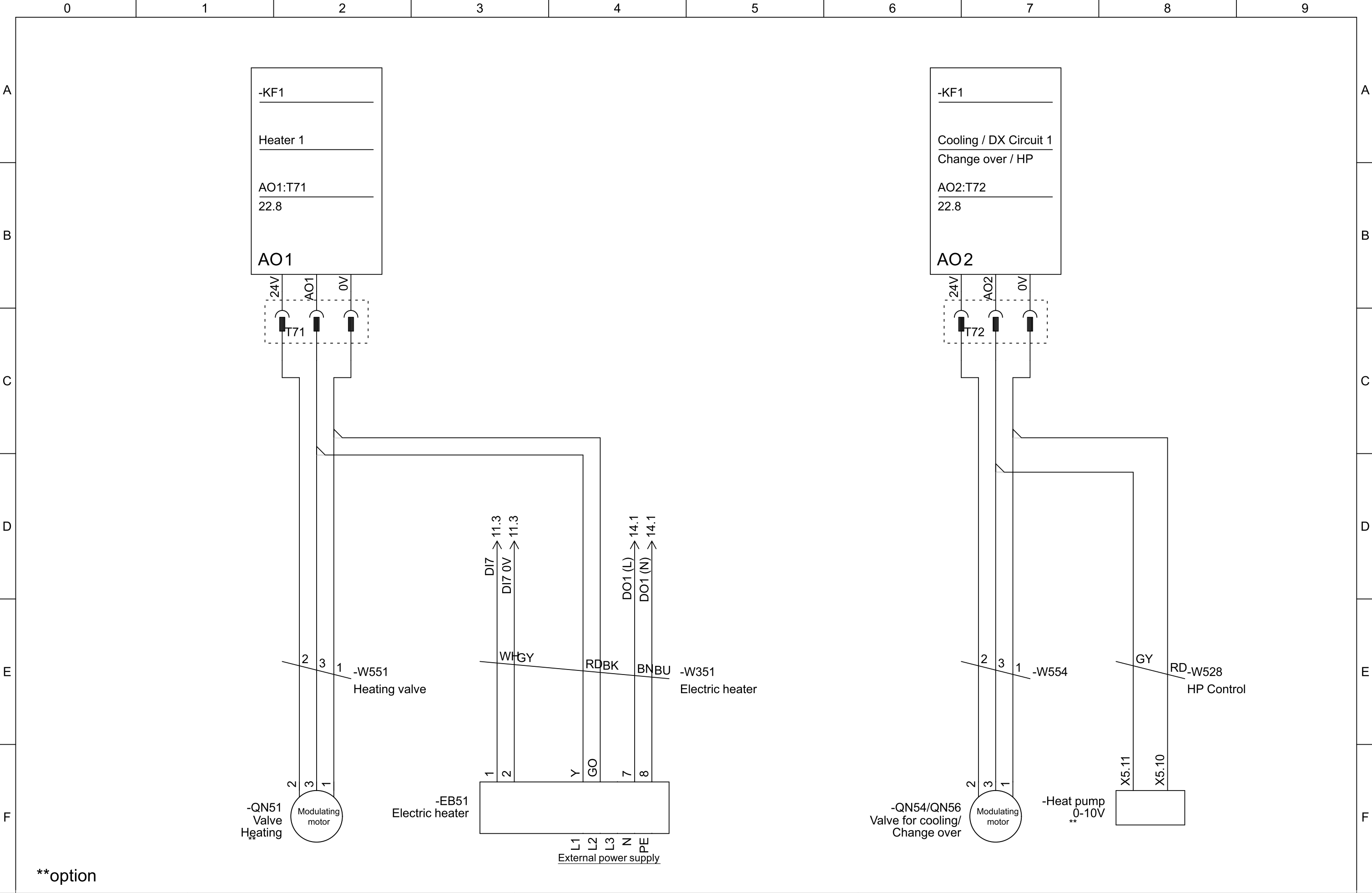


**option

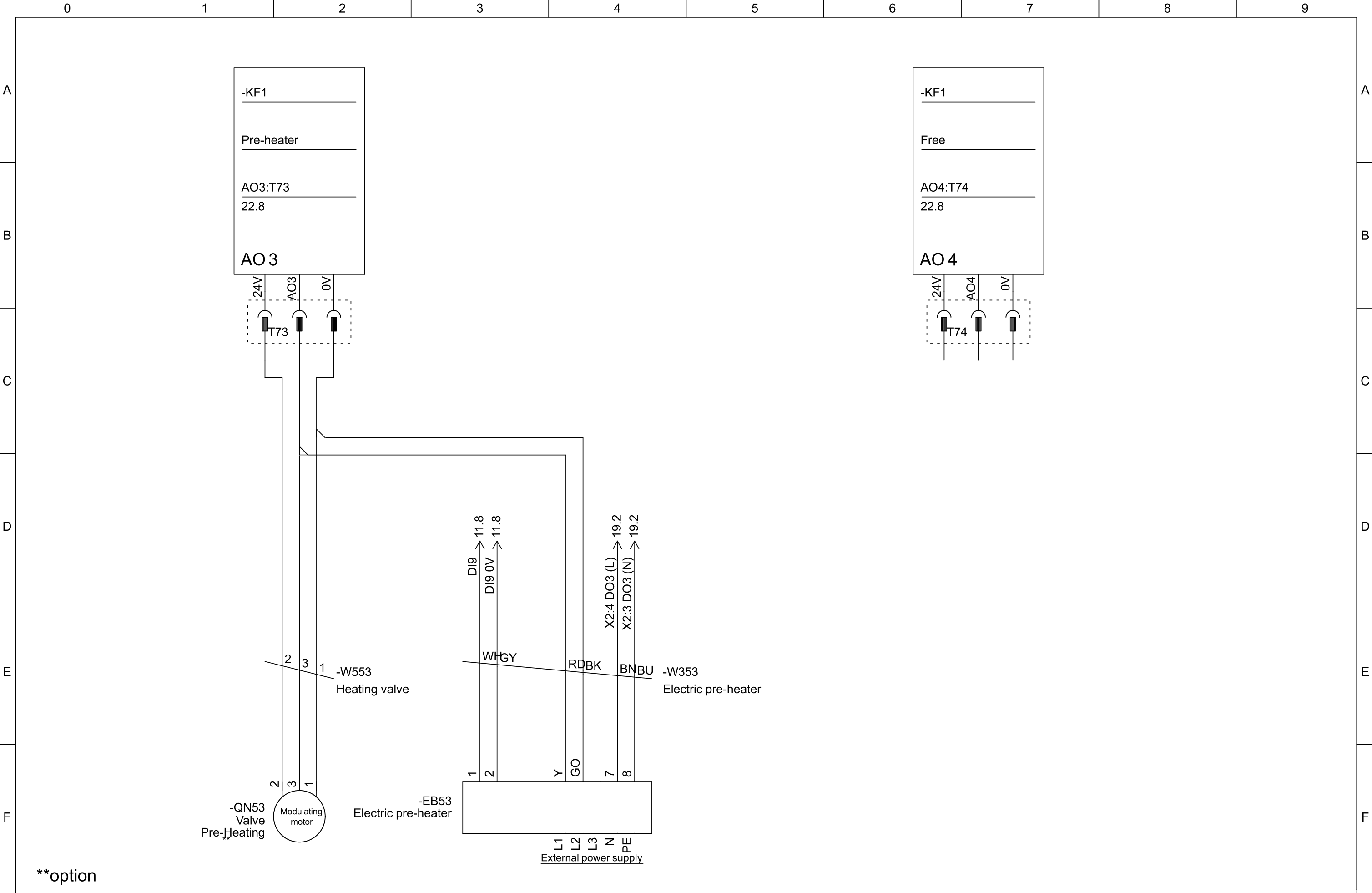


**option

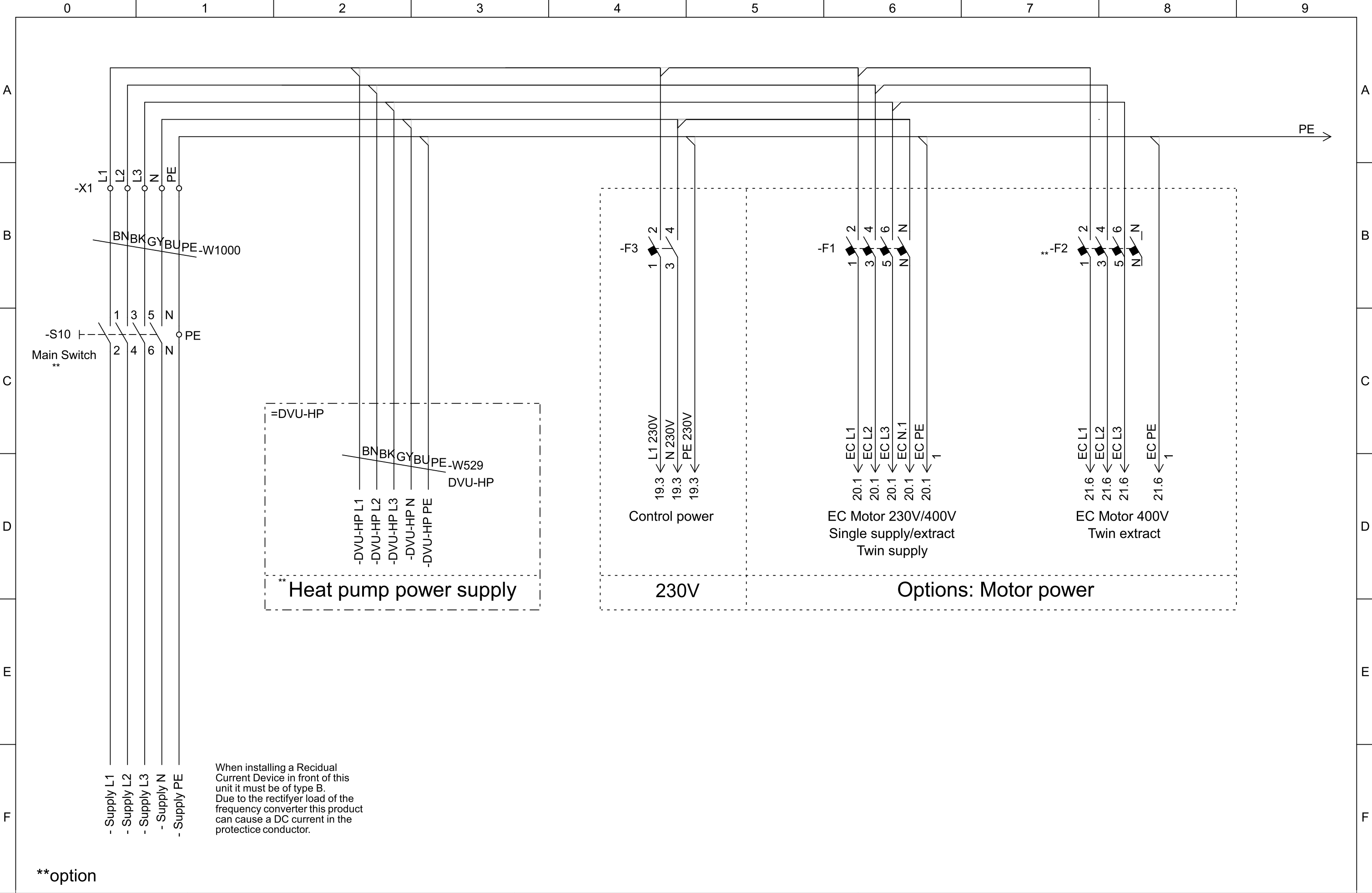


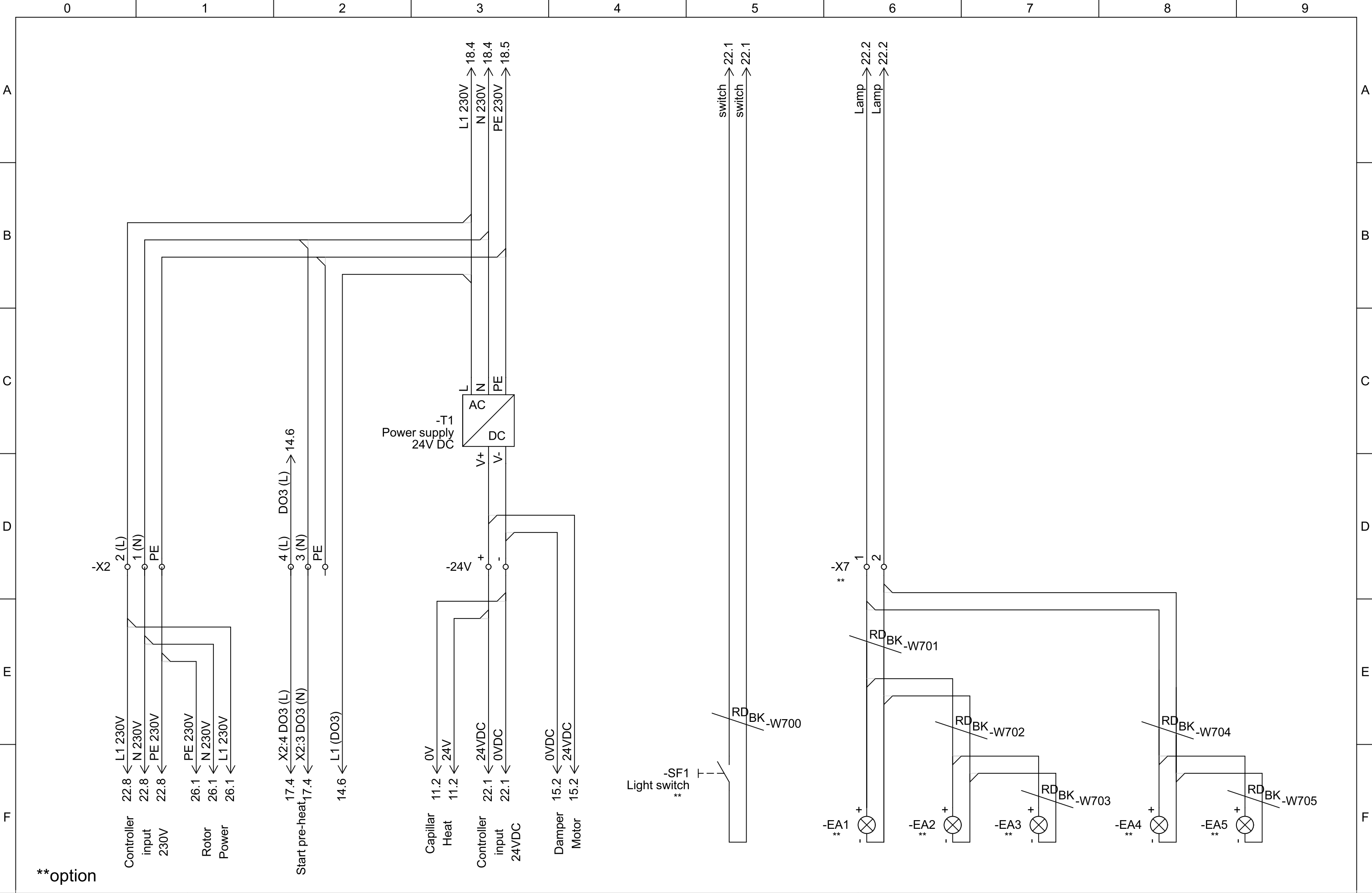


**option

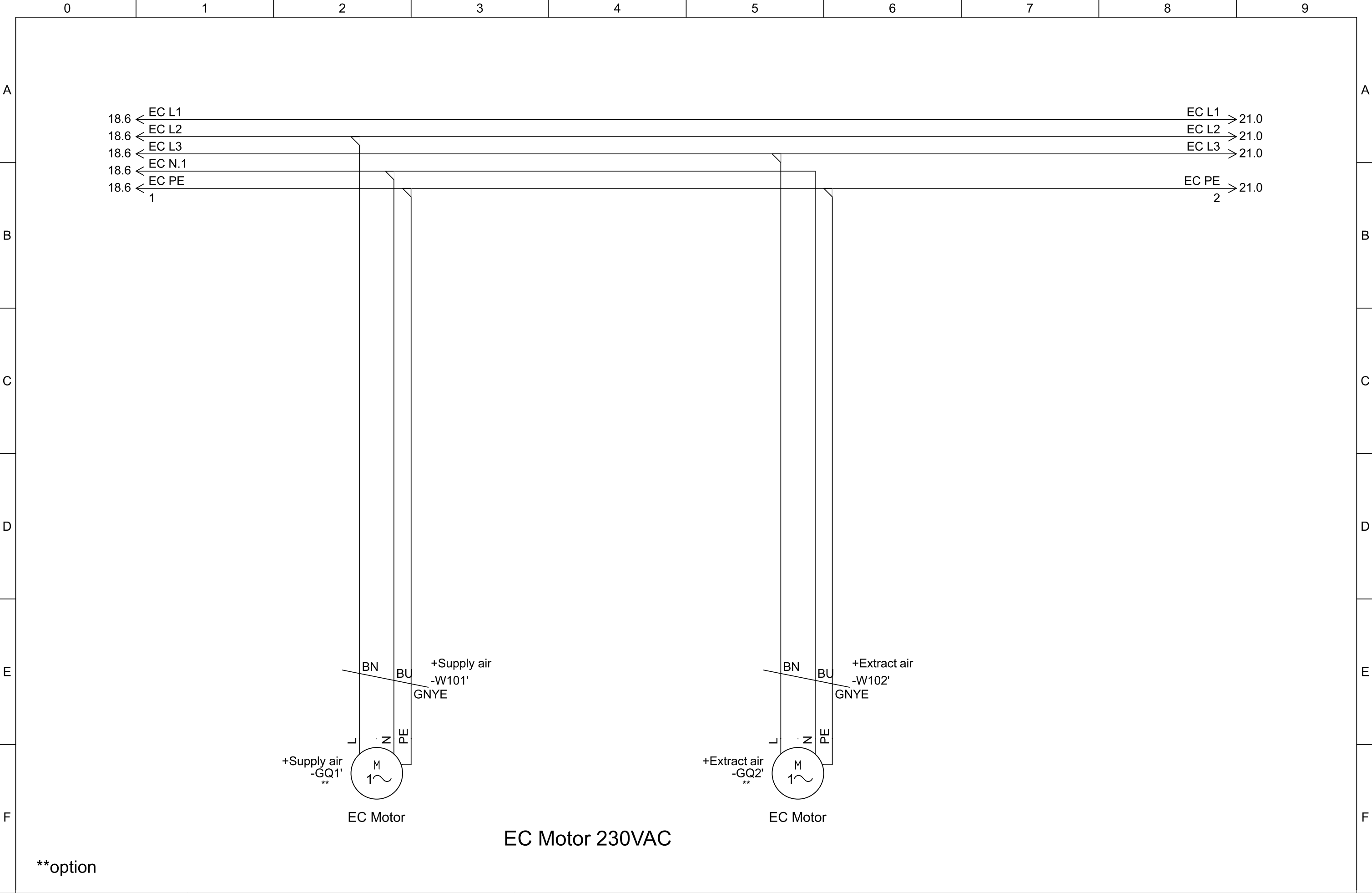


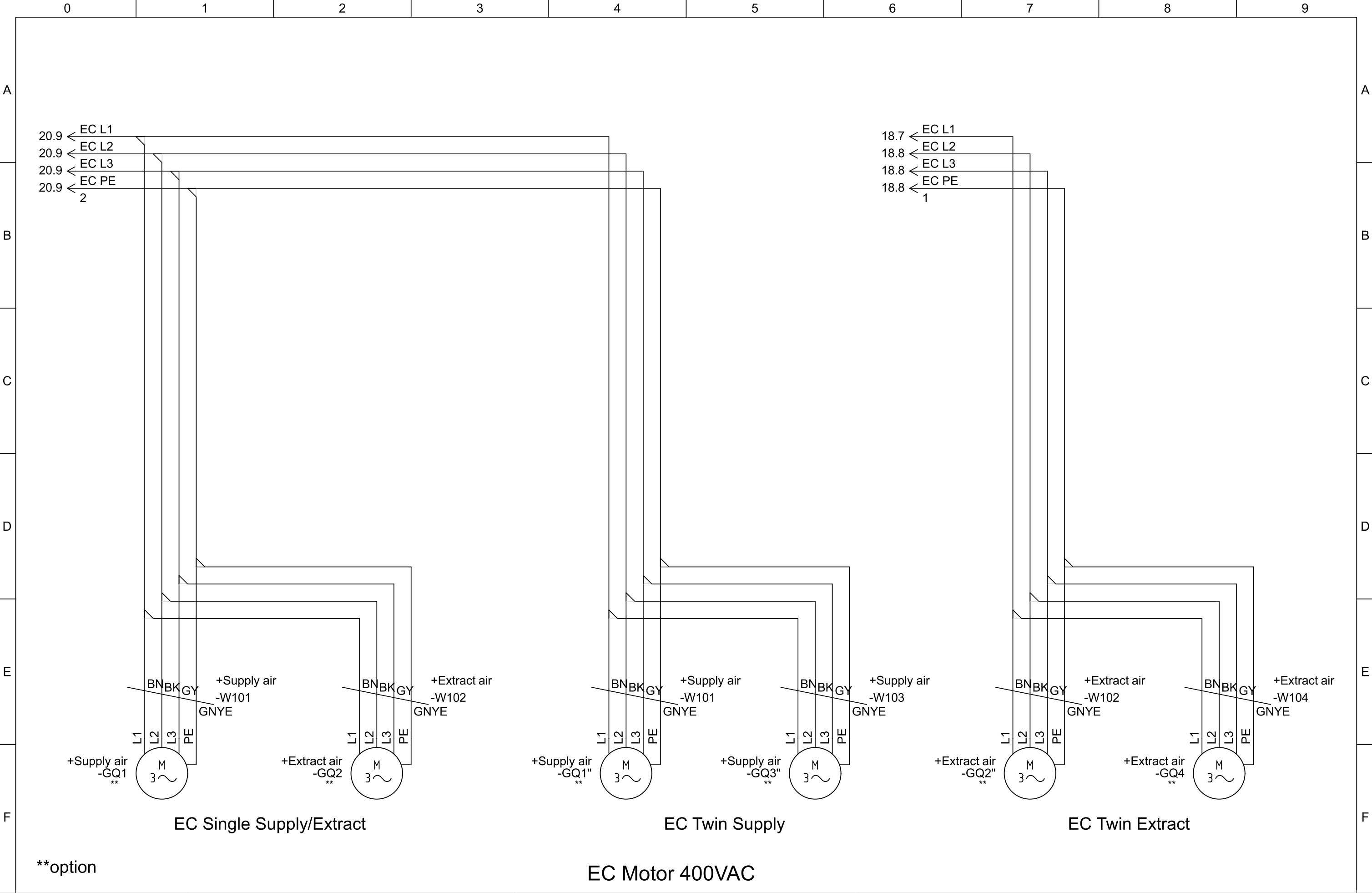
**option





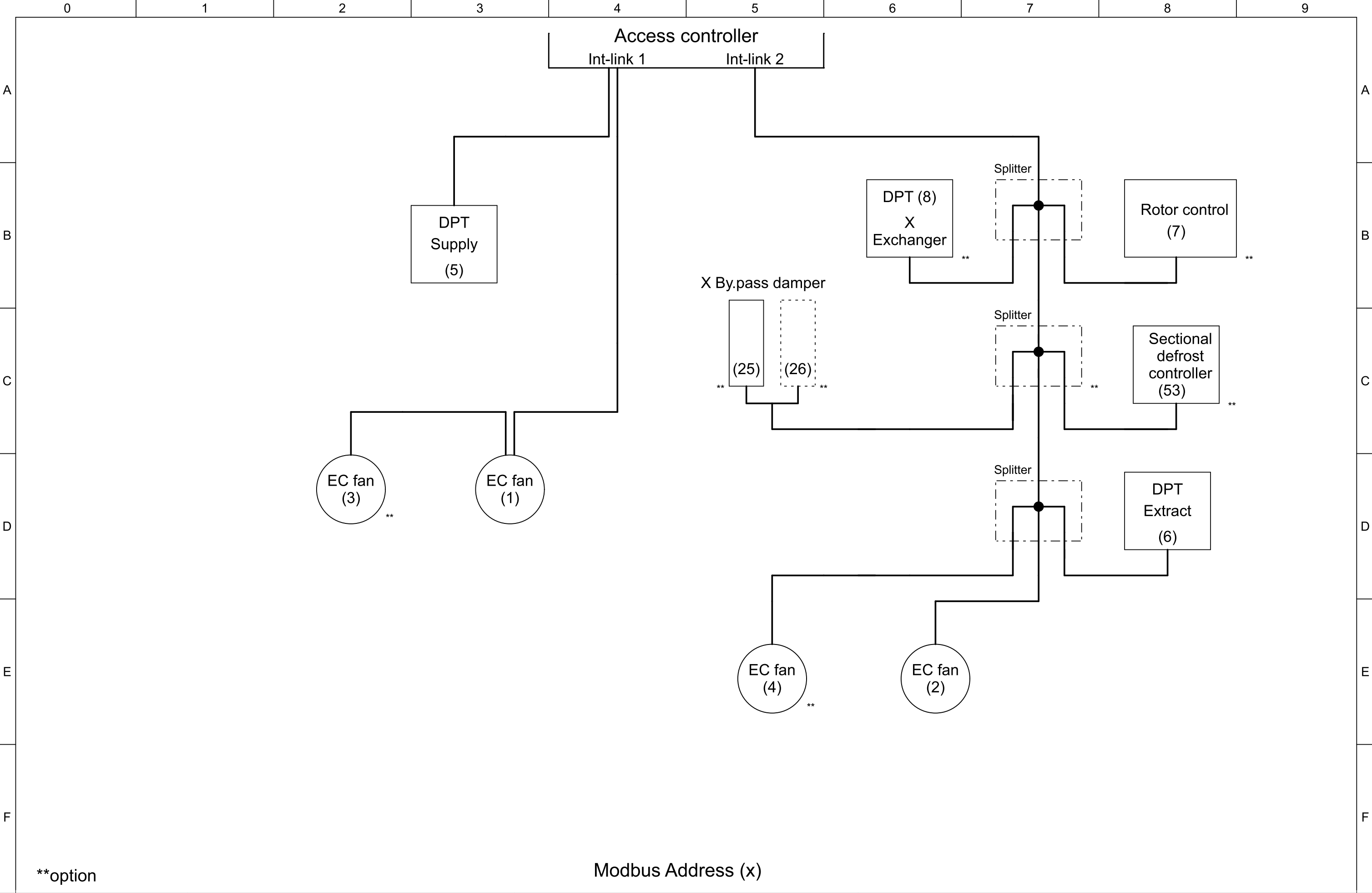
**option





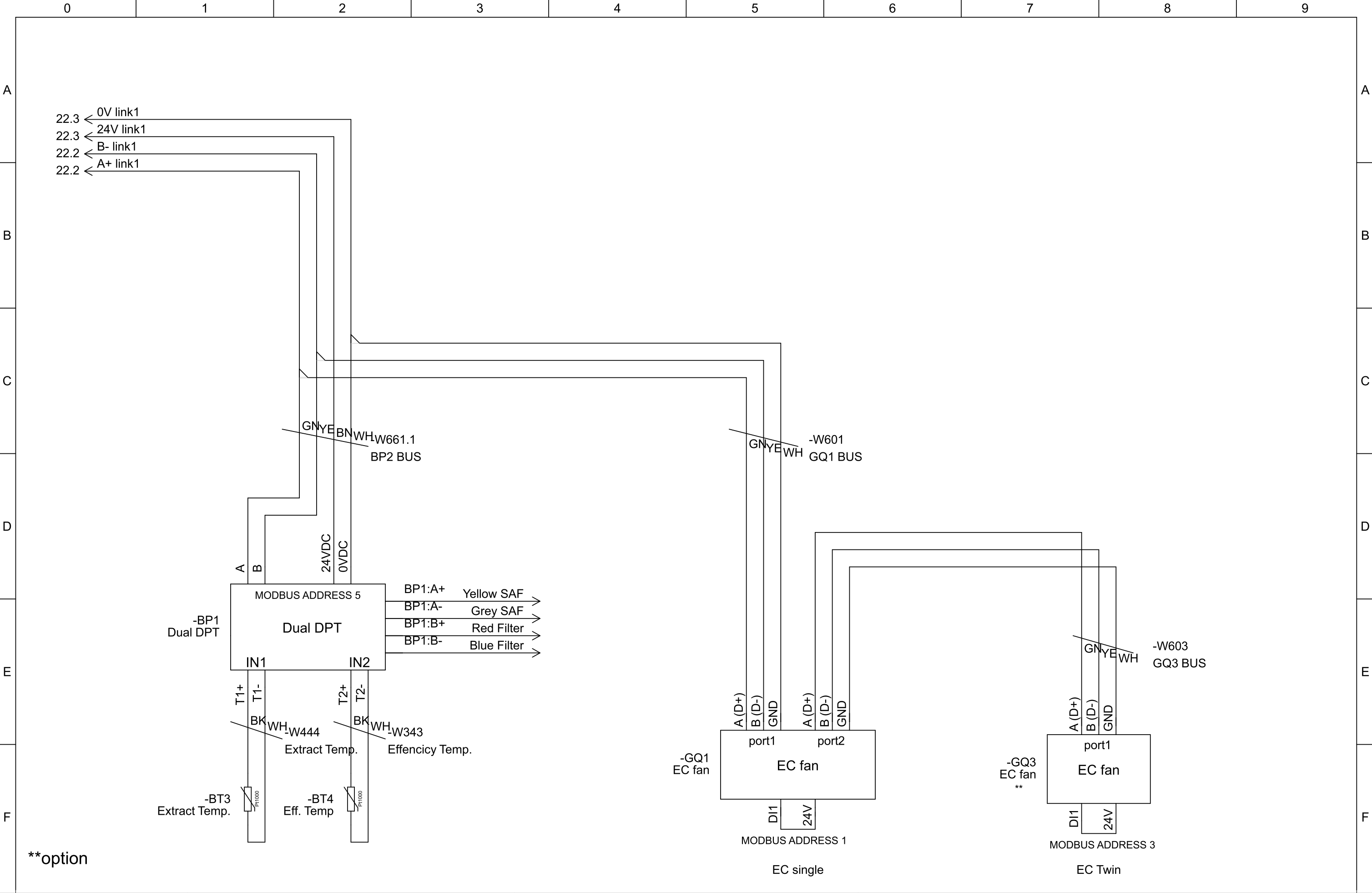
**option

EC Motor 400VAC

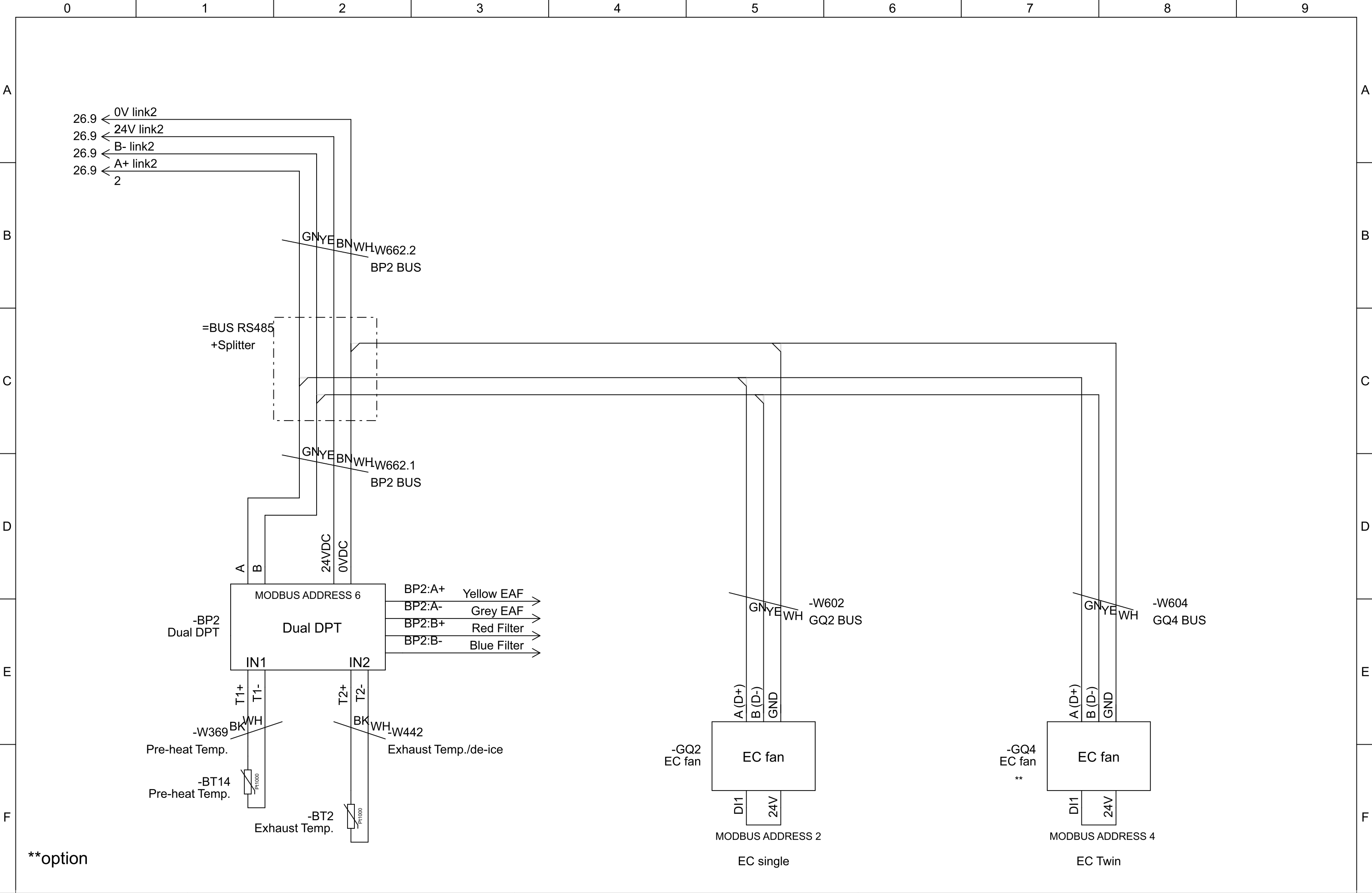


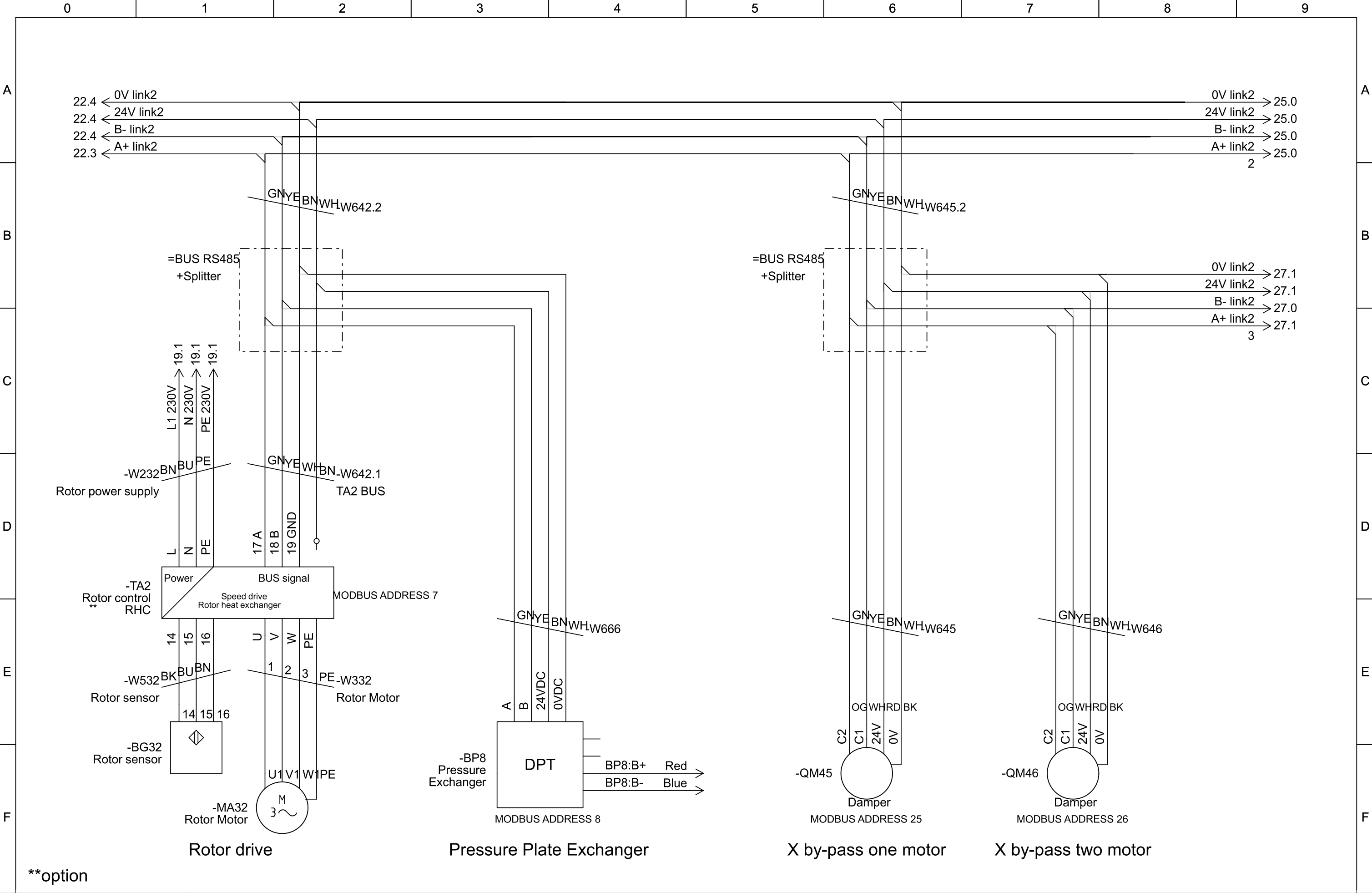
**option

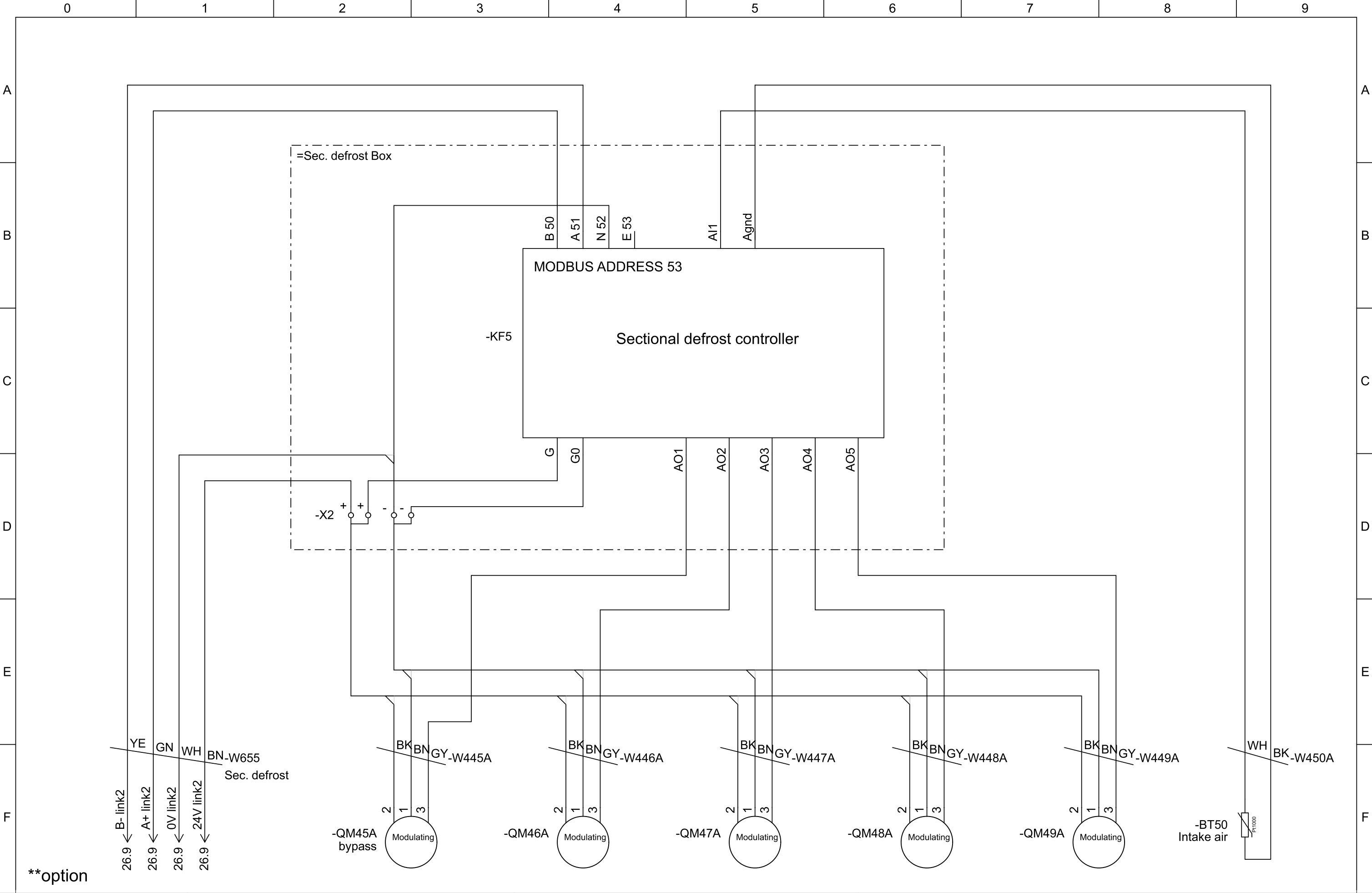
Modbus Address (x)



**option







**option

system**air**

W232

Rel

Cable Plan



Path	4 4 4 4 3 4 3	4 4 4 3 4 3	1 2
	16 16 16 16 16 16 16	17 17 17 17 17 17	13 13
Sheet			

[illegible]

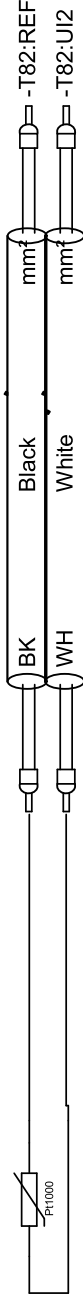
Cable Plan

Path		Sheet	
-W357	Remark: Frost protection heating coil Cable-type:	13	4
		13	3
-W359	Remark: Frost thermostat Cable-type:	11	2
		11	2
-W363	Remark: Extra filter guard Cable-type:	11	1
-W367	Remark: Pre-heat Frost Cable-type:	10	4
		10	4
-W369	Remark: Pre-heat Temp. Cable-type:	13	6
		13	5
		25	1
		25	1

-W357

Frost protection
Pt 1000

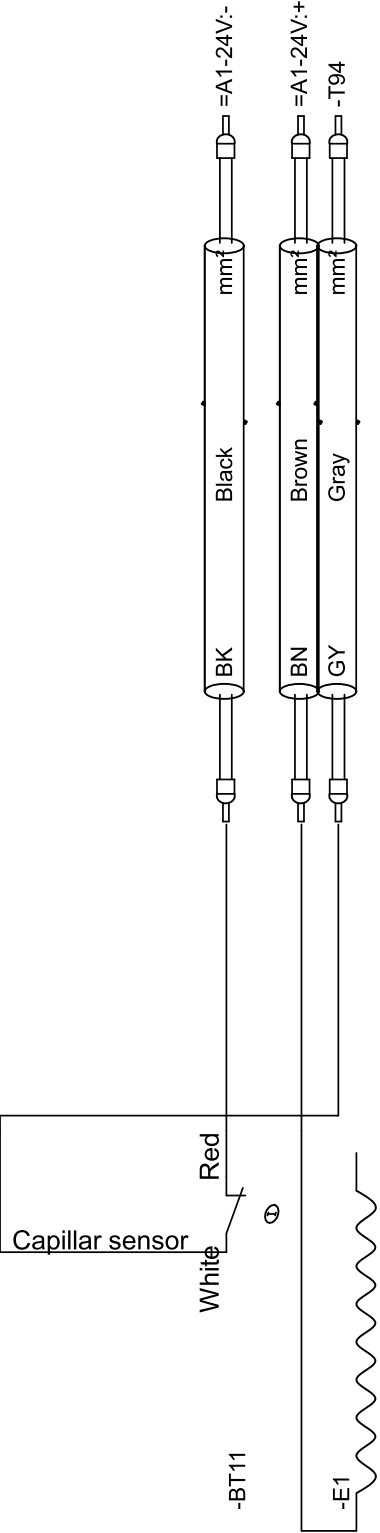
-BT10



-W359

Capillar sensor

-BT11

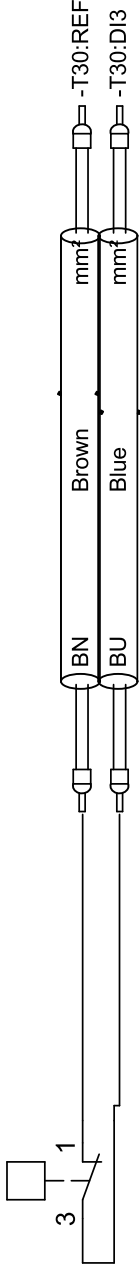


-W363

Remark: Extra filter guard
Cable-type:

Extra filterguard
Supply air

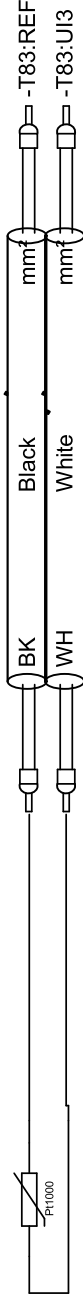
-BP5



-W367

Pre-heat Frost
Pt 1000

-BT13



-W369

Pre-heat Temp.

=A3+DVAF-SA-BT14



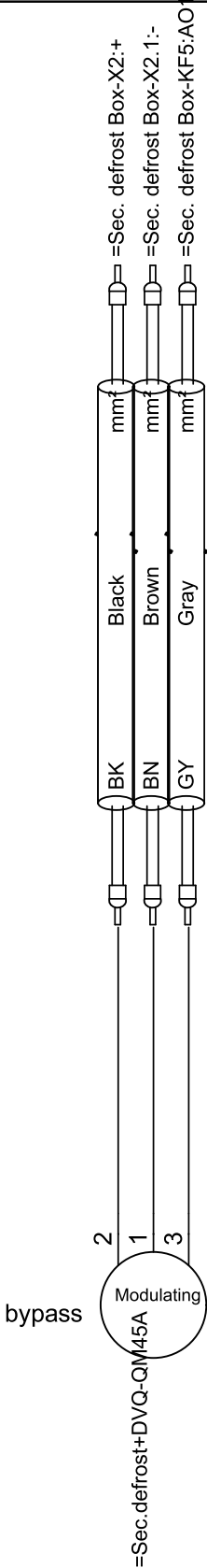
Cable Plan

Sheet

Path

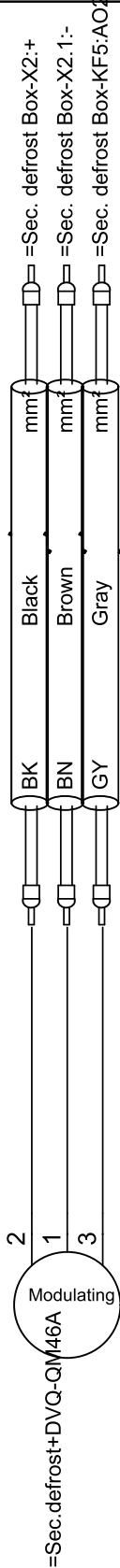
-W445A

Remark:
Cable-type:



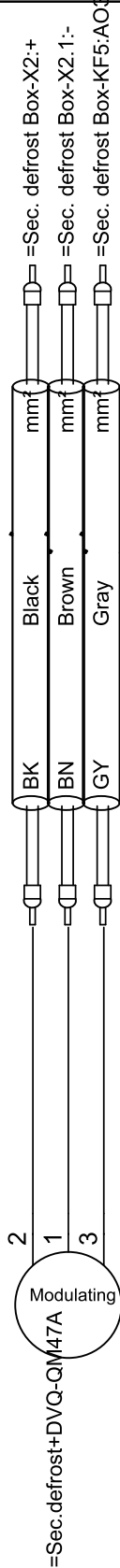
-W446A

Remark:
Cable-type:



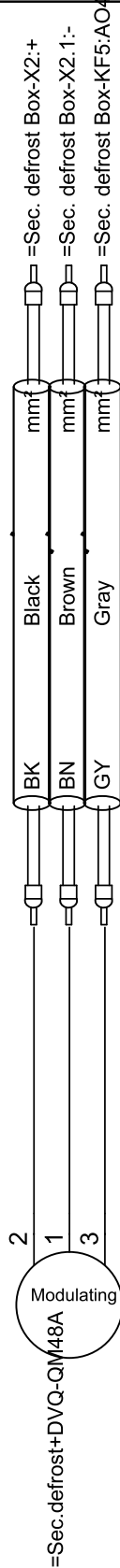
-W447A

Remark:
Cable-type:



-W448A

Remark:
Cable-type:

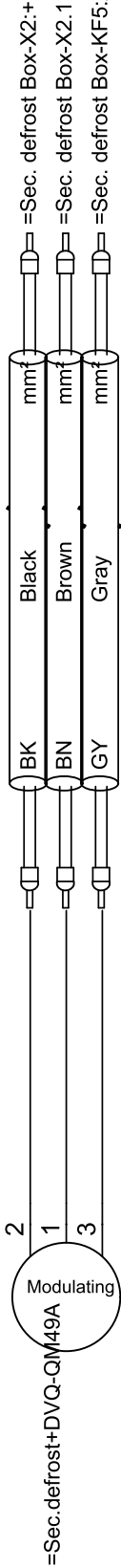


Cable Plan

Sheet	Path
27	7
27	8
27	8
27	9
27	9
11	6
11	6
11	6
11	6

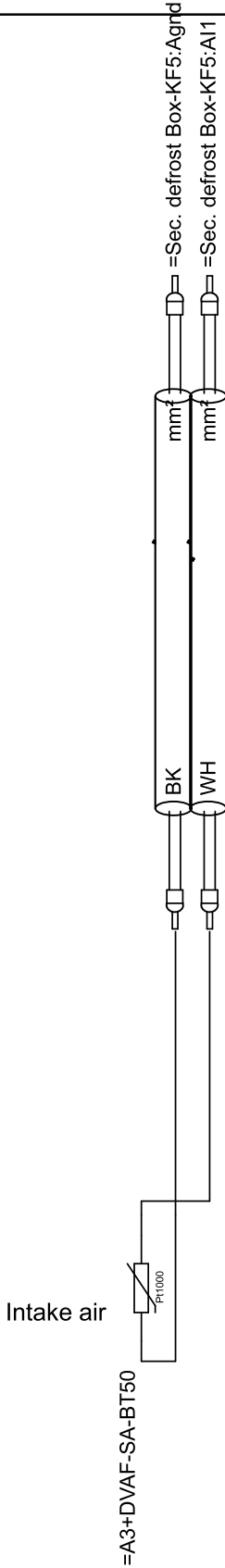
-W449A

Remark:
Cable-type:



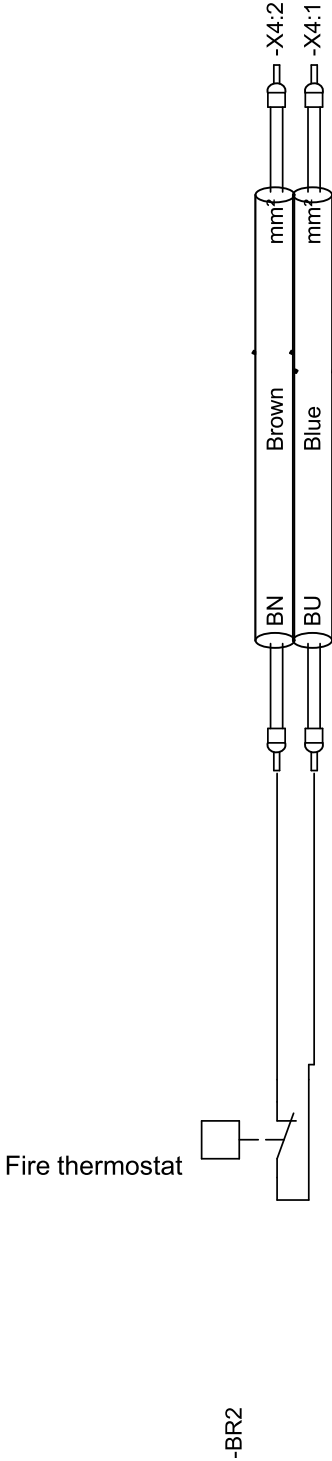
-W450A

Remark: Intake air
Cable-type:



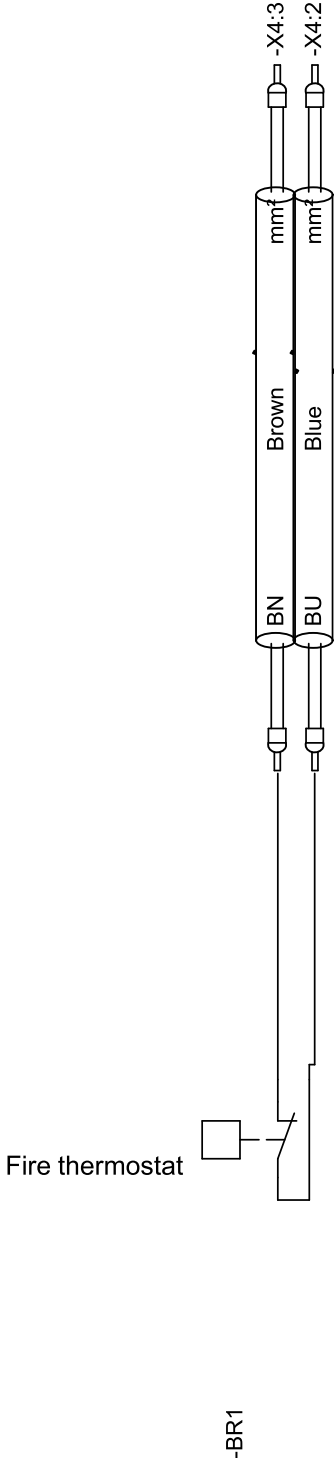
-W456

Remark: Fire thermostat extract air
Cable-type:



-W457

Remark: Fire thermostat
Cable-type: 2x0,75mm2

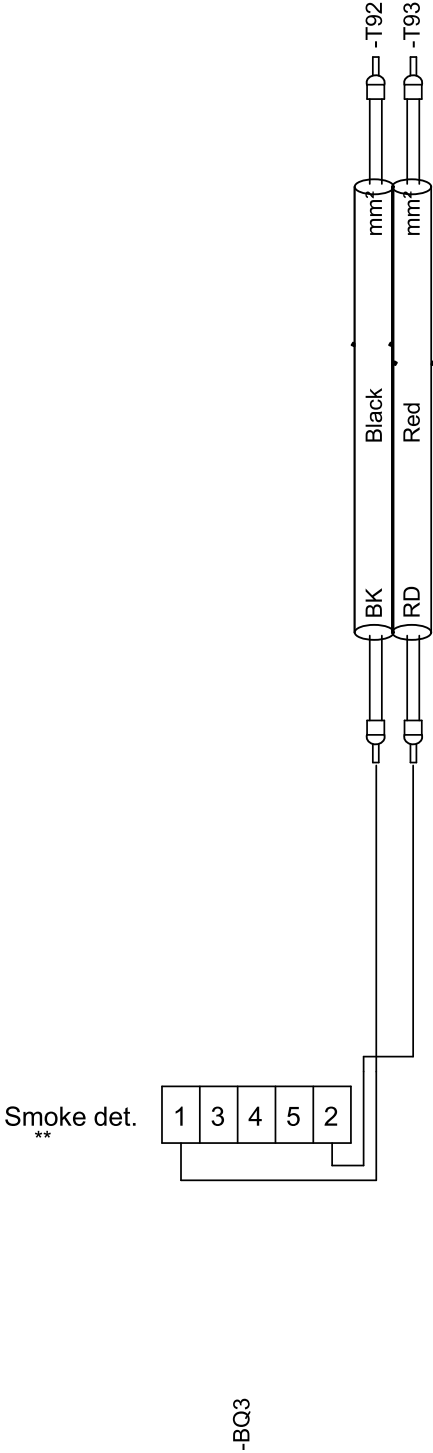


Cable Plan

Path	Sheet
0	12
1	12
8	13
8	13
8	12
9	12
9	12
3	12
3	12
2	12

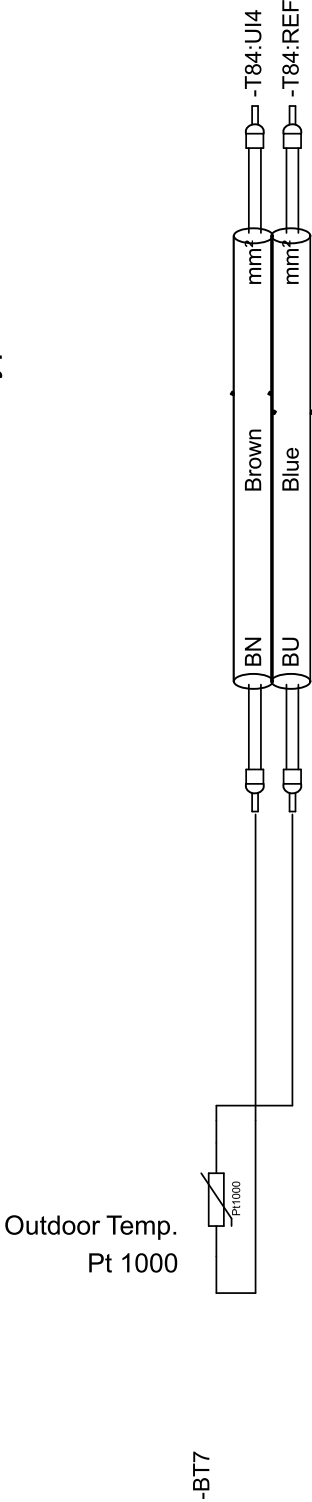
Remark: Smoke detector
Cable-type:

-W458



Remark: Outdoor sensor
Cable-type:

-W507



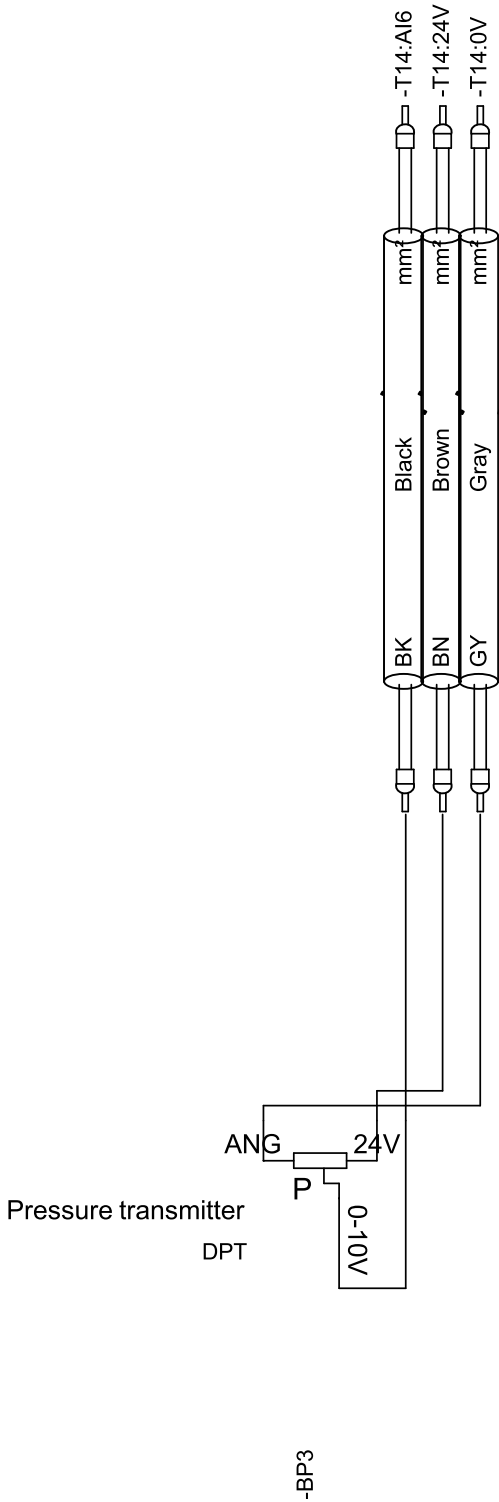
Remark: Room sensor 1
Cable-type:

-W508



Remark: Pressure Supply air external
Cable-type:

-W513

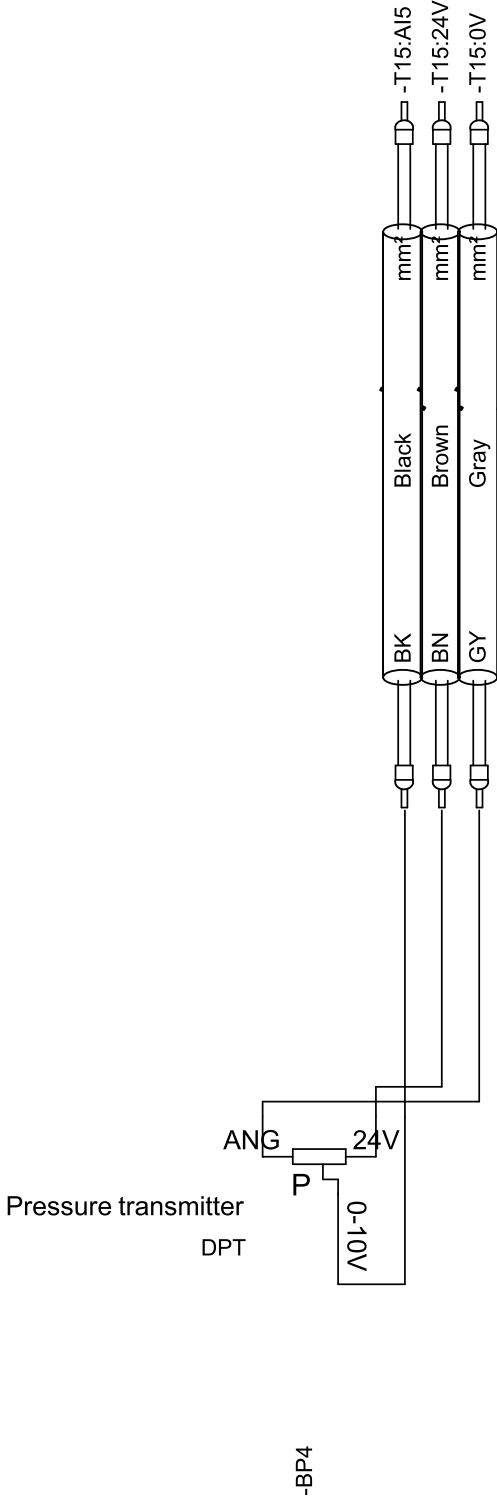


Sheet	Path											
	12	12	12	12	12	12	12	12	12	12	12	12

Cable Plan

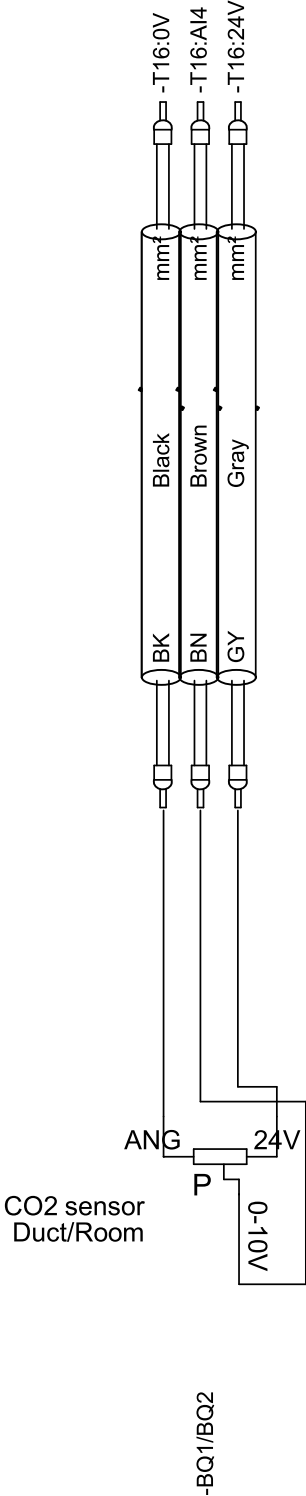
Remark: Pressure Extract air external
Cable-type:

-W514



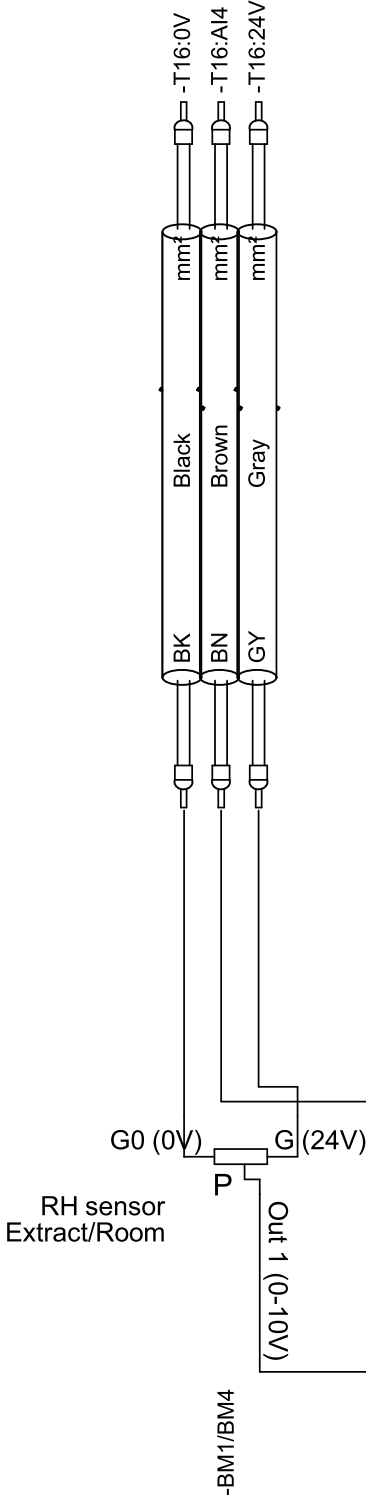
Remark: CO2 sensor
Cable-type:

-W515/516

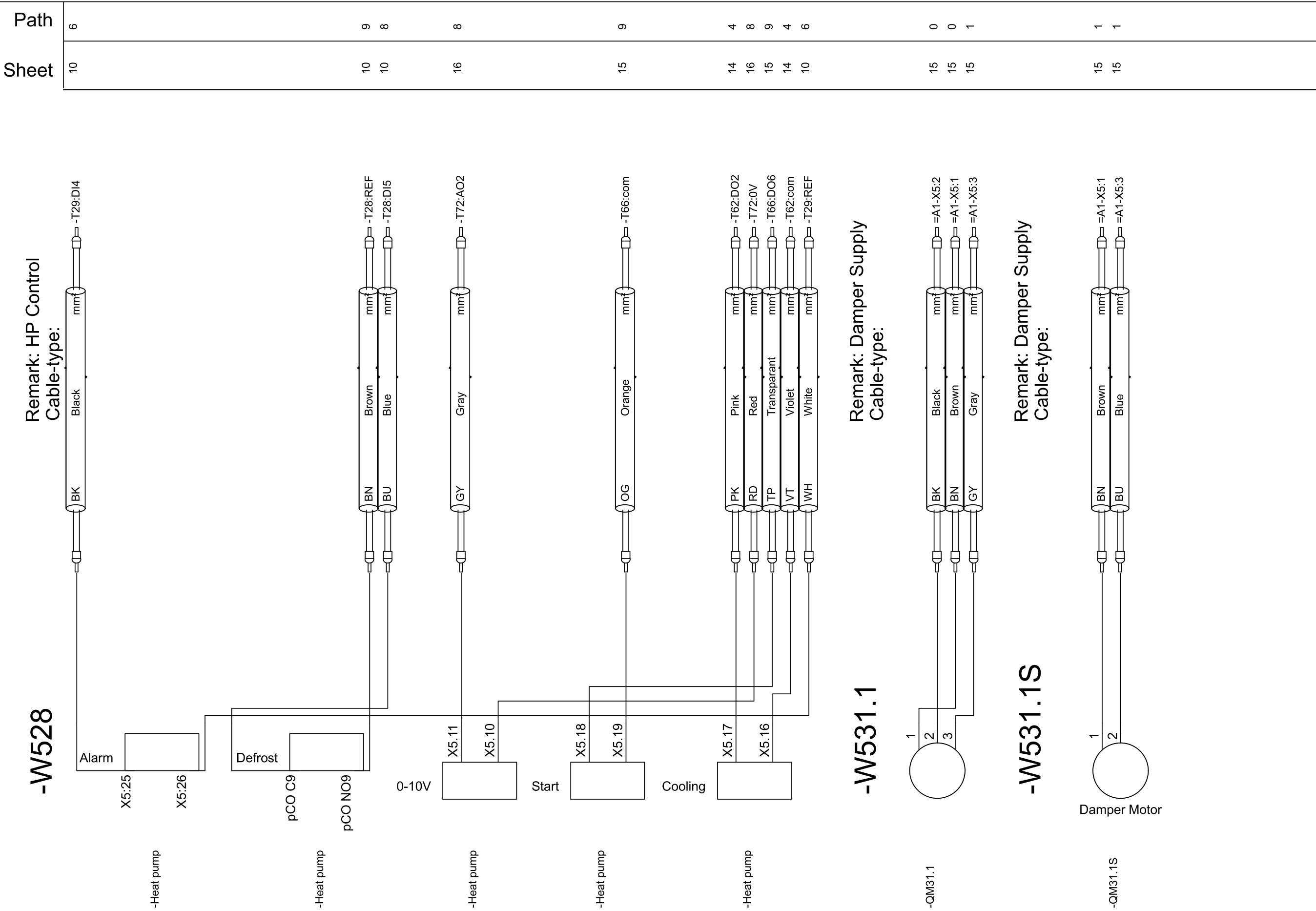


Remark: RH sensor
Cable-type:

-W517/W520



Cable Plan

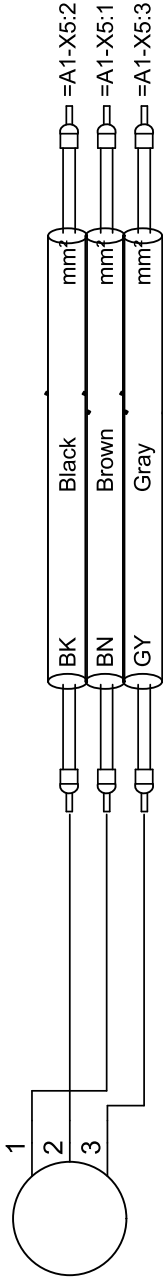


Cable Plan

Path	Sheet
4	15
4	15
4	15
5	15
5	15
2	16
2	16
2	16
2	17
2	17
2	17
2	15
2	15
2	15
3	15
3	15

Remark: Damper Extract
Cable-type:

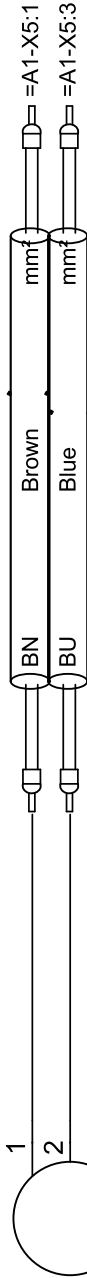
-W532.1



-QM32.1

Remark: Damper Extract
Cable-type:

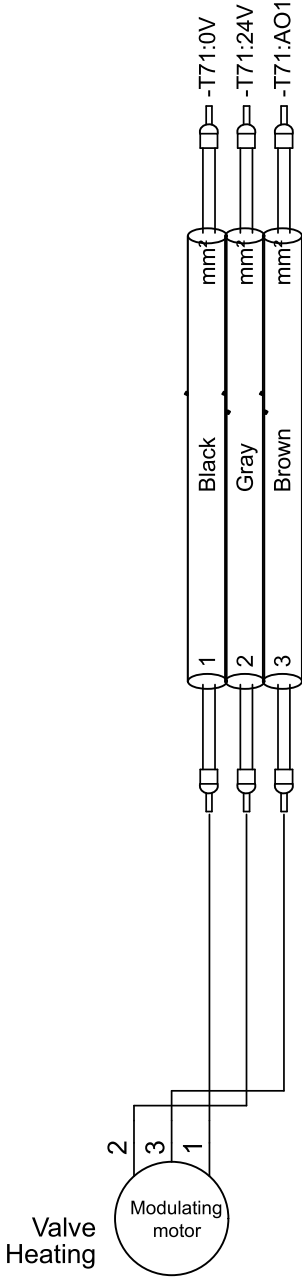
-W532.1S



-QM32.1S

Remark: Heating valve
Cable-type:

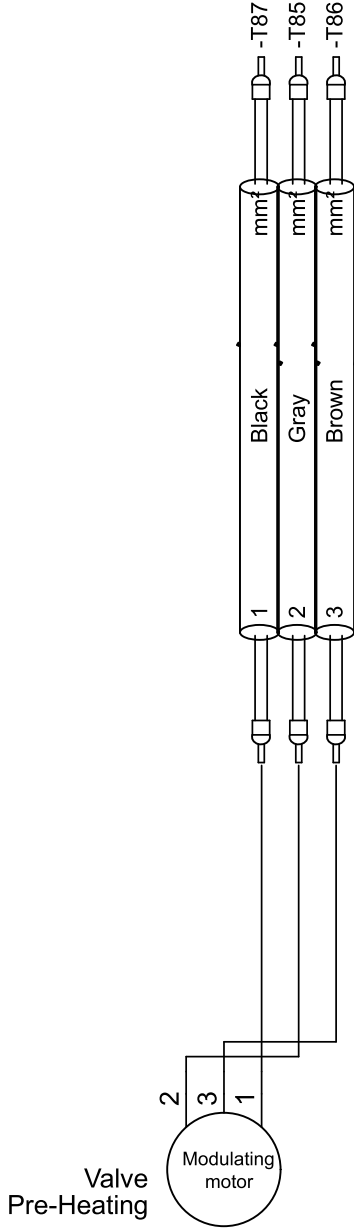
-W551



-QN51

Remark: Heating valve
Cable-type:

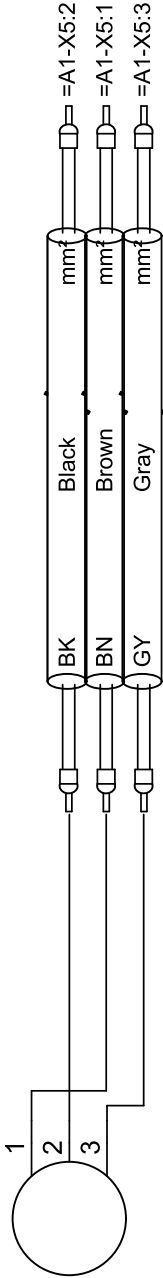
-W553



-QN53

Remark: Damper Supply 2
Cable-type:

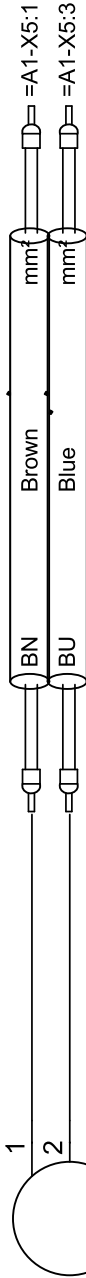
-W571.1



-QM71.1

Remark: Damper Supply 2
Cable-type:

-W571.1S



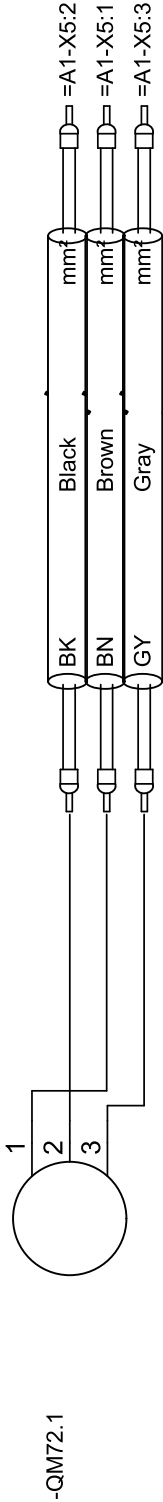
-QM71.1S

Cable Plan

Path	Sheet
6	15
6	15
6	15
7	15
7	15
1	10
1	10
2	10
3	10
5	10
5	10
8	10
8	10

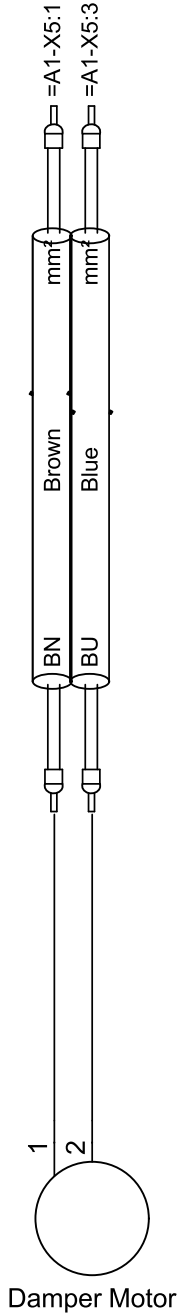
-W572.1

Remark: Damper Extract 2
Cable-type:



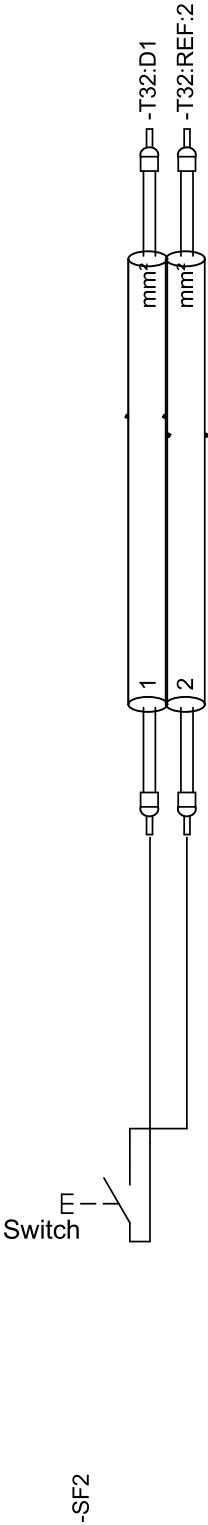
-W572.1S

Remark: Damper Extract 2
Cable-type:



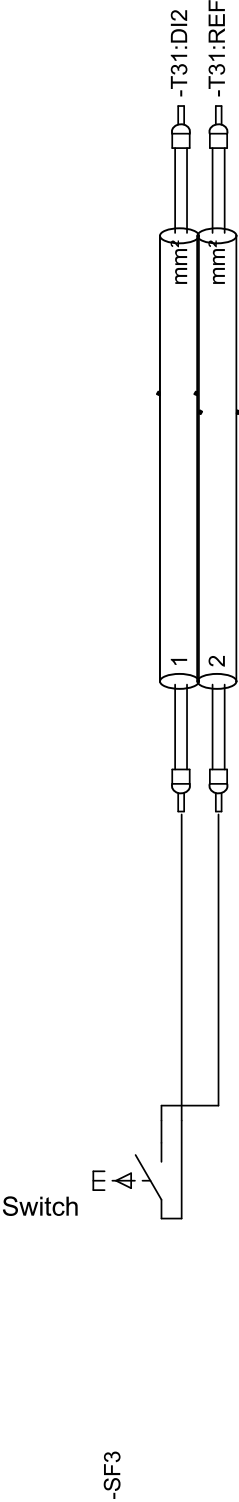
-W580

Remark: Reduced speed
Cable-type: 2x0,75mm2



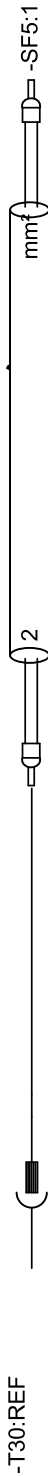
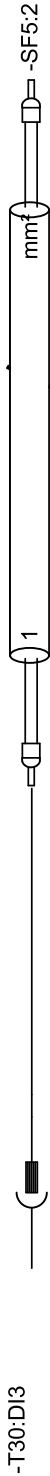
-W581

Remark: Normal speed-ext.
Cable-type:



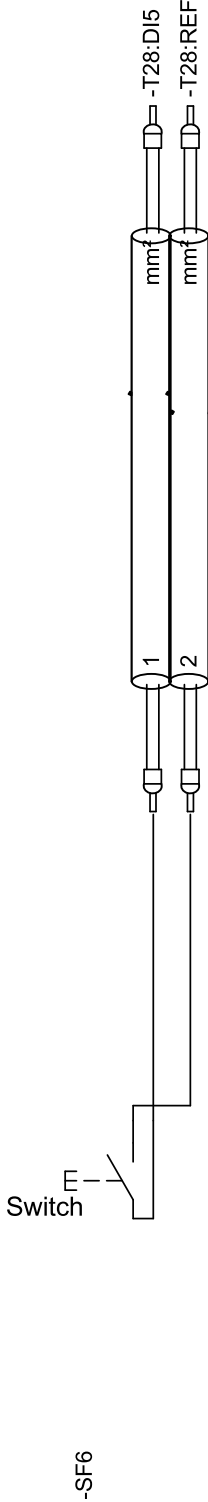
-W583

Remark: Ext. stop
Cable-type: 2x0,75mm2



-W584

Remark: Change over
Cable-type:



Cable Plan

-W601

EC fan

DI1 24V

port1 port2

A (D+) B (D-) GND A (D+) B (D-) GND

1 2 3

GN YE WH

mm mm mm

Remark: GQ1 BUS
Cable-type: 4x0,6mm2

-W602

EC fan

DI1 24V

A (D+) B (D-) GND

1 2 3

GN YE WH

mm mm mm

Remark: GQ2 BUS
Cable-type: 4x0,6mm2

-W603

EC fan

DI1 24V

A (D+) B (D-) GND

1 2 3

GN YE WH

mm mm mm

Remark: GQ3 BUS
Cable-type: 4x0,6mm2

-W604

EC fan

DI1 24V

A (D+) B (D-) GND

1 2 3

GN YE WH

mm mm mm

Remark: GQ4 BUS
Cable-type: 4x0,6mm2

Path

Sheet

5
5
5

24
24
24

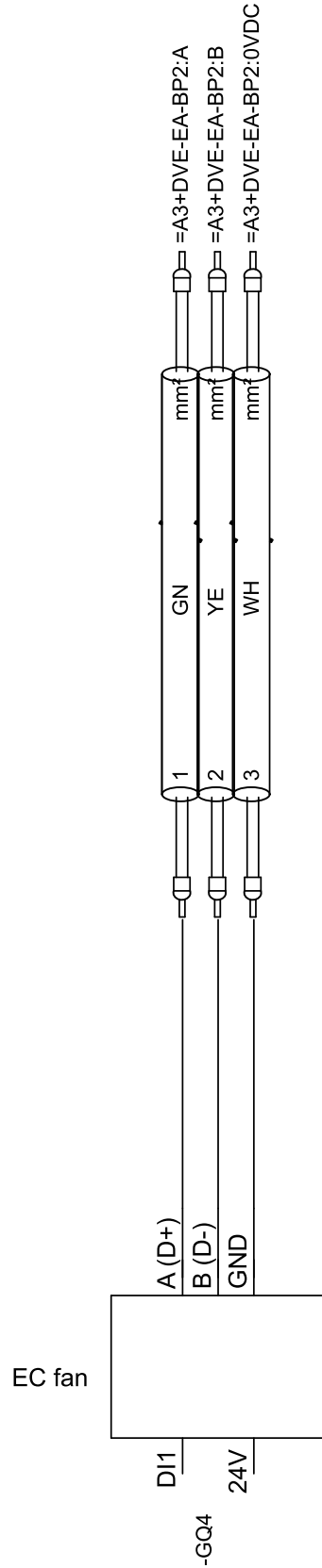
25
25
25

24
24
24

7
8
8

25
25
25

7
8
8



	Geniox Access CU27 Controller	-W601, -W602, -W603, -W604	Project:	Geniox-Core CS 42.04.02 Pre-heat GB	Rev.: 42.04.02	Sheet: 110
			Date: 14-08-2020	initials: MIKE	Total sheets: 18	Next sheet: 111

Cable Plan

Path	Sheet
2	26
1	26
2	26
2	26
6	26
6	26
6	26
6	26
7	26
7	26
8	26
7	26

-W642.1

Remark: TA2 BUS
Cable-type:

-X1

Rotor control
RHC

=A1+RHC-TA2

14 L
15 N
16 PE

17 A
18 B
19 GND

U
V
W
PE

GN Green
WH White
YE Yellow

BN Brown

mm²

-KF1:A+
-KF1:0V
-KF1:B-

-W645

Remark: Extract
Cable-type:

Damper

=BUS RS485+Ext
air-QM43

C2
C1
24V
0V

BN Brown
GN Green
WH White
YE Yellow

mm²

=A3+DVE-SA-BP8:24VDC
=A3+DVE-SA-BP8:A
=A3+DVE-SA-BP8:0VDC
=A3+DVE-SA-BP8:B

-W646

Remark: Extract
Cable-type:

Damper

=BUS RS485+Ext
air-QM46

C2
C1
24V
0V

BN Brown
GN Green
WH White
YE Yellow

mm²

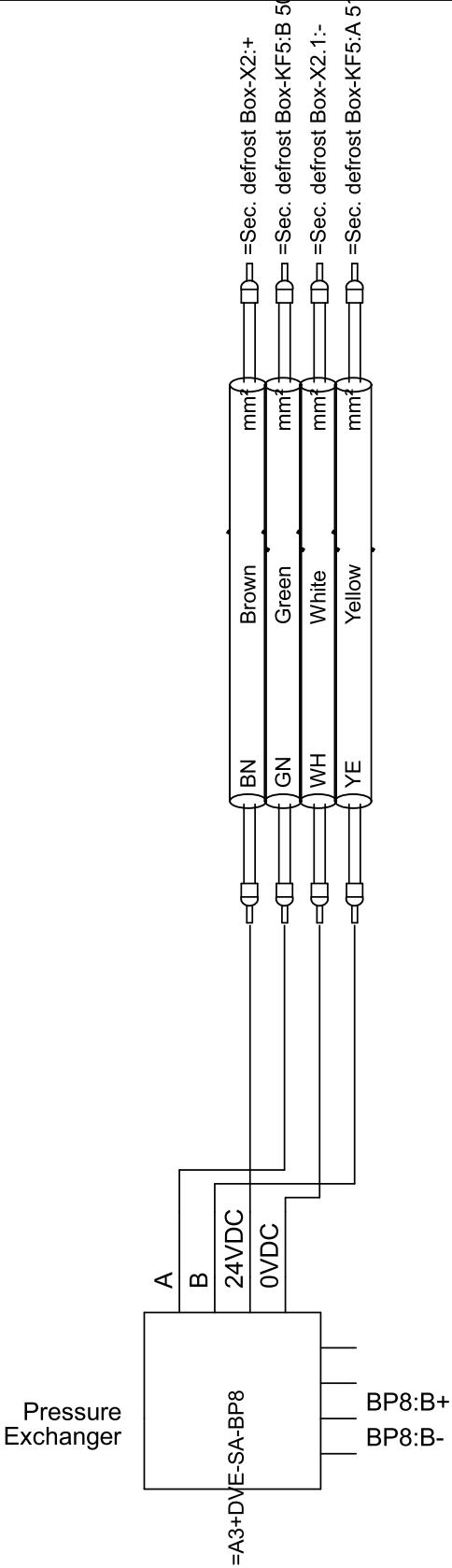
=A3+DVE-SA-BP8:24VDC
=A3+DVE-SA-BP8:A
=A3+DVE-SA-BP8:0VDC
=A3+DVE-SA-BP8:B

Cable Plan

Path	Sheet
1	27
1	27
1	27
0	27
4	26
3	26
4	26
3	26
1	26
2	26
2	26
2	26
2	18
2	18
3	18
2	18
3	18

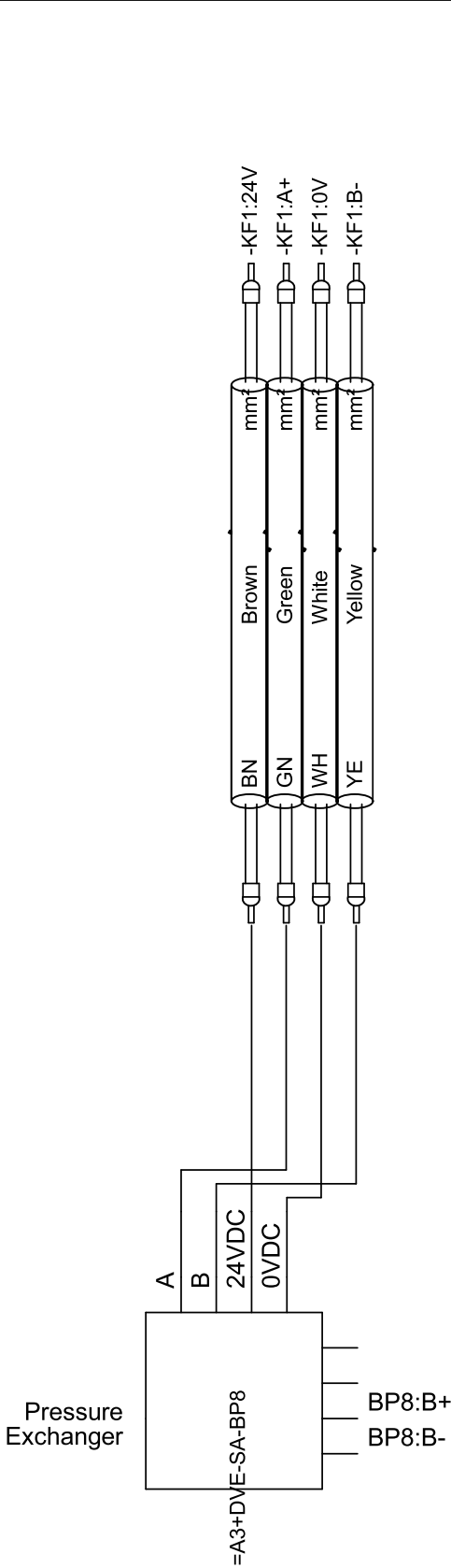
Remark: Sec. defrost
Cable-type:

-W655



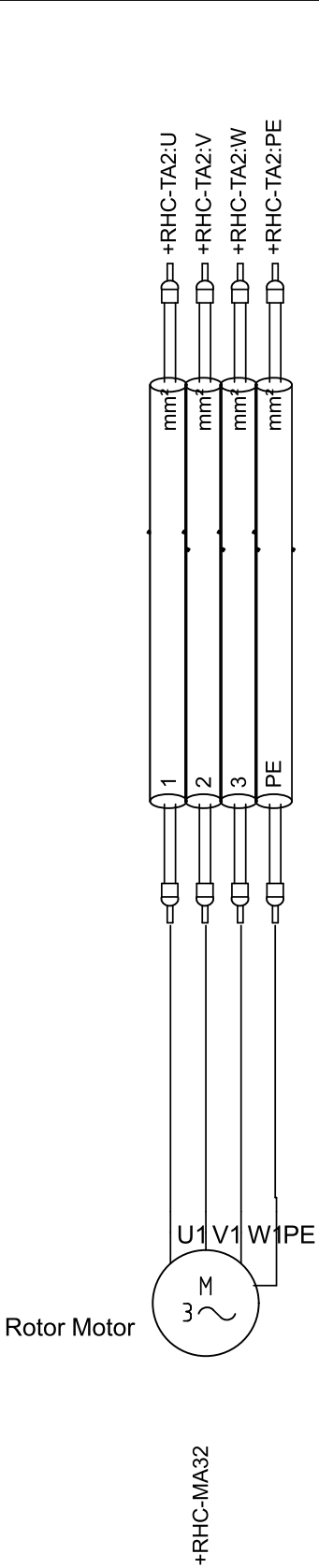
Remark: Pressure Plate
Cable-type:

-W666



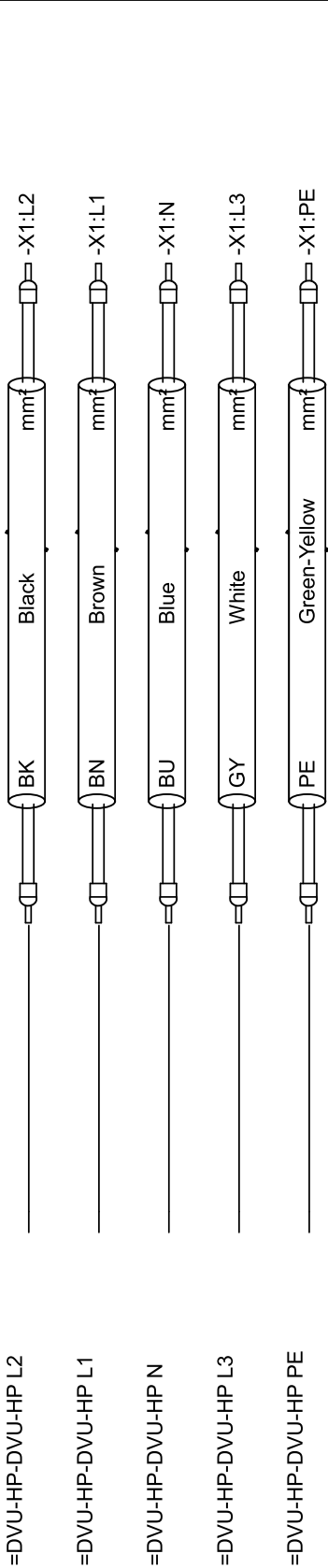
Remark: Rotor Motor
Cable-type:

=A1-W332



Remark: DVU-HP
Cable-type:

=A1-W529

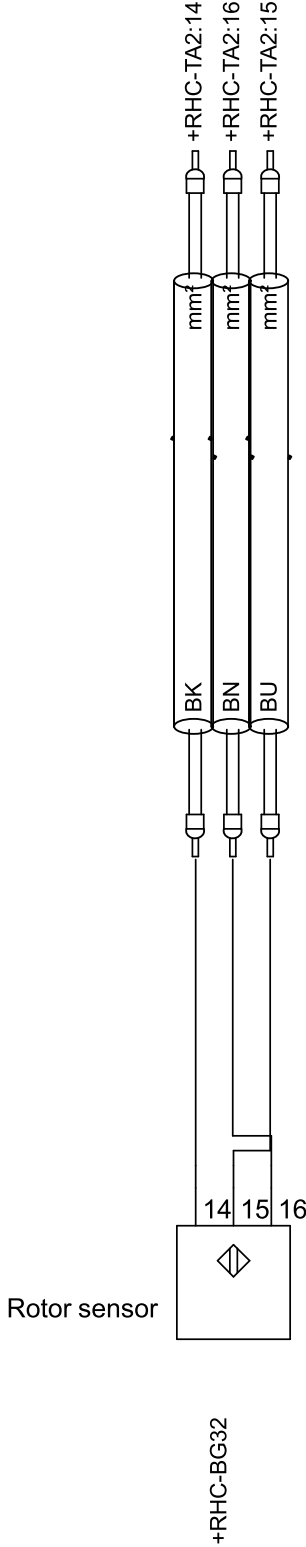


Cable Plan

Path										
Sheet	26	26	26	14	14	14	16	16	16	19
	1	1	1	2	2	2	7	7	7	5
										5
										6
										6

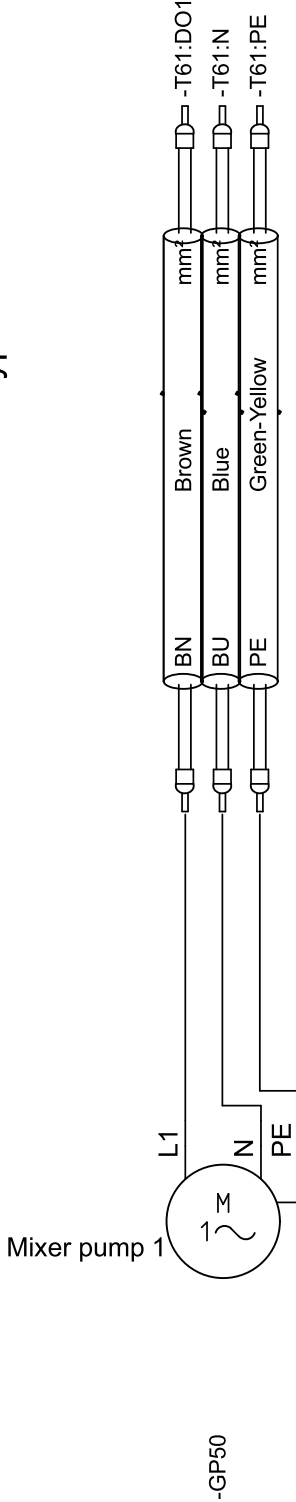
=A1-W532

Remark: Rotor sensor
Cable-type:



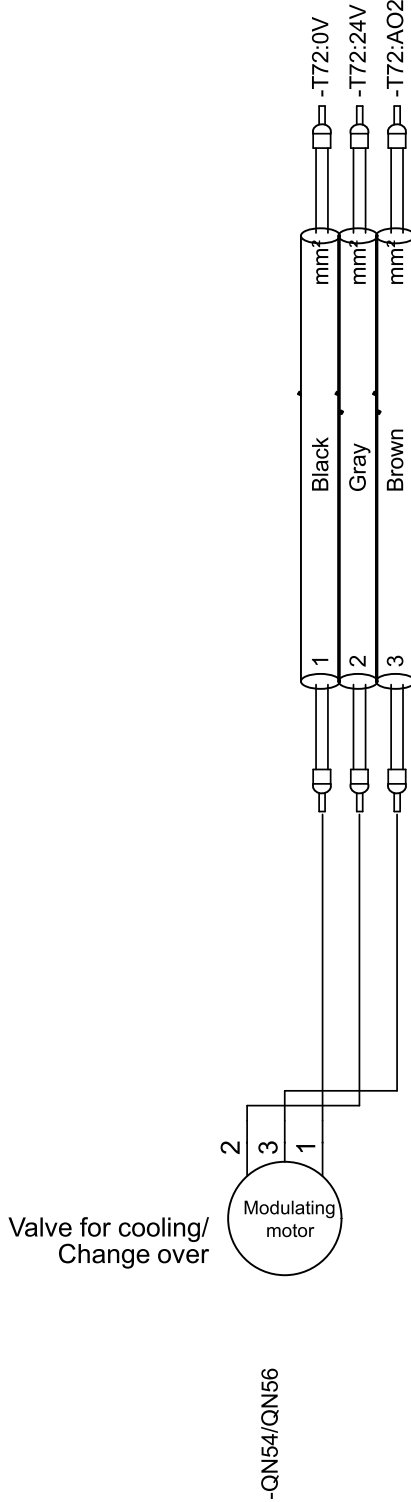
=A1-W550

Remark: Mixing pump
Cable-type:



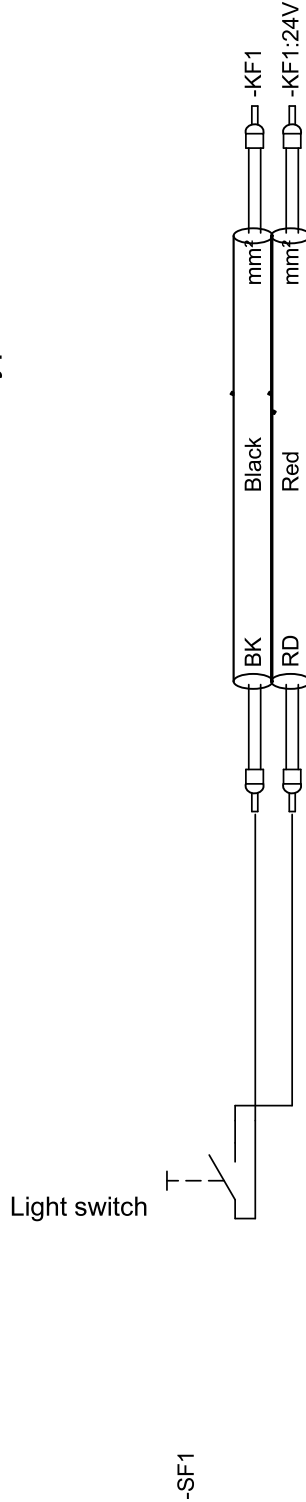
=A1-W554

Remark: Cooling valve
Cable-type:



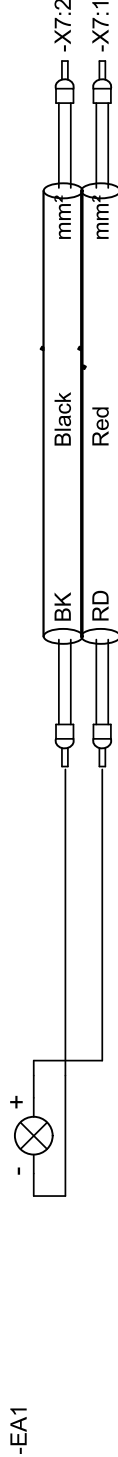
=A1-W700

Remark: Light switch
Cable-type:



=A1-W701

Remark: Light P20
Cable-type:



Path	7 6	7 7	8 8	9 9	0 0 1 1 1
	19 19	19 19	19 19	19 19	18 18 18 18 18

Remark: Light P20
Cable-type:



Cable Plan

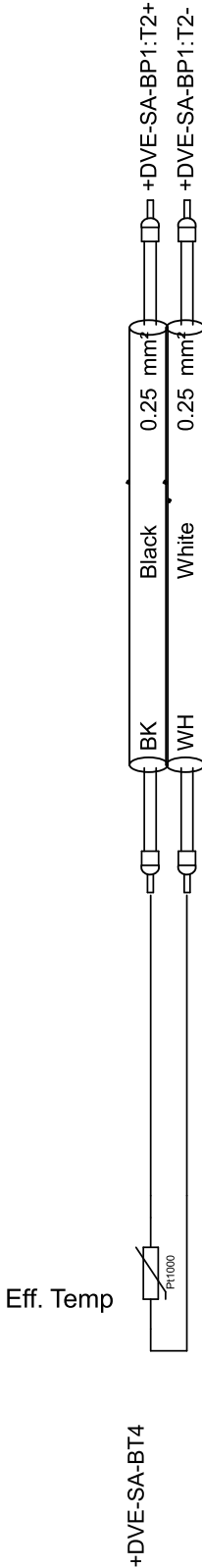
Path	Sheet
=A1 controller-W661.1 Remark: BP2 BUS Cable-type:	24
	24
	24
	24
=A1 controller-W662.1 Remark: BP2 BUS Cable-type:	25
	25
	25
	25
=A1 controller-W662.2 Remark: BP2 BUS Cable-type:	25
	25
	25
	25

Cable Plan

Path	Sheet
2	24
2	24
2	25
2	25
1	24
1	24
2	21
2	21
2	21
3	21
5	20
5	20
6	20

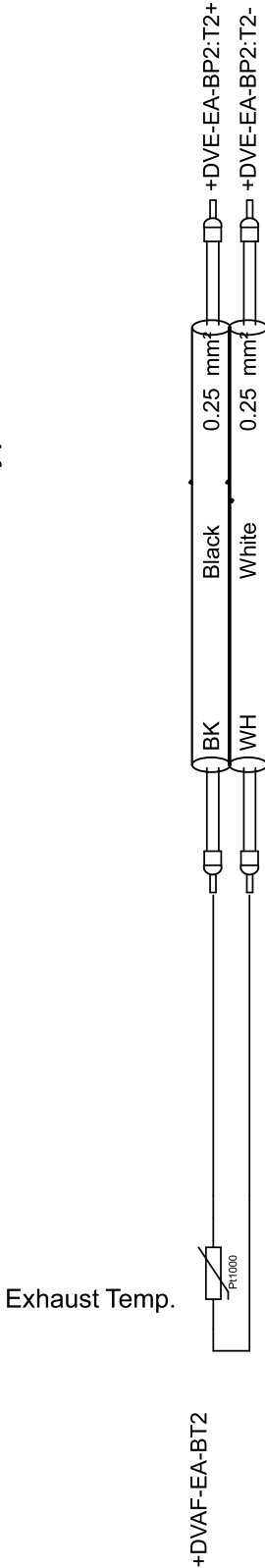
=A3-W343

Remark: Effencency Temp.
Cable-type: 2x0,25mm2



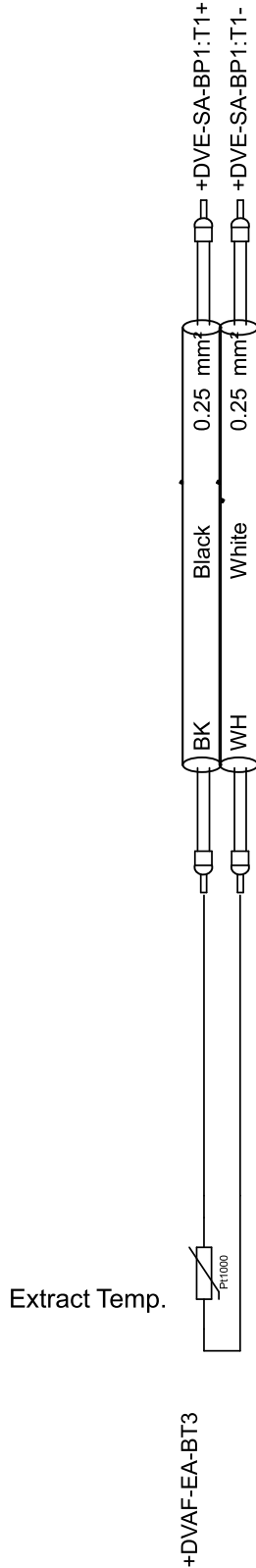
=A3-W442

Remark: Exhaust Temp./de-ice
Cable-type: 2x0,25mm2



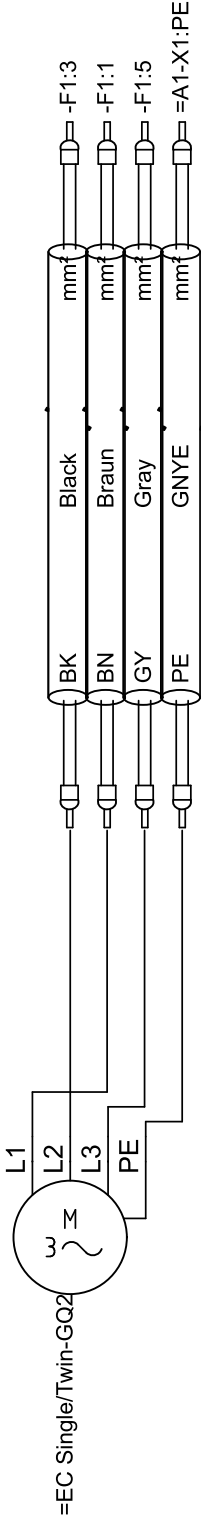
=A3-W444

Remark: Extract Temp.
Cable-type: 2x0,25mm2



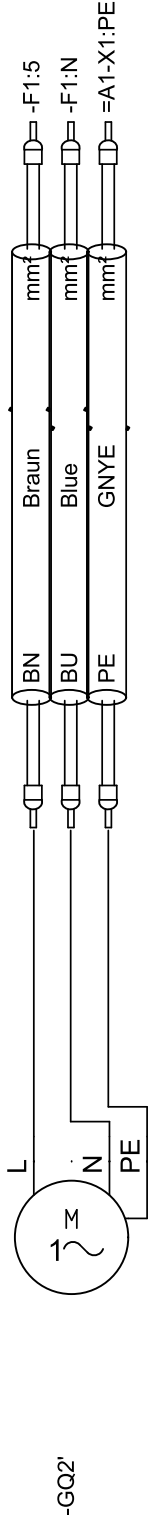
=EC single+Extract air-W102

Remark: motor extract air
Cable-type:



=EC single+Extract air-W102

Remark: motor extract air
Cable-type:



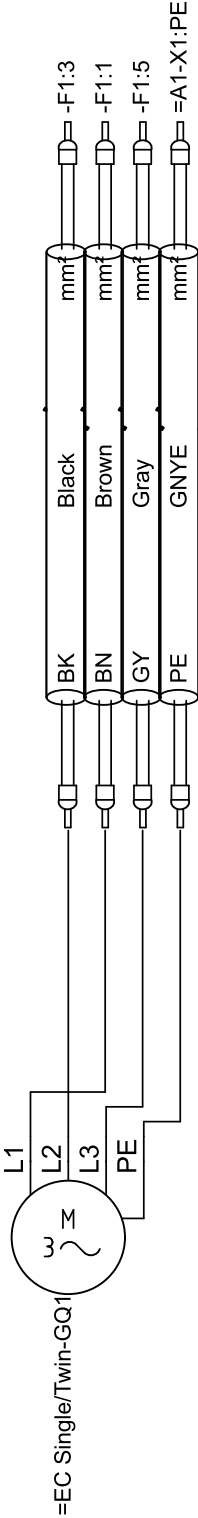
Cable Plan

Sheet		Path
=EC Single+Twin-GQ1 L1 L2 L3 PE BK BN GY PE Black Brown Gray GNYE -F1:3 -F1:1 -F1:5 =A1-X1:PE	21	1
	21	1
	21	1
	21	1
=EC single+Supply air-W101 L N PE BN BU PE Brown Blue GNYE -F1:3 -F1:N =A1-X1:PE	20	2
	20	2
	20	3
=EC Twin+Extract air-W102 L1 L2 L3 PE BK BN GY PE Black Brown Gray GNYE -F2:3 -F2:1 -F2:5 =A1-X1:PE	21	7
	21	7
	21	7
	21	7
=EC Twin+Extract air-W104 L1 L2 L3 PE BK BN GY PE Black Braun Gray GNYE -F2:3 -F2:1 -F2:5 =A1-X1:PE	21	8
	21	8
	21	9
	21	9
=EC Twin+Supply air-W101 L1 L2 L3 PE BK BN GY PE Black Brown Gray GNYE -F1:3 -F1:1 -F1:5 =A1-X1:PE	21	4
	21	4
	21	4
	21	4
=EC Twin+Supply air-W103 L1 L2 L3 PE BK BN GY PE Black Braun Gray GNYE -F1:3 -F1:1 -F1:5 =A1-X1:PE	21	5
	21	5
	21	6
	21	6

=EC single+Supply air-W101

Remark: motor supply air

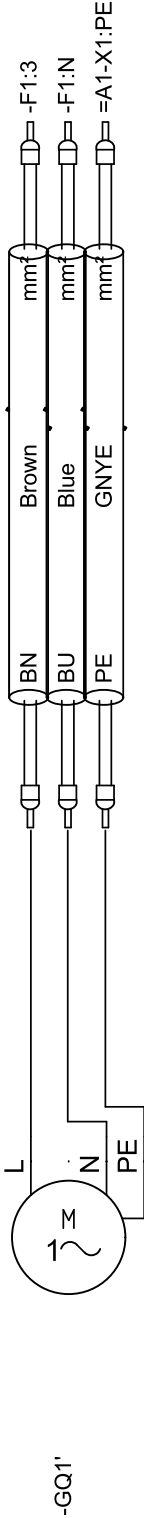
Cable-type:



=EC single+Supply air-W101

Remark: motor supply air

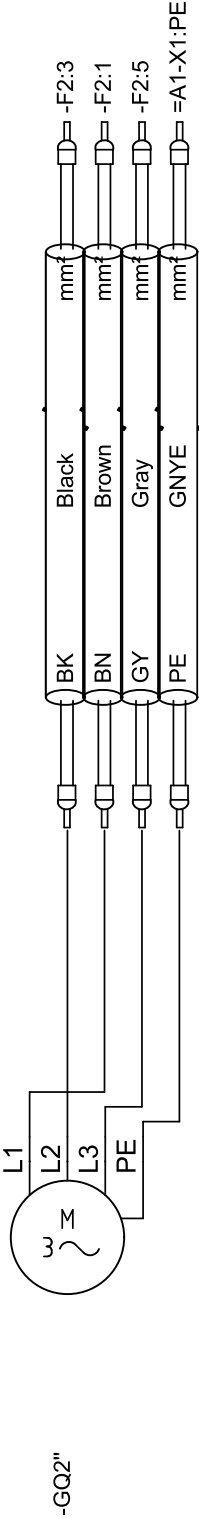
Cable-type:



=EC Twin+Extract air-W102

Remark: motor supply air

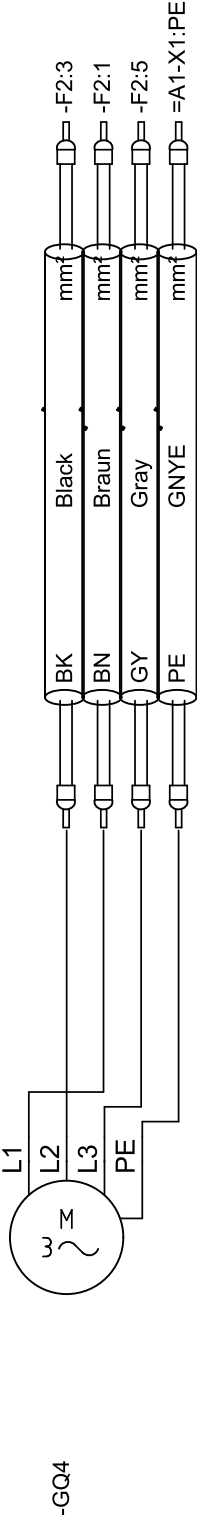
Cable-type:



=EC Twin+Extract air-W104

Remark: motor extract air

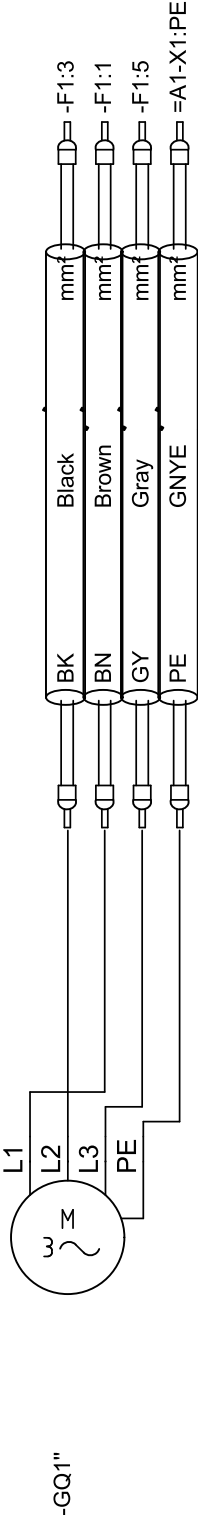
Cable-type:



=EC Twin+Supply air-W101

Remark: motor supply air

Cable-type:



=EC Twin+Supply air-W103

Remark: motor supply air

Cable-type:

