Geniox Core Control system 43.04.02 (230V)

Documents listed on pages below:

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

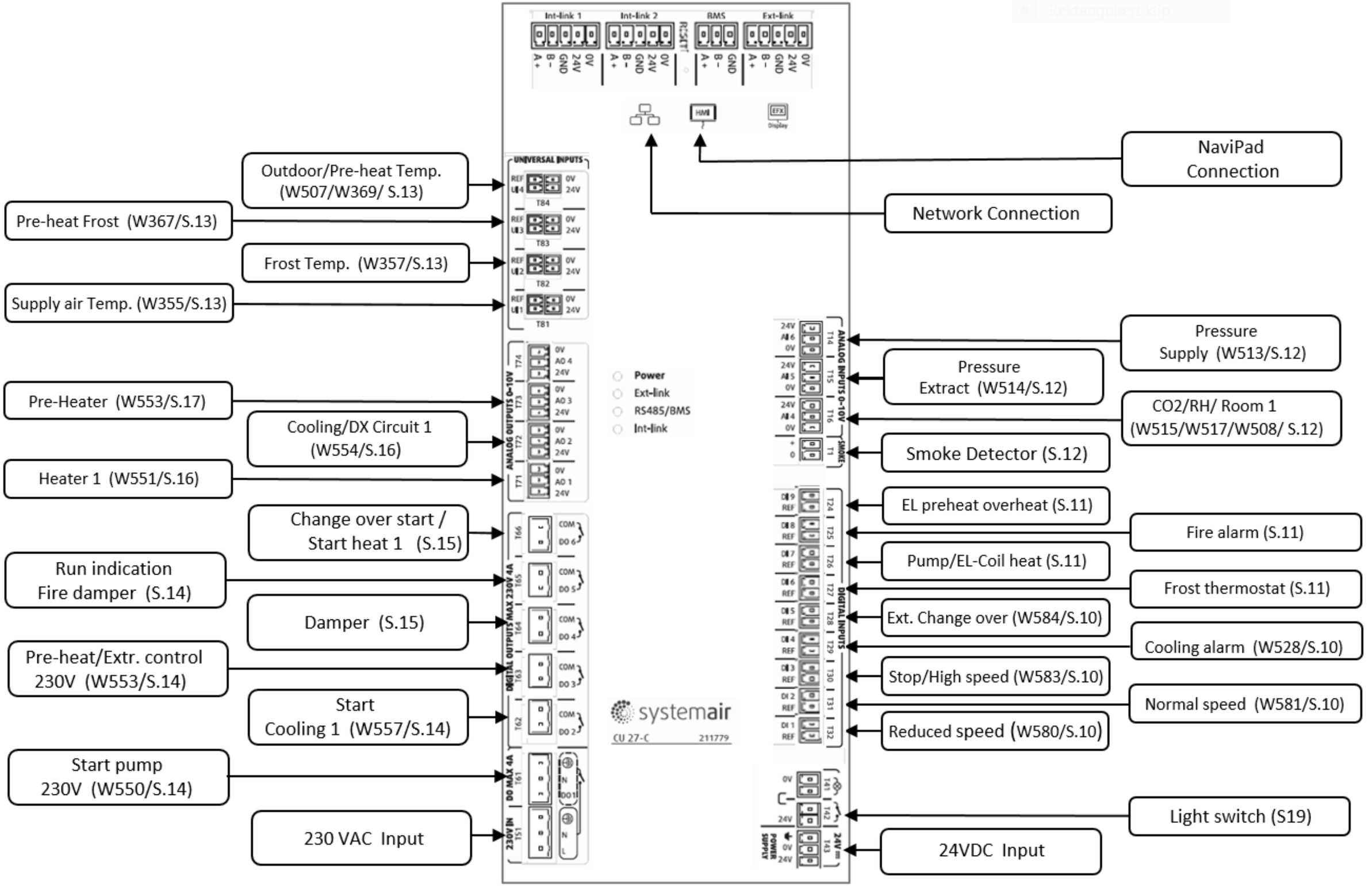
Cooling coil type:
See data in the attached annex - Technial data

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



systemair	Geniox Access CU27 Controller	Quick guide	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 2
			Date: 06-11-2019 initials: MIKE	Total sheets: 4	Next sheet: 3

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

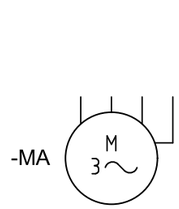
Wire Colour code

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 1 Terminal

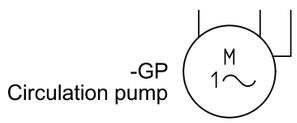
-EA Lamp



Motor

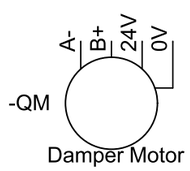
-SF Switchgear

-BP P Pressure transmitter



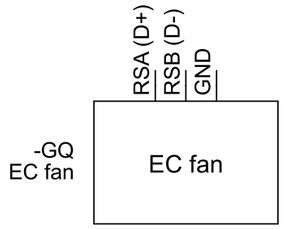
Cirkulation pump

-BP P Pressure Switch

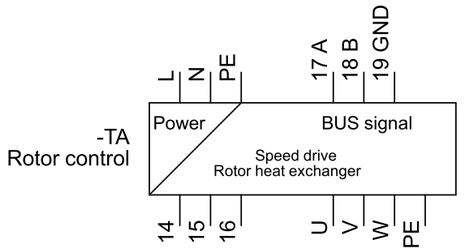


Damper motor

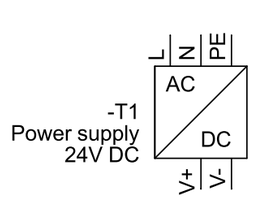
-F Automatic tripping,



EBM EC fan

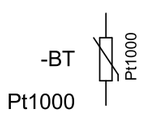


Rotary heat exchanger



Power supply

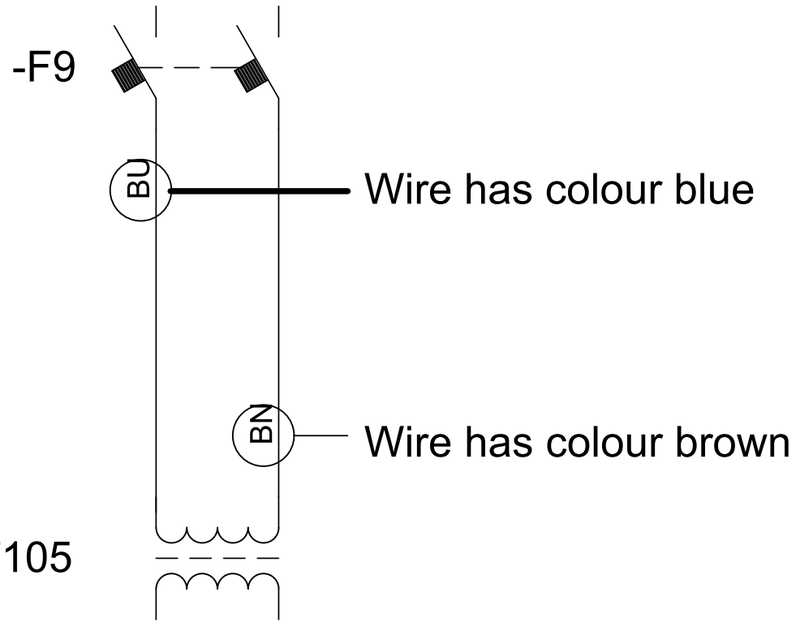
fireguard



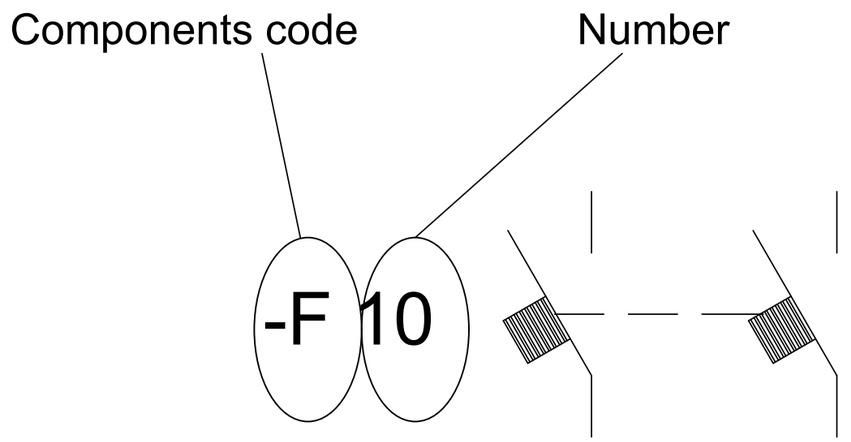
Temperature (measuring)

systemair	Geniox Access CU27 Controller	General Description Symbols	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 3
			Date: 06-11-2019 / initials: MIKE	Total sheets: 4	Next sheet: 4

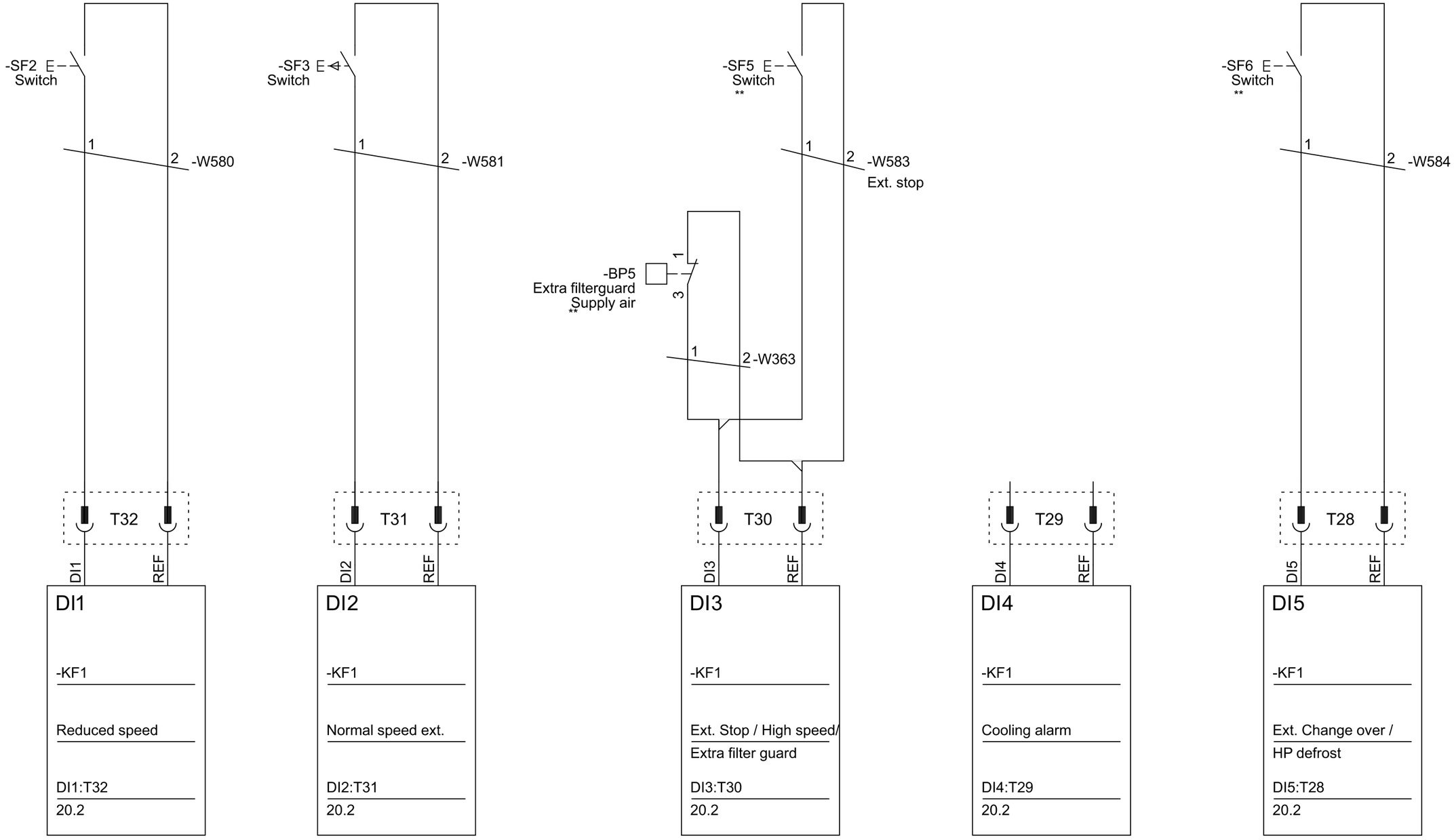
Labeling of wires
are marked with
terminal name



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

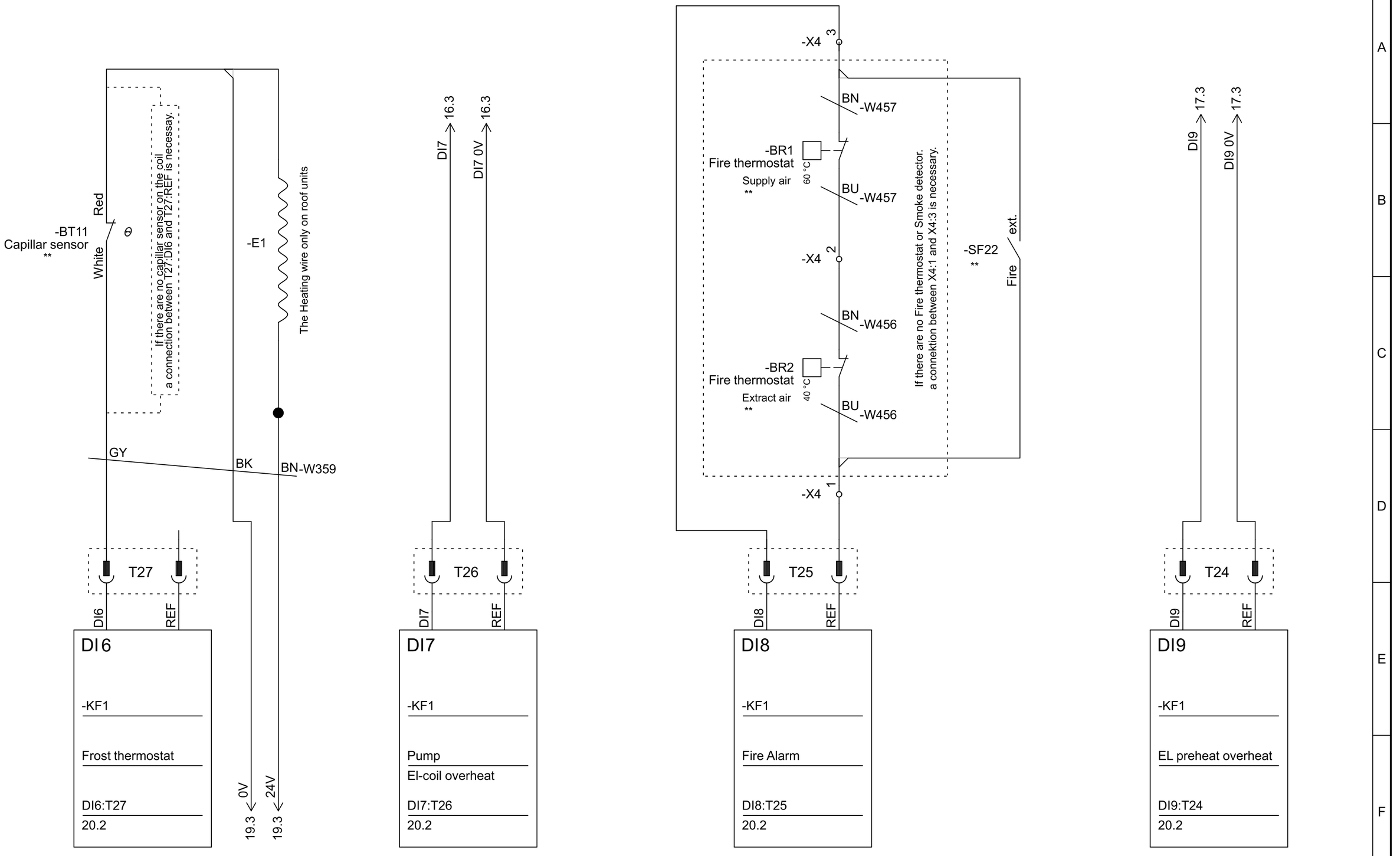


systemair	Geniox Access CU27 Controller	General Description Wires	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 4
			Date: 06-11-2019 / initials: MIKE	Total sheets: 4	Next sheet:



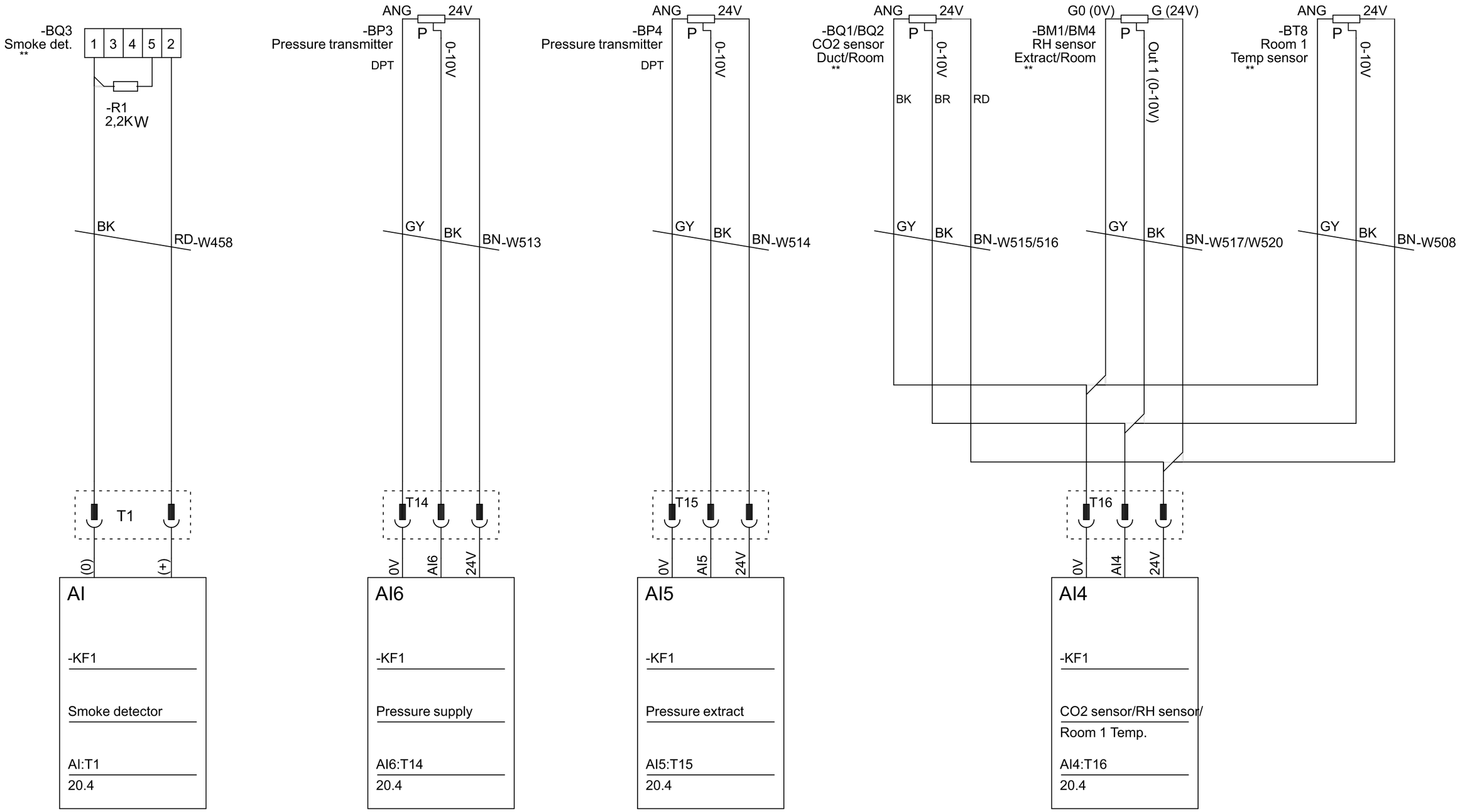
**option

systemair	Geniox Access CU27 Controller	External connections DI	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 10
			Date: 06-11-2019 / initials: MIKE	Total sheets: 17	Next sheet: 11



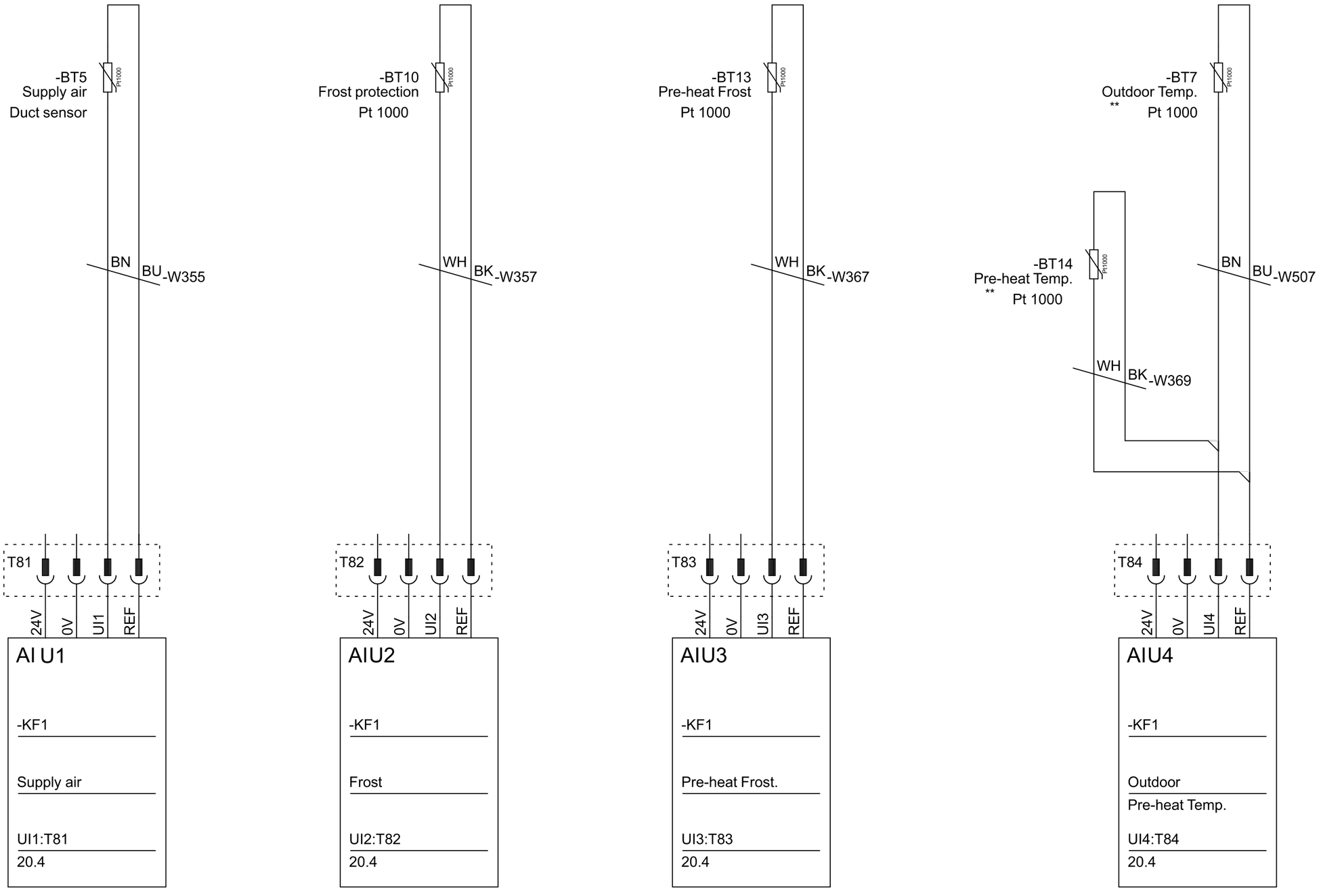
**option

systemair	Geniox Access CU27 Controller	External connections DI	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 11
			Date: 06-11-2019 initials: MIKE	Total sheets: 17	Next sheet: 12



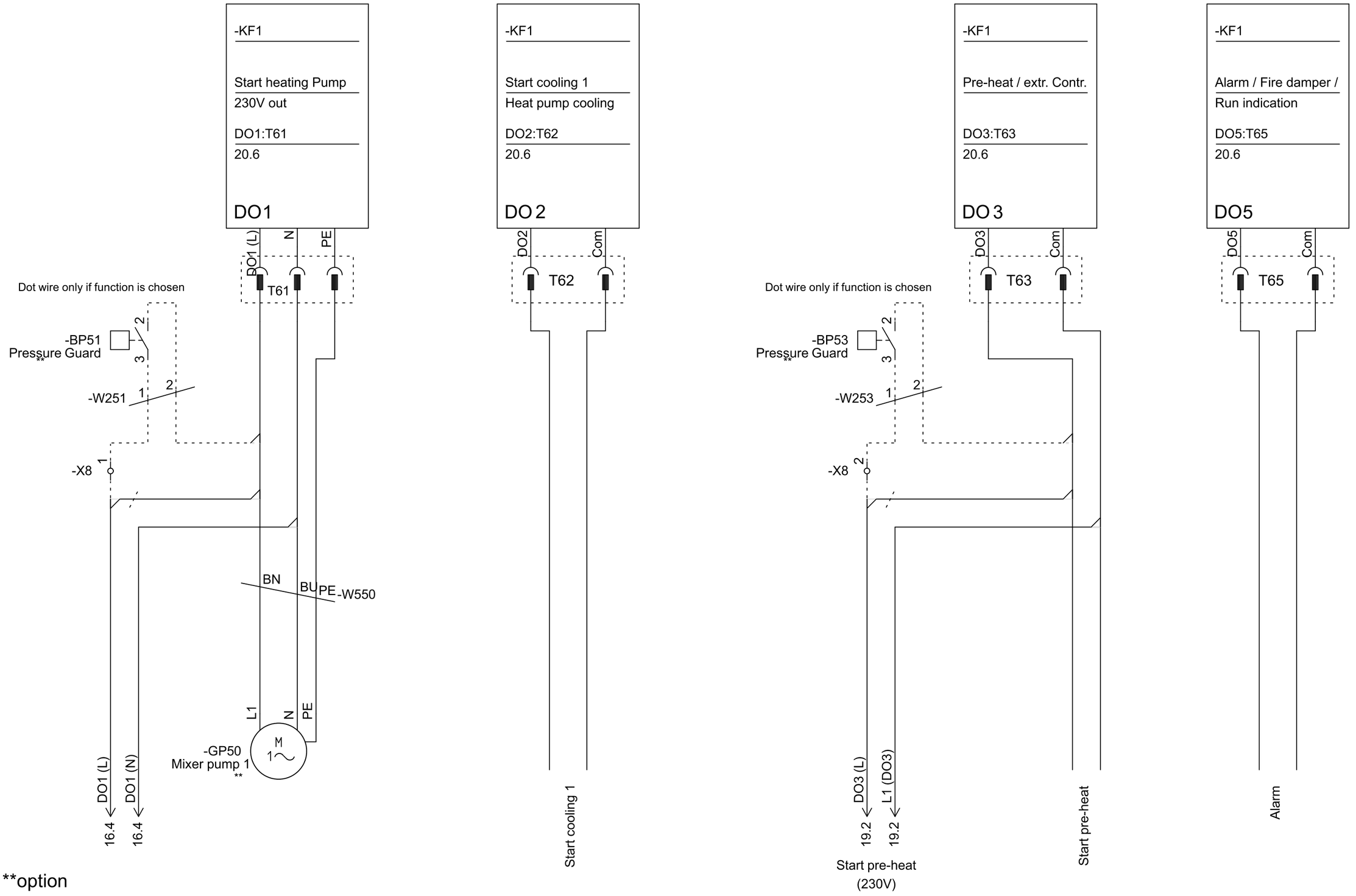
**option

systemair	Geniox Access CU27 Controller	External connections AI	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 12
			Date: 06-11-2019 / initials: MIKE	Total sheets: 17	Next sheet: 13

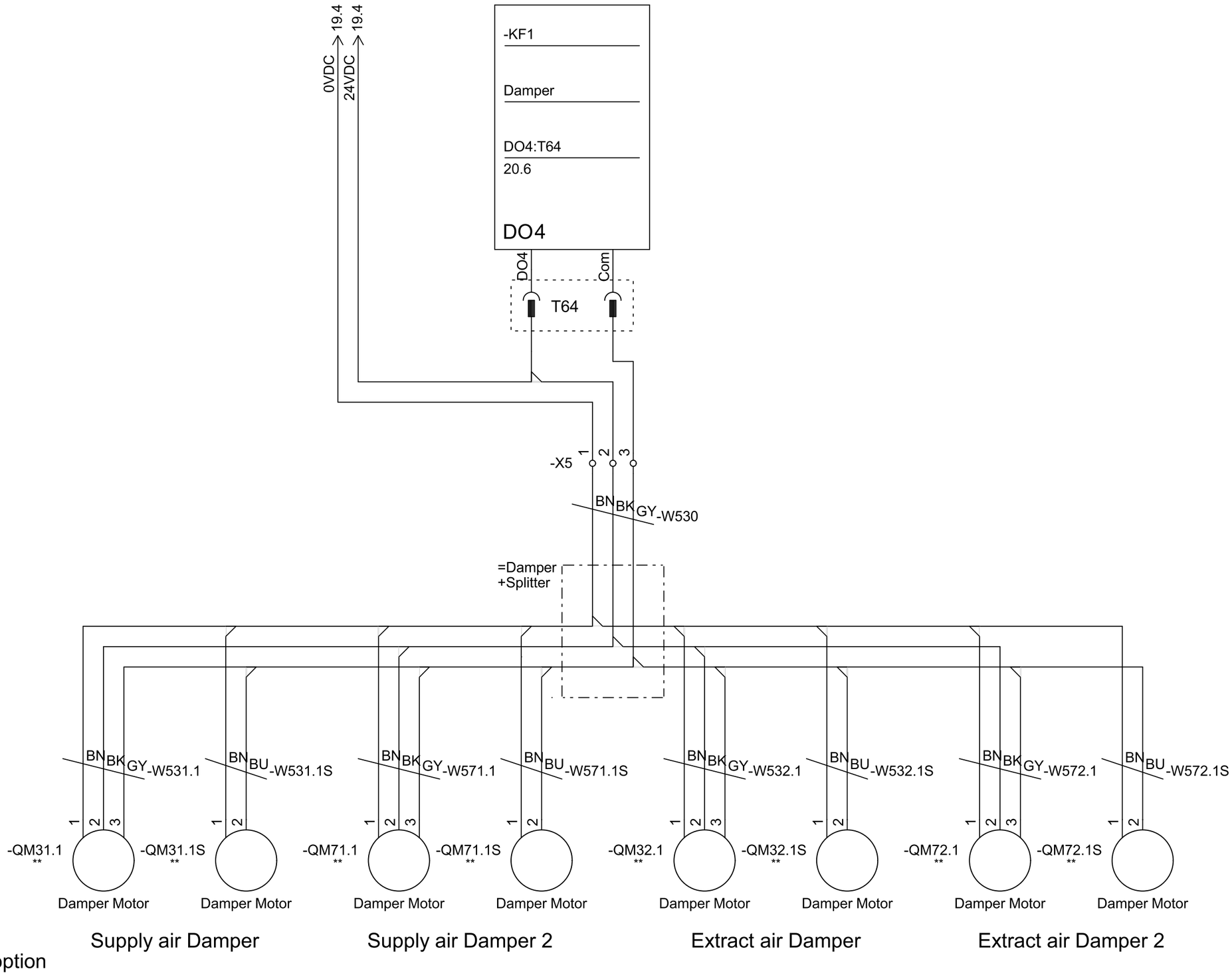


**option

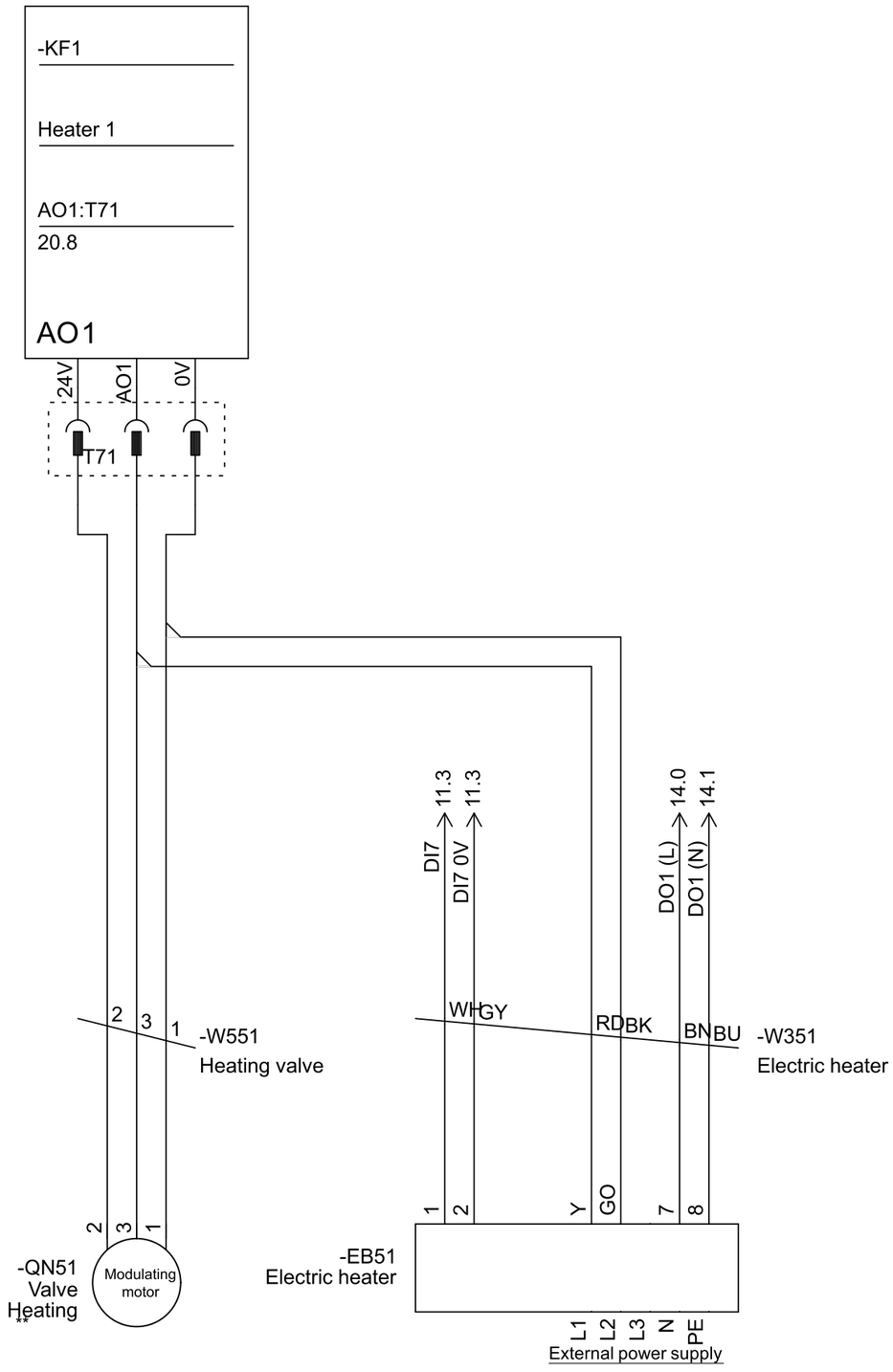
systemair	Geniox Access CU27 Controller	External connections UI	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 13
			Date: 06-11-2019 initials: MIKE	Total sheets: 17	Next sheet: 14

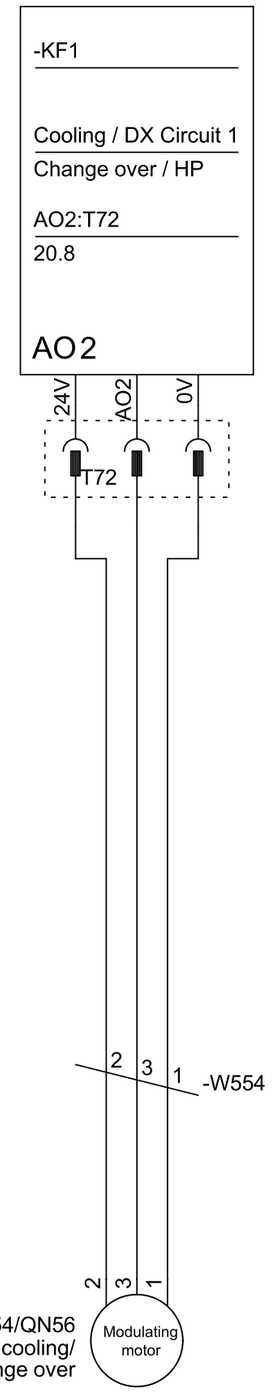


systemair	Geniox Access CU27 Controller	External connections DO	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 14
			Date: 06-11-2019 initials: MIKE	Total sheets: 17	Next sheet: 15



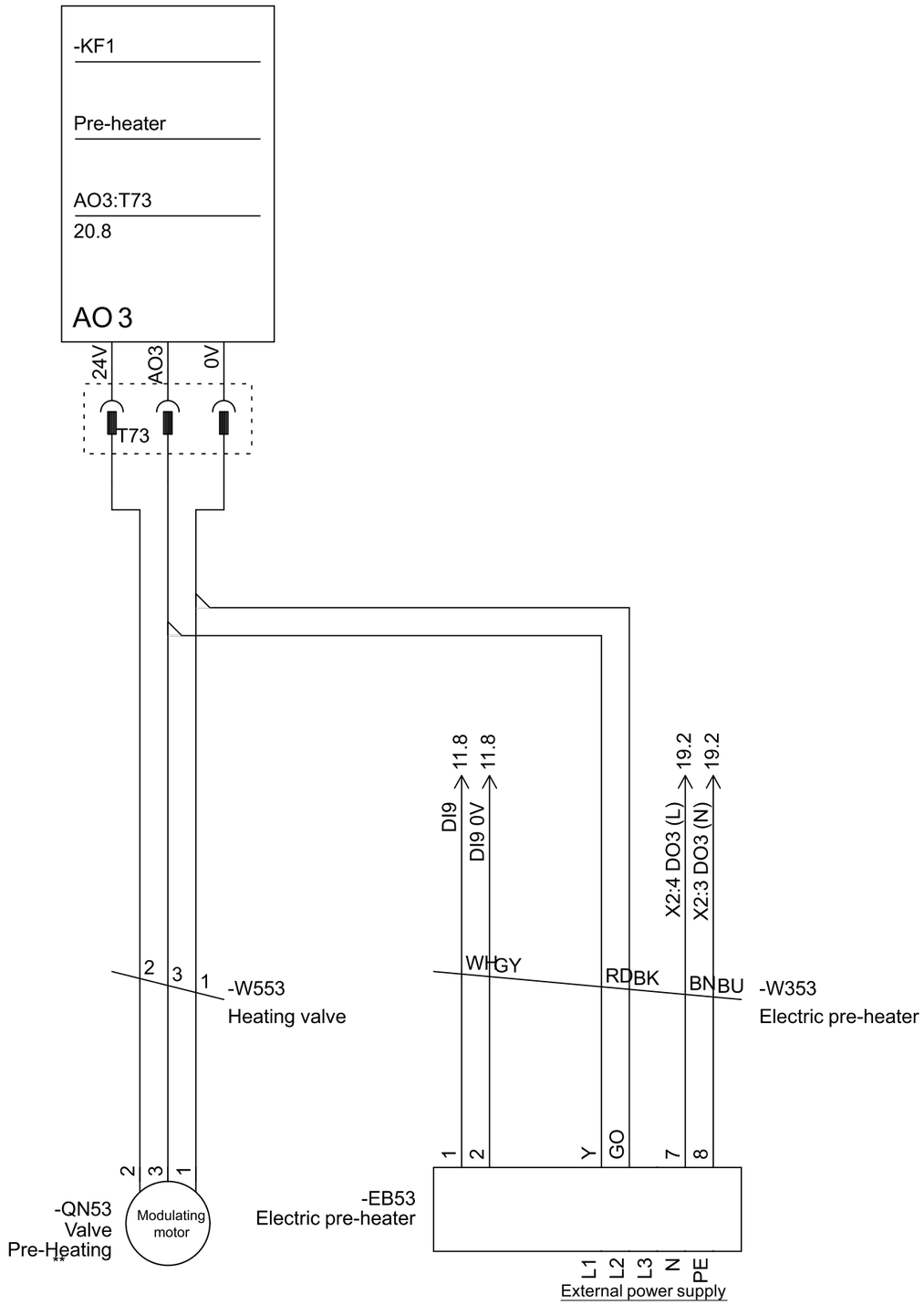
systemair	Geniox Access CU27 Controller	External connections DO	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 15
			Date: 06-11-2019 / initials: MIKE	Total sheets: 17	Next sheet: 16





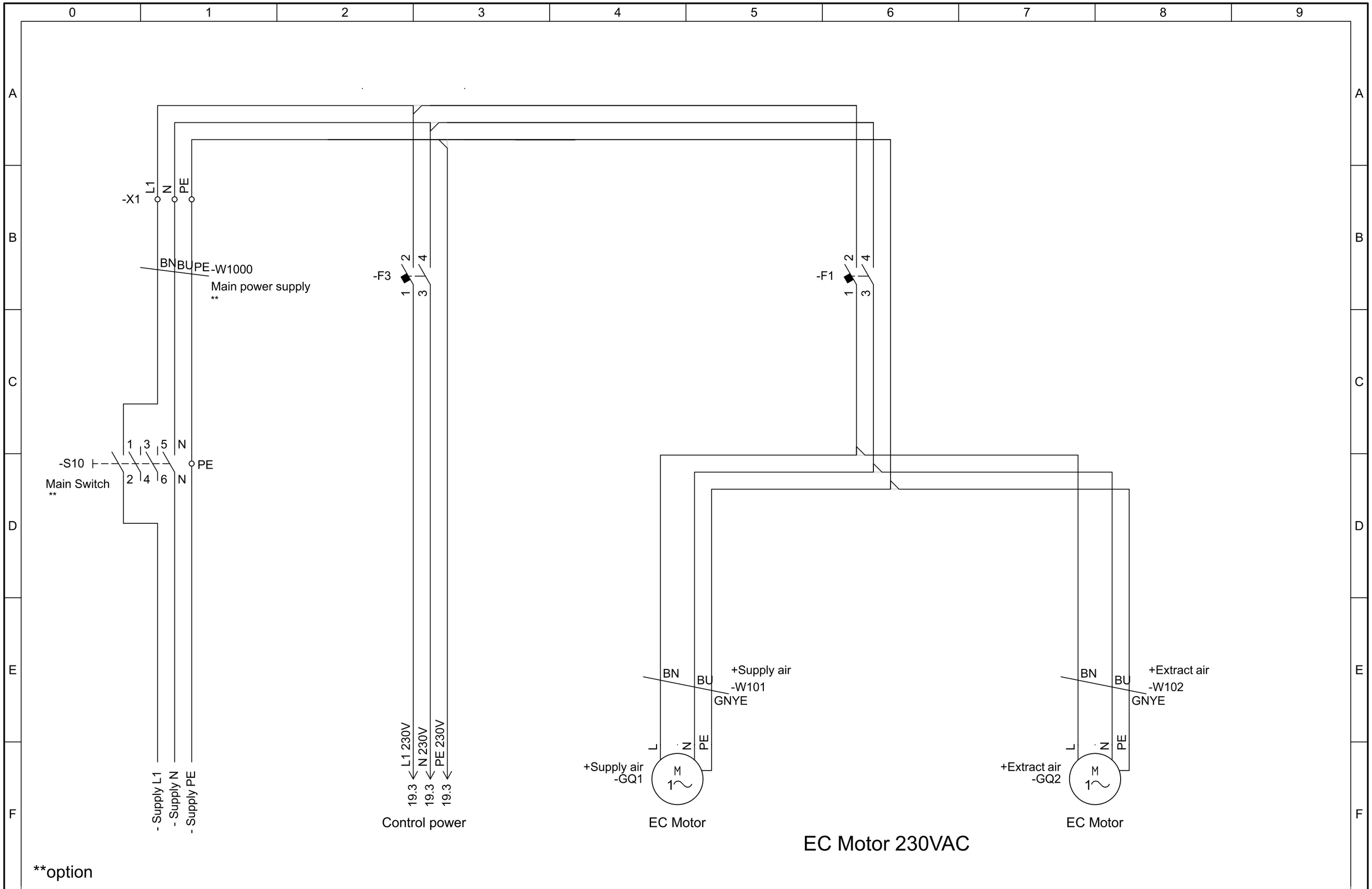
**option

systemair	Geniox Access CU27 Controller	External connections AO	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 16
			Date: 06-11-2019 initials: MIKE	Total sheets: 17	Next sheet: 17

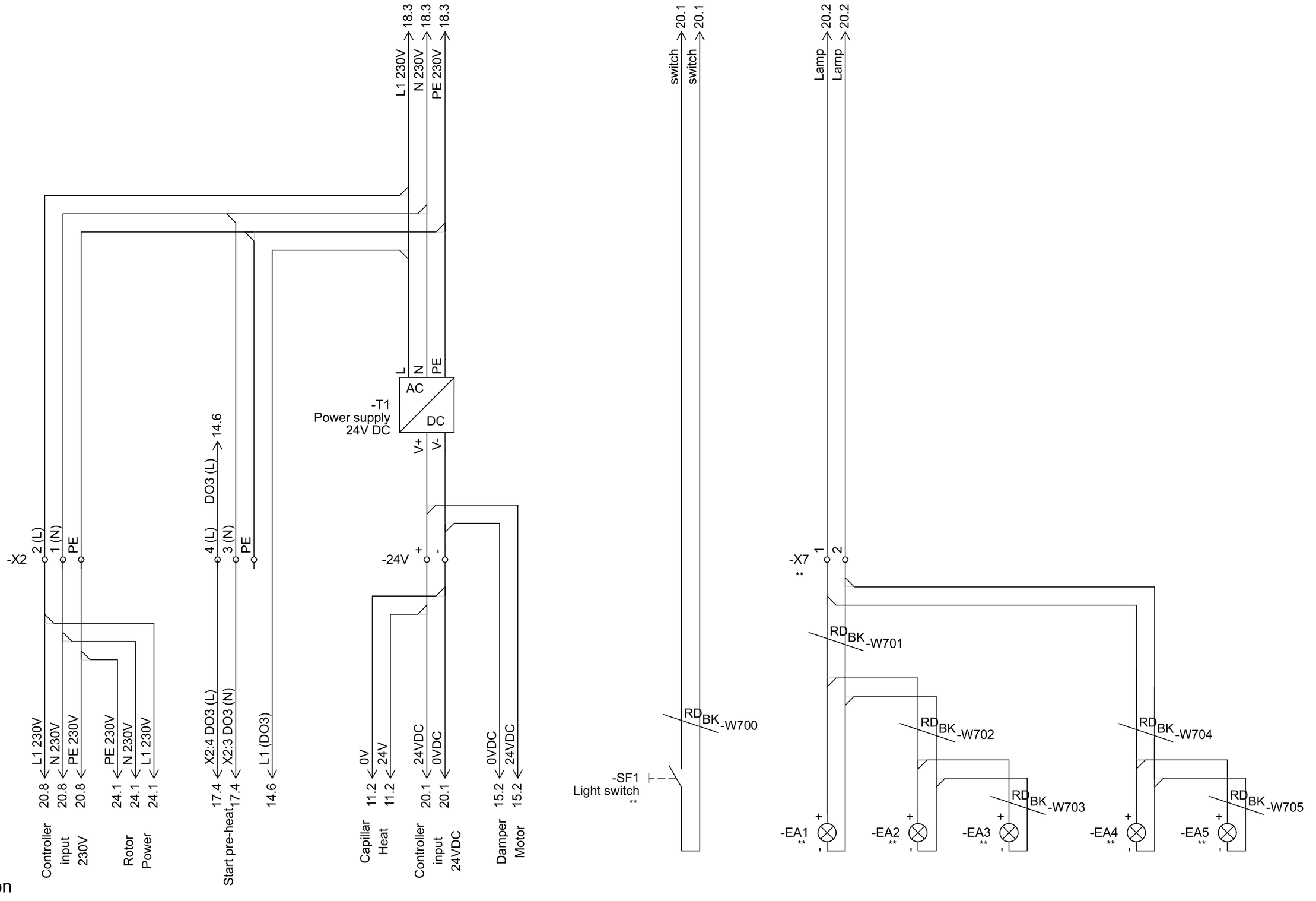


**option

systemair	Geniox Access CU27 Controller	External connections AO	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 17
			Date: 06-11-2019 / initials: MIKE	Total sheets: 17	Next sheet: 18



systemair	Geniox Access CU27 Controller	Main power EC fan	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 18
			Date: 06-11-2019 / initials: MIKE	Total sheets: 17	Next sheet: 19



systemair	Geniox Access CU27 Controller	Control power	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 19
			Date: 06-11-2019 initials: MIKE	Total sheets: 17	Next sheet: 20

-KF1

Access CU27 Controller

Systemair A/S

DI1:T32	10.1	DI1		AI:T1	12.0	(0)	AI	DO1:T61	14.1	DO1 (L)	AO1:T71	16.2	24V
Reduced speed				Smoke detector				Start heating Pump 230V out			Heater 1		
DI2:T31	10.2	DI2		AI6:T14	12.2	0V	AI	DO2:T62	14.3	DO2	AO2:T72	16.7	24V
Normal speed ext.				Pressure supply				Start cooling 1 Heat pump cooling			Cooling / DX Circuit 1 Change over / HP		
DI3:T30	10.4	DI3		AI5:T15	12.4	0V	AI	DO3:T63	14.6	DO3	AO3:T73	17.1	24V
Ext. Stop / High speed/ Extra filter guard				Pressure extract				Pre-heat / extr. Contr.			Pre-heater		
DI4:T29	10.6	DI4		AI4:T16	12.7	0V	AI	DO4:T64	15.3	DO4	AO4:T74	17.6	24V
Cooling alarm				CO2 sensor/RH sensor/				Damper			Free		
DI5:T28	10.8	DI5						DO5:T65	14.8	DO5			
Ext. Change over / HP defrost								Alarm / Fire damper / Run indication					
DI6:T27	11.1	DI6		UI1:T81	13.1	24V	UI	DO6:T66	15.8	DO6			
Frost thermostat				Supply air				Start Heat 1/Heat Pump Change over					
DI7:T26	11.3	DI7		UI2:T82	13.3	24V	UI						
Pump El-coil overheat				Frost									
DI8:T25	11.5	DI8		UI3:T83	13.5	24V	UI						
Fire Alarm				Pre-heat Frost.									
DI9:T24	11.8	DI9		UI4:T84	13.8	24V	UI						
EL preheat overheat				Outdoor Pre-heat Temp.									

24VDC Input

PE	24V	0V
	24VDC	0VDC
	19.3	19.3

Light

24V		0V
switch	switch	
19.5	19.5	
Lamp	Lamp	
19.6	19.6	

Int-link 1

A+	B-	GND	24V	0V
A+ link1	B- link1	24V link1	0V link1	
22.0	22.0	22.0	22.0	

Int-link 2

A+	B-	GND	24V	0V
A+ link2	B- link2	24V link2	0V link2	
24.0	24.0	24.0	24.0	

Ext-link

A+	B-	GND	24V	0V

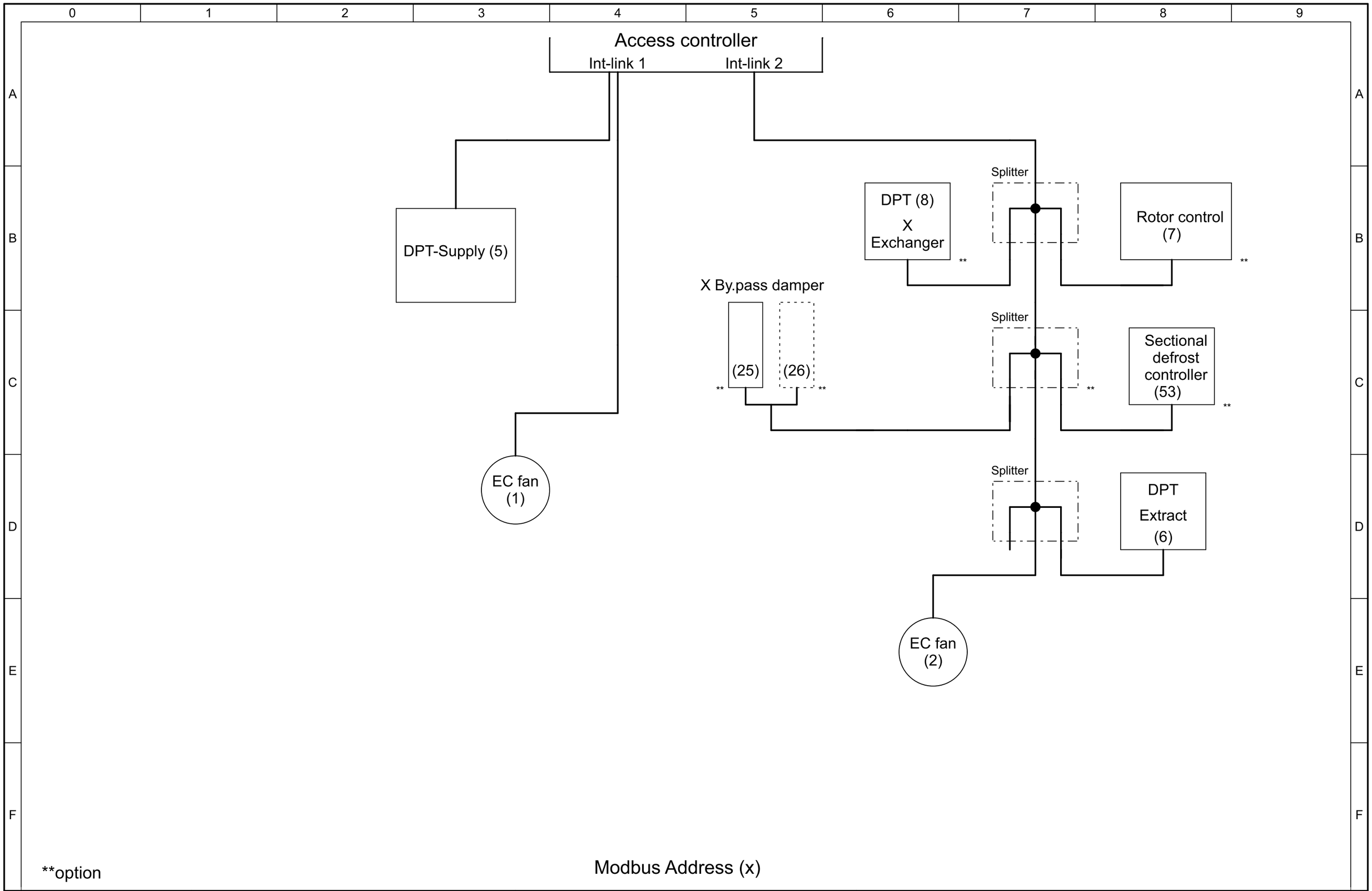
BMS

A+	B-	GND

230V Input

PE	N	L
PE 230V	N 230V	L1 230V
19.1	19.1	19.0

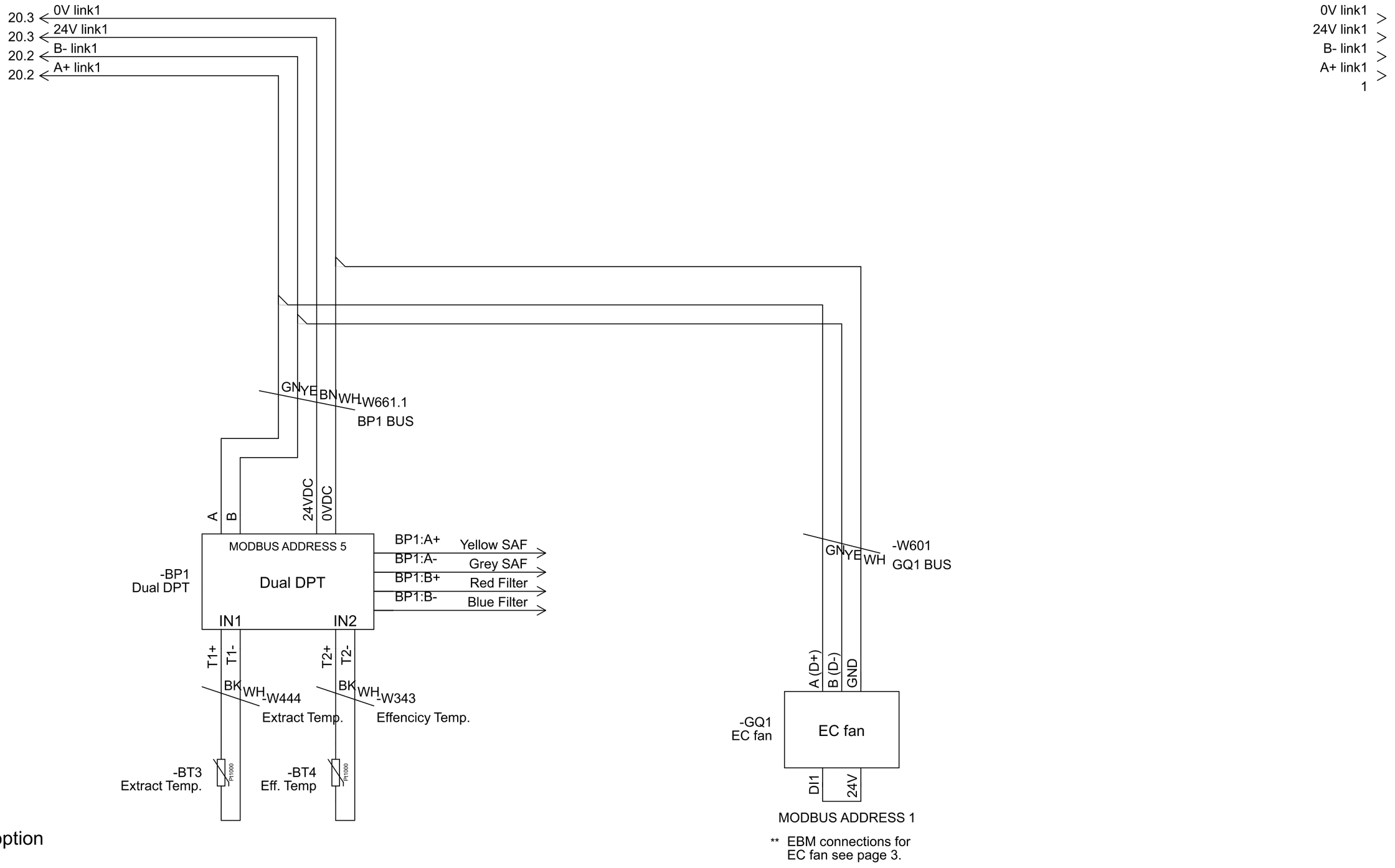
systemair	Geniox Access CU27 Controller	Access CU27 Controller	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02 / Sheet: 20
			Date: 06-11-2019 / initials: MIKE	Total sheets: 17 / Next sheet: 21



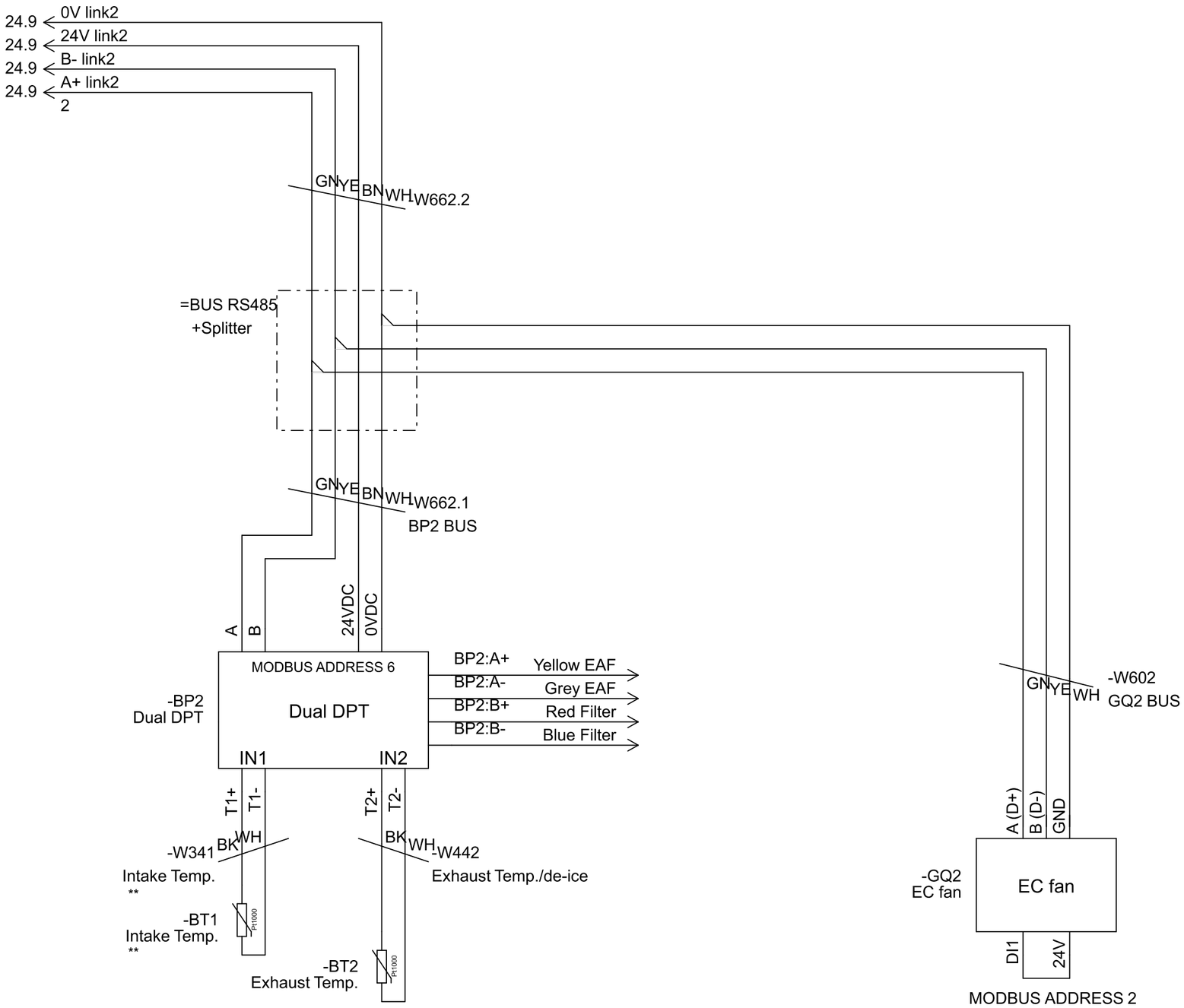
**option

Modbus Address (x)

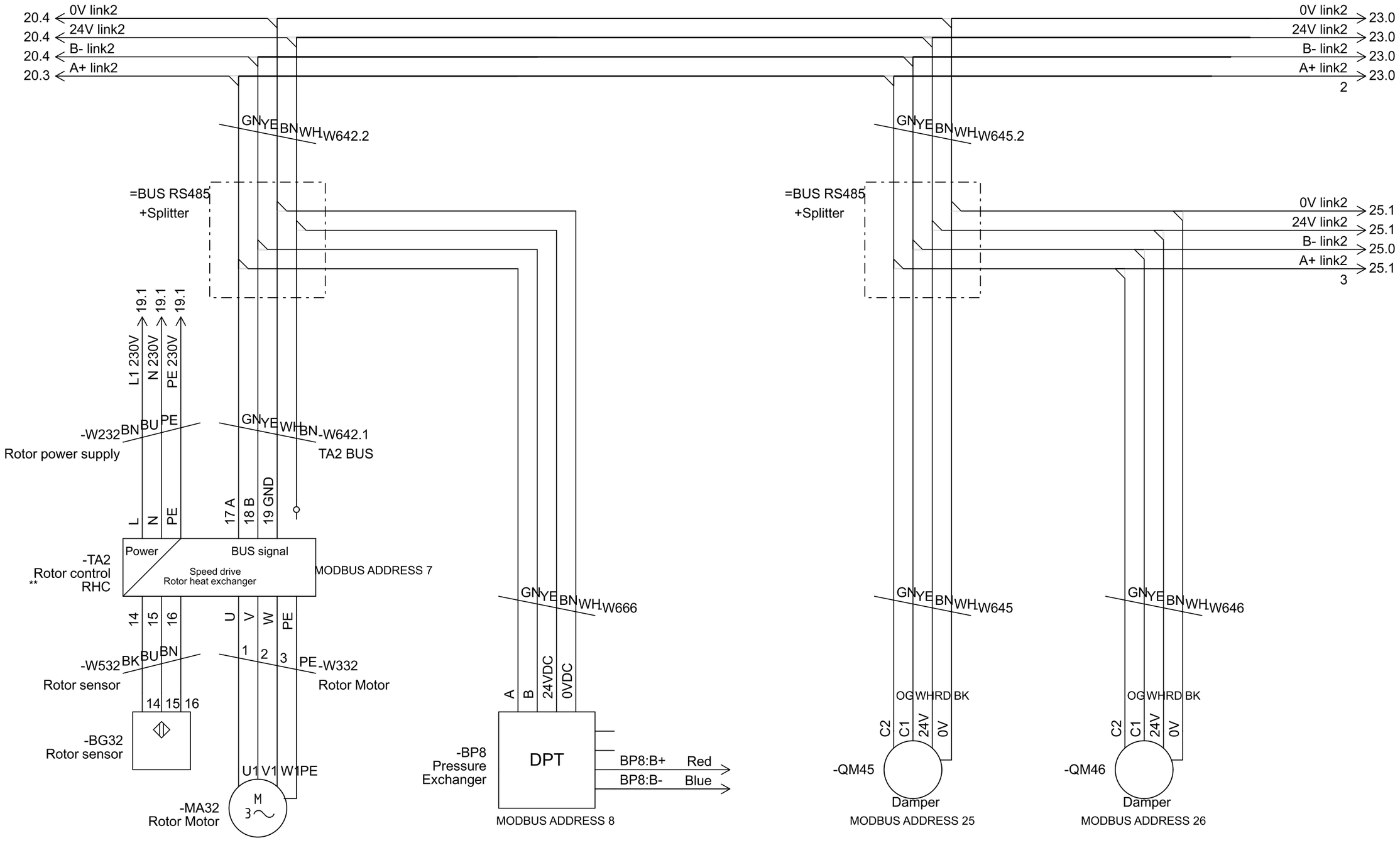
systemair	Geniox Access CU27 Controller	RS485 Modbus guide	Project: Geniox-Core CS 43.04.02 230V GB		Rev.: 43.04.02	Sheet: 21
			Date: 06-11-2019	initials: MIKE	Total sheets: 17	Next sheet: 22



systemair	Geniox Access CU27 Controller	RS485 EC Supply air	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 22
			Date: 06-11-2019 / initials: MIKE	Total sheets: 17	Next sheet: 23

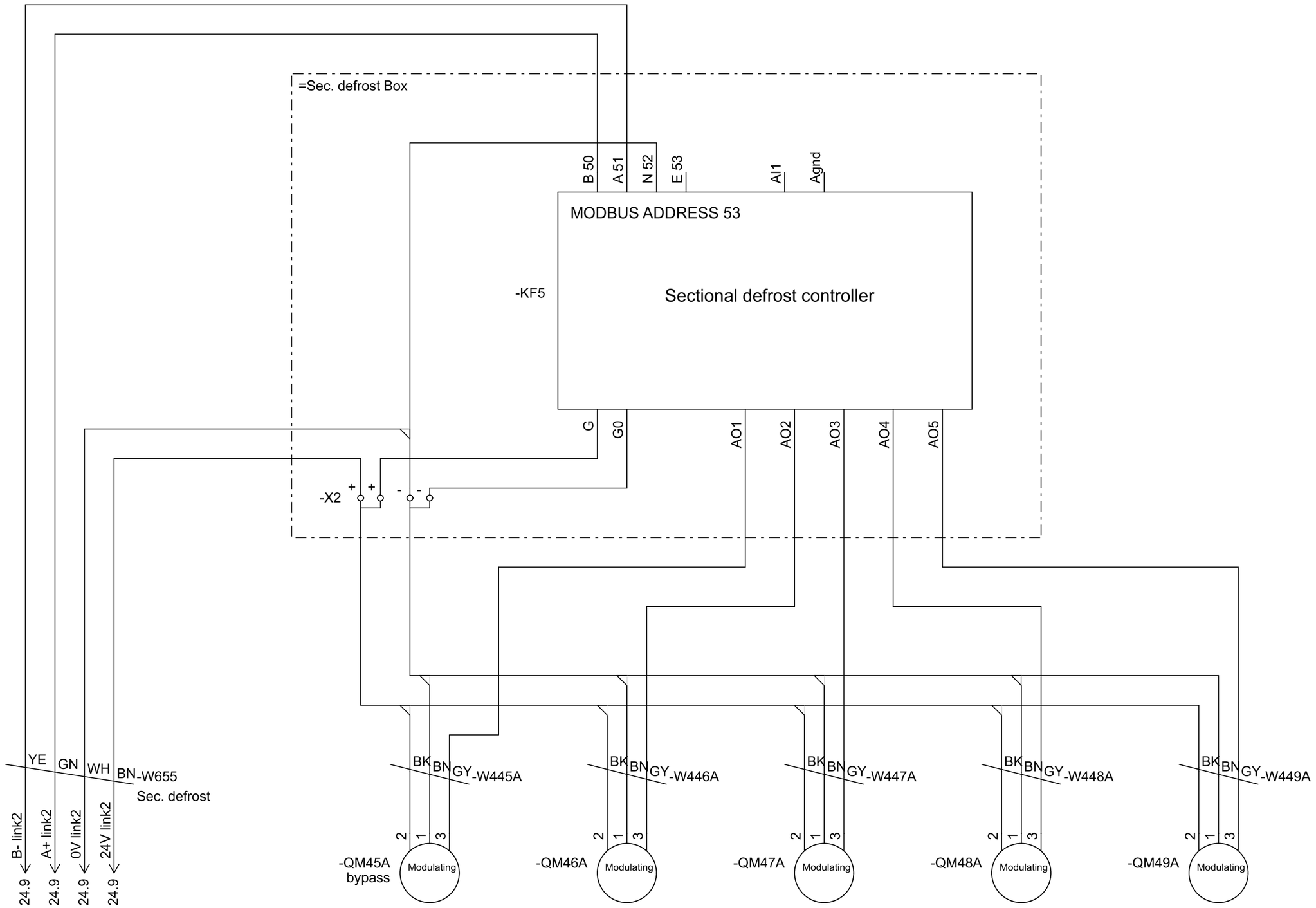


systemair	Geniox Access CU27 Controller	RS485 EC Extract air	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 23
			Date: 06-11-2019 initials: MIKE	Total sheets: 17	Next sheet: 24



**option

systemair	Geniox Access CU27 Controller	RS485 RHC, Damper Heat exchanger	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 24
			Date: 06-11-2019 initials: MIKE	Total sheets: 17	Next sheet: 25



systemair	Geniox Access CU27 Controller	Sectional defrosting	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 25
			Date: 06-11-2019 initials: MIKE	Total sheets: 17	Next sheet: 26

Address list

Address	Component: Code
1	Supply air fan 1: GQ1
2	Extract air fan 1: GQ2
3	Supply air fan 2: GQ3
4	Extract air fan 2: GQ4
5	Dual pressure transmitter supply: BP1
6	Dual pressure transmitter extract: BP2
7	RHC (Rotor drive system): TA2
8	Pressure Exchanger: BP8
25	Plate exchanger by-pass: QM45
26	Plate exchanger "by-pass" 2: QM46
53	Sectional Defrost control: KF5

Systemair settings of ECblue Modbus

COM Baudrate: 9600Bd

COM Mode: 8N1

BUS Address: Supply air, 1 and (3, Twin fans)

Extract air, 2 and (4, Twin fans)

D1: 19D

D1 is set to disable internal safety functions that protects the motor (fire mode)

Normal speed control of the fan is possible in this mode.

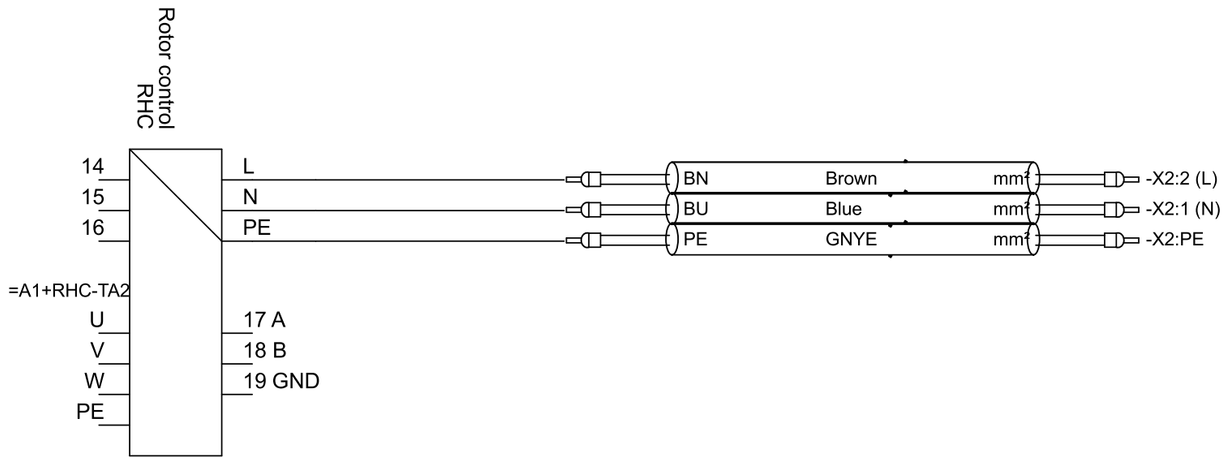
Function is active if D1 is open = no signal.

systemair	Geniox Access CU27 Controller	Modbus address list	Project: Geniox-Core CS 43.04.02 230V GB	Rev.: 43.04.02	Sheet: 26
			Date: 06-11-2019 / initials: MIKE	Total sheets: 17	Next sheet:

Cable Plan

-W232

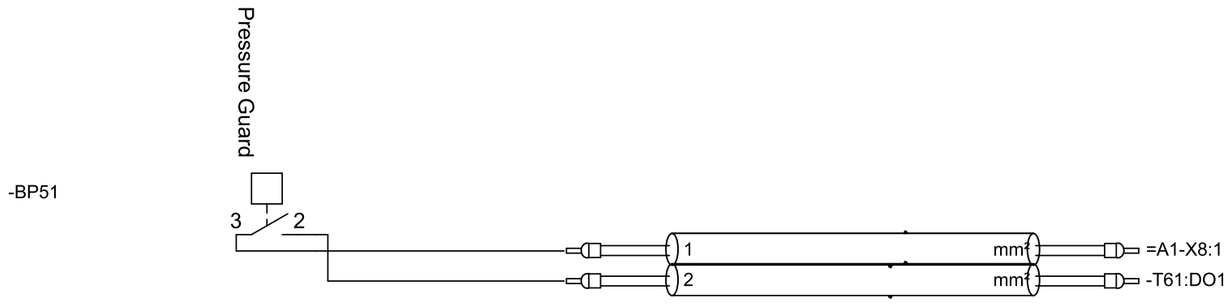
Remark: Rotor power supply
Cable-type:



Sheet	Path
24	1
24	1
24	1

-W251

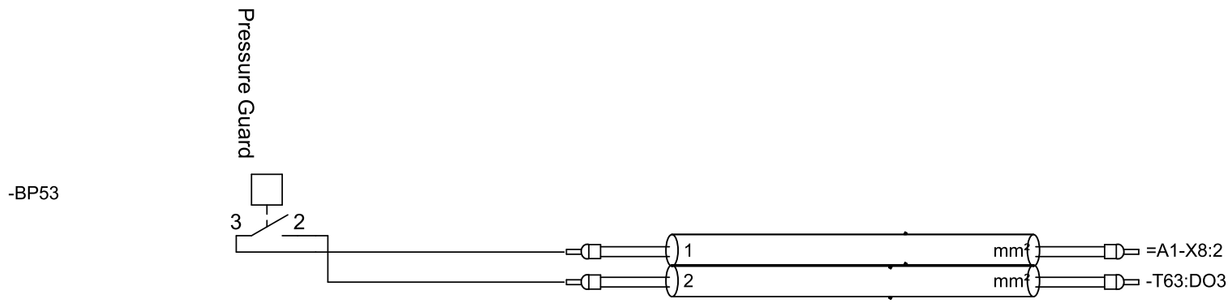
Remark:
Cable-type:



Sheet	Path
14	1
14	1

-W253

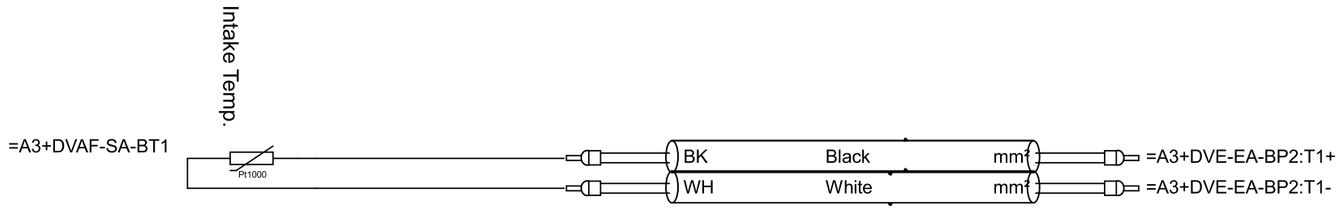
Remark:
Cable-type:



Sheet	Path
14	6
14	6

-W341

Remark: Intake Temp.
Cable-type:



Sheet	Path
23	1
23	1

systemair

Geniox
Access CU27 Controller

-W232, -W251, -W253, -W341

Project: Geniox-Core CS 43.04.02 230V GB

Date: 06-08-2020

initials: MIKE

Rev.: 43.04.02

Total sheets: 16

Sheet: 100

Next sheet: 101

Cable Plan

-W351

Remark: Electric heater
Cable-type:

Electric heater

-EB51

								Sheet	Path
L1	1								
L2	2								
L3									
N	Y	BK	Black	mm²	-T71:0V	16	4
PE	GO	BN	Brown	mm²	-T61:DO1	16	4
	7	BN	Brown	mm²		16	4
	8	BU	Blue	mm²	-T61:N	16	4
		GY	Gray	mm²	-T26:REF	16	3
		RD	Red	mm²	-T71:AO1	16	4
		WH	White	mm²	-T26:DI7	16	3

-W353

Remark: Electric pre-heater
Cable-type:

Electric pre-heater

-EB53

								Sheet	Path
L1	1								
L2	2								
L3									
N	Y	BK	Black	mm²	-T87	17	4
PE	GO	BN	Brown	mm²	-X2:4 (L)	17	4
	7	BU	Blue	mm²	-X2:3 (N)	17	4
	8	GY	Gray	mm²	-T24:REF	17	3
		RD	Red	mm²	-T86	17	4
		WH	White	mm²	-T24:DI9	17	3

-W355

Remark: Temperatur sensor supply air
Cable-type:

Supply air Duct sensor

-BT5

Pt1000

						Sheet	Path
BN	Brown	mm²	-T81:UI1	13	1
BU	Blue	mm²	-T81:REF	13	2

systemair

Geniox Access CU27 Controller

-W351, -W353, -W355

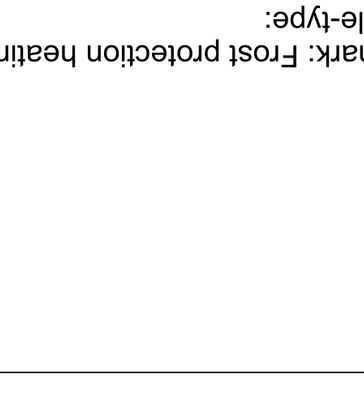
Project:	Geniox-Core CS 43.04.02 230V GB
Date:	06-08-2020
initials:	MIKE
Rev.:	43.04.02
Total sheets:	16
Sheet:	101
Next sheet:	102

Cable Plan

Path	
Sheet	
11	2
11	2
11	1
13	3
13	4
13	5
13	6
10	4
10	4

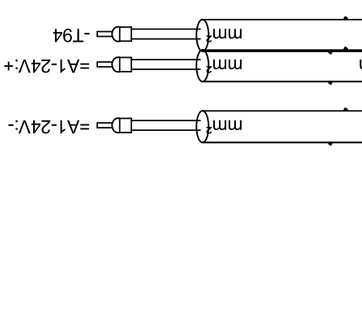
-W357

Remark: Frost protection heating coil
Cable-type:



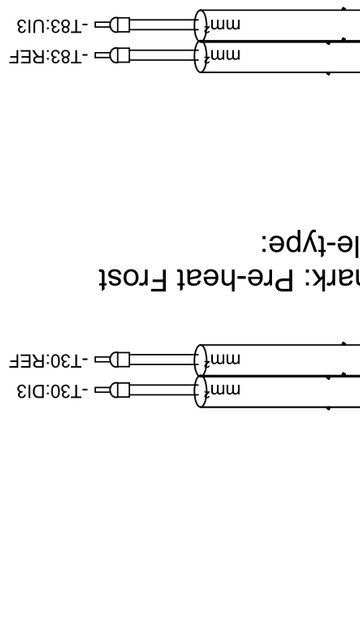
-W359

Remark: Frost thermostat
Cable-type:



-W363

Remark: Extra filter guard
Cable-type:



-W367

Remark: Pre-heat Frost
Cable-type:

Project:	Geniox-Core CS 43.04.02 230V GB
Rev.:	43.04.02
Sheet:	102
Date:	06-08-2020
initials:	MIKE
Total sheets:	16
Next sheet:	103

systemair

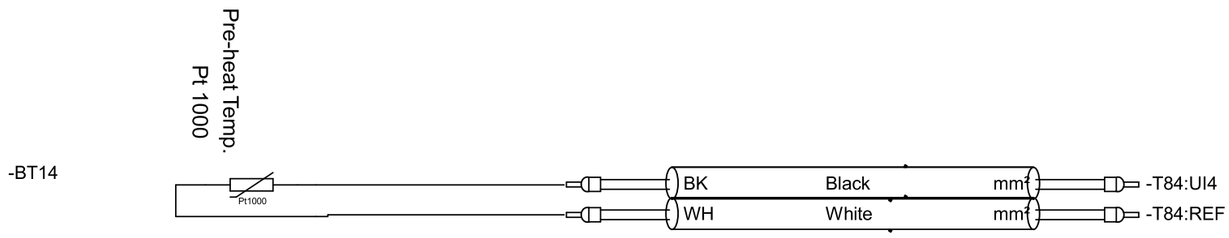
Geniox
Access CU27 Controller

-W357, -W359, -W363, -W367

Cable Plan

-W369

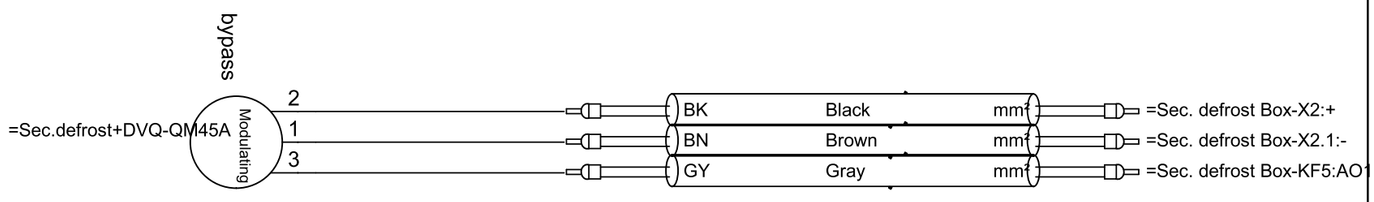
Remark: Pre-heat Temp.
Cable-type:



Sheet	Path
13	7
13	7

-W445A

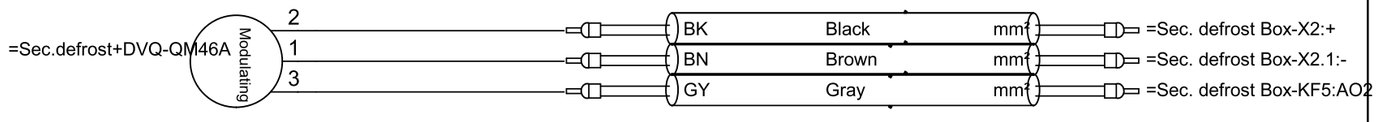
Remark:
Cable-type:



Sheet	Path
25	3
25	3
25	3

-W446A

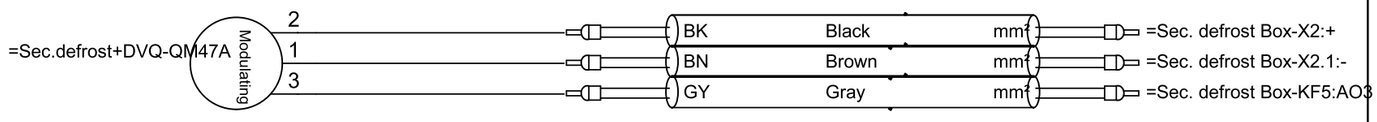
Remark:
Cable-type:



Sheet	Path
25	4
25	4
25	4

-W447A

Remark:
Cable-type:



Sheet	Path
25	5
25	6
25	6

systemair

Geniox
Access CU27 Controller

-W369, -W445A, -W446A, -W447A

Project: Geniox-Core CS 43.04.02 230V GB

Date: 06-08-2020

initials: MIKE

Rev.: 43.04.02

Total sheets: 16

Sheet: 103

Next sheet: 104

Cable Plan

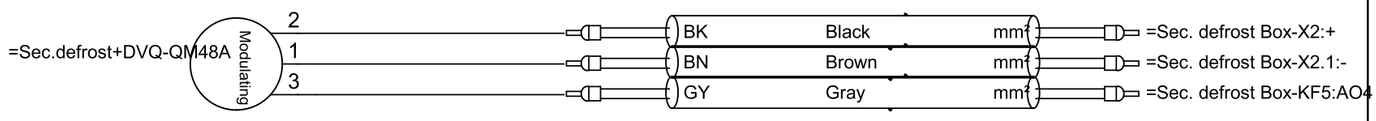
systemair

Geniox
Access CU27 Controller

-W448A, -W449A, -W456, -W457

-W448A

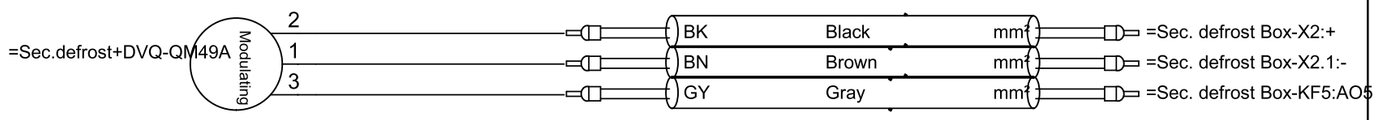
Remark:
Cable-type:



Sheet	Path
25	7
25	7
25	7

-W449A

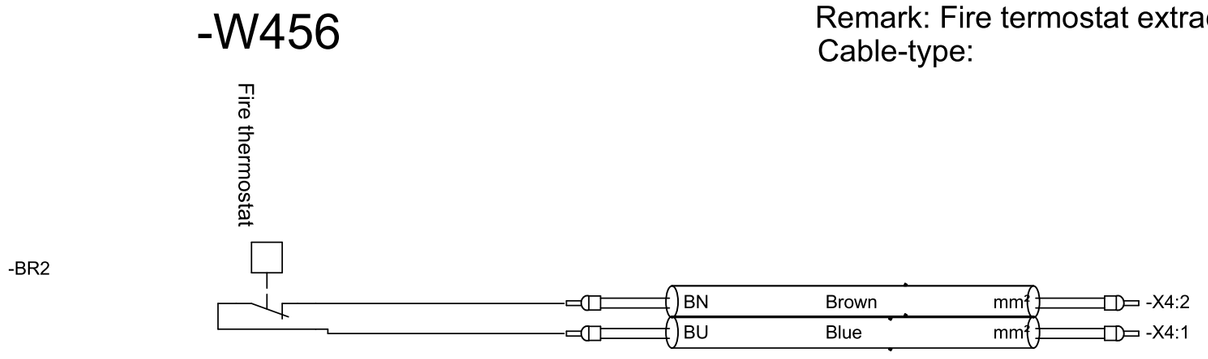
Remark:
Cable-type:



Sheet	Path
25	8
25	8
25	8

-W456

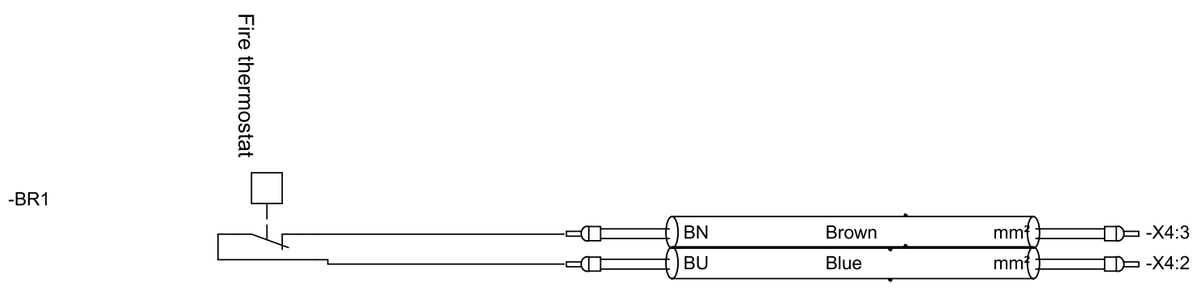
Remark: Fire termostat extract air
Cable-type:



Sheet	Path
11	6
11	6

-W457

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



Sheet	Path
11	6
11	6

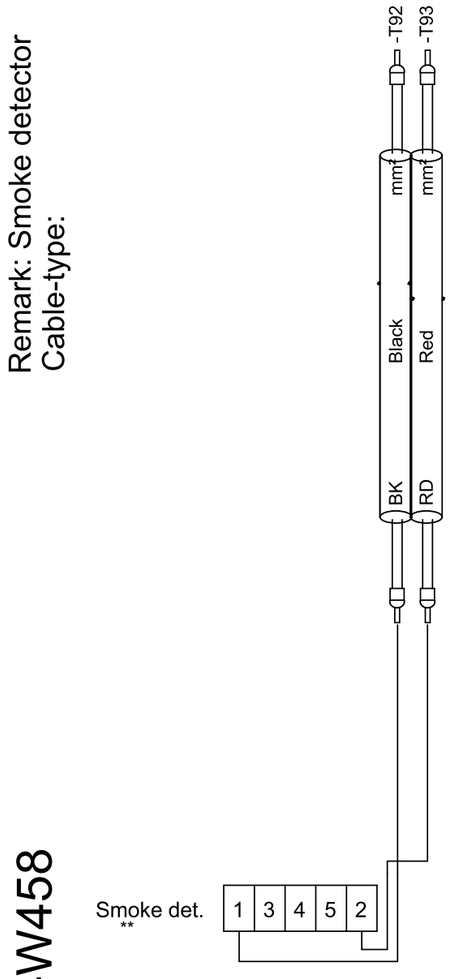
Project:	Geniox-Core CS 43.04.02 230V GB
Date:	06-08-2020
initials:	MIKE
Rev.:	43.04.02
Total sheets:	16
Sheet:	104
Next sheet:	105

Cable Plan

	Path	Sheet
-W458	0	12
	1	12
-W507	8	13
	8	13
-W508	9	12
	9	12
	8	12
-W513	3	12
	3	12
	2	12

-W458

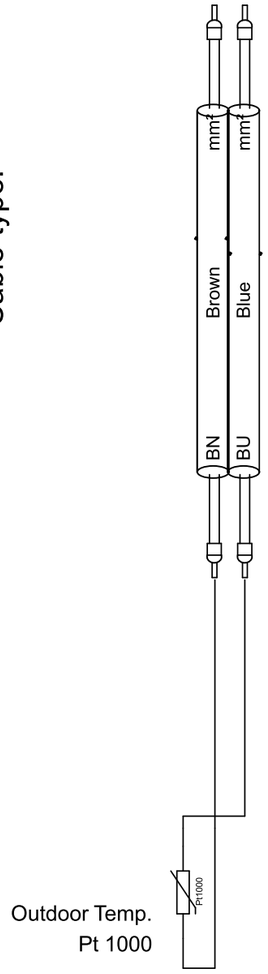
Remark: Smoke detector
Cable-type:



-BQ3

-W507

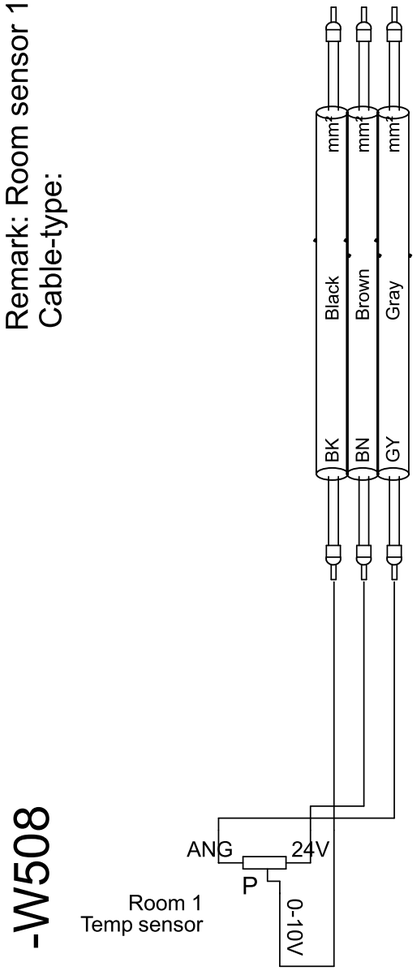
Remark: Outdoor sensor
Cable-type:



-BT7

-W508

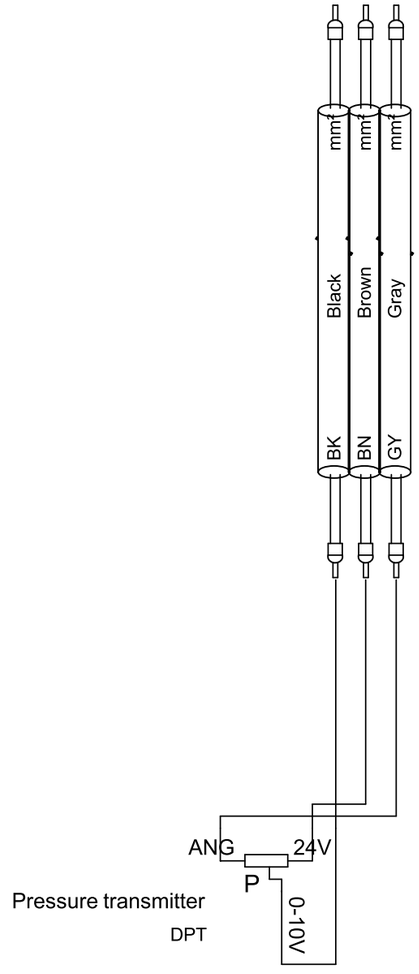
Remark: Room sensor 1
Cable-type:



-BT8

-W513

Remark: Pressure Supply air external
Cable-type:



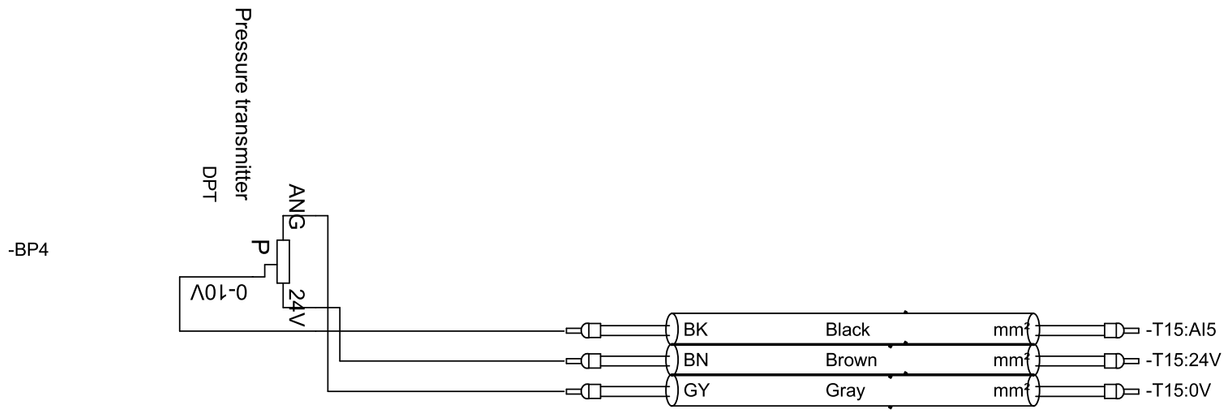
-BP3

systemair	Geniox Access CU27 Controller	-W458, -W507, -W508, -W513	Project: Geniox-Core CS 43.04.02 230V GB		Rev.: 43.04.02	Sheet: 105
			Date: 06-08-2020	initials: MIKE	Total sheets: 16	Next sheet: 106

Cable Plan

-W514

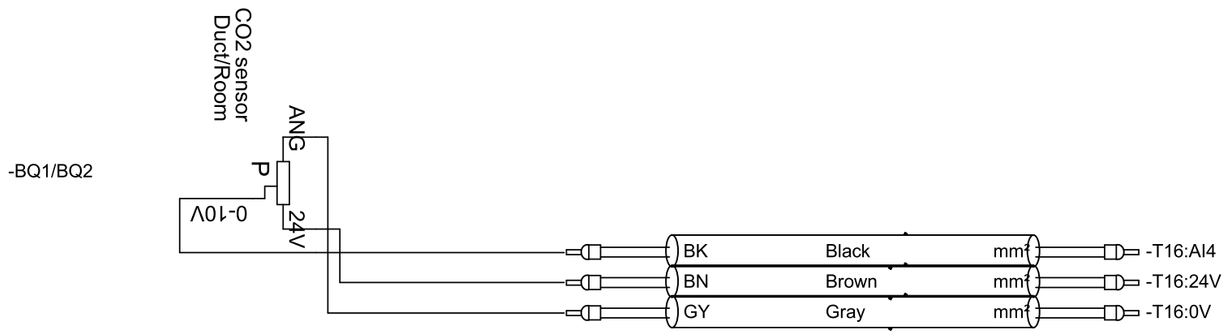
Remark: Pressure Extract air external
Cable-type:



Sheet	Path
12	4
12	5
12	4

-W515/516

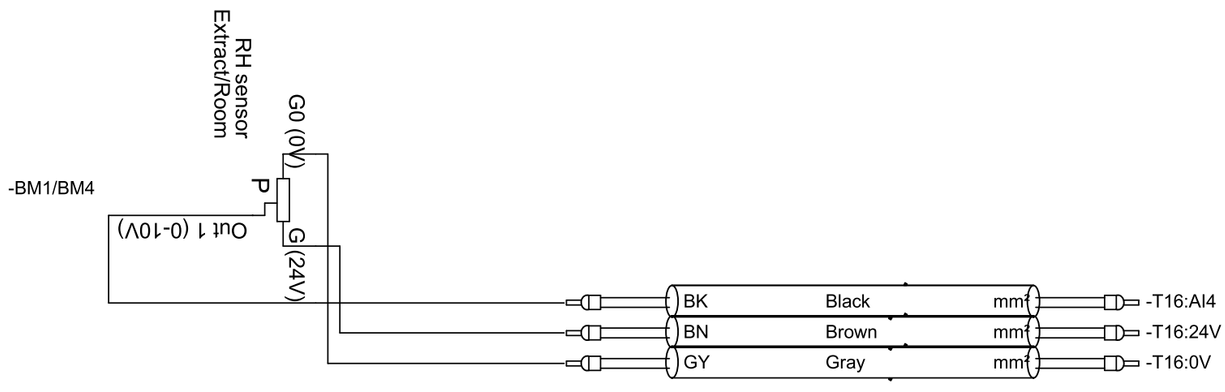
Remark: CO2 sensor
Cable-type:



Sheet	Path
12	6
12	6
12	6

-W517/W520

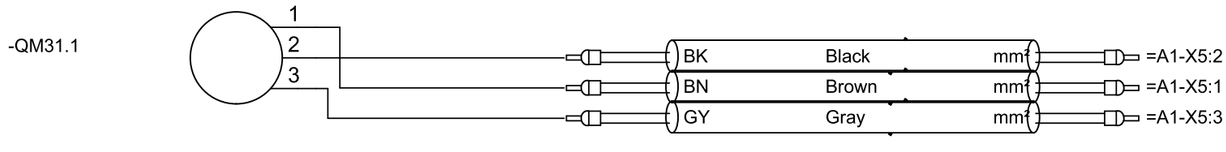
Remark: RH sensor
Cable-type:



Sheet	Path
12	7
12	7
12	7

-W531.1

Remark: Damper Supply
Cable-type:



Sheet	Path
15	1
15	0
15	1

systemair

Geniox
Access CU27 Controller

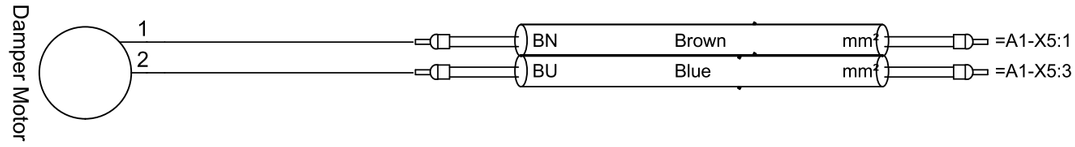
-W514, -W515/516, -W517/W520, -W531.1

Project: Geniox-Core CS 43.04.02 230V GB
Date: 06-08-2020
initials: MIKE
Rev.: 43.04.02
Total sheets: 16
Sheet: 106
Next sheet: 107

Cable Plan

-W531.1S

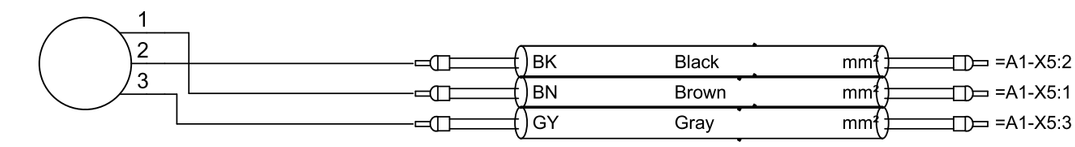
Remark: Damper Supply
Cable-type:



Sheet	Path
15	1
15	1

-W532.1

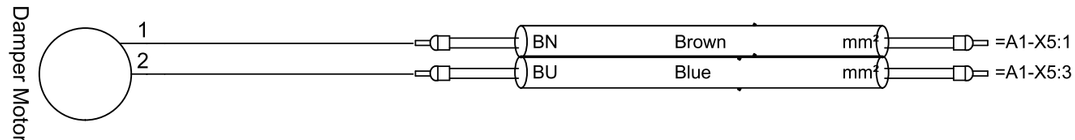
Remark: Damper Extract
Cable-type:



Sheet	Path
15	4
15	4
15	4

-W532.1S

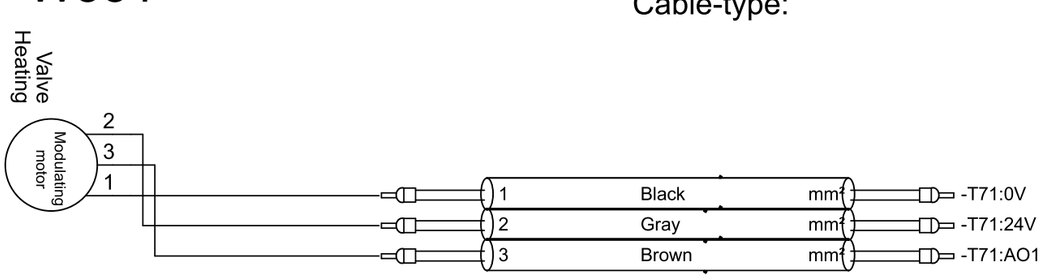
Remark: Damper Extract
Cable-type:



Sheet	Path
15	5
15	5

-W551

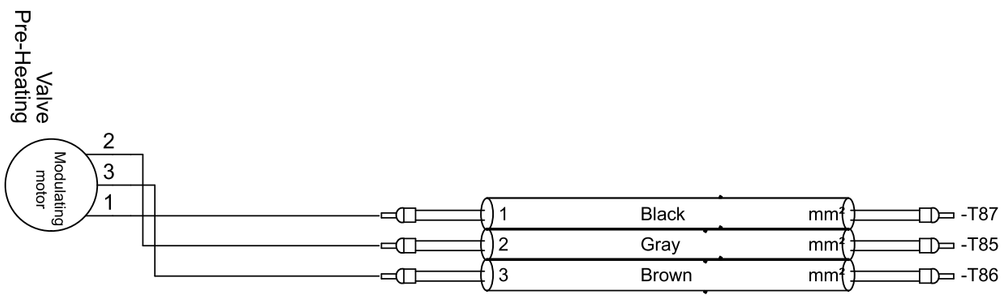
Remark: Heating valve
Cable-type:



Sheet	Path
16	2
16	2
16	2

-W553

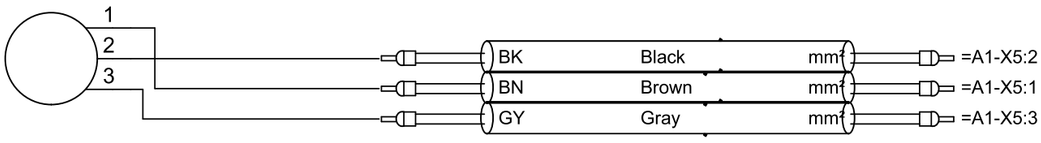
Remark: Heating valve
Cable-type:



Sheet	Path
17	2
17	2
17	2

-W571.1

Remark: Damper Supply 2
Cable-type:



Sheet	Path
15	2
15	2
15	2

Geniox Access CU27 Controller

-W531.1S, -W532.1, -W532.1S, -W551, -W553, -W571.1

Project: Geniox-Core CS 43.04.02 230V GB

Date: 06-08-2020

initials: MIKE

Rev.: 43.04.02

Total sheets: 16

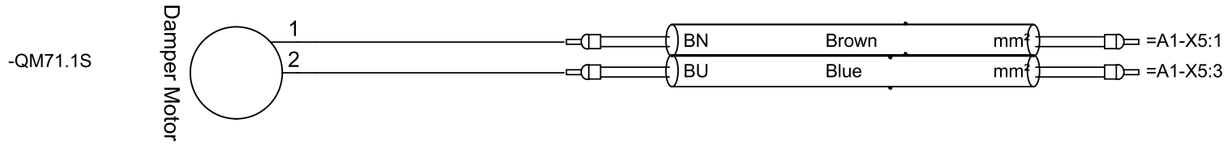
Sheet: 107

Next sheet: 108

Cable Plan

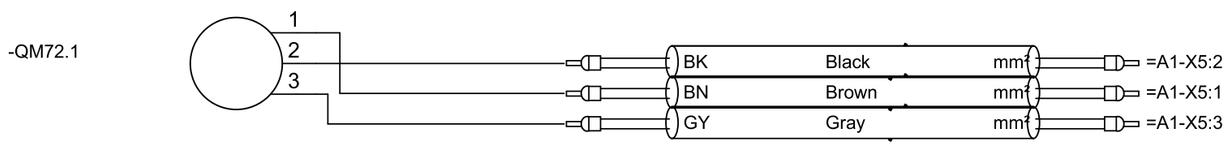
-W571.1S

Remark: Damper Supply 2
Cable-type:



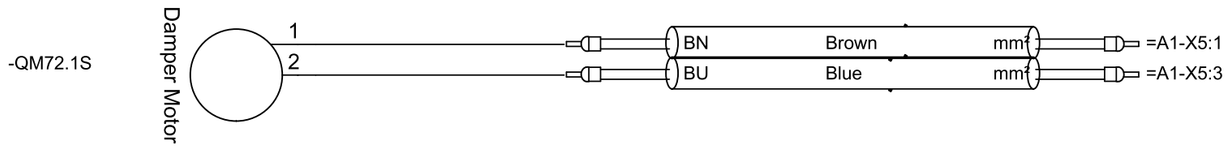
-W572.1

Remark: Damper Extract 2
Cable-type:



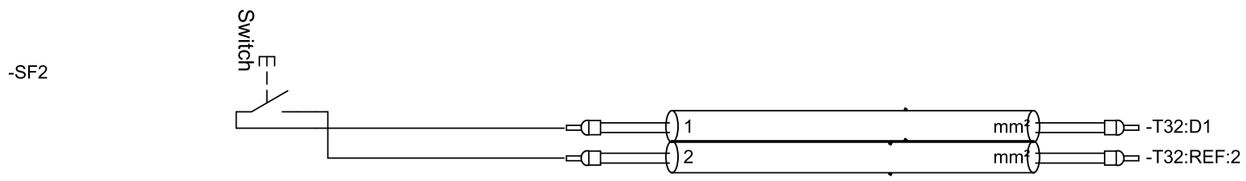
-W572.1S

Remark: Damper Extract 2
Cable-type:



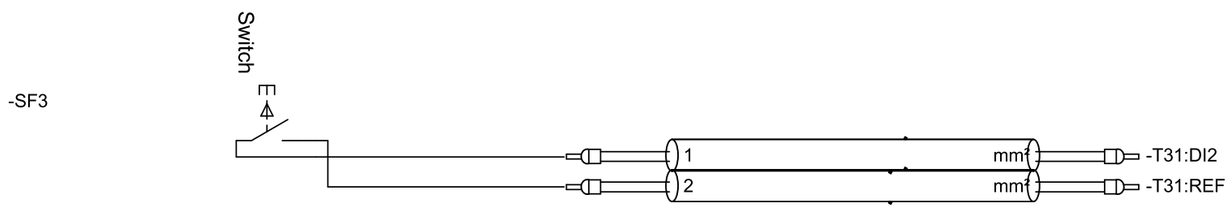
-W580

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



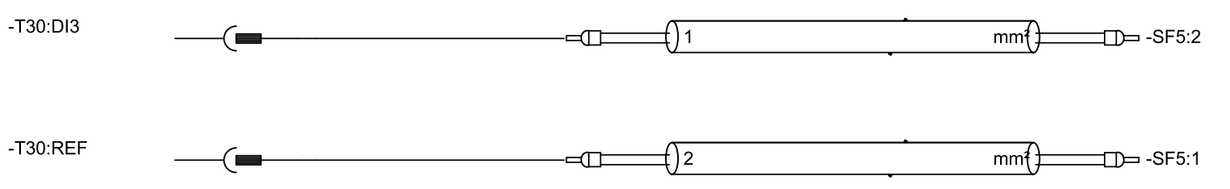
-W581

Remark: Normal speed-ext.
Cable-type:



-W583

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



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

systemair

Geniox
Access CU27 Controller

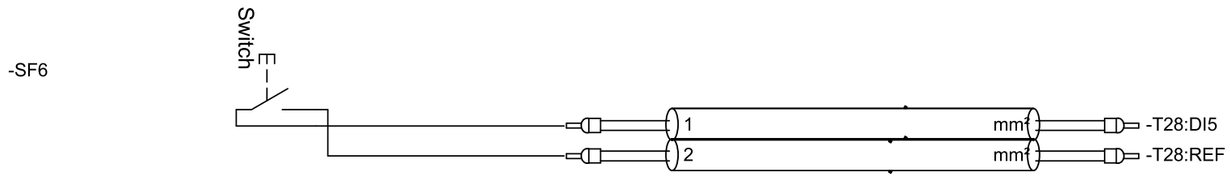
-W571.1S, -W572.1, -W572.1S, -W580, -W581, -W583

Project: Geniox-Core CS 43.04.02 230V GB
Date: 06-08-2020
initials: MIKE
Rev.: 43.04.02
Total sheets: 16
Sheet: 108
Next sheet: 109

Cable Plan

-W584

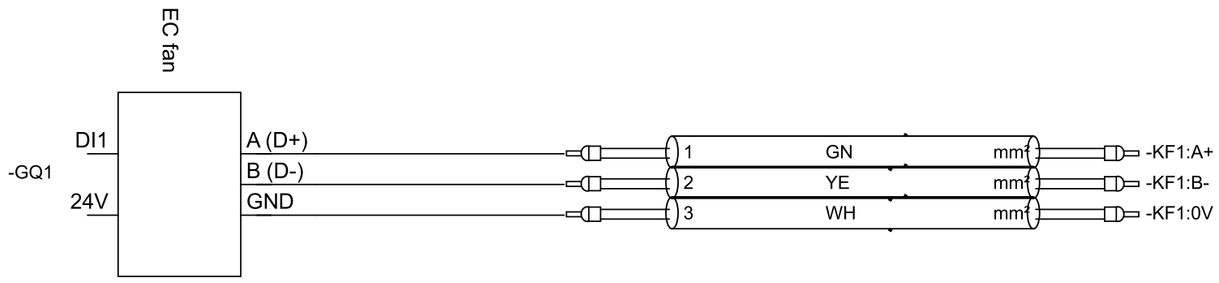
Remark: Change over
Cable-type:



Sheet	Path
10	8
10	8

-W601

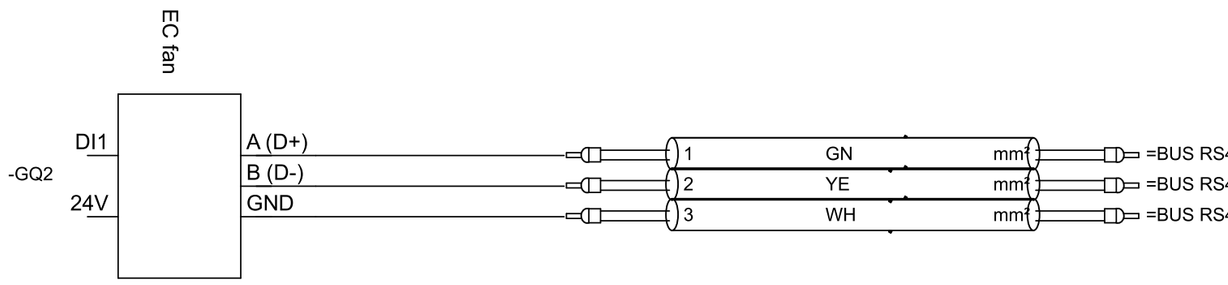
Remark: GQ1 BUS
Cable-type: 4x0,6mm2



Sheet	Path
22	5
22	5
22	6

-W602

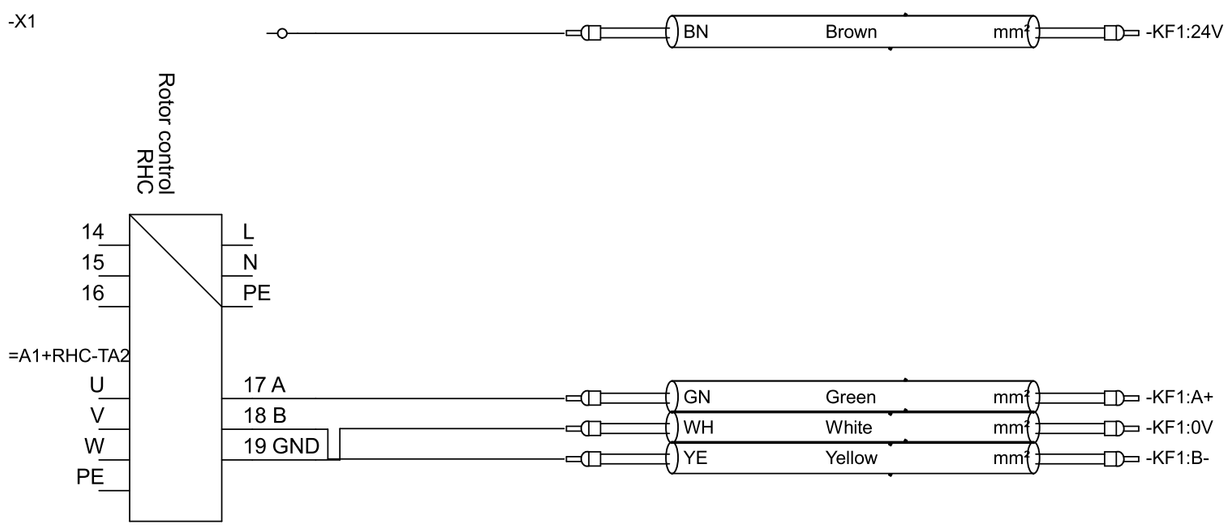
Remark: GQ2 BUS
Cable-type: 4x0,6mm2



Sheet	Path
23	6
23	6
23	6

-W642.1

Remark: TA2 BUS
Cable-type:



Sheet	Path
24	2
24	1
24	2
24	2

systemair

Geniox
Access CU27 Controller

-W584, -W601, -W602, -W642.1

Project: Geniox-Core CS 43.04.02 230V GB

Date: 06-08-2020

initials: MIKE

Rev.: 43.04.02

Total sheets: 16

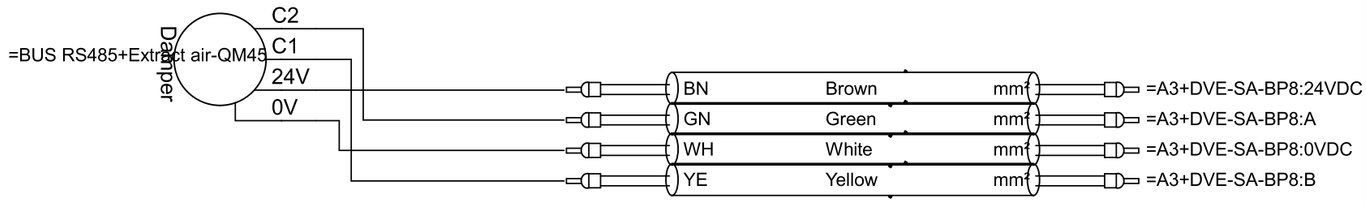
Sheet: 109

Next sheet: 110

Cable Plan

-W645

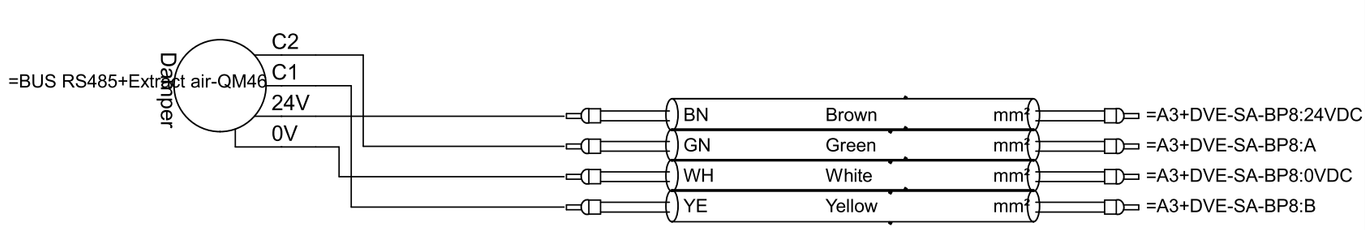
Remark: Extract
Cable-type:



Sheet	Path
24	6
24	6
24	6
24	6

-W646

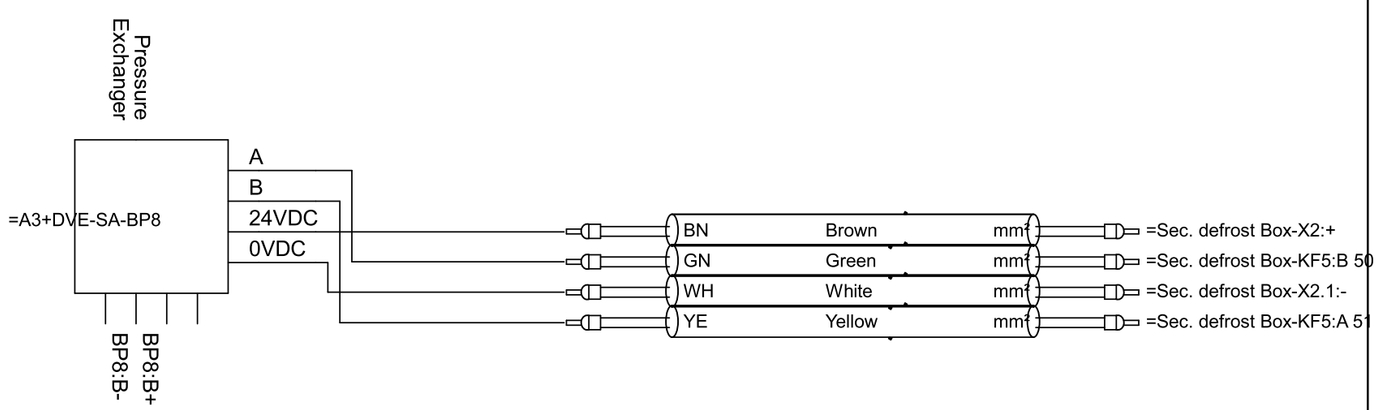
Remark: Extract
Cable-type:



Sheet	Path
24	7
24	7
24	8
24	7

-W655

Remark: Sec. defrost
Cable-type:



Sheet	Path
25	1
25	1
25	1
25	0

systemair

Geniox
Access CU27 Controller

-W645, -W646, -W655

Project: Geniox-Core CS 43.04.02 230V GB

Date: 06-08-2020

initials: MIKE

Rev.: 43.04.02

Total sheets: 16

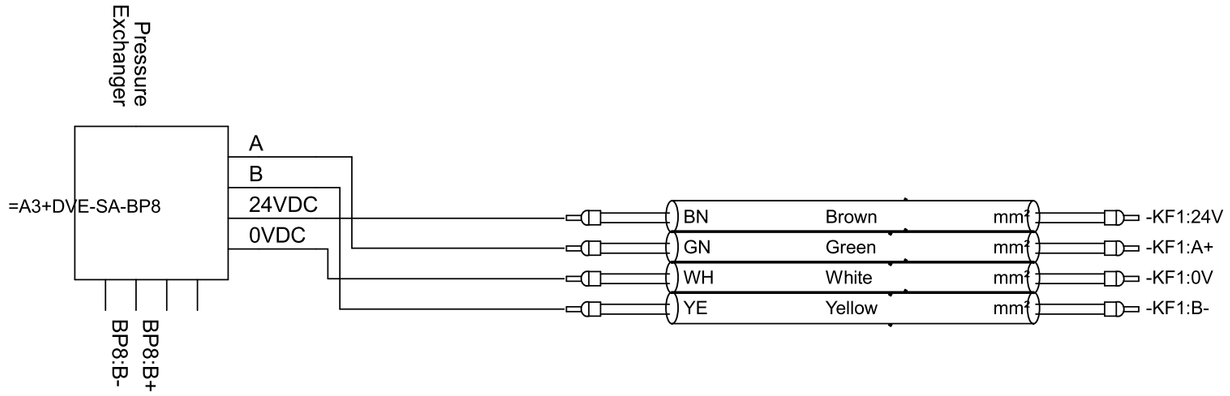
Sheet: 110

Next sheet: 111

Cable Plan

-W666

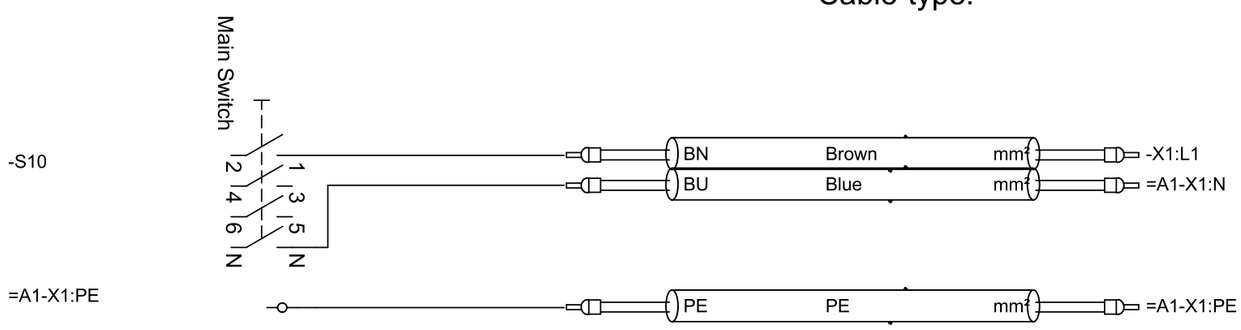
Remark: Pressure Plate
Cable-type:



Sheet	Path
24	4
24	3
24	4
24	3

-W1000

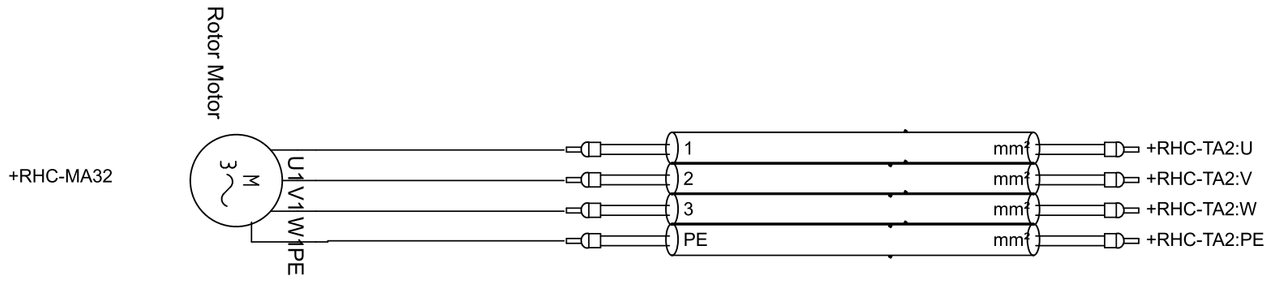
Remark: Main power supply
Cable-type:



Sheet	Path
18	1
18	1
18	1

=A1-W332

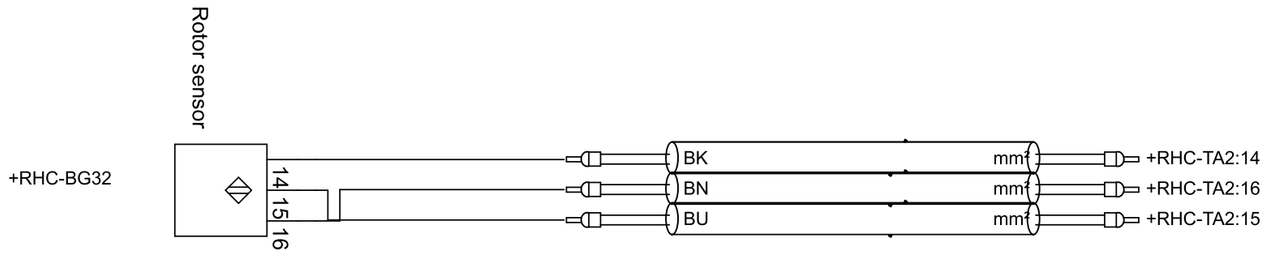
Remark: Rotor Motor
Cable-type:



Sheet	Path
24	1
24	2
24	2
24	2

=A1-W532

Remark: Rotor sensor
Cable-type:



Sheet	Path
24	1
24	1
24	1

systemair

Geniox
Access CU27 Controller

-W666, -W1000, -W332, -W532

Project: Geniox-Core CS 43.04.02 230V GB

Date: 06-08-2020

initials: MIKE

Rev.: 43.04.02

Total sheets: 16

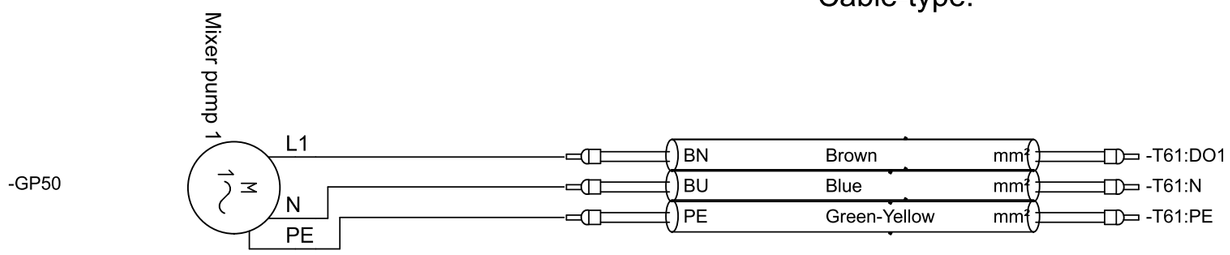
Sheet: 111

Next sheet: 112

Cable Plan

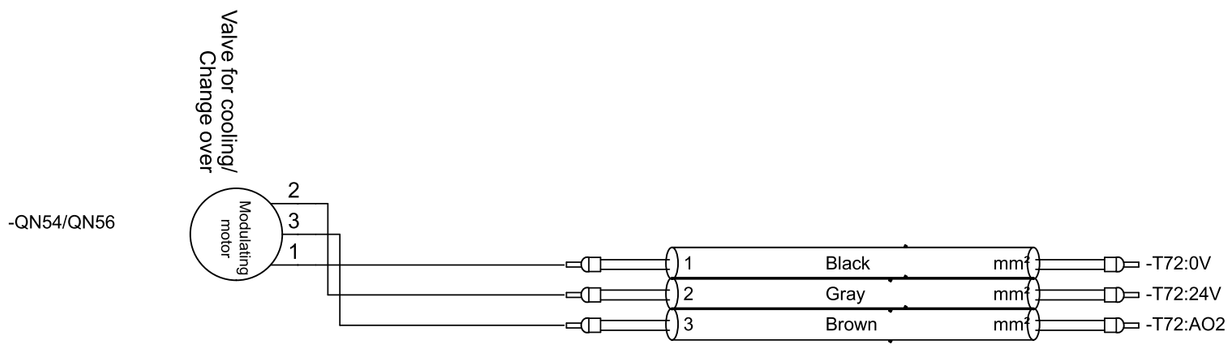
=A1-W550

Remark: Mixing pump
Cable-type:



=A1-W554

Remark: Cooling valve
Cable-type:

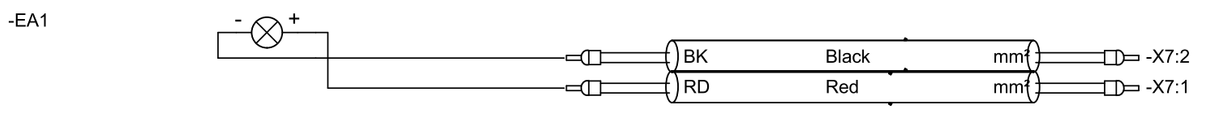


=A1-W700

Remark: Light switch
Cable-type:

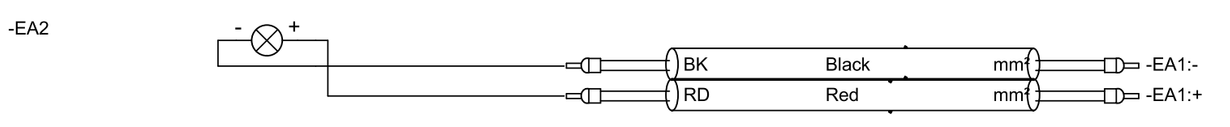
=A1-W701

Remark: Light P20
Cable-type:



=A1-W702

Remark: Light P20
Cable-type:



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

systemair

Geniox
Access CU27 Controller

-W550, -W554, -W700, -W701, -W702

Project: Geniox-Core CS 43.04.02 230V GB

Date: 06-08-2020

initials: MIKE

Rev.: 43.04.02

Total sheets: 16

Sheet: 112

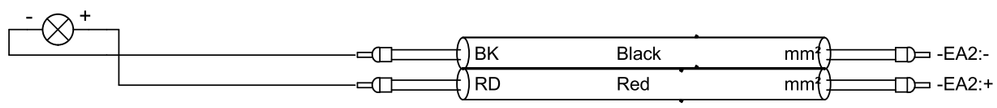
Next sheet: 113

Cable Plan

=A1-W703

Remark: Light P20
Cable-type:

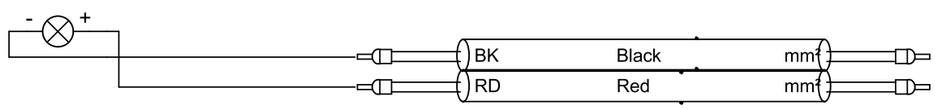
-EA3



=A1-W704

Remark: Light P21
Cable-type:

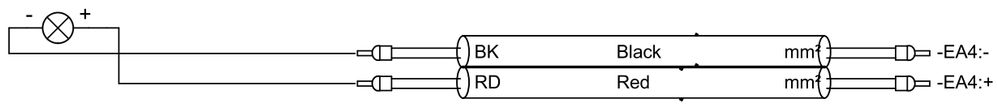
-EA4



=A1-W705

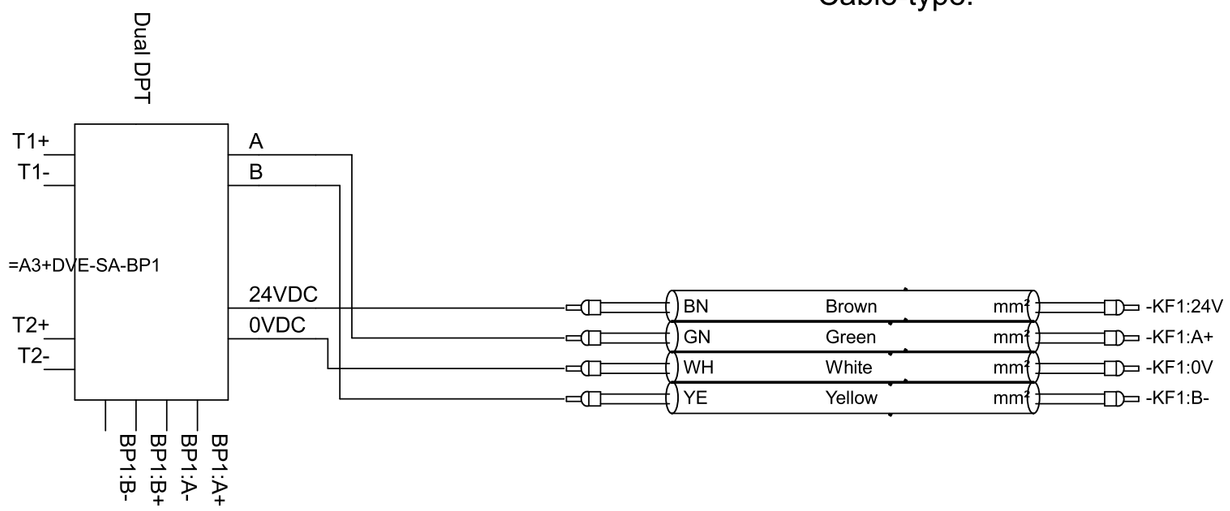
Remark:
Cable-type:

-EA5



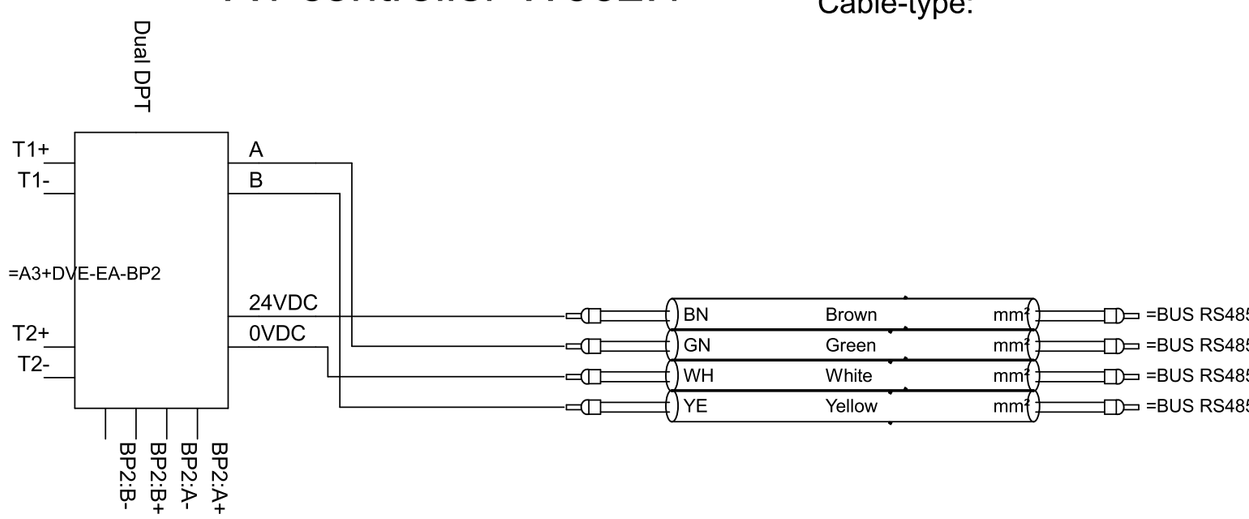
=A1 controller-W661.1

Remark: BP1 BUS
Cable-type:



=A1 controller-W662.1

Remark: BP2 BUS
Cable-type:



Sheet	Path
19	7
19	7
19	8
19	8
19	9
19	9
22	2
22	2
22	2
22	2
23	2
23	2
23	2
23	2

systemair

Geniox
Access CU27 Controller

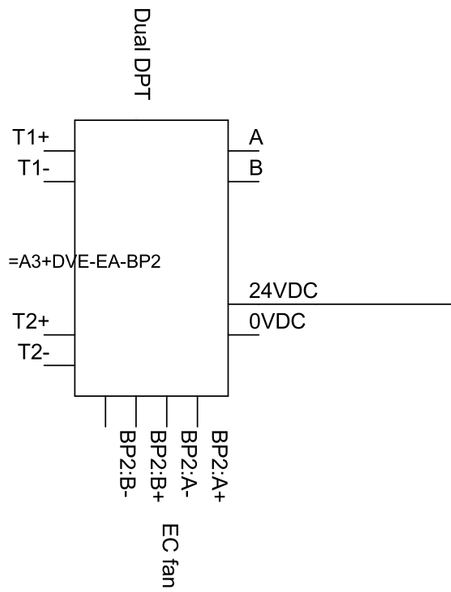
-W703, -W704, -W705, -W661.1, -W662.1

Project: Geniox-Core CS 43.04.02 230V GB
Date: 06-08-2020
initials: MIKE
Rev.: 43.04.02
Total sheets: 16
Sheet: 113
Next sheet: 114

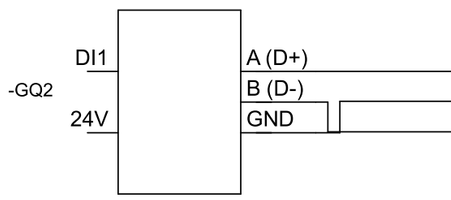
Cable Plan

=A1 controller-W662.2

Remark: BP2 BUS
Cable-type:



						Sheet	Path
		BN	Brown	mm²	=BUS RS485+Extract air-QM46:24V	23	2



		GN	Green	mm²	=BUS RS485+Extract air-QM46:C2	23	2
		WH	White	mm²	=BUS RS485+Extract air-QM46:0V	23	2
		YE	Yellow	mm²	=BUS RS485+Extract air-QM46:C1	23	2

=A3-W343

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

Eff. Temp

+DVE-SA-BT4		BK	Black	0.25 mm²	+DVE-SA-BP1:T2+	22	2
		WH	White	0.25 mm²	+DVE-SA-BP1:T2-	22	2

=A3-W442

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

Exhaust Temp.

+DVAF-EA-BT2		BK	Black	0.25 mm²	+DVE-EA-BP2:T2+	23	2
		WH	White	0.25 mm²	+DVE-EA-BP2:T2-	23	2

=A3-W444

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

Extract Temp.

+DVAF-EA-BT3		BK	Black	0.25 mm²	+DVE-SA-BP1:T1+	22	1
		WH	White	0.25 mm²	+DVE-SA-BP1:T1-	22	1

systemair

Geniox
Access CU27 Controller

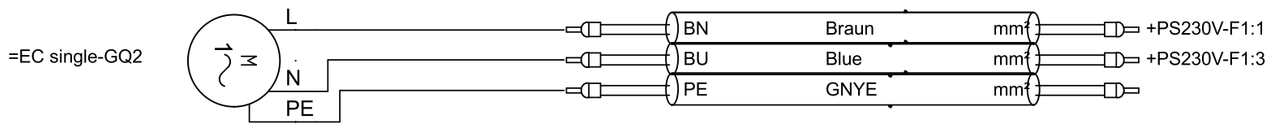
-W662.2, -W343, -W442, -W444

Project: Geniox-Core CS 43.04.02 230V GB
Date: 06-08-2020
initials: MIKE
Rev.: 43.04.02
Total sheets: 16
Sheet: 114
Next sheet: 115

Cable Plan

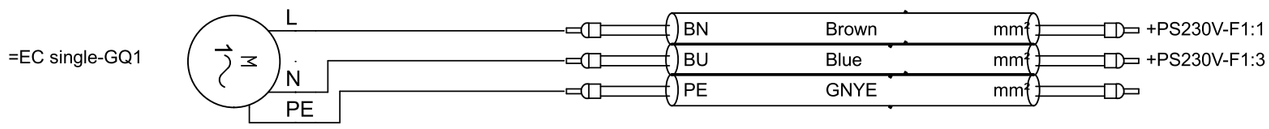
=EC Single/Twin+Extract air-W102

Remark: motor extract air
Cable-type:



=EC Single/Twin+Supply air-W101

Remark: motor supply air
Cable-type:



Sheet	Path
18	7
18	8
18	8
18	4
18	5
18	5

systemair

Geniox
Access CU27 Controller

-W102, -W101

Project: Geniox-Core CS 43.04.02 230V GB			Rev.: 43.04.02	Sheet: 115
Date: 06-08-2020	initials: MIKE		Total sheets: 16	Next sheet: