



Carel USA LLC

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power**solution**

Product code	CMNAKSE000	Rev. 1
Project description	Fan Hood Controller 1351	
Supply voltage	120VAC 1P+N+PE 60Hz	Operating temperature 40°C
Rated current	1.25A	
Auxiliary voltage	24VDC	
Designed by	Daniel Harris on 14-Feb-2022	
Checked by	Matteo Mazzocco on 11-May-2022	
Approved by	Matteo Mazzocco on 11-May-2022	
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Modification	Date	Name	Rev.	1
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Date	14-Feb-2022
Elab	Daniel Harris
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Title page

Mounting locations	+	Page	&EAA/1
		Next	2
Function	=	Total pages	16

Cable Ampacity		
Size (mm [AWG])	FS17 Ampacity (A)	FG17 Ampacity (A)
0,5 [20]	\	NOT AVAILABLE
0,75 [18]	\	NOT AVAILABLE
1 [18]	8A	12A
1,5 [16]	11A	16A
2,5 [14]	15A	22.4A
4 [12]	20A	29.6A
6 [10]	26A	38.4A
10 [8]	36A	52.8A
16 [6]	48A	70.4A
25 [4]	64A	93.6A
35 [2]	80A	115.2A
50 [1]	95A	140A
95 [3/0]	150A	177.6A
120 [4/0]	170A	215.2A
150 [300 kcmil]	195A	NOT AVAILABLE
185 [350 kcmil]	220A	NOT AVAILABLE
240 [500 kcmil]	260A	NOT AVAILABLE
300 [600 kcmil]	300A	NOT AVAILABLE

UL 508A Cable Ampacity (75°C)	
Size (AWG [mm])	Ampacity (A)
20 [0.5]	5A
18 [0.75]	6A
16 [1.5]	10A
14 [2.5]	15A
12 [4]	20A
10 [6]	30A
8 [10]	50A
6 [16]	65A
4 [25]	85A
2 [35]	115A
1 [50]	130A
1/0 [55]	150A
2/0 [70]	175A
3/0 [95]	200A
4/0 [120]	230A
Larger sizes shown in Table 28.1	

Color Table	
Colors	Short name
Red	RD
Black	BK
Yellow	YE
Yellow\Green	GN/YE
Orange	OG
Light blue	TQ
Blue	BU
Pink	PK
White	WH
Gray	GY
Brown	BN
Green	GN
Purple	VT

REVIEW TABLE

Rev.	Technical name	Date	Note
0	DH	2-MAR-2023	PRODUCTION RELEASE
1	DH	17-APR-2023	HINGED ENCLOSURE, CHANGED RELAYS TO 22 SERIES MODULAR CONTACTORS, DOOR SWITCHES FOR FAN AND LIGHTS

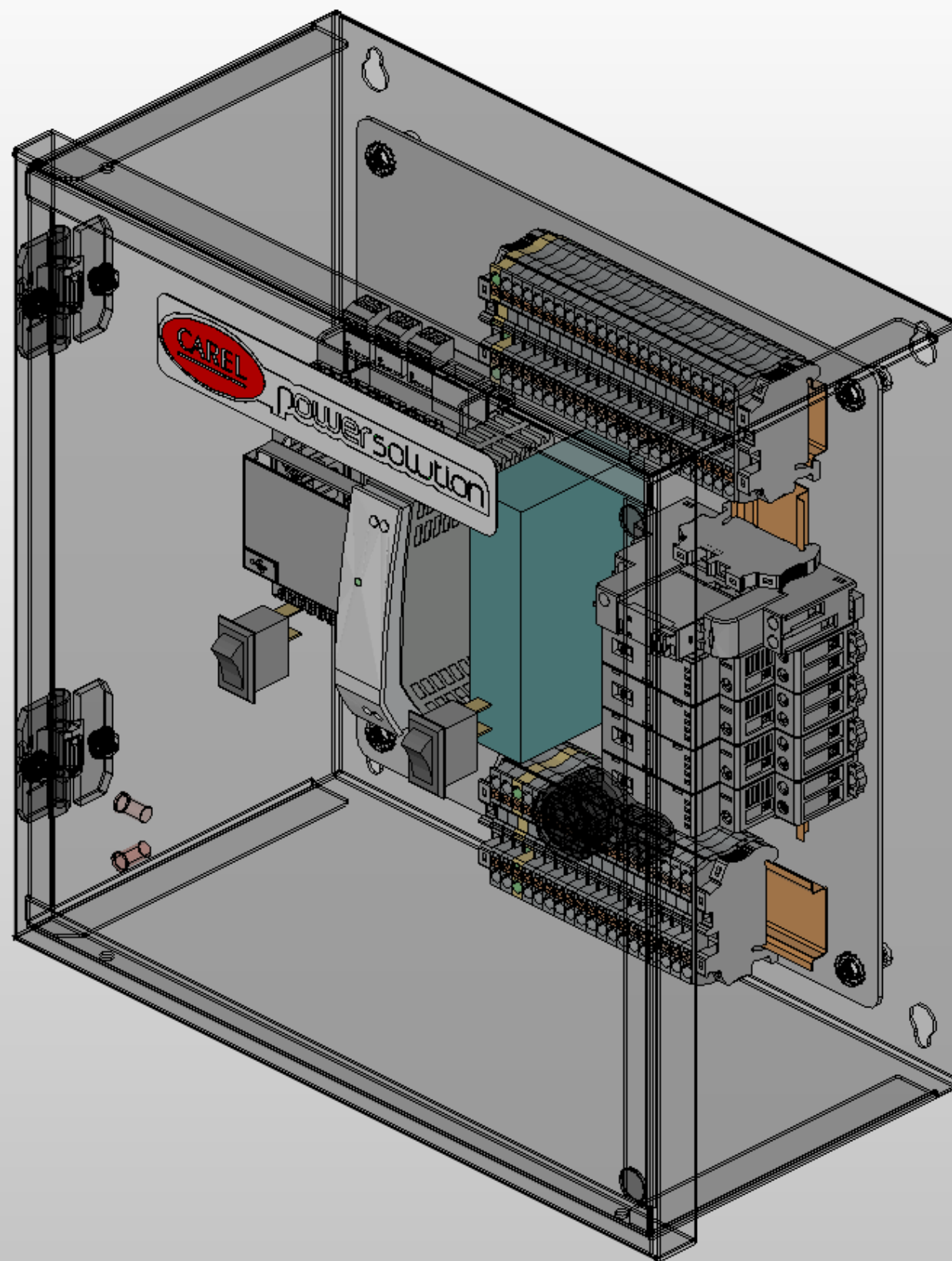
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Technical information

Mounting locations	+	Page	&EAA/2
		Next	&EAB/1
Function	=	Total pages	16



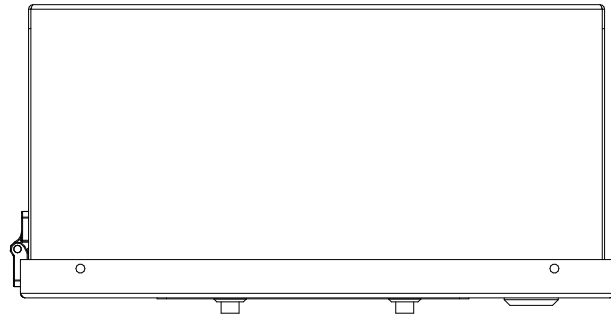
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			Elab	Daniel Harris
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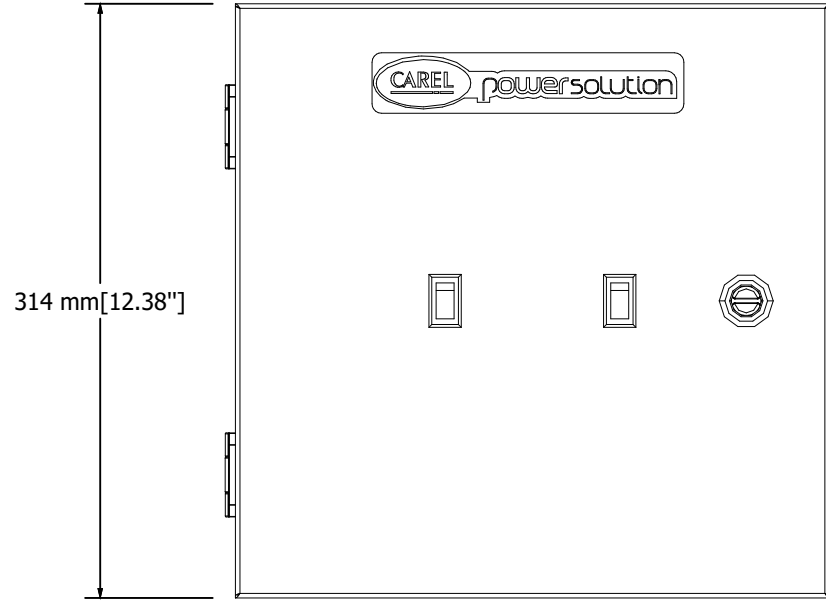


General view

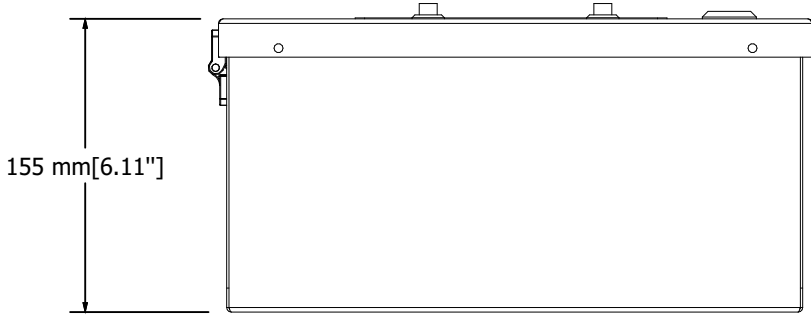
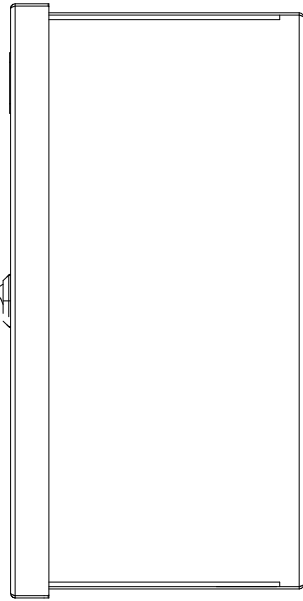
Mounting locations	+ QE	Page	+QE&ETL/1
		Next	2
Function	=	Total pages	16



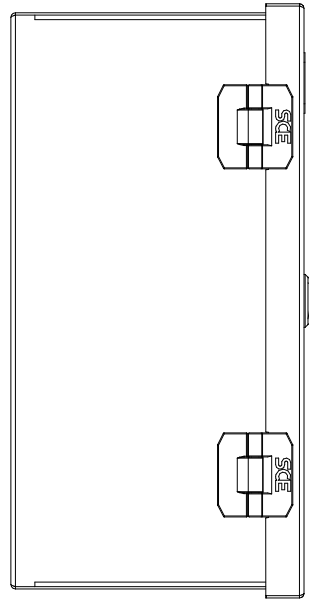
314 mm [12.37"]



314 mm [12.38"]



155 mm [6.11"]



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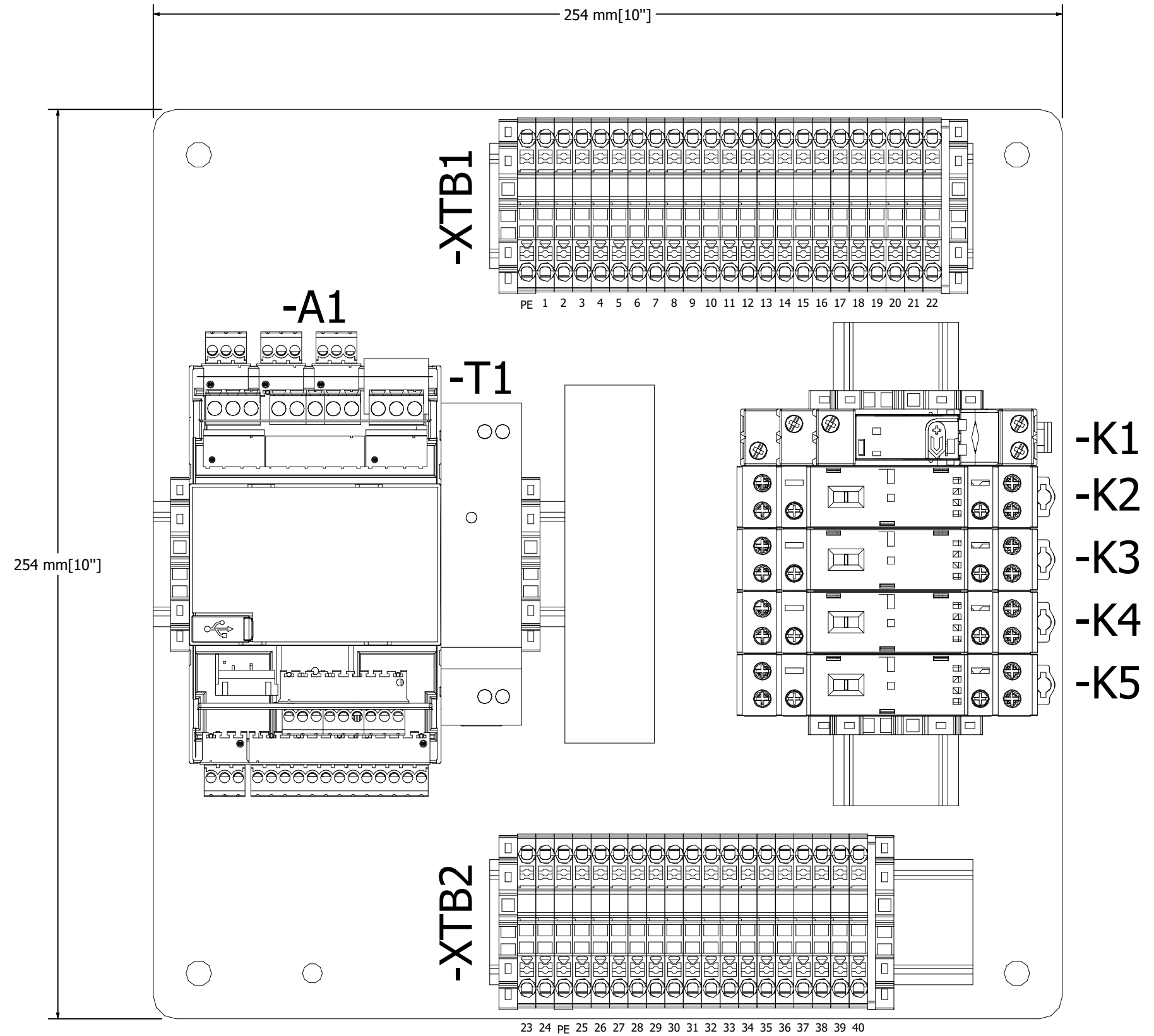
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View of all sides

Mounting locations	+ QE
Function	=

Page	+QE&ETL/2
Next	3
Total pages	16



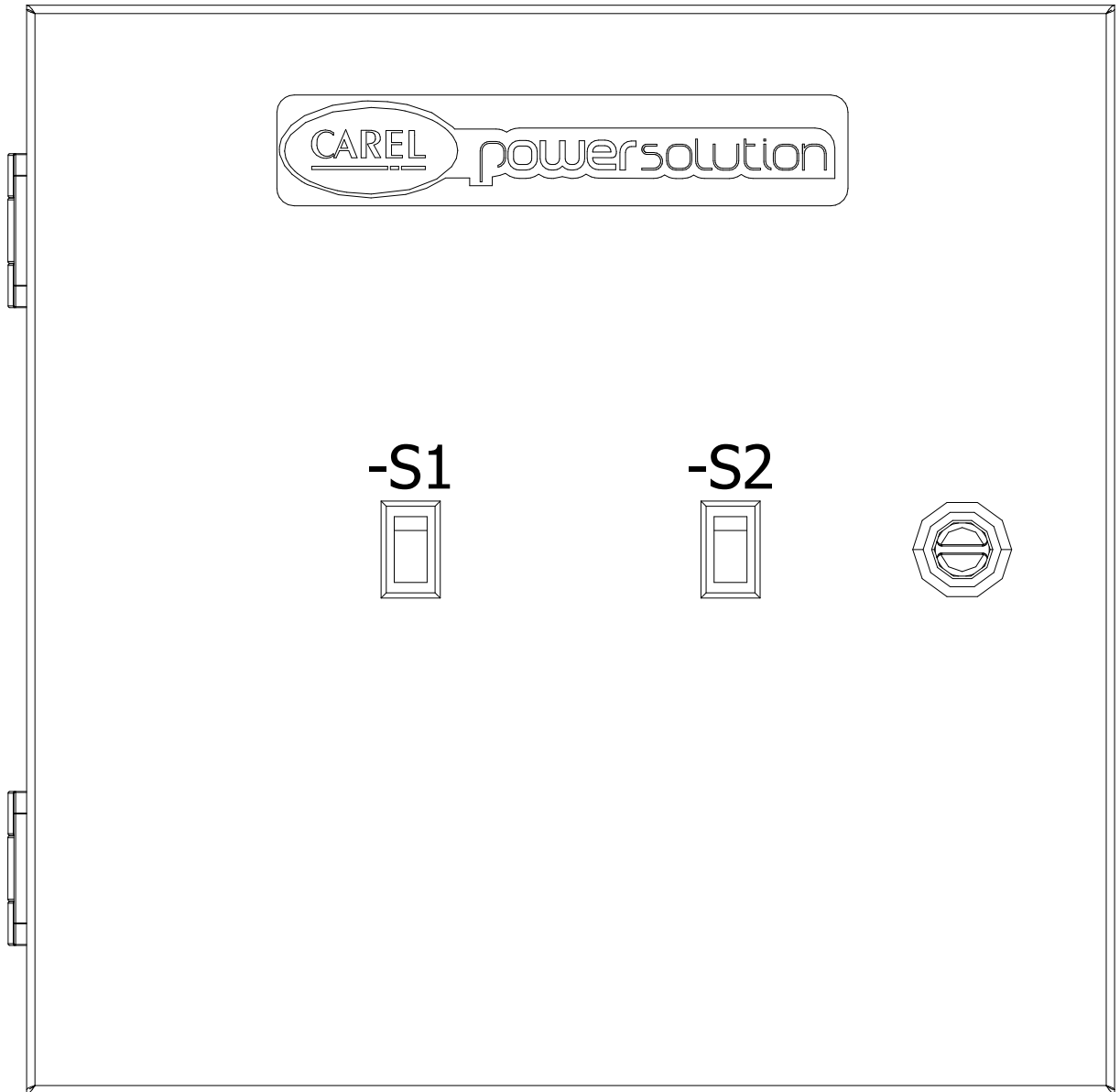
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Mounting plate view

Mounting locations	+ QE	Page	+QE&ETL/3
		Next	4
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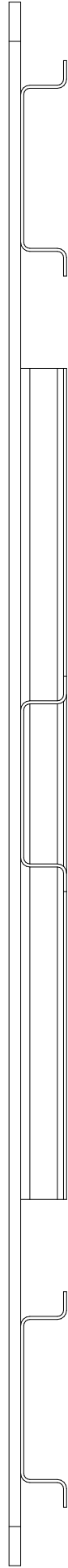
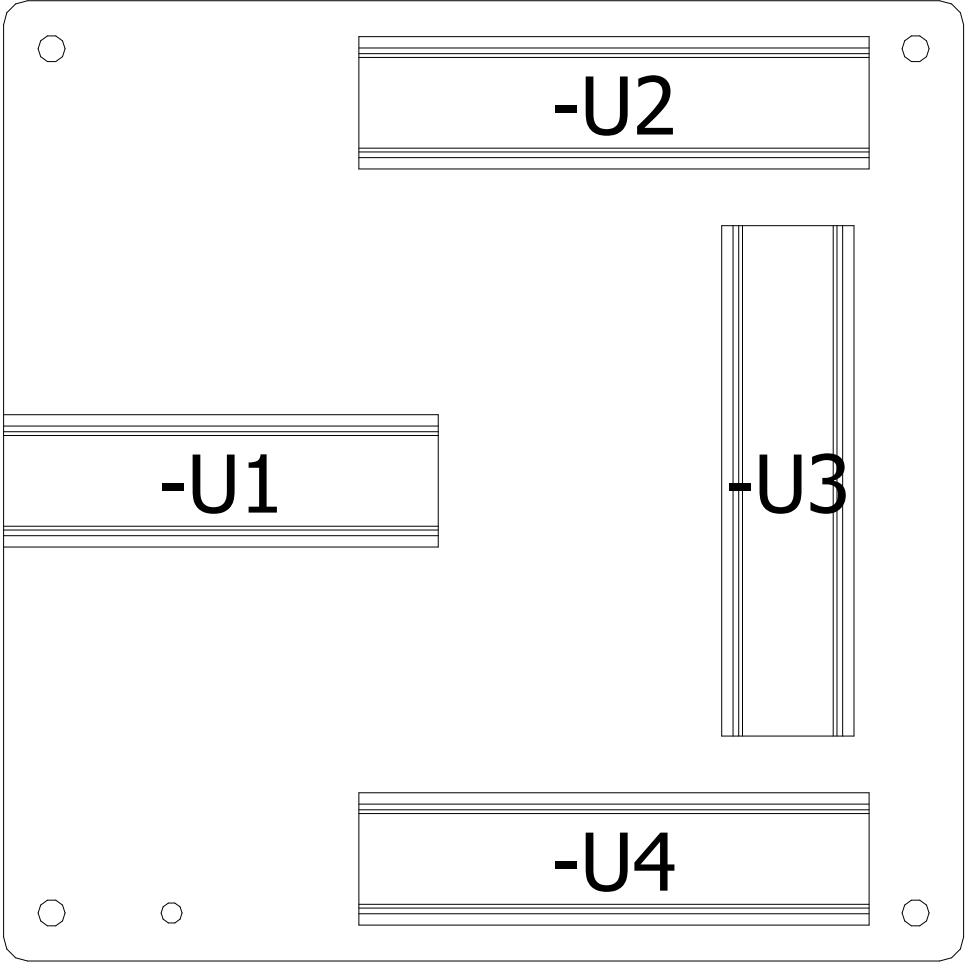
Door view

Mounting locations	+ QE
Function	=

Page	+QE&ETL/4
Next	5
Total pages	16

Layout guides and channels

Sign	Type	Length (Tolerance -5mm)
U1	35x7.5	115 mm
U4	35x7.5	135 mm
U3	35x7.5	135 mm
U2	35x7.5	135 mm



Empty

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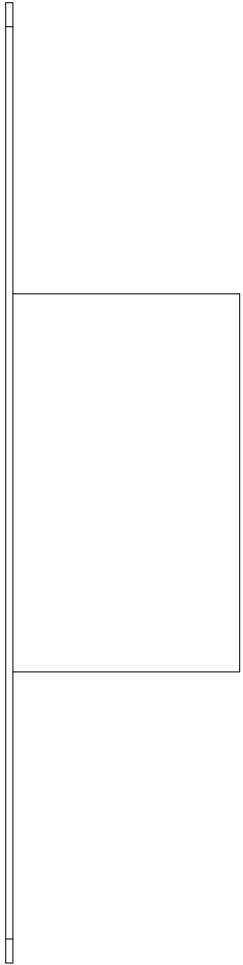
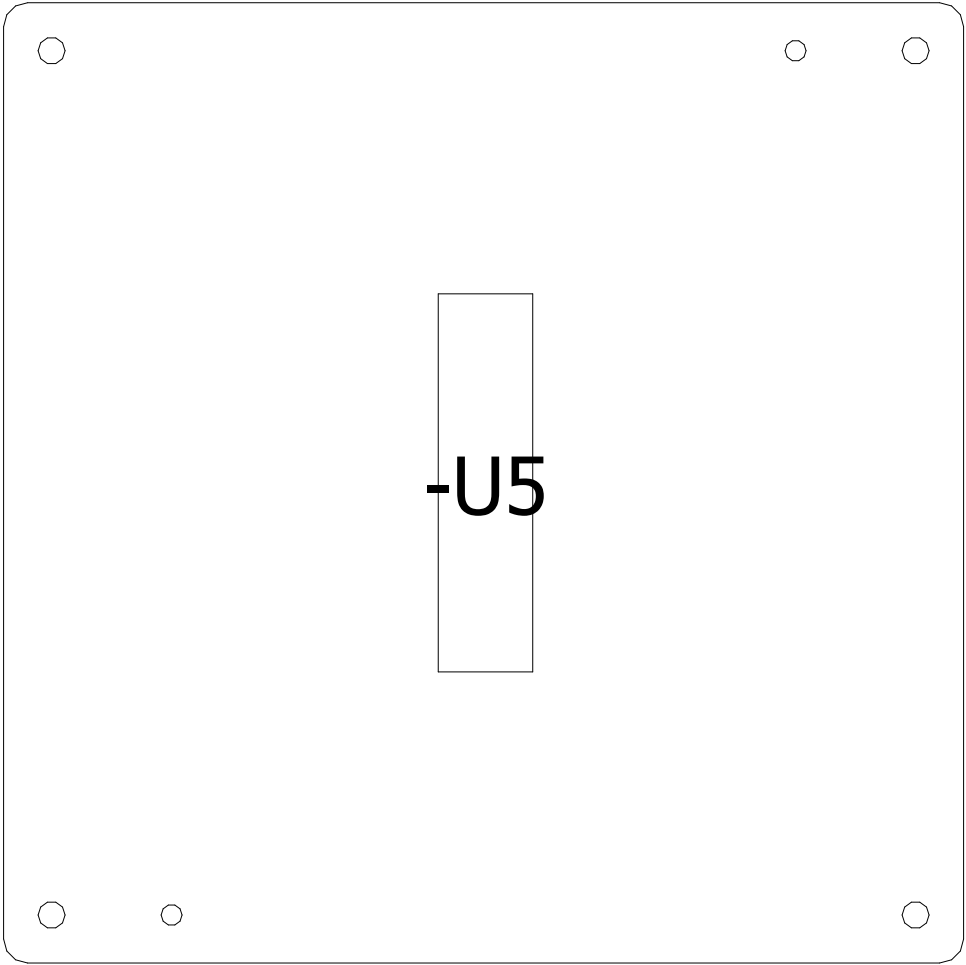
Guides view

Mounting locations	+ QE
Function	=

Page	+QE&ETL/5
Next	6
Total pages	16

Layout guides and channels

Sign	Type	Length (Tolerance -5mm)
U5	25x60	100 mm



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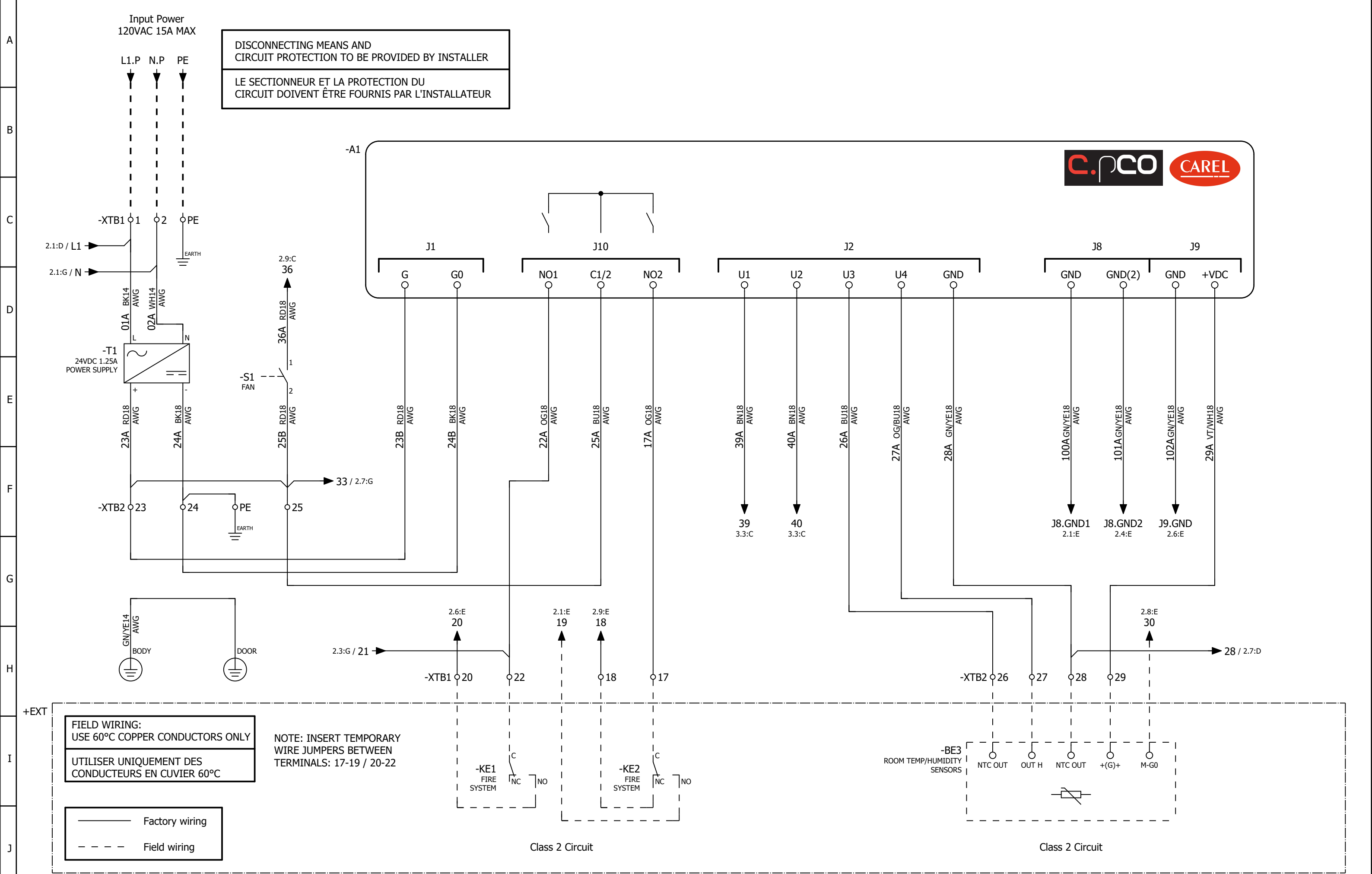
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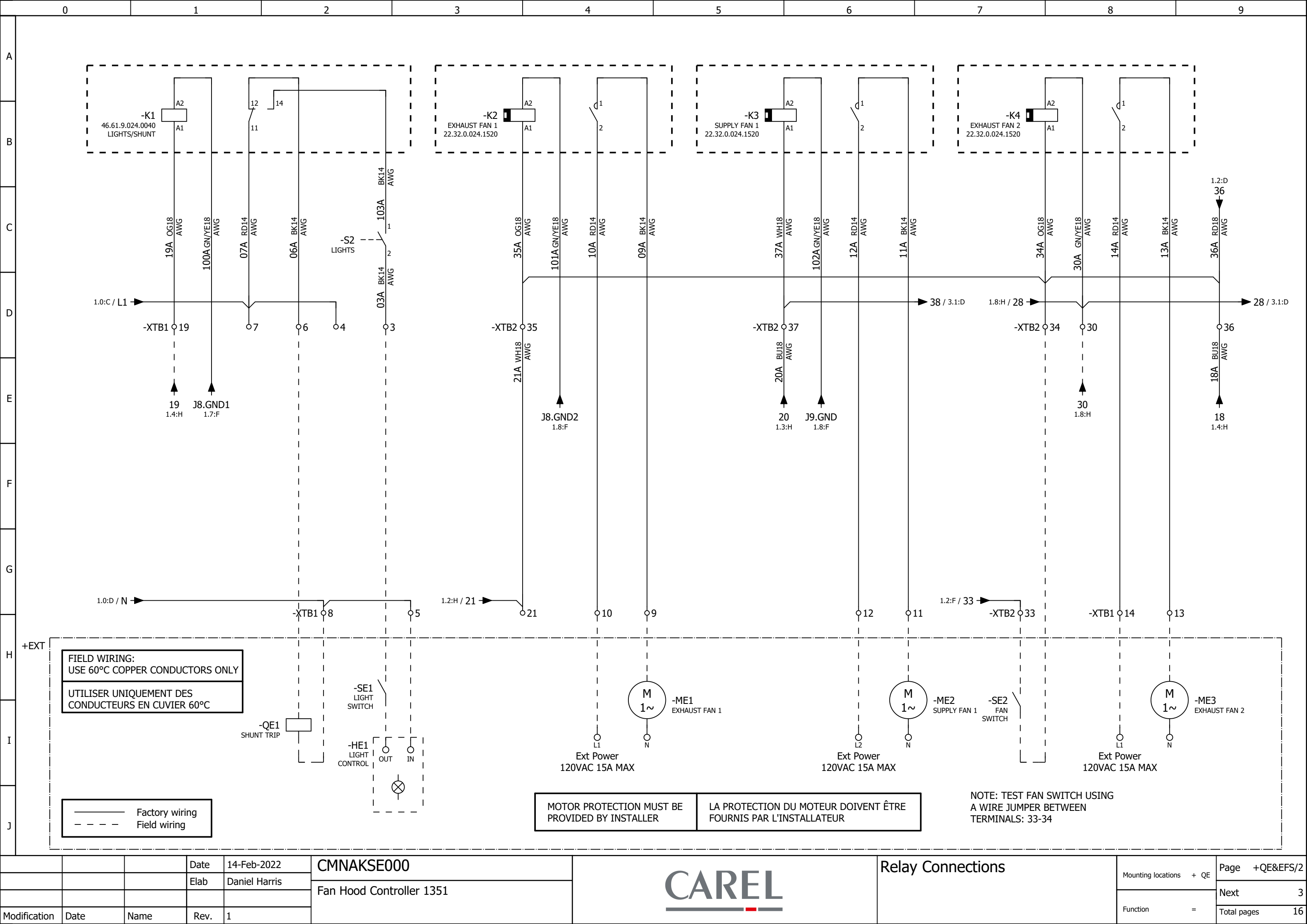


Channels view

Mounting locations	+ QE
Function	=

Page	+QE&ETL/6
Next	&EFS/1
Total pages	16





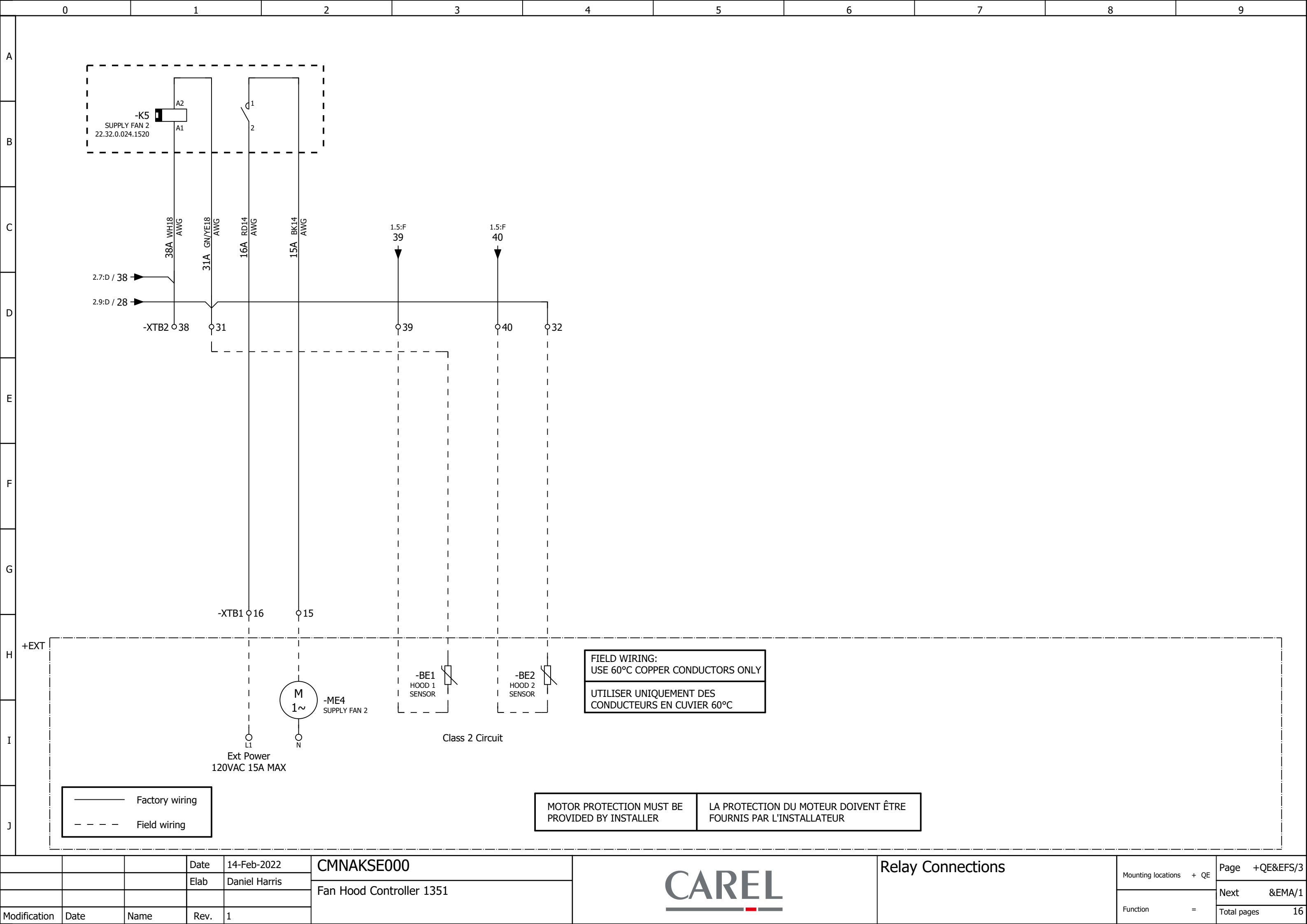
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Relay Connections

Mounting locations	+ QE	Page	+QE&EFS/2
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Relay Connections

Mounting locations	+ QE	Page	+QE&EFS/3
Function	=	Next	&EMA/1
		Total pages	16

Terminal diagram

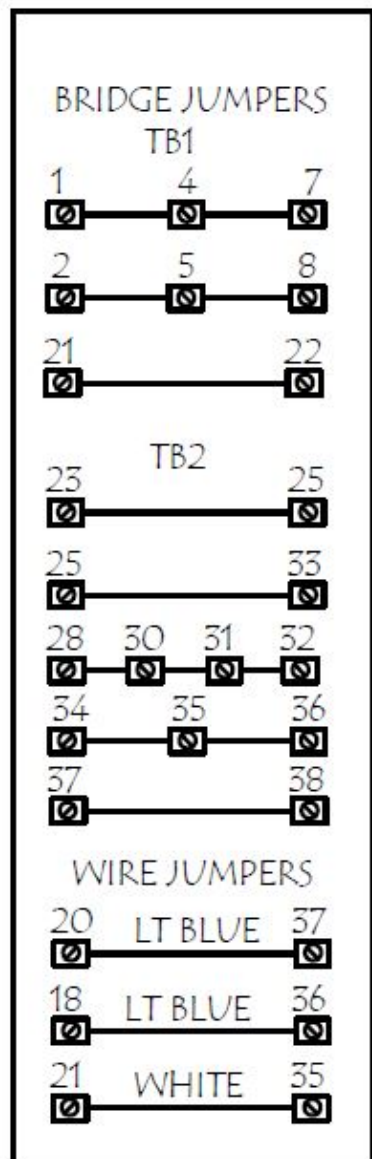
Terminal strip

+QE-XTB1

External targets

Terminal type

Terminal position on the drawings



POWER SUPPLY
=
LIGHT SWITCH

LIGHTS
SHUNT TRIP

Shunt Trip
EXHAUST FAN

SUPPLY FAN
EXHAUST FAN

EXHAUST FAN

FIRE SYSTEM
=
=
=

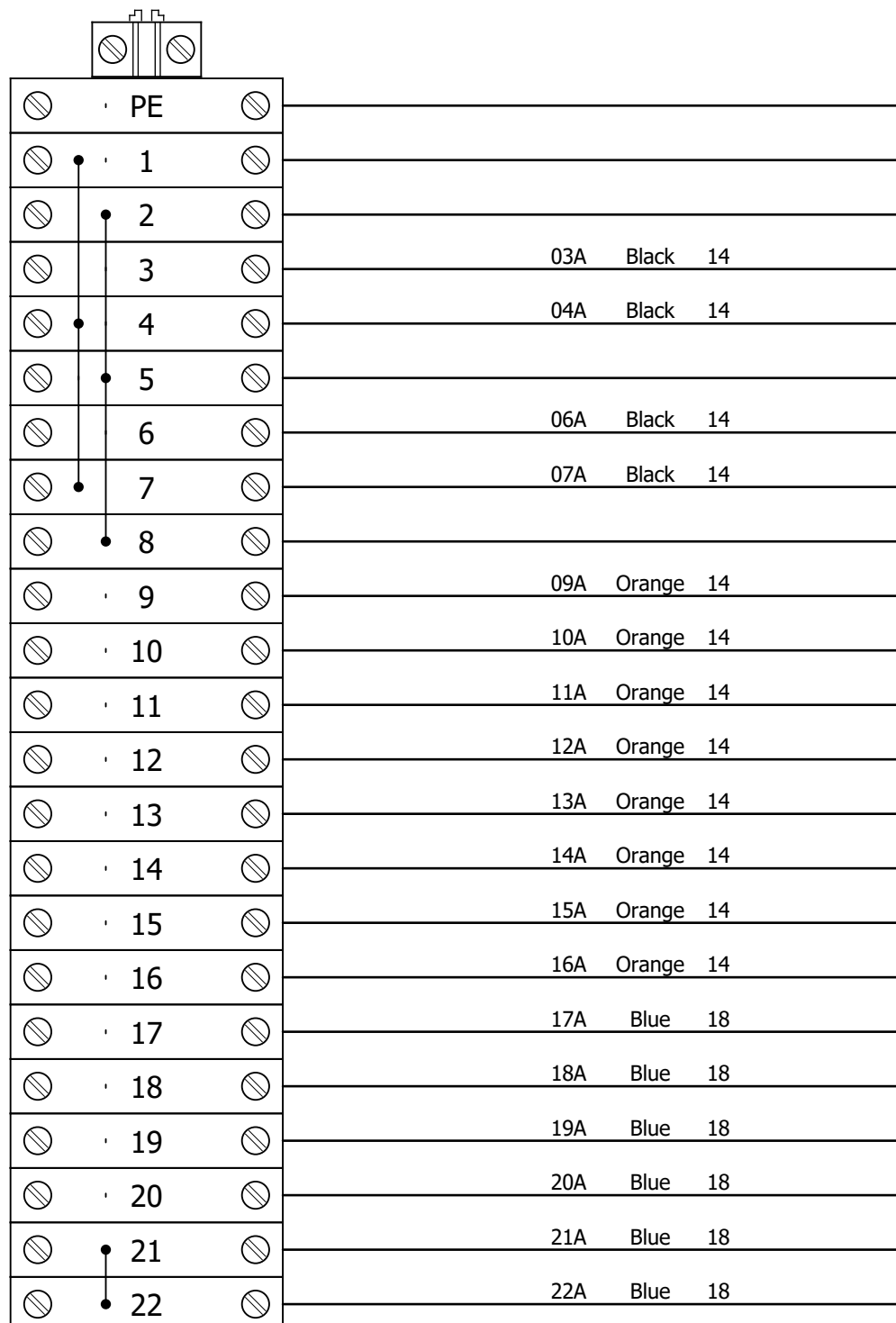
FIRE SYSTEM

-T1:L
-T1:N
+EXT-S1

+EXT-HE1
+EXT-QE1

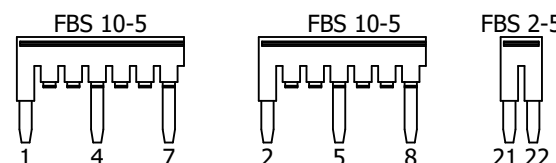
+EXT-QE1
+EXT-ME1
L1
+EXT-ME2
L2
+EXT-ME3
L1
+EXT-ME4
L1
+EXT-KE2:C
+EXT-KE2:NC
+EXT-KE2:NO
+EXT-KE1:NO

+EXT-KE1:C



PT 2,5-PE &EFS/1.1:C
PT 2,5 &EFS/1.0:C
PT 2,5 &EFS/1.1:C
PT 2,5 &EFS/2.2:D
PT 2,5 &EFS/2.2:D
PT 2,5 &EFS/2.3:G
PT 2,5 &EFS/2.2:D
PT 2,5 &EFS/2.1:D
PT 2,5 &EFS/2.2:G
PT 2,5 &EFS/2.5:G
PT 2,5 &EFS/2.4:G
PT 2,5 &EFS/2.7:G
PT 2,5 &EFS/2.6:G
PT 2,5 &EFS/2.9:G
PT 2,5 &EFS/2.8:G
PT 2,5 &EFS/3.2:G
PT 2,5 &EFS/3.1:G
PT 2,5 &EFS/1.4:H
PT 2,5 &EFS/1.4:H
PT 2,5 &EFS/2.1:D
PT 2,5 &EFS/1.3:H
PT 2,5 &EFS/2.4:G
PT 2,5 &EFS/1.3:H

Jumper Configuration



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Terminal strip

Mounting locations	+ QE	Page	+QE&EMA/1
Function	=	Next	2
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Terminal diagram

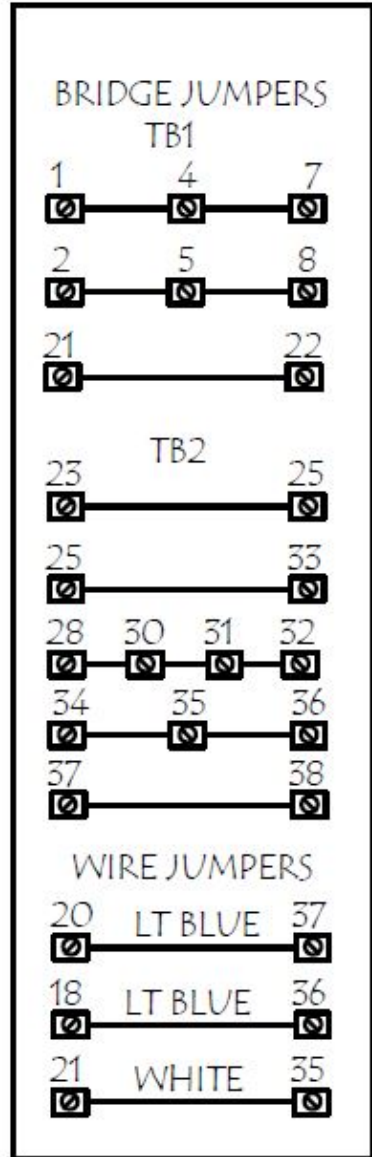
Terminal strip

+QE-XTB2

External targets

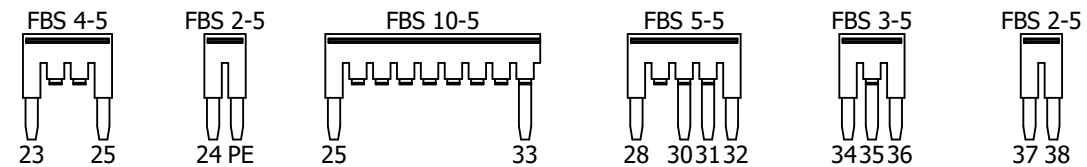
Terminal type

Terminal position on the drawings



External targets	Terminal strip	Terminal type	Terminal position on the drawings
-A1:J1:G	23	23A Blue 18	&EFS/1.0:F
-A1:J1:G0	24	24A WH/BU 18	&EFS/1.1:F
	PE	PT 2,5-PE	&EFS/1.1:F
-A1:J10:C1/2	25	PT 2,5	&EFS/1.2:F
+EXT-BE3:M-G0	26	26A Blue 18	&EFS/1.7:H
+EXT-BE3:+(G)+	27	27A Blue 18	&EFS/1.7:H
+EXT-BE3:NTC OUT	28	28A Blue 18	&EFS/1.7:H
+EXT-BE3:OUT H	29	29A Blue 18	&EFS/1.8:H
+EXT-BE3:NTC OUT	30	30A Blue 18	&EFS/2.8:D
+EXT-BE1	31	31A Blue 18	&EFS/3.1:D
+EXT-BE2	32	PT 2,5	&EFS/3.4:D
+EXT-SE2	33	PT 2,5	&EFS/2.8:G
+EXT-SE2	34	34A Blue 18	&EFS/2.8:D
-XTB1:21:1	35	35A Blue 18	&EFS/2.4:D
-XTB1:18:1	36	PT 2,5	&EFS/2.9:D
-XTB1:20:1	37	37A Blue 18	&EFS/2.6:D
	38	38A Blue 18	&EFS/3.1:D
+EXT-BE1	39	39A Blue 18	&EFS/3.3:D
+EXT-BE2	40	40A Blue 18	&EFS/3.3:D

Jumper Configuration



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Terminal strip

Mounting locations	+ QE	Page	+QE&EMA/2
Function	=	Next	&EPA/1
		Total pages	16

