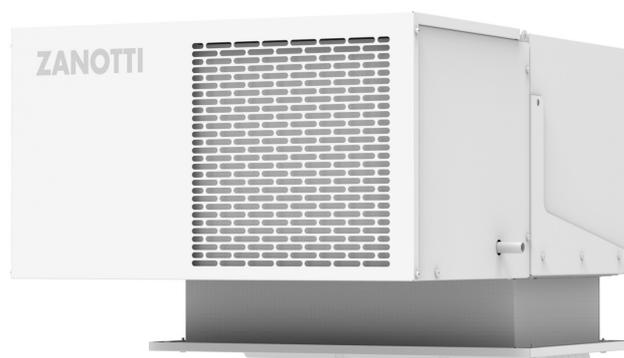


# Ceiling mounted unit Technical Data PC



MPC1107YA11X  
MPC1110YA11X  
BPC1112YA11X  
MPC2112YA11X  
BPC2224YA11X  
MPC3220YA11X  
MPC3224YA11X  
BPC4336YA11X  
MPC4336YA11X  
BPC4345YA11X



# TABLE OF CONTENTS

# PC

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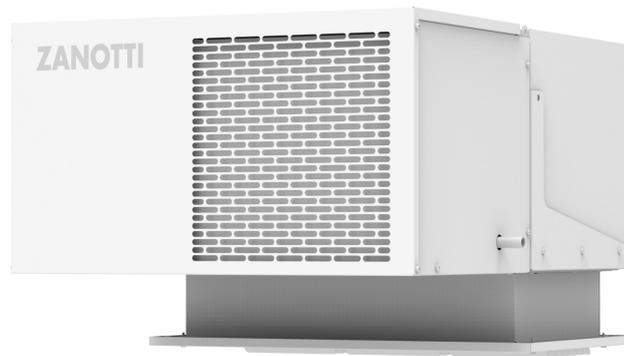
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# 1 Features

## 1 - 1 PC

**1**

- › 1 year warranty
- › CE certified
- › 50 Hz power supply
- › Ambient working temperature: +5°C ÷ +45°C
- › Cold room working temperature: MT +10°C / -5°C | LT -15°C / -25°C
- › MT and LT in separate models
- › Hermetic reciprocating compressor
- › Suitable for **110mm up to 200mm** panels
- › Fin&tube condenser
- › Fin&tube evaporator
- › Filter dryer
- › Thermal expansion valve
- › Condensate evaporation tray with automatic elimination of condensation water
- › Fixed calibration HP switch with automatic reset
- › Hot gas defrost
- › Propane refrigerant charge 150 gr max per circuit
- › Electronic control board
- › Master slave connection
- › Serial output
- › **5m cable for power supply**
- › Predisposition for connection of «Man in cold room» alarm
- › 2m cold room lighting cable (Light bulb holder and bulb as option)
- › 5m microswitch door cable (Microswitch as option)
- › 5m cable for door heater (LT units only)
- › **5m cable for remote control panel**



## 2 Specifications

### 2 - 1 Specifications

Technical specifications				MPC1107YA11X	MPC1110YA11X	BPC1112YA11X	MPC2112YA11X	BPC2224YA11X
Power input	Max.	W		900	985	1,100	1,555	2,125
Dimensions	Unit	Height	mm		470			665
		Width	mm		655			925
		Depth	mm		780			1,100
	Packed unit	Height	mm		705			970
		Width	mm		770			990
		Depth	mm		885			1,205
Weight	Unit	kg		56			85	110
	Packed unit	kg		77			125	154
Compressor	Type	Hermetic reciprocating (ON/OFF controlled)						
Condenser	Air flow	m <sup>3</sup> /h		600 (1)				1,800 (1)
Defrost		Hot gas						
Evaporator	Air flow	m <sup>3</sup> /h		550 (1)				900 (1)
	Air throw	m				2 (2)		
Operation range	Cold room	Min. temperature	°C			-5		
		Max. temperature	°C			10		
	Ambient	Min. temperature	°C				5	
		Max. temperature	°C				45	
Refrigerant	Type	R-290						
	GWP	0.02						
	Charge	kg		0.14			0.15	0.11
PED	Category	Category I						
Characteristics of the hole where to accommodate the units (through the wall installation)	Height	mm		550				750
	Width	mm				340		
	Thickness (of ceiling)	m				from 100 to 200		
Operating sound pressure at condenser	Max.	dB(A)		45 (3)				51 (3)
N° of circuits						1		2

Technical specifications				MPC3220YA11X	MPC3224YA11X	BPC4336YA11X	MPC4336YA11X	BPC4345YA11X
Power input	Max.	W		2,270	2,920	3,335		4,440
Dimensions	Unit	Height	mm		665			775
		Width	mm				1,050	
		Depth	mm		1,100			1,450
	Packed unit	Height	mm		970			1,080
		Width	mm		1,110			1,115
		Depth	mm		1,210			1,555
Weight	Unit	kg		120				180
	Packed unit	kg		164				236
Compressor	Type	Hermetic reciprocating (ON/OFF controlled)						
Condenser	Air flow	m <sup>3</sup> /h		1,800 (1)				2,500 (1)
Defrost		Hot gas						
Evaporator	Air flow	m <sup>3</sup> /h		1,600 (1)				2,000 (1)
	Air throw	m		2 (2)				3 (2)
Operation range	Cold room	Min. temperature	°C	-25		-5		-5
		Max. temperature	°C	-15		10		10
	Ambient	Min. temperature	°C				5	
		Max. temperature	°C				45	
Refrigerant	Type	R-290						
	GWP	0.02						
	Charge	kg		0.14			0.15	
PED	Category	Category I						
Characteristics of the hole where to accommodate the units (through the wall installation)	Height	mm		750				1,004
	Width	mm				460		
	Thickness (of ceiling)	mm				from 100 to 200		
Operating sound pressure at condenser	Max.	dB(A)				51 (3)		
N° of circuits				2			3	

Electrical specifications				MPC1107YA11X	MPC1110YA11X	BPC1112YA11X	MPC2112YA11X	BPC2224YA11X	
Power supply	Voltage	V				230			
	Phase					1N~			
	Frequency	Hz				50			
	Maximum fuse amps (MFA)	A				10			
	Max. current amps (MCA)	A		4.89	5.35	5.99	8.44	11.54	
	Total overcurrent amps (TOCA)	A		23	29	36	48	72	
	Voltage range	Max.	V				250		
		Min.	V				207		

## 2 Specifications

### 2 - 1 Specifications

2

Electrical specifications		MPC1107YA11X	MPC1110YA11X	BPC1112YA11X	MPC2112YA11X	BPC2224YA11X
Rated input	kW	0.58	0.75	0.81	1.28	1.6
Rated input	A	3.76	3.68	4.49	6.18	8.54
IP	Class	IPX0				

Electrical specifications		MPC3220YA11X	MPC3224YA11X	BPC4336YA11X	MPC4336YA11X	BPC4345YA11X	
Power supply	Voltage	V			230		
	Phase				1N~		
	Frequency	Hz			50		
	Maximum fuse amps (MFA)	A			10		
	Max. current amps (MCA)	A	12.34	15.86	18.13	24.13	24.13
	Total overcurrent amps (TOCA)	A	68	96	108	144	126
	Voltage range	Max.	V			250	
Min.		V			207		
Rated input	kW	1.76	2.34	2.58	3.59	3.02	
Rated input	A	8.22	11.34	13.63	17.35	14.95	
IP	Class	IPX0					

(1)According to EN ISO 5801 |

(2)According to CECOMAF GT 6-001 (final velocity = 0,25 m/s) |

(3)According to UNI EN ISO 3746

# 3 Options

## 3 - 1 Options

PC

ACCESSORIES	
Description	Material code
AUDIBLE AND VISUAL ALARM	2KIT026ACC
KIT MAN IN COLDROOM	1KGM030ACC
MONIT.XWEB300D-8D000P PRO 18ADR 110/230V	3UNM042ACC
MONIT.XWEB500D-8F000P PRO 36ADR 110/230V	3UNM043ACC
KIT MONITORING SYSTEM WIFI TRANSMITTER	1KGM029ACC
DOOR SWITCH KIT FOR LMS/LMC	3MCT014ACC
ACCESSORY KIT - COLD ROOM LIGHT	1KIT862ACC

UNIT									
MPC1107YA11X	MPC1110YA11X	MPC2112YA11X	MPC3220YA11X	MPC3224YA11X	MPC4336YA11X	BPC1112YA11X	BPC2224YA11X	BPC4336YA11X	BPC4345YA11X
●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●

# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

PC

4

MPC1107YA11X	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	1026	934	747	674	
43	1060	969	776	704	
40	1119	1027	827	753	
35	1229	1131	917	783	
32	1296	1191	969	828	
30	1339	1227	1001	853	
25	1429	1296	1057	893	
20	1480	1319	1068	917	
15	1525	1354	1100	986	
10	1658	1480	1208	1036	
5	1746	1553	1270	1085	

MPC1110YA11X	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	1372	1108	1049	779	
43	1407	1133	1085	801	
40	1476	1189	1151	849	
35	1624	1314	1280	952	
32	1722	1397	1357	1016	
30	1787	1453	1405	1057	
25	1935	1578	1499	1137	
20	2039	1660	1533	1162	
15	2239	1804	1577	1274	
10	2358	1915	1733	1363	
5	2503	2033	1826	1446	

MPC2112YA11X	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	2462	2003	1504	1253	
43	2545	2073	1553	1299	
40	2686	2195	1648	1387	
35	2945	2423	1837	1559	
32	3098	2559	1955	1662	
30	3195	2644	2029	1725	
25	3393	2813	2180	1843	
20	3496	2889	2247	1868	
15	3569	3003	2331	1954	
10	3894	3265	2555	2148	
5	4090	3439	2701	2270	

MPC3220YA11X	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	2936	2633	2360	1981	
43	2991	2700	2435	2051	
40	3117	2835	2575	2180	
35	3405	3120	2849	2426	
32	3603	3304	3015	2571	
30	3737	3424	3119	2658	
25	4050	3687	3323	2812	
20	4283	3844	3397	2942	
15	5069	4391	3593	2966	
10	5122	4539	3879	3281	
5	5453	4819	4091	3459	

MPC3224YA11X	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	3884	2783	2505	1972	
43	3950	3270	3014	2363	
40	4110	3305	3181	2496	
35	4494	3630	3538	2799	
32	4765	3865	3768	2998	
30	4950	4028	3917	3126	
25	5391	4413	4232	3391	
20	5731	4698	4396	3507	
15	6107	5091	4913	3943	
10	6493	5449	5272	4239	
5	6879	5807	5630	4535	

MPC4336YA11X	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	6432	5505	4401	3674	
43	6597	5662	4521	3788	
40	6920	5966	4772	4022	
35	7592	6587	5307	4509	
32	8029	6982	5652	4815	
30	8318	7238	5875	5007	
25	8968	7790	6348	5384	
20	9413	8113	6594	5761	
15	10536	8904	7150	6017	
10	10974	9412	7641	6555	
5	11640	9975	8107	6966	

BPC1112YA11X	According to EN12900/EN13215			
	Qcool [W]	Tcoldroom		
	Tout	-15	-20	-25
45	692	624	471	
43	717	629	501	
40	773	689	558	
35	895	805	660	
32	970	869	713	
30	1016	904	738	
25	1096	945	750	
20	1216	1064	871	
15	1322	1154	949	
10	1429	1245	1026	
5	1536	1335	1104	

BPC2224YA11X	According to EN12900/EN13215			
	Qcool [W]	Tcoldroom		
	Tout	-15	-20	-25
45	1607	1195	898	
43	1684	1257	905	
40	1827	1378	1007	
35	2096	1610	1206	
32	2246	1738	1315	
30	2330	1808	1373	
25	2448	1890	1500	
20	2740	2145	1685	
15	2965	2333	1848	
10	3189	2521	2011	
5	3414	2709	2174	

BPC4336YA11X	According to EN12900/EN13215			
	Qcool [W]	Tcoldroom		
	Tout	-15	-20	-25
45	2147	1706	1197	
43	2243	1799	1203	
40	2436	1980	1272	
35	2822	2328	1558	
32	3049	2520	1725	
30	3182	2624	1818	
25	3393	2747	1930	
20	3794	3130	2181	
15	4125	3412	2389	
10	4456	3694	2597	
5	4788	3976	2804	

BPC4345YA11X	According to EN12900/EN13215			
	Qcool [W]	Tcoldroom		
	Tout	-15	-20	-25
45	3333	2552	1883	
43	3485	2679	1987	
40	3750	2906	2180	
35	4218	3312	2530	
32	4466	3523	2708	
30	4600	3632	2795	
25	4759	3729	2837	
20	5291	4198	3250	
15	5674	4519	3515	
10	6057	4840	3780	
5	6440	5161	4045	

# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

**PC**  
**MPC1107YA11X**  
**MPC1110YA11X**  
**BPC1112YA11X**

LOW TEMPERATURE / MEDIUM TEMPERATURE		
No.	Name	Note
1	Cables	
2	Drain outlet pipe	O.D. 16mm

**2D156814**

**PC**  
**MPC2112YA11X**  
**BPC2224YA11X**

LOW TEMPERATURE / MEDIUM TEMPERATURE		
No.	Name	Note
1	Cables	
2	Drain outlet pipe	O.D. 16mm

**2D156815**

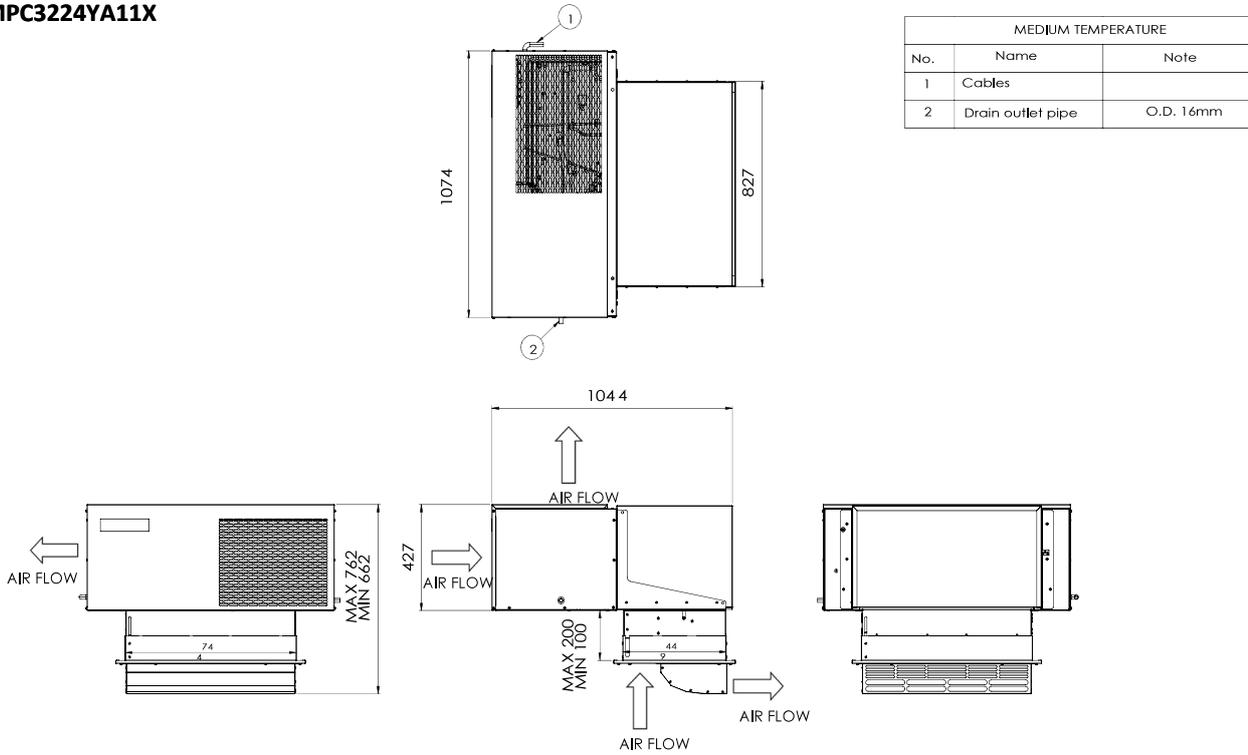
# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

5

PC

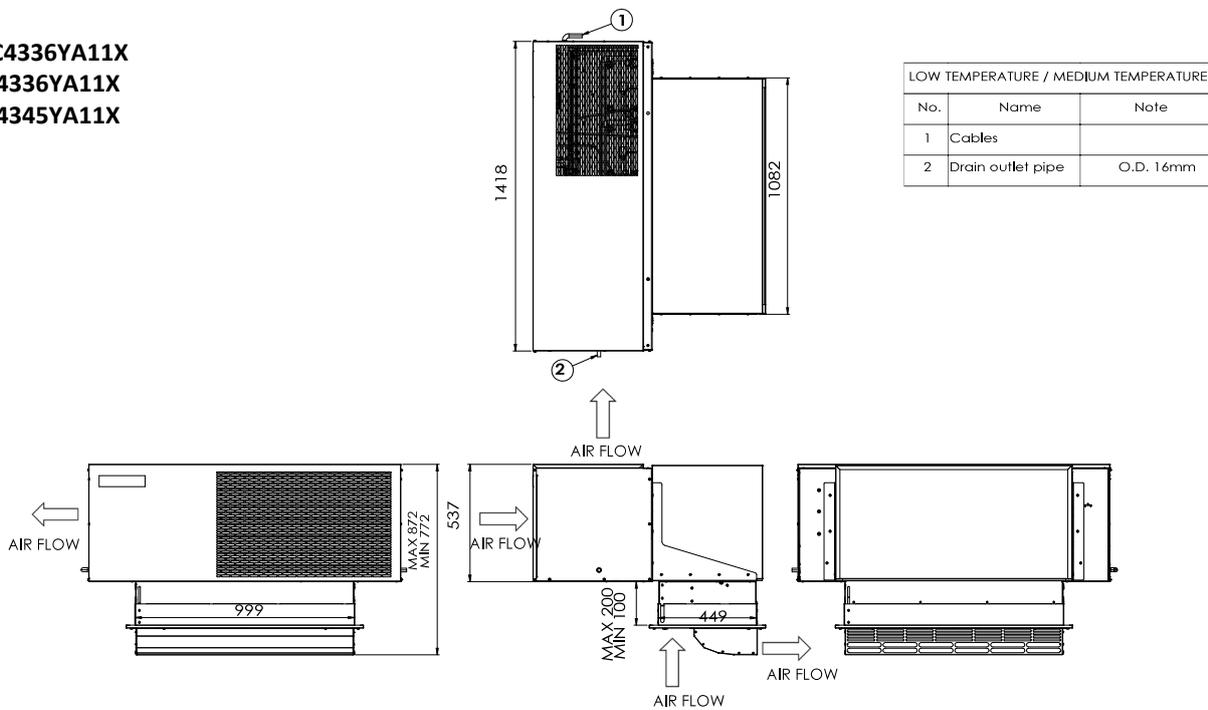
**MPC3220YA11X**  
**MPC3224YA11X**



**2D156816**

PC

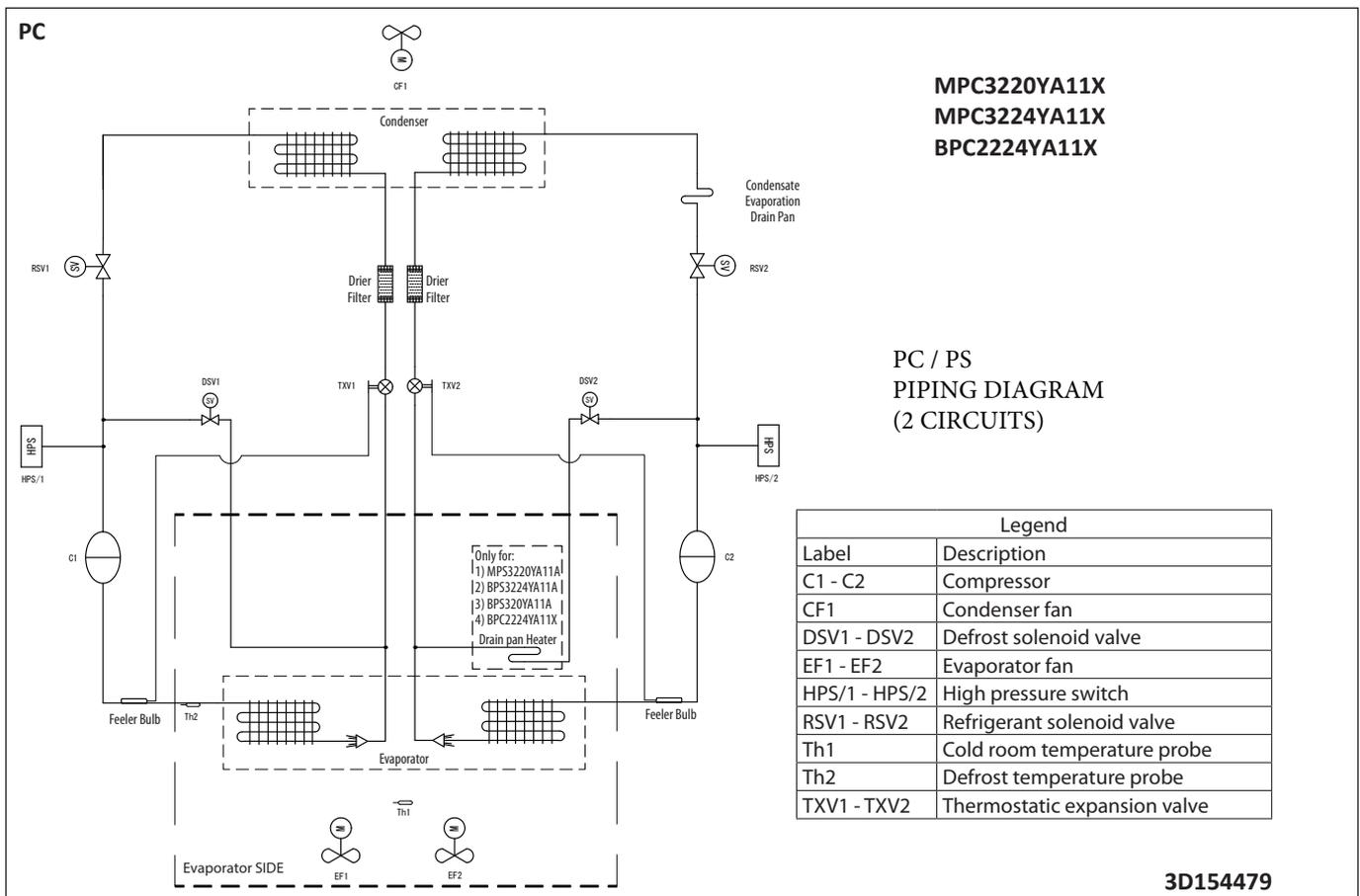
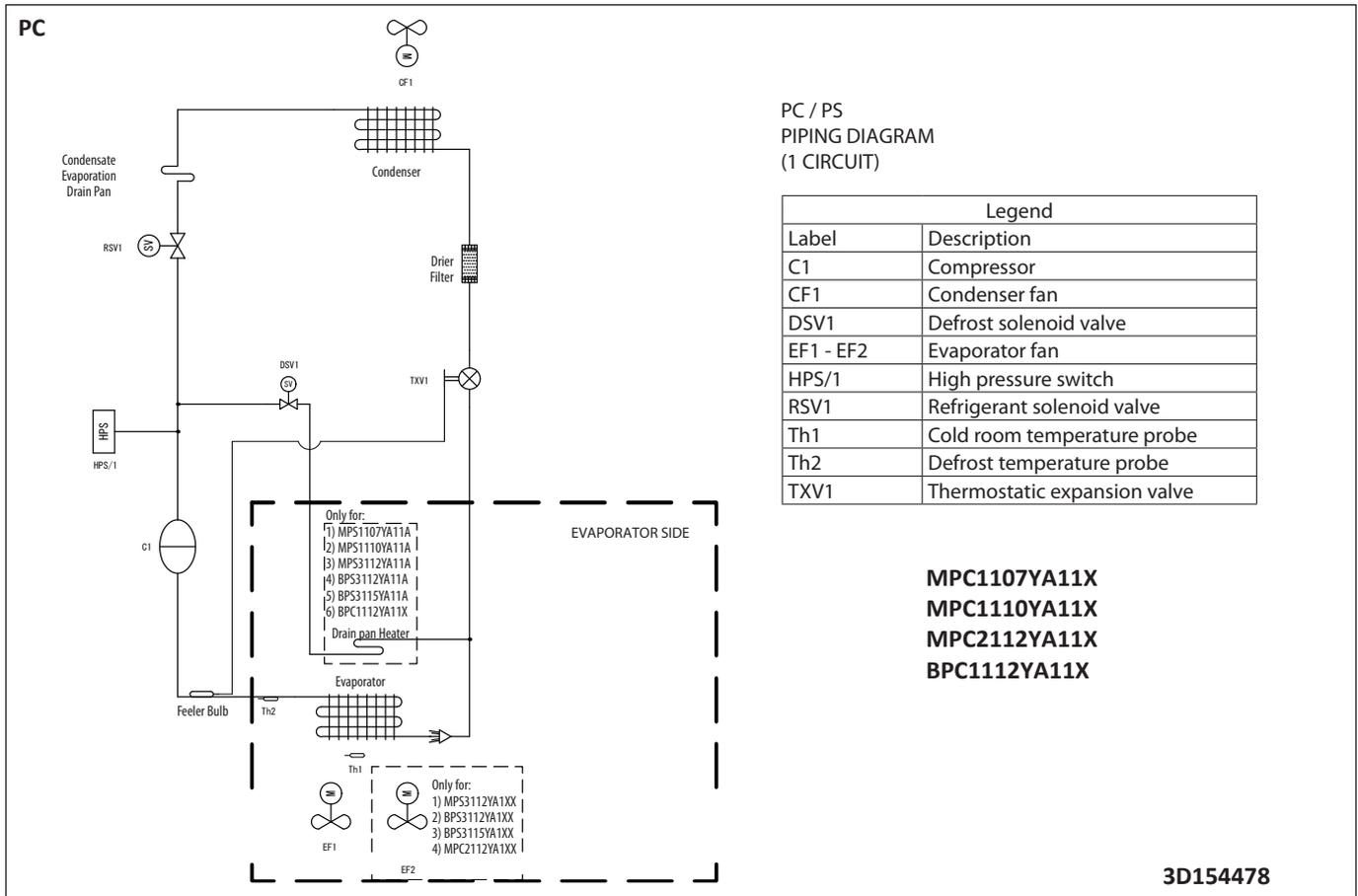
**MPC4336YA11X**  
**BPC4336YA11X**  
**BPC4345YA11X**



**2D156817**

# 6 Piping diagrams

## 6 - 1 Piping Diagrams



# 6 Piping diagrams

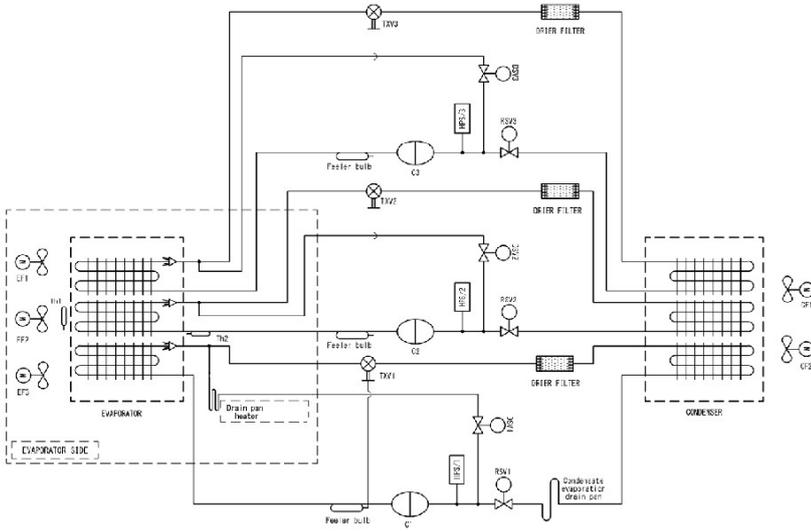
## 6 - 1 Piping Diagrams

6

PC

PC  
PIPING DIAGRAM  
(3 CIRCUITS)

LEGEND	
Label	Description
C1 - C2 - C3	Compressor
CF1- CF2	Condenser fan
DSV1-DSV2-DSV3	Defrost solenoid valve
EF1-EF2-EF3	Evaporator fan
HPS1 - HPS2 - HPS3	High pressure switch
RSV1-RSV2-RSV3	Refrigerant solenoid valve
Th1	Cold room temperature probe
Th2	Defrost temperature probe
TXV1 - TXV2 - TXV3	Thermostatic expansion valve



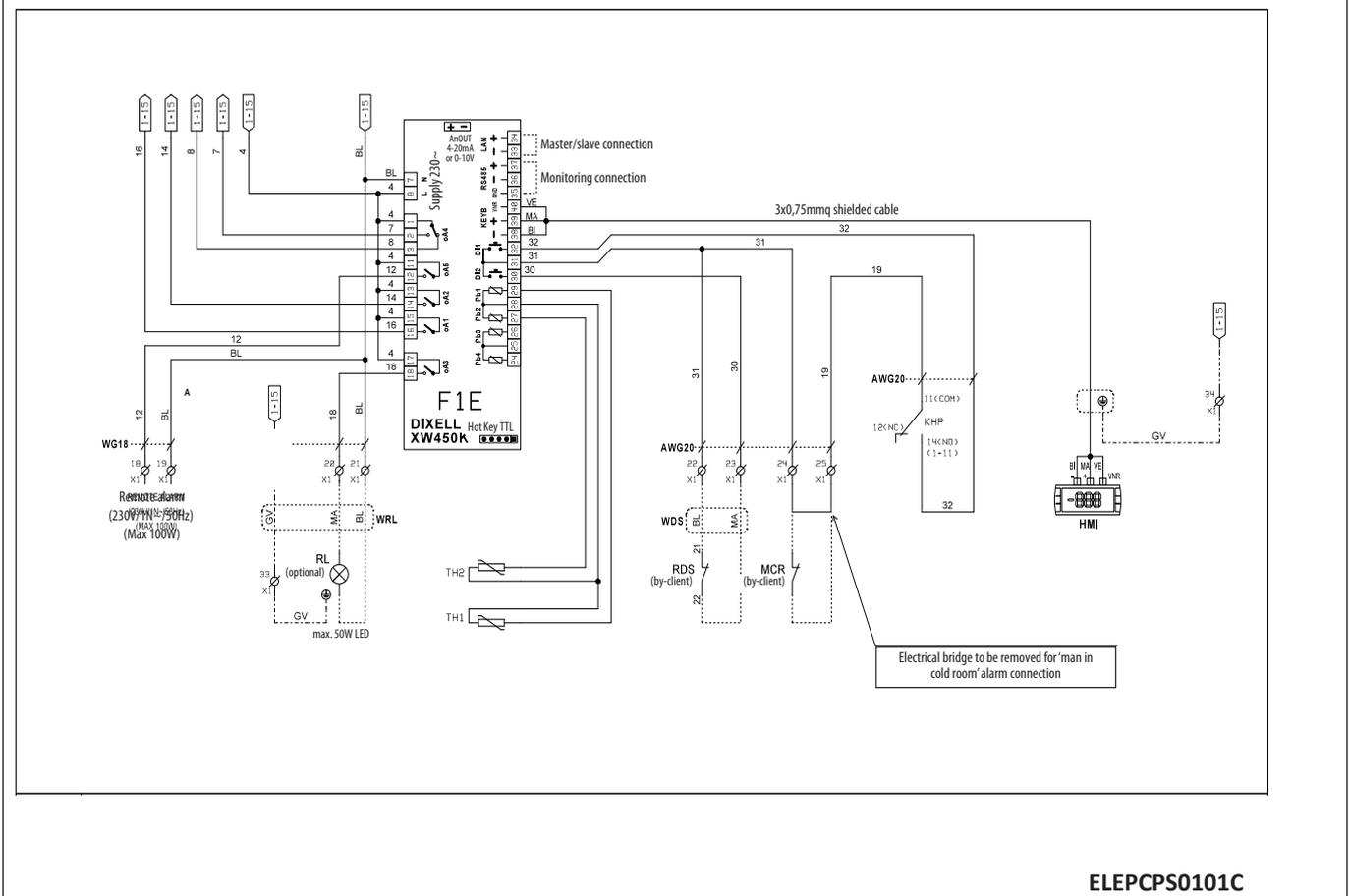
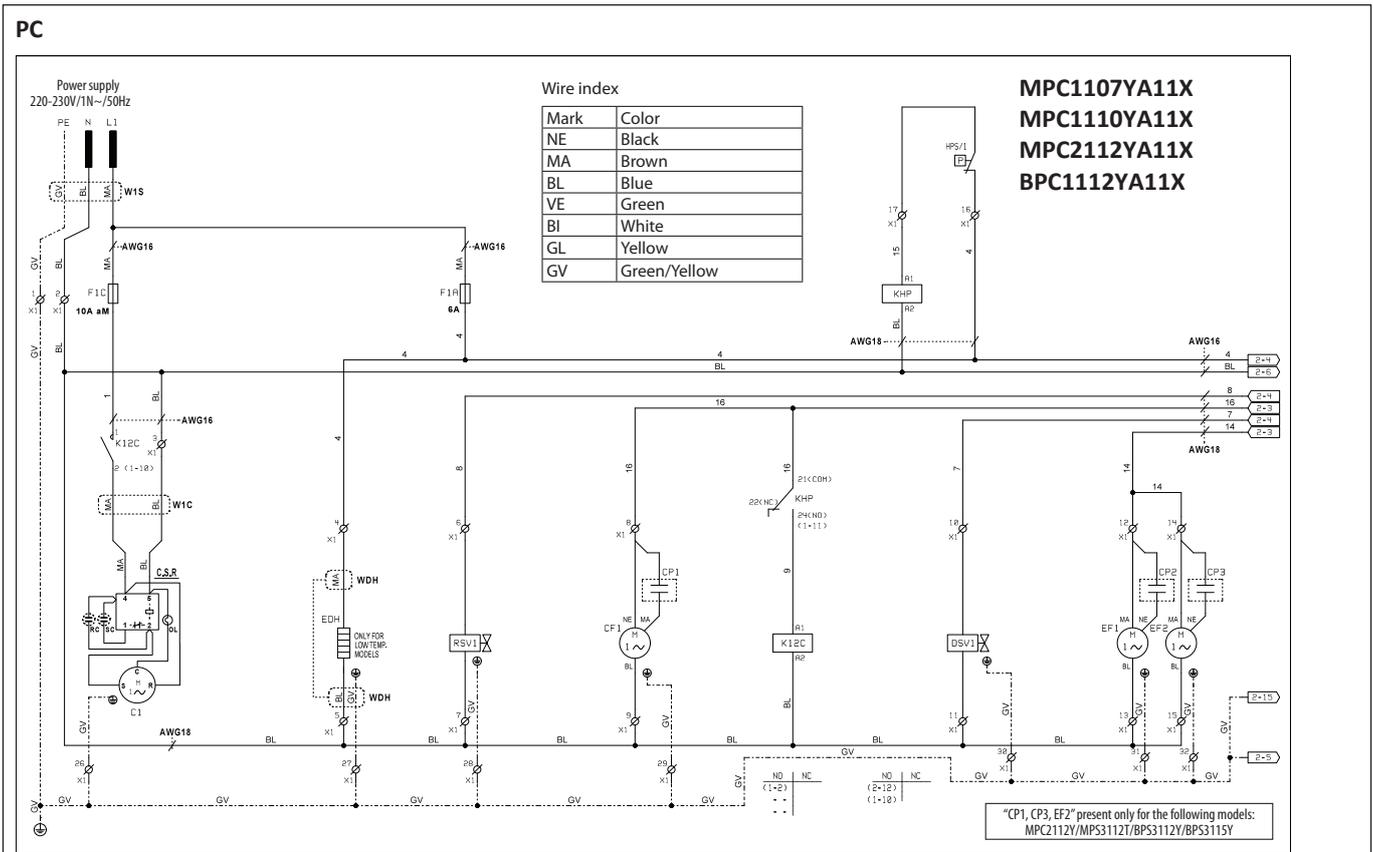
**MPC4336YA11X**  
**BPC4336YA11X**  
**BPC4345YA11X**

NOTE 1: Drain pan heater is only for models BPC4336YA11X and BPC4345YA11X.

**3D154480A**

# 7 Wiring diagrams

## 7 - 1 Wiring Diagrams - Single Phase

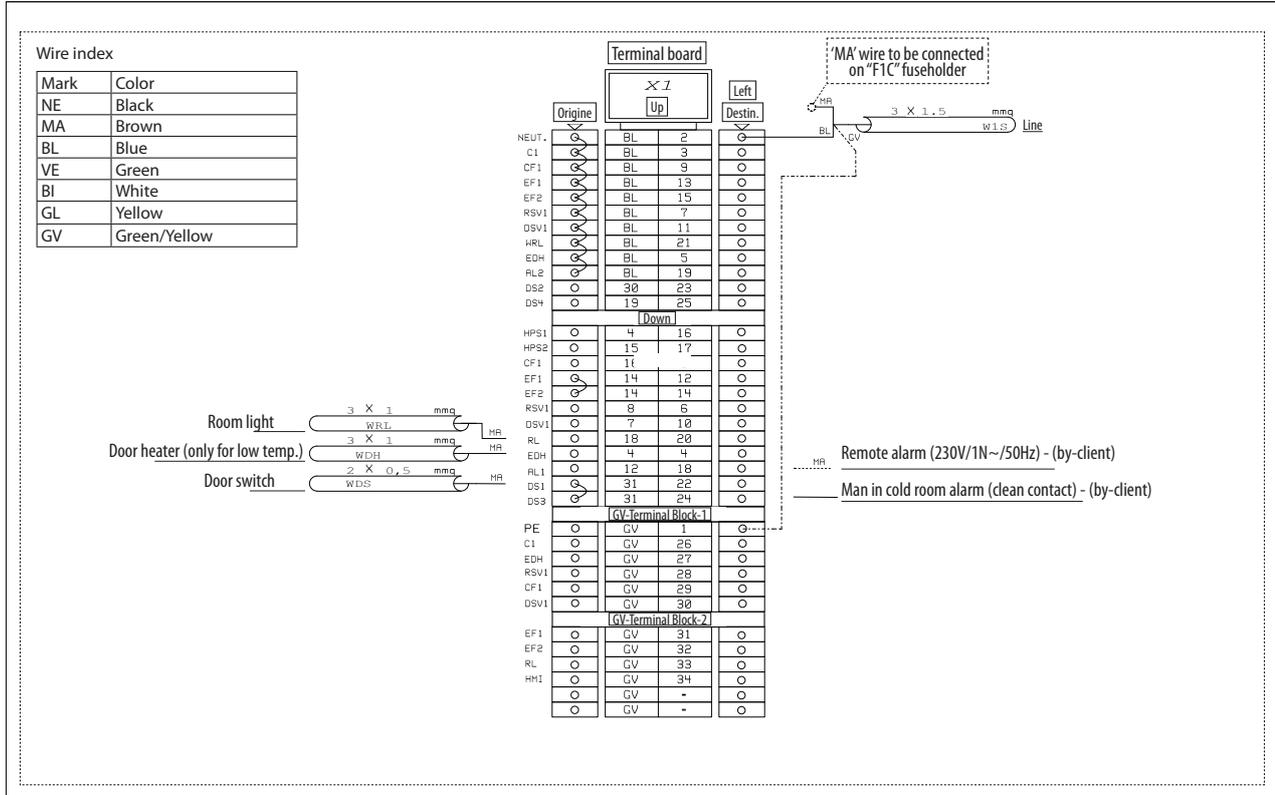


# 7 Wiring diagrams

## 7 - 1 Wiring Diagrams - Single Phase

7

PC



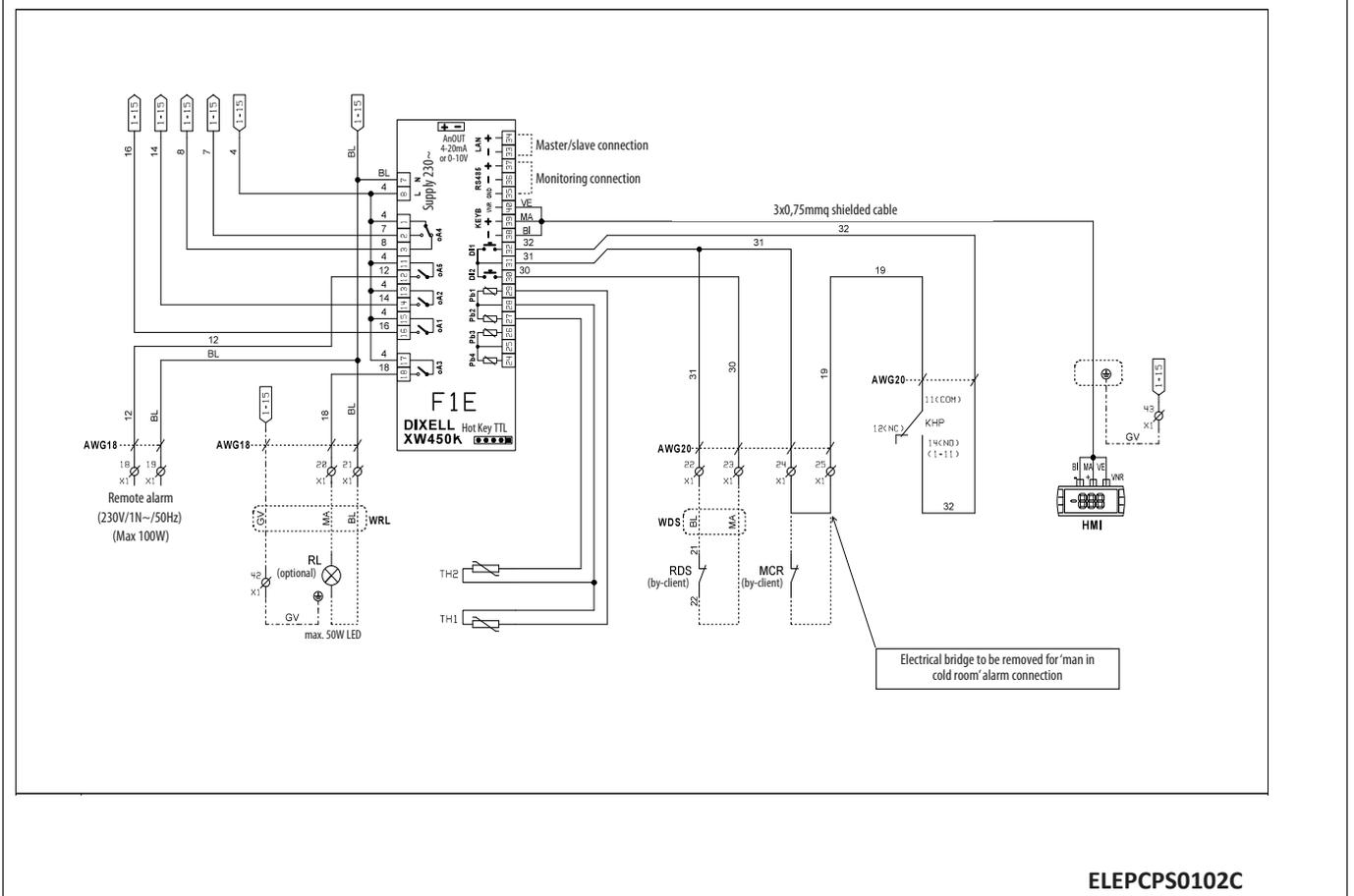
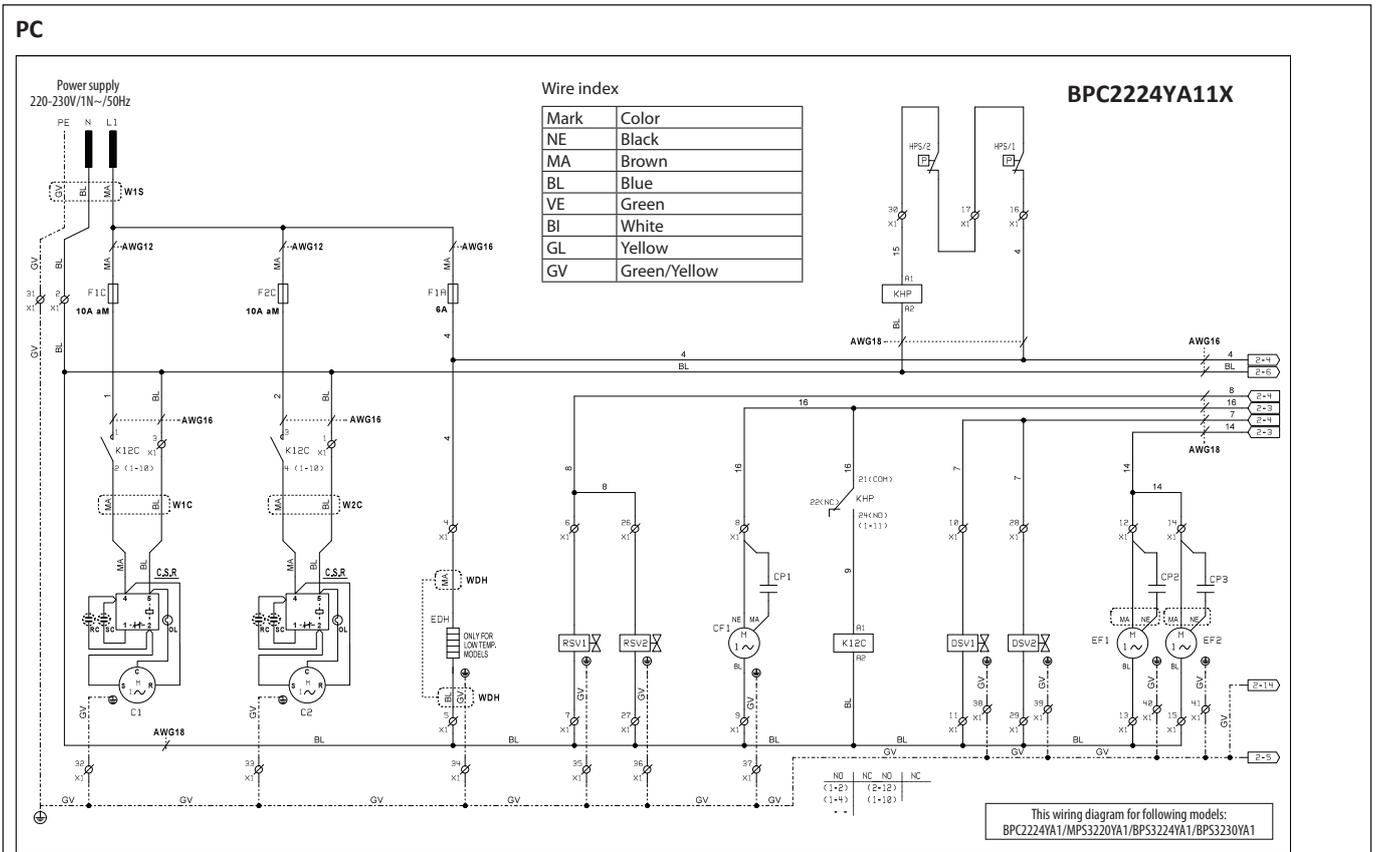
Device	Description
C1	Compressor 1
C.S.R.	Compressor starting kit
CF1	Condenser fan 1
CP1	Condenser fan 1 capacitor
CP3	Evaporator fan 1 capacitor
CP4	Evaporator fan 2 capacitor
DSV1	Defrost solenoid valve 1
EDH	Door heater
EF1	Evaporator fan 1
EF2	Evaporator fan 2
F1C	Compressor 1 fuse
F1A	Auxiliary fuse
F1E	Control unit
HPS/1	High pressure switch 1
HMI	Human machine interface
K12C	Compressor 1 relay
KHP	High pressure switch relay
MCR	Man in cold room alarm
RSV1	Refrig. solenoid valve 1
RL	Room light (optional)
RDS	Room door switch
TH1	Ambient probe

Device	Description
TH2	Defrost probe
TH3	Condenser probe
W1S	Supply cable
W1C	Compressor 1 cable
WRL	Room light cable
WDS	Door switch cable

ELEPCPS0101C

# 7 Wiring diagrams

## 7 - 1 Wiring Diagrams - Single Phase



# 7 Wiring diagrams

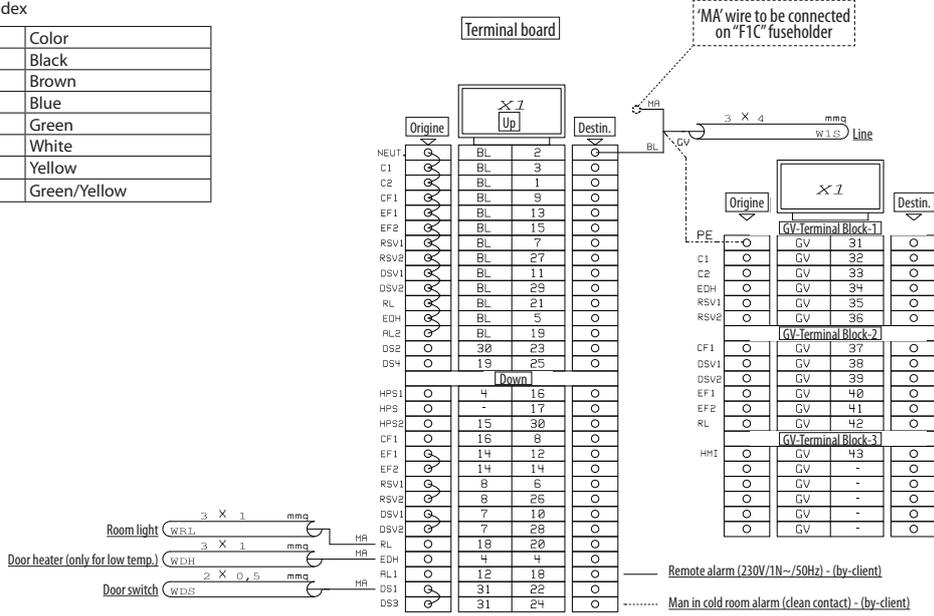
## 7 - 1 Wiring Diagrams - Single Phase

7

PC

Wire index

Mark	Color
NE	Black
MA	Brown
BL	Blue
VE	Green
BI	White
GL	Yellow
GV	Green/Yellow



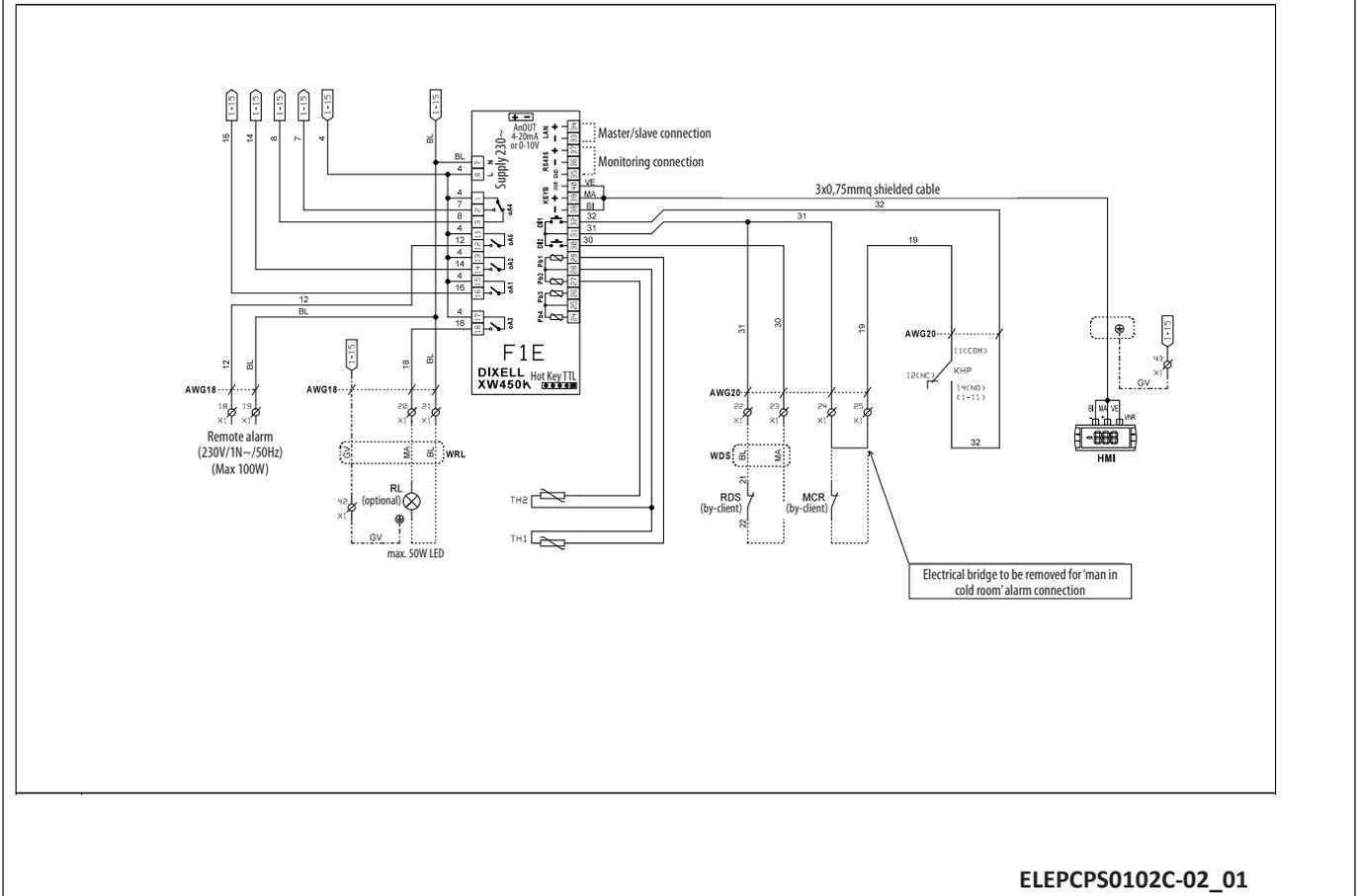
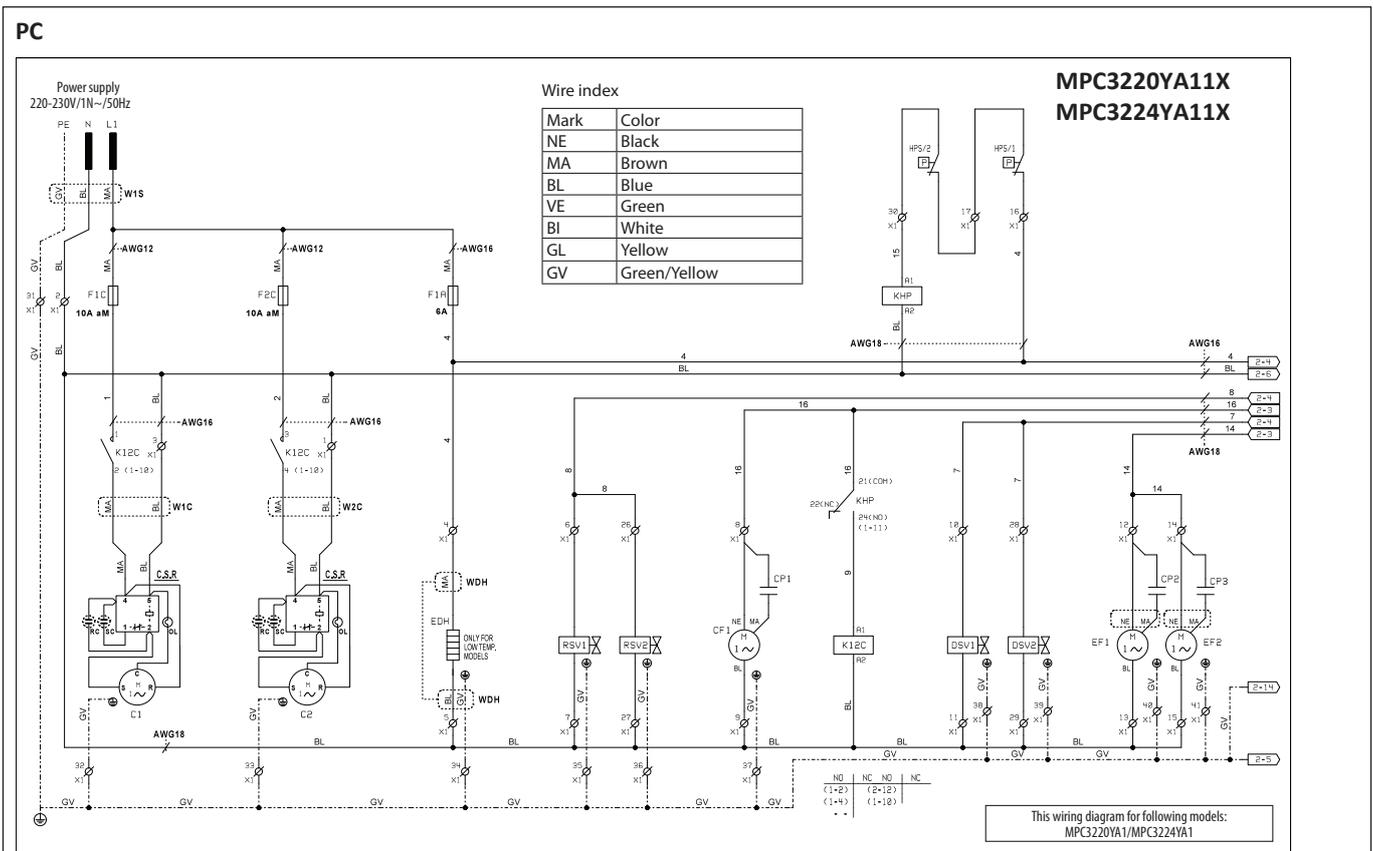
Device	Description
C1	Compressor 1
C2	Compressor 2
C.S.R.	Compressor starting kit
CF1	Condenser fan 1
CP1	Condenser fan 1 capacitor
CP3	Evaporator fan 1 capacitor
CP4	Evaporator fan 2 capacitor
DSV1	Defrost solenoid valve 1
DSV2	Defrost solenoid valve 2
EDH	Door heater
EF1	Evaporator fan 1
EF2	Evaproatator fan 2
F1C	Compressor 1 fuse
F2C	Compressor 2 fuse
F1A	Auxiliary fuse
F1E	Control unit
HPS1/1	High pressure switch 1
HPS2/2	High pressure switch 2
HMI	Human machine interface
K12C	Compressor 1-2 relay
KHP	High pressure switch relay
MCR	Man in cold room alarm

Device	Description
RSV1	Refrig. solenoid valve 1
RSV2	Refrig. solenoid valve 2
RL	Room light (optional)
RDS	Room door switch
TH1	Ambient probe
TH2	Defrost probe
TH3	Condenser probe
W1S	Supply cable
W1C	Compressor 1 cable
W2C	Compressor 2 cable
WRL	Room light cable
WDS	Door switch cable

ELEPCPS0102C

# 7 Wiring diagrams

## 7 - 1 Wiring Diagrams - Single Phase

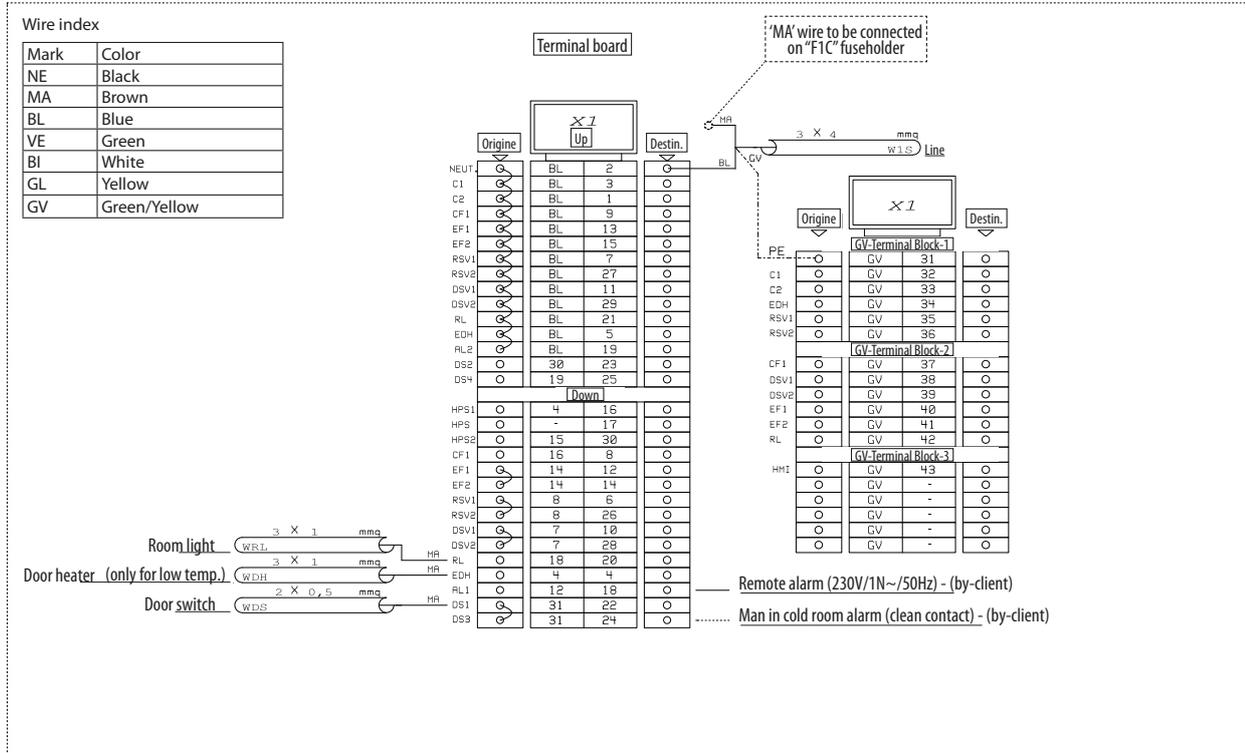


# 7 Wiring diagrams

## 7 - 1 Wiring Diagrams - Single Phase

PC

7

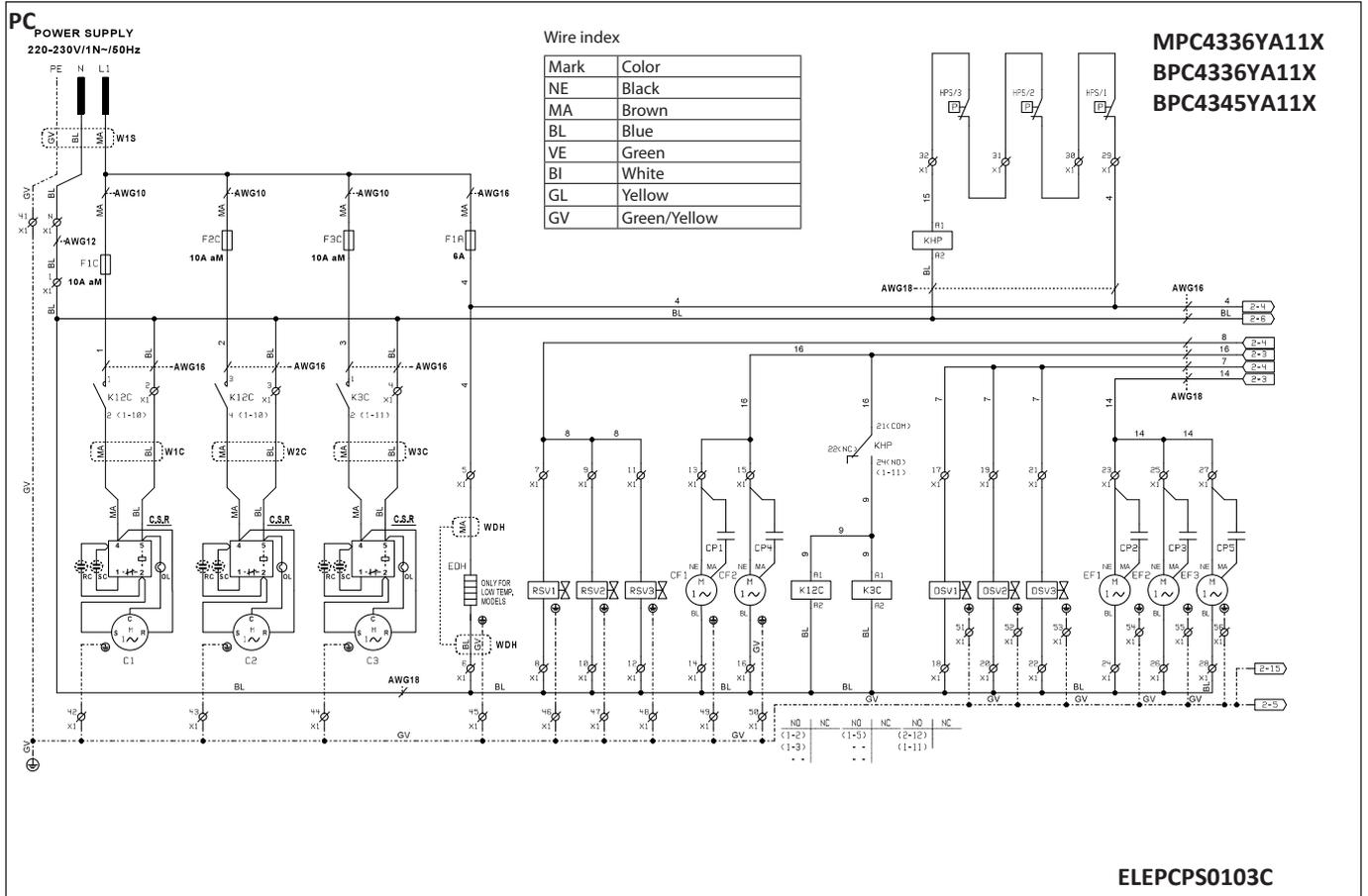


Device	Description
C1	Compressor 1
C2	Compressor 2
C.S.R.	Compressor starting kit
CF1	Condenser fan 1
CP1	Condenser fan 1 capacitor
CP3	Evaporator fan 1 capacitor
CP4	Evaporator fan 2 capacitor
DSV1	Defrost solenoid valve 1
DSV2	Defrost solenoid valve 2
EDH	Door heater
EF1	Evaporator fan 1
EF2	Evaporator fan 2
F1C	Compressor 1 fuse
F2C	Compressor 2 fuse
F1A	Auxiliary fuse
F1E	Control unit
HPS/1	High pressure switch 1
HPS/2	High pressure switch 2
HMI	Human machine interface
K12C	Compressor 1-2 relay
KHP	High pressure switch relay
MCR	Man in cold room alarm

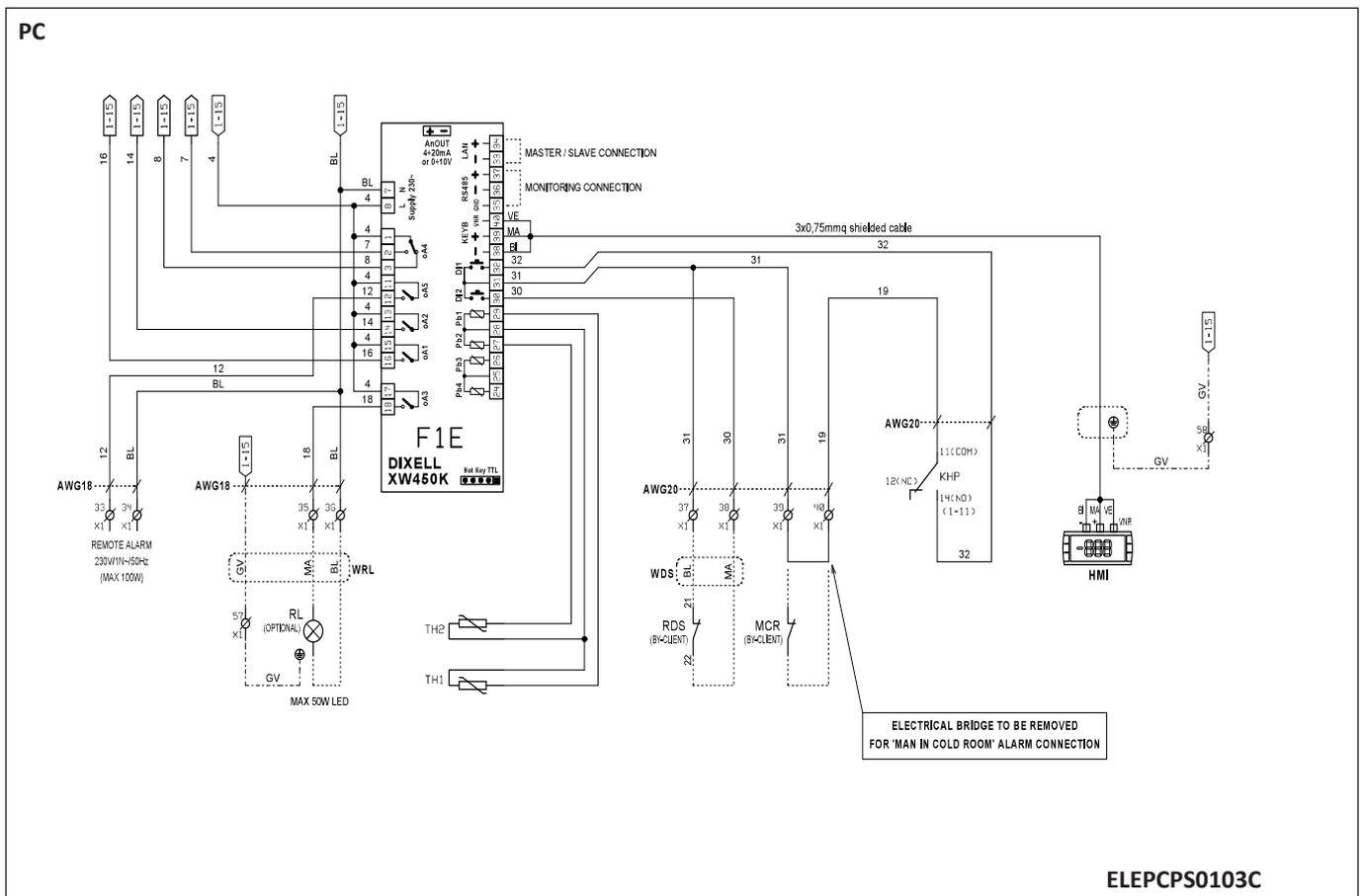
Device	Description
RSV1	Refrig. solenoid valve 1
RSV2	Refrig. solenoid valve 2
RL	Room light (optional)
RDS	Room door switch
TH1	Ambient probe
TH2	Defrost probe
TH3	Condenser probe
W1S	Supply cable
W1C	Compressor 1 cable
W2C	Compressor 2 cable
WRL	Room light cable
WDS	Door switch cable

# 7 Wiring diagrams

## 7 - 1 Wiring Diagrams - Single Phase



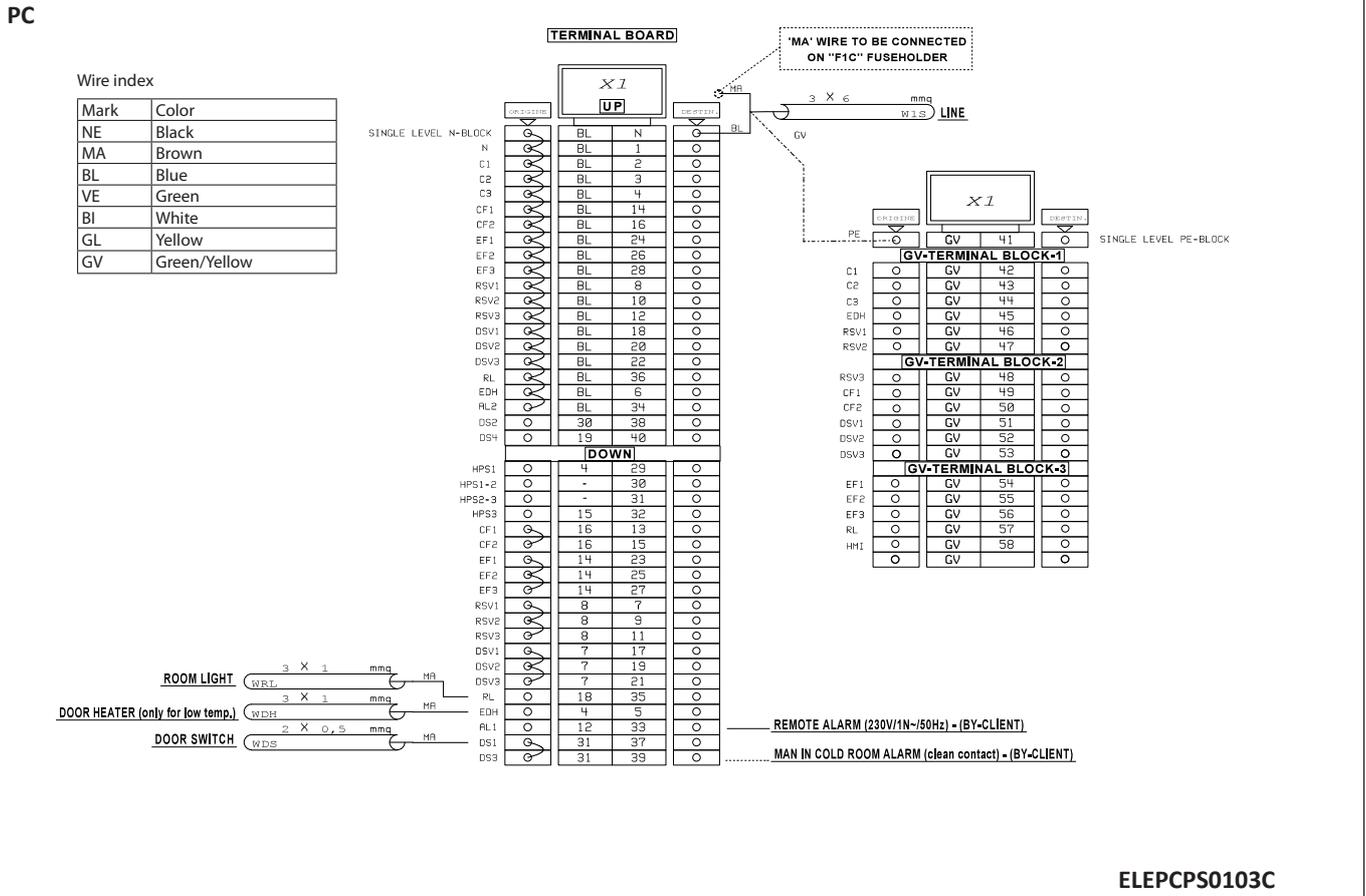
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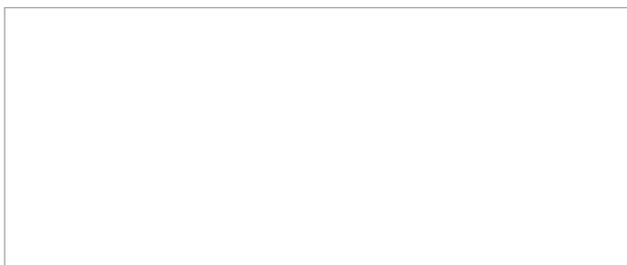
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**PC**

DEVICE DISPOSIT.	DESCRIPTION / DESCRIZIONE	DEVICE DISPOSIT.	DESCRIPTION / DESCRIZIONE
C1	COMPRESSOR 1 / COMPRESSORE 1	HMI	HUMAN MACHINE INTERFACE
C2	COMPRESSOR 2 / COMPRESSORE 2	K12C	COMPRESSOR 1-2 RELAY / RELE' COMPRESSORE 1-2
C3	COMPRESSOR 3 / COMPRESSORE 3	K3C	COMPRESSOR 3 RELAY / RELE' COMPRESSORE 3
C.S.R.	COMPRESSOR STARTING KIT/KIT AVVIAMENTO COMPRESSORE	KHP	HIGH PRESSURE SWITCH RELAY / RELE' PRESSOSTATO ALTA PRESSIONE
CF1	CONDENSER FAN 1 / VENTOLA CONDENSATORE 1	MCR	MAN IN COLD ROOM ALARM / ALLARME UOMO IN CELLA
CF2	CONDENSER FAN 2 / VENTOLA CONDENSATORE 2	RL	ROOM LIGHT (OPTIONAL) / LUCE CELLA (OPZIONALE)
CP1	CONDENSER FAN1 CAPACITOR / CONDENSATORE VENTOLA 1 CAPACITA'	RDS	ROOM DOOR SWITCH / MICRO PORTA (BY-CLIENT)
CP4	CONDENSER FAN2 CAPACITOR / CONDENSATORE VENTOLA 2 CAPACITA'	RSV1	REFRIG. SOLENOID VALVE 1 / REFRIGER. VALVOLA SOLENOIDE 1
CP2	EVAPORATOR FAN1 CAPACITOR / EVAPORATORE VENTOLA 1 CAPACITA'	RSV2	REFRIG. SOLENOID VALVE 2 / REFRIGER. VALVOLA SOLENOIDE 2
CP3	EVAPORATOR FAN2 CAPACITOR / EVAPORATORE VENTOLA 2 CAPACITA'	RSV3	REFRIG. SOLENOID VALVE 3 / REFRIGER. VALVOLA SOLENOIDE 3
CP5	EVAPORATOR FAN3 CAPACITOR / EVAPORATORE VENTOLA 3 CAPACITA'	TH1	AMBIENT PROBE / SONDA AMBIENTE
DSV1	DEFROST SOLENOID VALVE 1 / VALVOLA SOLENOIDE DI SABRINAMENTO 1	TH2	DEFROST PROBE / SONDA SBRINAMENTO
DSV2	DEFROST SOLENOID VALVE 2 / VALVOLA SOLENOIDE DI SABRINAMENTO 2	WDS	DOOR SWITCH CABLE / CAVO MICRO PORTA
DSV3	DEFROST SOLENOID VALVE 3 / VALVOLA SOLENOIDE DI SABRINAMENTO 3	W1S	SUPPLY CABLE / CAVO DI ALIMENTAZIONE
EDH	DOOR HEATER / RESISTENZA PORTA	W1C	COMPRESSOR 1 CABLE / CAVO COMPRESSORE 1
EF1	EVAPORATOR FAN 1 / VENTOLA EVAPORATORE 1	W2C	COMPRESSOR 2 CABLE / CAVO COMPRESSORE 2
EF2	EVAPORATOR FAN 2 / VENTOLA EVAPORATORE 2	W3C	COMPRESSOR 3 CABLE / CAVO COMPRESSORE 3
EF3	EVAPORATOR FAN 3 / VENTOLA EVAPORATORE 3	WRL	ROOM LIGHT CABLE / CAVO LUCE CELLA
F1C	COMPRESSOR1 FUSE / FUSIBILE COMPRESSORE1		
F2C	COMPRESSOR2 FUSE / FUSIBILE COMPRESSORE2		
F3C	COMPRESSOR3 FUSE / FUSIBILE COMPRESSORE3		
F1A	AUXILIARY FUSE / FUSIBILE AUSILIARIO		
F1E	CONTROL UNIT / UNITA' DI CONTROLLO		
HPS/1	HIGH PRESSURE SWITCH 1 / PRESSOSTATO ALTA PRESSIONE 1		
HPS/2	HIGH PRESSURE SWITCH 2 / PRESSOSTATO ALTA PRESSIONE 2		
HPS/3	HIGH PRESSURE SWITCH 3 / PRESSOSTATO ALTA PRESSIONE 3		

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