

# PS Monoblock Technical Data PS



MPS1107YA11A  
MPS1110YA11A  
MPS3112YA11A  
BPS3112YA11A  
BPS3115YA11A  
MPS3220YA11A  
BPS3224YA11A  
BPS3230YA11A



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# 1 Features

## 1 - 1 PS

- › 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 100mm and 150mm panel
- › Fin&tube condenser
- › Fin&tube evaporator
- › Filter dryer
- › Thermostatic 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
- › Predisposition for connection of «Man in cold room» alarm
- › 5m cable for power supply
- › 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)



## 2 Specifications

### 2 - 1 Specifications

Technical specifications				MPS1107YA11A	MPS1110YA11A	MPS3112YA11A	BPS3112YA11A	
Power input	Max.	W		900	920	1,680	1,310	
Dimensions	Unit	Height	mm		745		850	
		Width	mm		400		650	
		Depth	mm		935		1,010	
	Packed unit	Height	mm		982		1,082	
		Width	mm		445		684	
		Depth	mm		985		1,040	
Weight	Unit	kg		50		87.6		
	Packed unit	kg		62.5		110.1		
Compressor	Type			Hermetic reciprocating (ON/OFF controlled) ..				
Condenser	Air flow	m <sup>3</sup> /h		530 (1)		930 (1)		
Defrost				Hot gas				
Evaporator	Air flow	m <sup>3</sup> /h		590 (1)		1,150 (1)		
	Air throw	m			5 (3)		5 (3)	
Operation range	Cold room temperature	Min.	°C		-5		-25	
		Max.	°C		10		-15	
	Ambient temperature	Min.	°C			5		
		Max.	°C			45		
Refrigerant	Type			R-290				
	GWP			0.02				
	Charge	kg		0.13		0.15		
PED	Category			Category I				
Characteristics of the hole where to accommodate the units (straddle installation)	Dimension (a) Dimension (c)	Height	mm		88		145	
		Width	mm		43		40	
		Width	mm		43		60	
Characteristics of the hole where to accommodate the units (through the wall installation)	Height Width	mm		335		335		
		mm		375		585		
Operating sound pressure at condenser	Max.	dB(A)		38.5 (2)		47.5 (2)	47.5 (2)	
N° of circuits				1				
Technical specifications				BPS3115YA11A	MPS3220YA11A	BPS3224YA11A	BPS3230YA11A	
Power input	Max.	W		1,680	2,140	2,250	2,985	
Dimensions	Unit	Height	mm			850		
		Width	mm			650		
		Depth	mm			1,010		
	Packed unit	Height	mm			1,082		
		Width	mm			684		
		Depth	mm			1,040		
Weight	Unit	kg		87.6	93	105.4		
	Packed unit	kg		110.1	115.5	127.9		
Compressor	Type			Hermetic reciprocating (ON/OFF controlled) ..				
Condenser	Air flow	m <sup>3</sup> /h		930 (1)		1,030 (1)		
Defrost				Hot gas				
Evaporator	Air flow	m <sup>3</sup> /h		1,150 (1)		1,230 (1)		
	Air throw	m			5 (3)			
Operation range	Cold room temperature	Min.	°C	-25	-5		-25	
		Max.	°C	-15	10		-15	
	Ambient temperature	Min.	°C			5		
		Max.	°C			45		
Refrigerant	Type			R-290				
	GWP			0.02				
	Charge	kg		0.15	0.13	0.13	0.13	
PED	Category			Category I				
Characteristics of the hole where to accommodate the units (straddle installation)	Dimension (a) Dimension (c)	Height	mm	145		145		
		Width	mm	40		40		
		Width	mm	60		60		
Characteristics of the hole where to accommodate the units (through the wall installation)	Height Width	mm		335		440		
		mm		585		585		
Operating sound pressure at condenser	Max.	dB(A)			47.5 (2)			
N° of circuits				1		2		
Electrical specifications				MPS1107YA11A	MPS1110YA11A	MPS3112YA11A	BPS3112YA11A	
Power supply	Voltage	V		230				
	Phase			1N~				
	Frequency	Hz		50				
	Maximum fuse amps (MFA)	A		10				
	Maximum Current Amps (MCA)	A		4.89	4.99	9.12	7.12	

## 2 Specifications

### 2 - 1 Specifications

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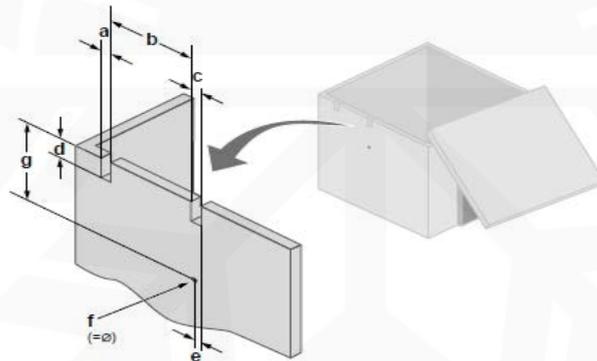
Electrical specifications			MPS1107YA11A	MPS1110YA11A	MPS3112YA11A	BPS3112YA11A
Power supply	Total overcurrent amps (Peak Current Amps)	A	23	29	49	37
	Voltage range	Max.	250			
		Min.	207			
Rated input		kW	580	0.75	1.43	1.09
Rated input		A	3.76	3.68	6.86	5.62
IP	Class		IPX0			

Electrical specifications			BPS3115YA11A	MPS3220YA11A	BPS3224YA11A	BPS3230YA11A
Power supply	Voltage	V	230			
	Phase		1N~			
	Frequency	Hz	50			
	Maximum fuse amps (MFA)	A	10			
	Maximum Current Amps (MCA)	A	9.12	11.62	12.22	16.22
	Total overcurrent amps (Peak Current Amps)	A	43	68	72	84
	Voltage range	Max.	250			
		Min.	207			
Rated input		kW	1.24	1.84	1.74	2.04
Rated input		A	6.06	8.58	9.22	10.1
IP	Class		IPX0			

(1)According to EN ISO 5801 |

(2)According to UNI EN ISO 3746 .. |

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



Model	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)	g (mm)
MPS1107YA11A	43	288	43	88	19	28	321
MPS1110YA11A							
MPS3112YA11A	40	470	60	145	19	28	320
BPS3112YA11A							
BPS3115YA11A							
MPS3220YA11A							
BPS3224YA11A	40	470	60	145	19	28	420
BPS3230YA11A							

### 3 Capacity tables

#### 3 - 1 Cooling Capacity Tables

MPS1107YA11A	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	1086	935	798	675	
43	1124	970	830	705	
40	1187	1028	884	754	
35	1302	1132	977	836	
32	1370	1192	1149	880	
30	1412	1228	1236	904	
25	1499	1297	1267	981	
20	1543	1372	1278	984	
15	1673	1428	1563	1138	
10	1775	1569	1631	1184	
5	1868	1626	1751	1255	

MPS1110YA11A	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	1806	1477	1190	944	
43	1873	1533	1236	983	
40	1981	1625	1315	1049	
35	2169	1788	1454	1167	
32	2277	1880	1533	1234	
30	2343	1936	1579	1272	
25	2473	2040	1661	1333	
20	2532	2073	1670	1365	
15	2651	2133	1674	1381	
10	2855	2326	1860	1528	
5	2998	2440	1948	1606	

MPS3112YA11A	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	2462	2003	1601	1253	
43	2545	2073	1658	1299	
40	2686	2195	1763	1387	
35	2945	2423	1962	1559	
32	3098	2559	2081	1662	
30	3195	2644	2154	1725	
25	3393	2813	2297	1843	
20	3496	2889	2347	1868	
15	3674	3003	2400	1954	
10	3951	3265	2648	2148	
5	4157	3439	2791	2270	

MPS3220YA11A	According to EN12900/EN13215				
	Qcool [W]	Tcoldroom			
	Tout	10	5	0	-5
45	3749	3082	2499	1997	
43	3864	3176	2574	2056	
40	4062	3344	2714	2172	
35	4431	3663	2988	2406	
32	4653	3855	3154	2550	
30	4793	3976	3258	2639	
25	5084	4221	3462	2807	
20	5244	4335	3536	2965	
15	5710	4662	3732	3049	
10	6008	4952	4018	3324	
5	6328	5215	4230	3510	

BPS3112YA11A	According to EN12900/EN13215			
	Qcool [W]	Tcoldroom		
	Tout	-15	-20	-25
45	1014,2	760,1	547,1	
43	1072,3	810,0	589,8	
40	1163,2	888,8	594,5	
35	1303,4	1008,7	760,1	
32	1366,1	1059	800,2	
30	1393,6	1078,9	812,7	
25	1452,2	1103,1	835,0	
20	1611,9	1247,3	960,5	
15	1726,4	1339,2	1041,5	
10	1840,8	1431,1	1122,6	
5	1955,3	1523,0	1203,7	

BPS3115YA11A	According to EN12900/EN13215			
	Qcool [W]	Tcoldroom		
	Tout	-15	-20	-25
45	1141	869	634	
43	1197	916	674	
40	1291	998	744	
35	1449	1135	862	
32	1529	1202	918	
30	1570	1234	943	
25	1607	1308	985	
20	1794	1455	1117	
15	1920	1570	1210	
10	2046	1684	1304	
5	2172	1799	1397	

BPS3224YA11A	According to EN12900/EN13215			
	Qcool [W]	Tcoldroom		
	Tout	-15	-20	-25
45	1878	1419	1037	
43	1977	1502	1107	
40	2143	1645	1230	
35	2424	1887	1438	
32	2565	2006	1537	
30	2637	2062	1580	
25	2702	2089	1644	
20	3033	2382	1880	
15	3256	2567	2043	

BPS3230YA11A	According to EN12900/EN13215			
	Qcool [W]	Tcoldroom		
	Tout	-15	-20	-25
45	2128	1631	1207	
43	2217	1703	1264	
40	2380	1841	1380	
35	2684	2104	1607	
32	2853	2249	1730	
30	2948	2328	1795	
25	3083	2423	1854	
20	3414	2713	2107	
15	3669	2927	2285	

# 4 Dimensional drawings

## 4 - 1 Dimensional Drawings

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Medium temperature		
No.	Name	Note
1	Controller	
2	Drain outlet pipe	O.D. 14 mm
3	Drain pan	
4	Cable for power supply	5m
5	Optional	
6	Cable for door switch	5m
7	Cable for light	2m

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**PS**

Medium temperature		
No.	Name	Note
1	Controller	
2	Drain outlet pipe	O.D. 14 mm
3	Drain pan	
4	Optional	
5	Cable for power supply	5m
6	Cable for door switch	5m
7	Cable for light	2m

Low temperature		
No.	Name	Note
1	Controller	
2	Drain outlet pipe	O.D. 14 mm
3	Drain pan	
4	Cable for door heater	5m
5	Cable for power supply	5m
6	Cable for door switch	5m
7	Cable for light	2m

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# 4 Dimensional drawings

## 4 - 1 Dimensional Drawings

**PS**

Medium temperature		
No.	Name	Note
1	Controller	
2	Drain outlet pipe	O.D. 14 mm
3	Drain pan	
4	Optional	
5	Cable for power supply	5m
6	Cable for door switch	5m
7	Cable for light	2m

Low temperature		
No.	Name	Note
1	Controller	
2	Drain outlet pipe	O.D. 14 mm
3	Drain pan	
4	Cable for door heater	5m
5	Cable for power supply	5m
6	Cable for door switch	5m
7	Cable for light	2m

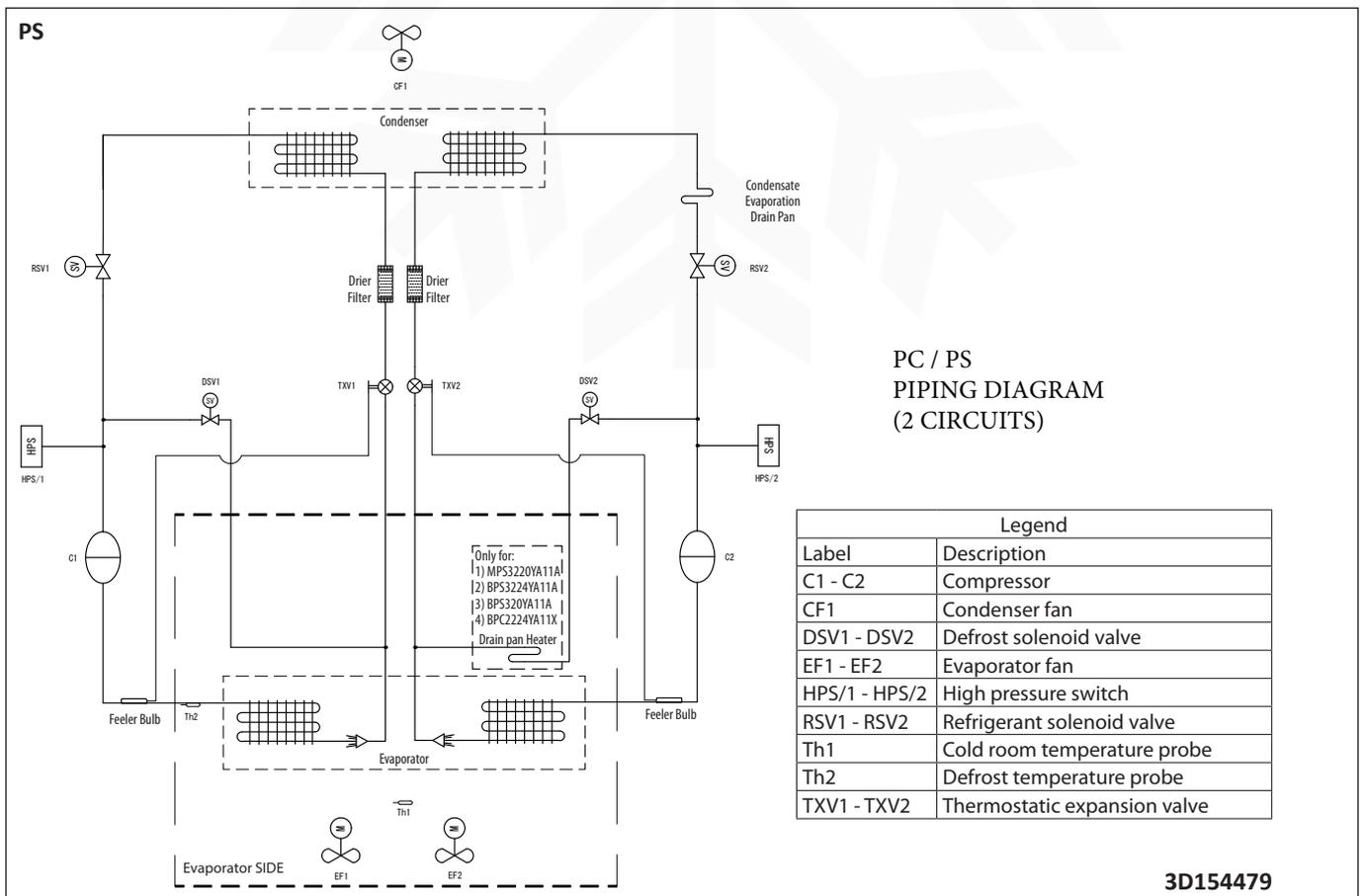
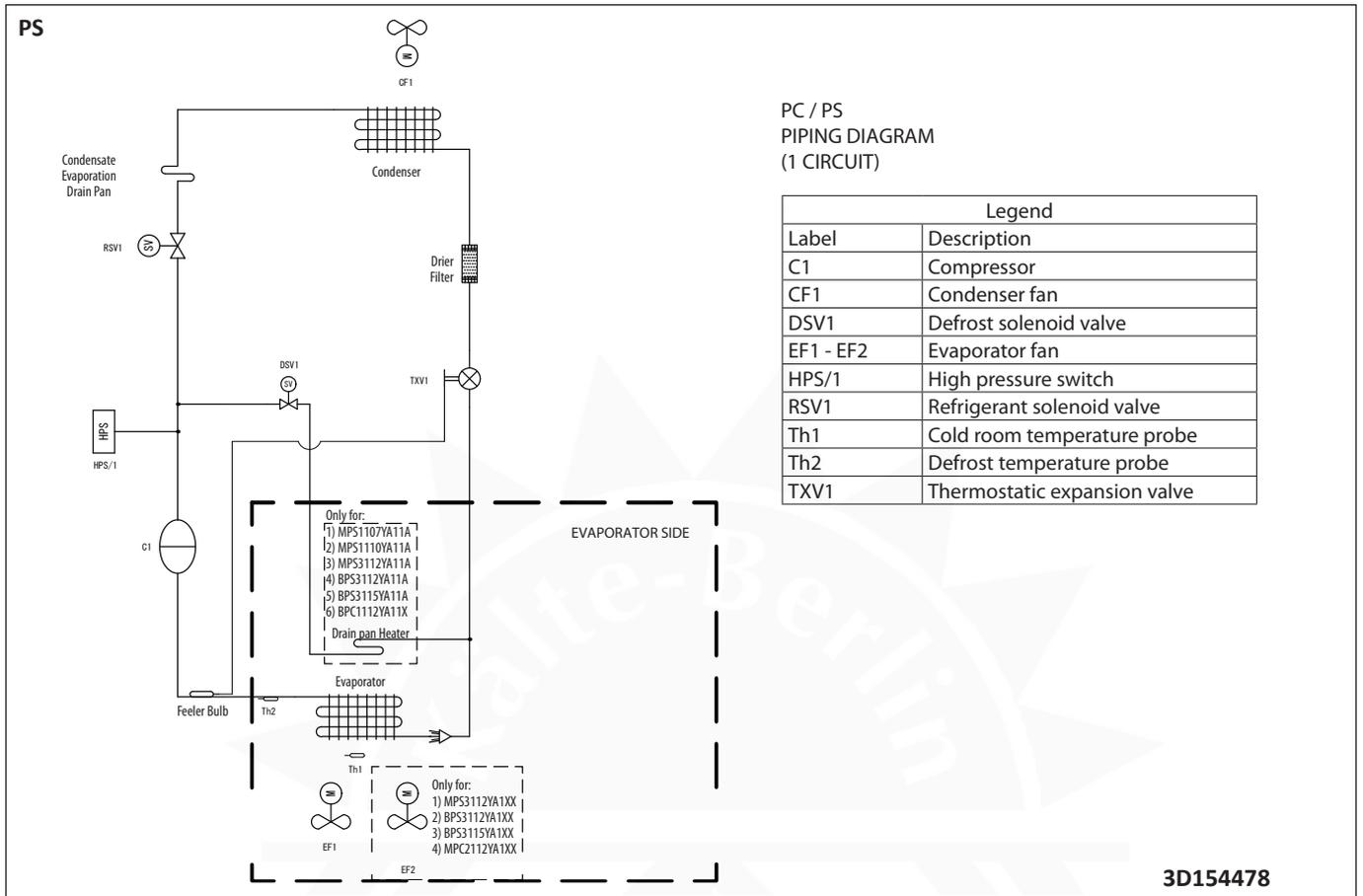
  

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# 5 Piping diagrams

## 5 - 1 Piping Diagrams

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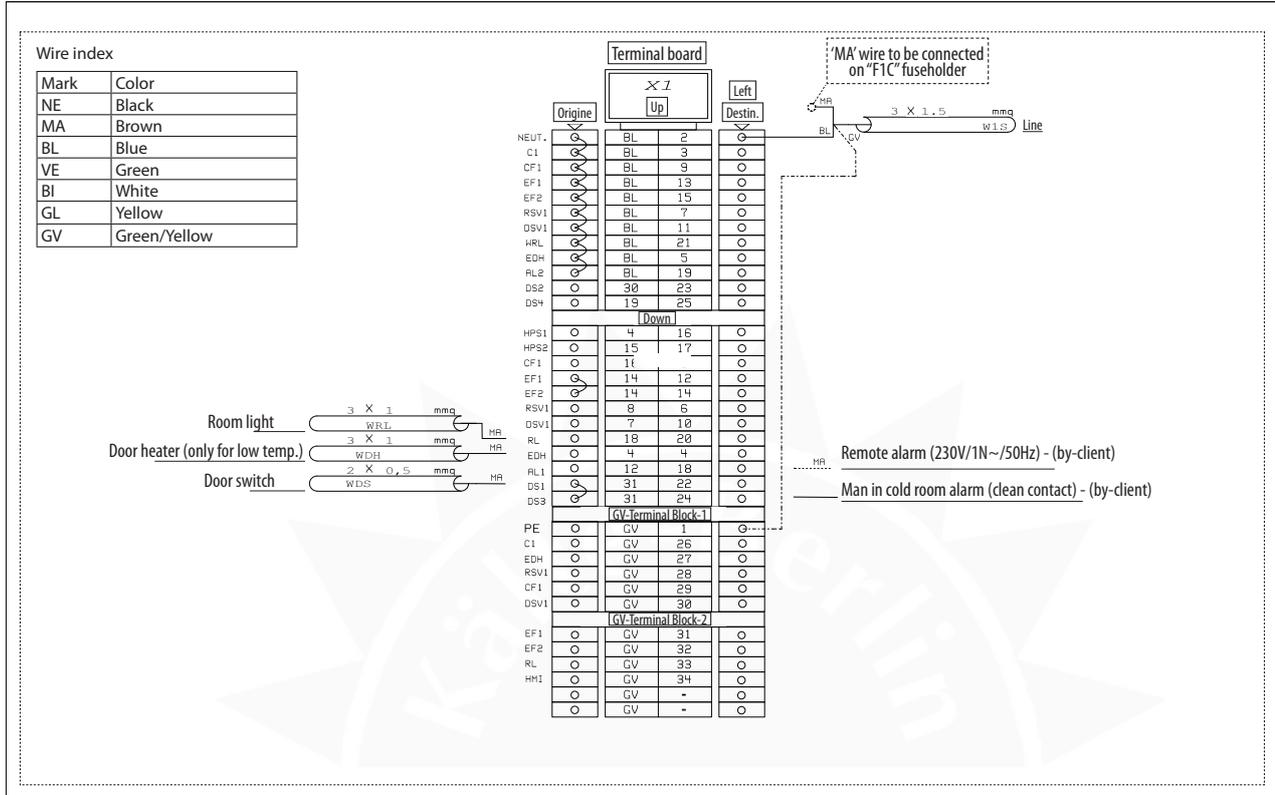


# 6 Wiring diagrams

## 6 - 1 Wiring Diagrams - Single Phase

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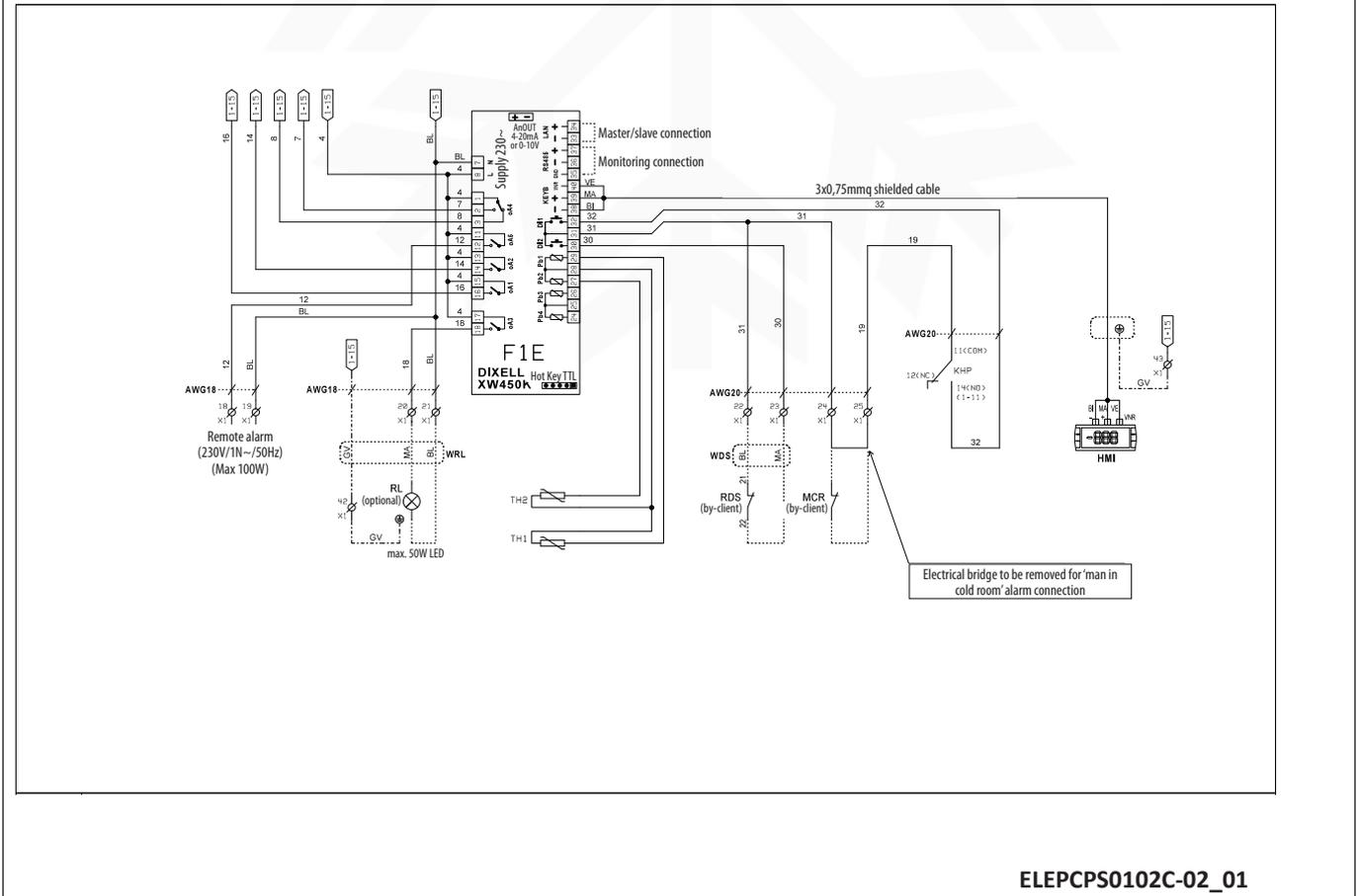
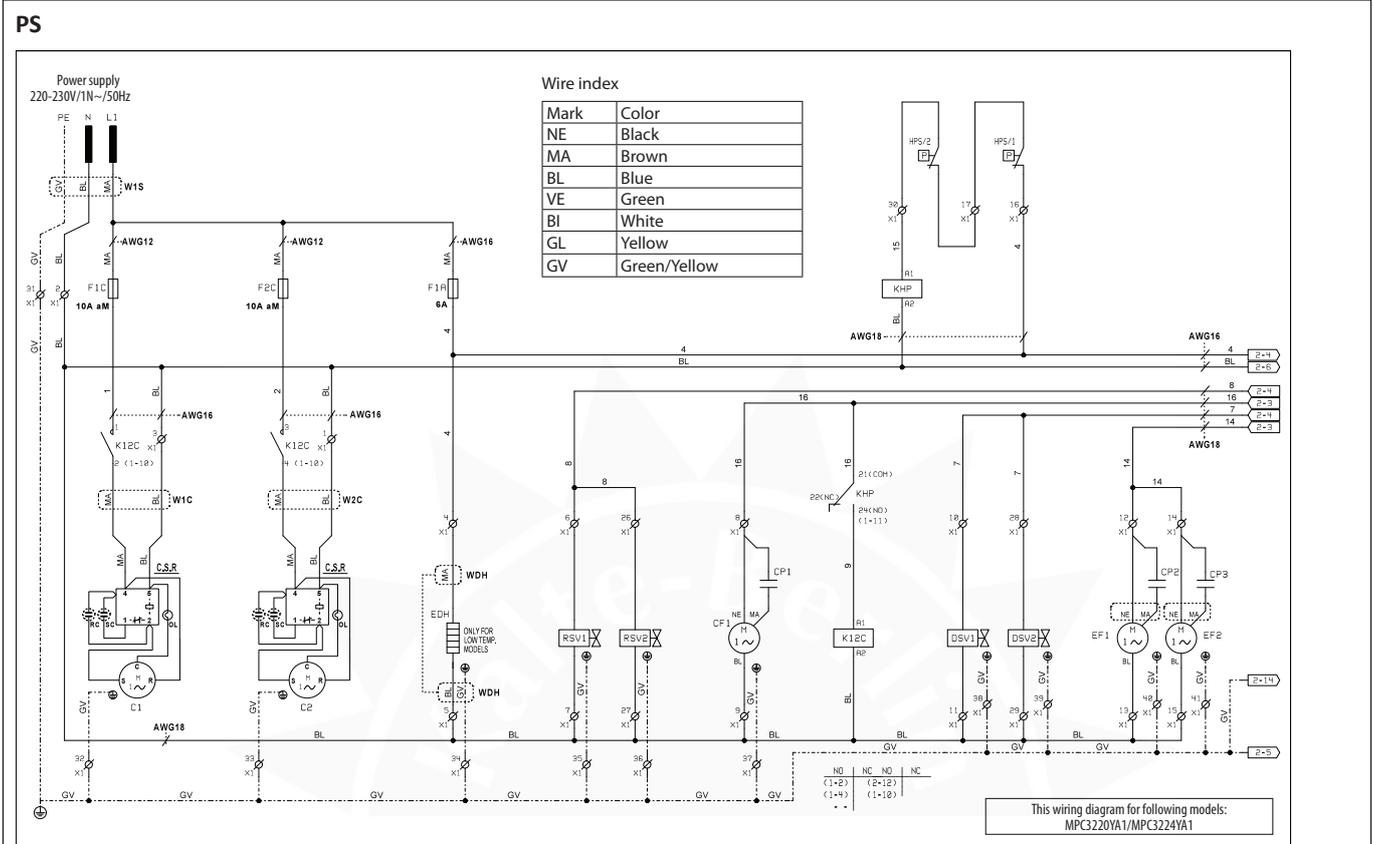
Device	Description
C1	Compressor 1
C.S.R.	Compressor starting kit
CF1	Condenser fan 1
CP1	Condenser fan 1 capacitor
CP3	Evaporator fan 1 capacitor
CP4	Evaporator fan 2 capacitor
DSV1	Defrost solenoid valve 1
EDH	Door heater
EF1	Evaporator fan 1
EF2	Evaproatore fan 2
F1C	Compressor 1 fuse
F1A	Auxiliary 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

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# 6 Wiring diagrams

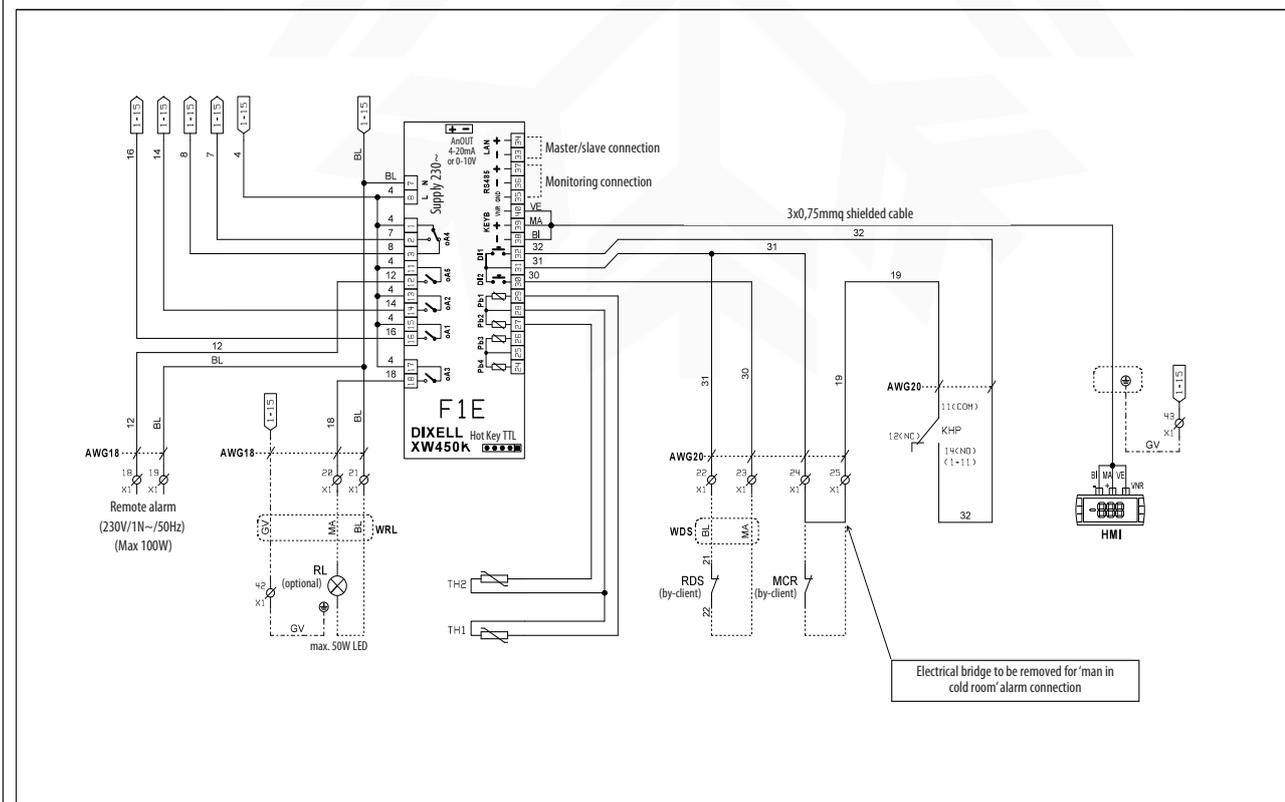
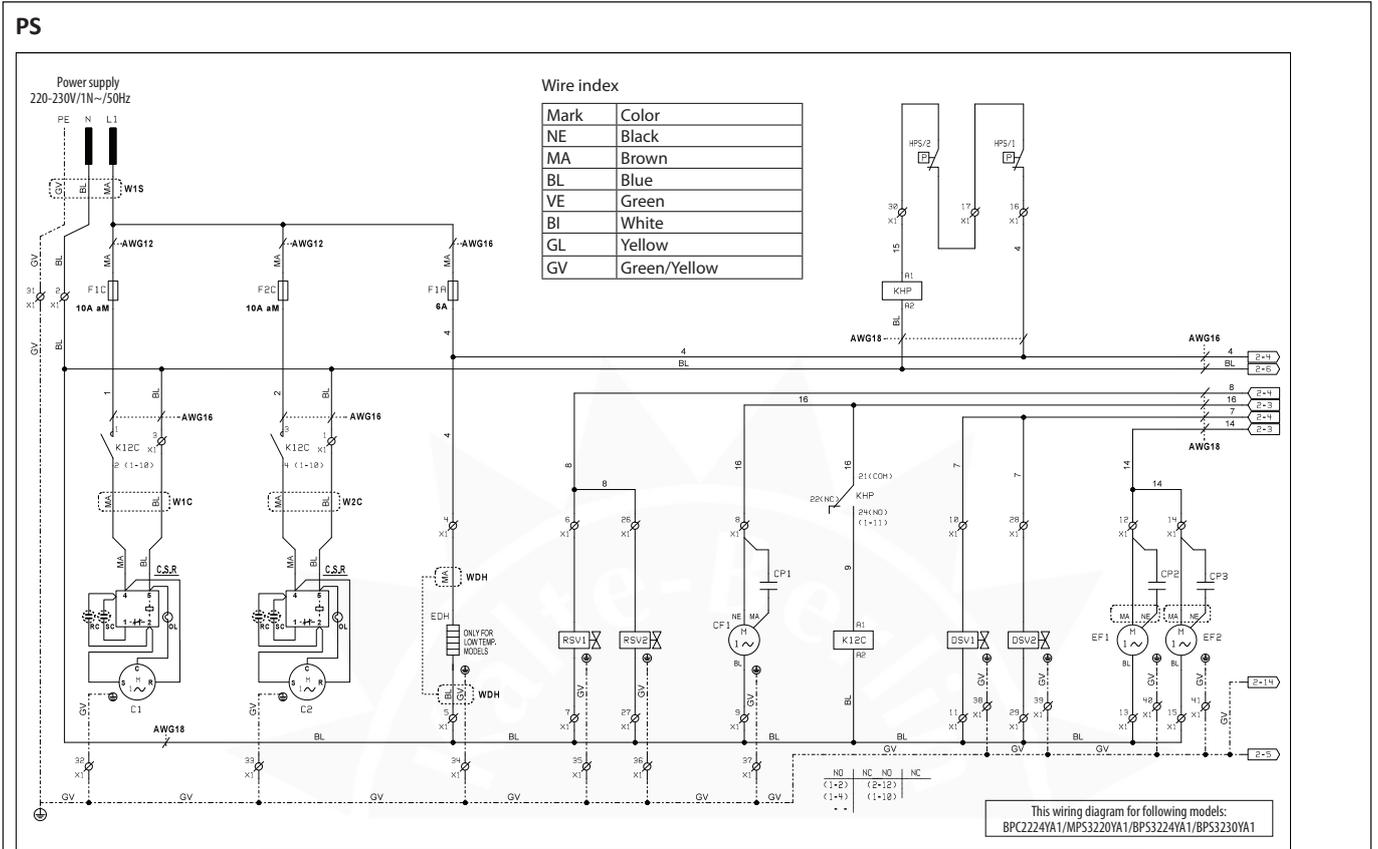
## 6 - 1 Wiring Diagrams - Single Phase



# 6 Wiring diagrams

## 6 - 1 Wiring Diagrams - Single Phase

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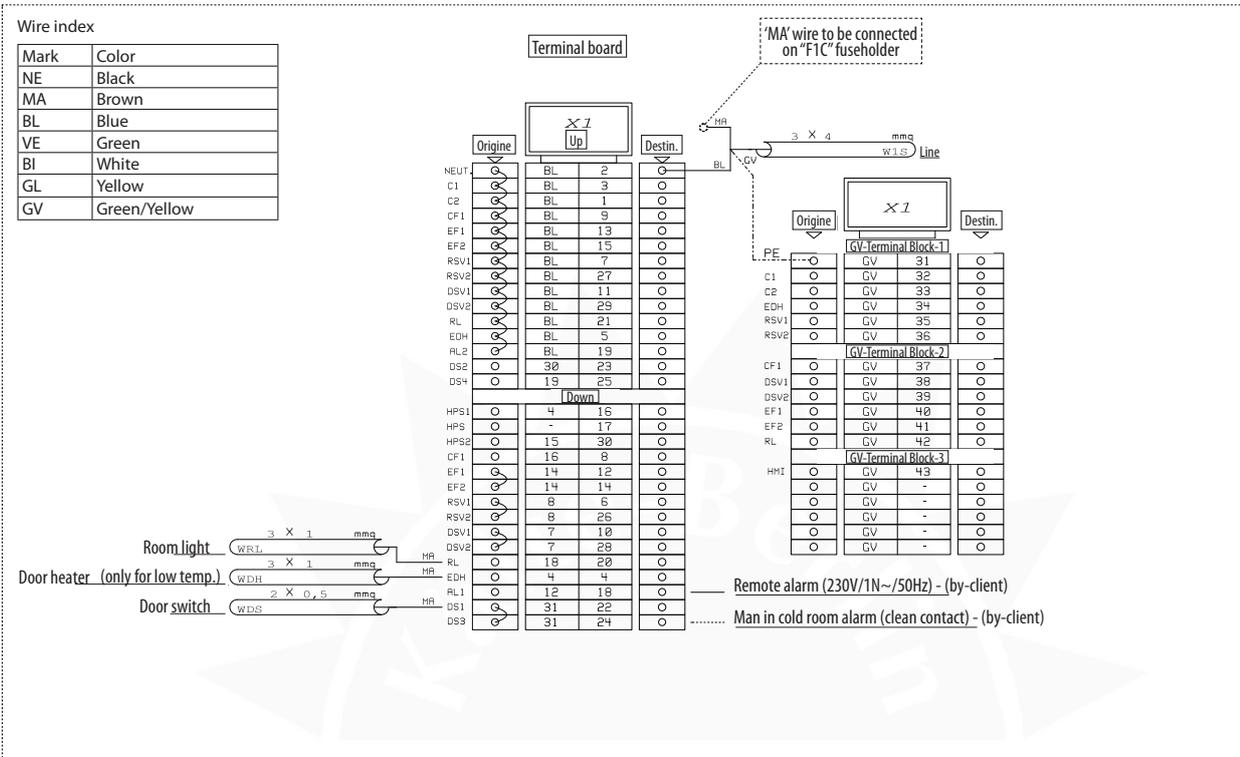


# 6 Wiring diagrams

## 6 - 1 Wiring Diagrams - Single Phase

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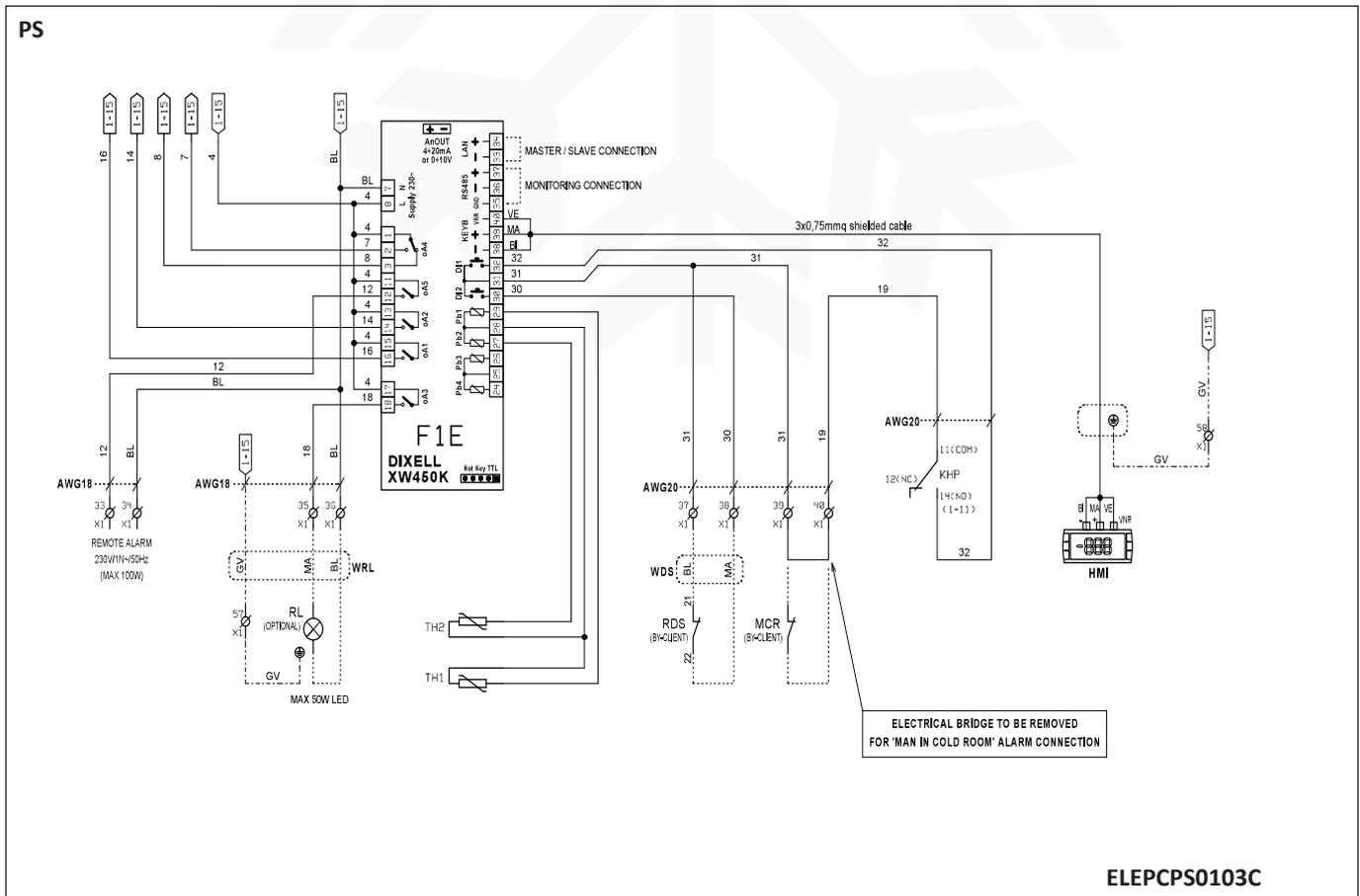
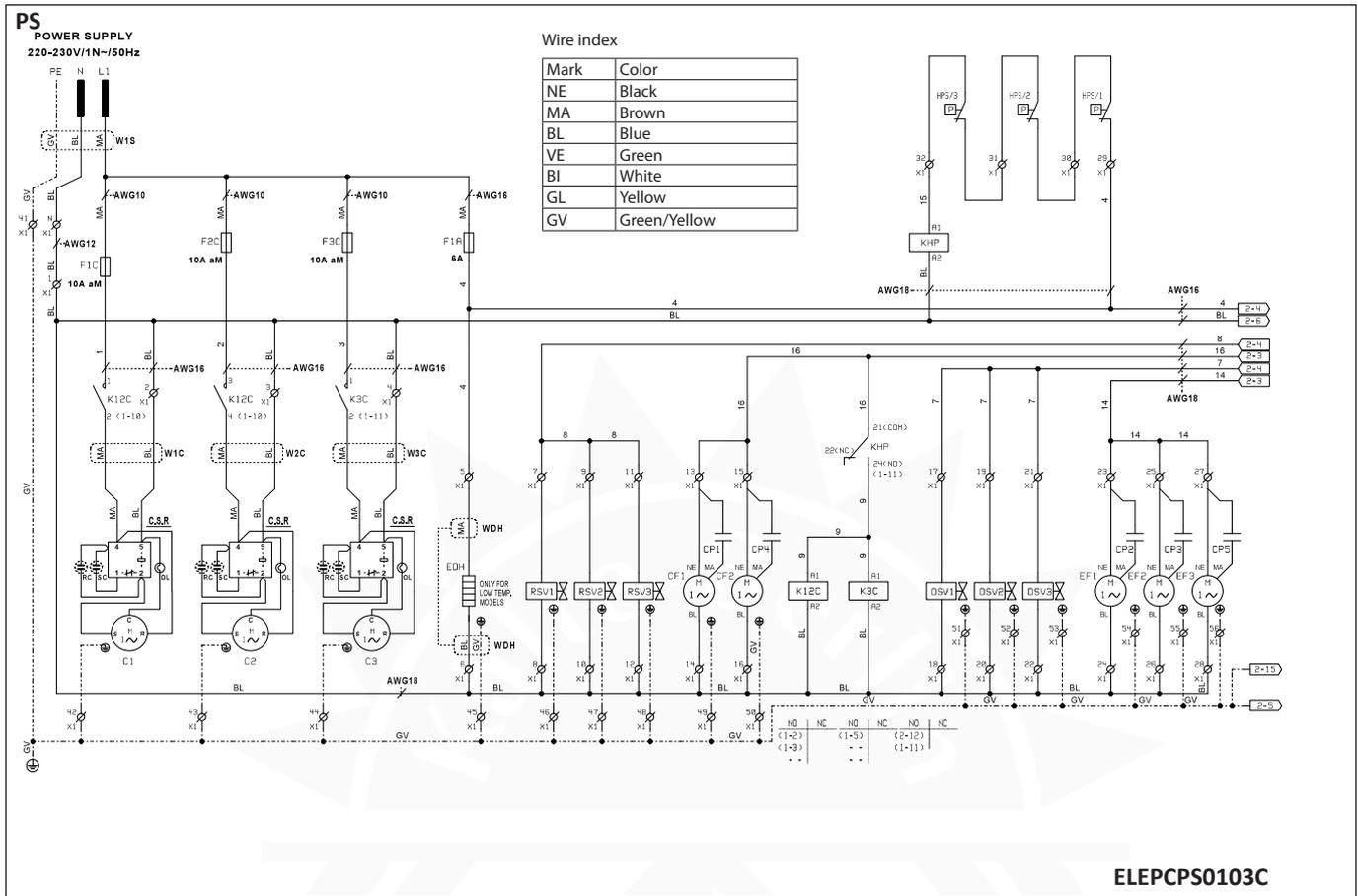
Device	Description
C1	Compressor 1
C2	Compressor 2
C.S.R.	Compressor starting kit
CF1	Condenser fan 1
CP1	Condenser fan 1 capacitor
CP3	Evaporator fan 1 capacitor
CP4	Evaporator fan 2 capacitor
DSV1	Defrost solenoid valve 1
DSV2	Defrost solenoid valve 2
EDH	Door heater
EF1	Evaporator fan 1
EF2	Evaproatator fan 2
F1C	Compressor 1 fuse
F2C	Compressor 2 fuse
F1A	Auxiliary fuse
F1E	Control unit
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

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# 6 Wiring diagrams

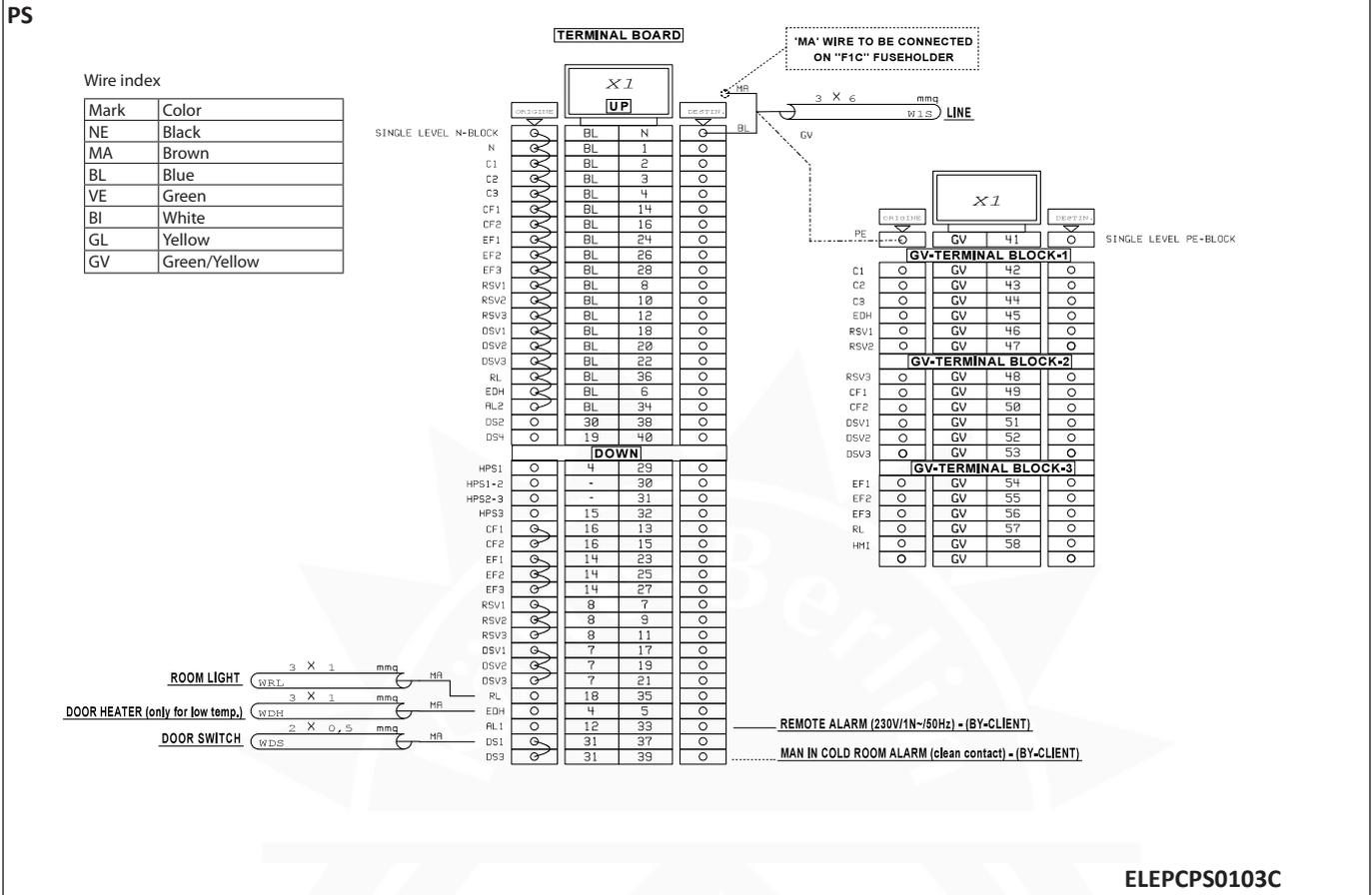
## 6 - 1 Wiring Diagrams - Single Phase



# 6 Wiring diagrams

## 6 - 1 Wiring Diagrams - Single Phase

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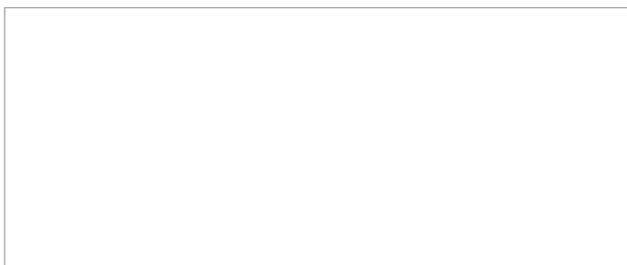
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DEVICE DISPOSIT.	DESCRIPTION / DESCRIZIONE	DEVICE DISPOSIT.	DESCRIPTION / DESCRIZIONE
C1	COMPRESSOR 1 / COMPRESSORE 1	HMI	HUMAN MACHINE INTERFACE
C2	COMPRESSOR 2 / COMPRESSORE 2	K12C	COMPRESSOR 1-2 RELAY / RELE' COMPRESSORE 1-2
C3	COMPRESSOR 3 / COMPRESSORE 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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