MITSUBISHI ELECTRIC

Changes for the Better

AIR CONDITIONING SYSTEMS

CITY MULTI

DATA BOOK

MODEL

CMB-M-NU-MA-SV

CMB-M-NU-MB-SV

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CMB-M-NU-MA-SV, CMB-M-NU-MB-SV

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1. SPECIFICATIONS

Model			CMB-M104NU-MA-SV			
Number of branch			4			
Power source			1-phase 208-230V			
			60Hz			
Power input	Cooling	kW	0.02/0.02			
	Heating	kW	0.01/0.01			
Current input	Cooling	A	0.08/0.09			
	Heating	A	0.05/0.05			
External finish			Galvanized steel plate			
Connectable outdoor/heat source unit capacity			M72 to M384			
Indoor unit capacity connectable to 1 branch *15			Model M54 or smaller(Use optional joint pipe combining 2 branches when the total unit capacity exceeds M55.)			
External dimension H x W x D *16		in.	9-15/16 x 41 x 34-11/16(38-1/4)			
		mm	252 x 1040 x 880(970)			
Refrigerant piping diameter	To outdoor/heat source unit		Connectable unit capacity	High press. pipe	Low press. pipe	
		in.(mm) O.D.	M72	5/8 (15.88) Brazed	3/4 (19.05) Brazed	
		in.(mm) O.D.	M96	3/4 (19.05) Brazed	7/8 (22.2) Brazed	
		*17 in.(mm) O.D.	M120	3/4 (19.05) Brazed	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	
		in.(mm) O.D.	M144 to M192	7/8 (22.2) Brazed	1-1/8 (28.58) Brazed	
		*17 in.(mm) O.D.	M216	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	1-1/8 (28.58) Brazed or 1-3/8 (34.93) Brazed	
		*17 in.(mm) O.D.	M240	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed	
		in.(mm) O.D.	M264 to M288	1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed	
		*17 in.(mm) O.D.	M312	1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed or 1-5/8 (41.28) Brazed	
		in.(mm) O.D.	M336 to M384	1-1/8 (28.58) Brazed	1-5/8 (41.28) Brazed	
	To indoor unit		Liquid pipe		Gas pipe	
		in.(mm) O.D.	Indoor unit Model M18 or smaller 1/4 (6.35) Brazed bigger than M18 3/8 (9.52) Brazed		Indoor unit Model M18 or smaller 1/2 (12.7) Brazed bigger than M18 5/8 (15.88) Brazed (3/4 (19.05) , 7/8 (22.2) with optional joint pipe used.)	
	To other BC controller		Total down-stream Indoor unit capacity	High press. pipe	Liquid pipe	Low press. pipe
		in.(mm) O.D.	to M72	5/8 (15.88) Brazed	3/8 (9.52) Brazed	3/4 (19.05) Brazed
		in.(mm) O.D.	M73 to M108	3/4 (19.05) Brazed	3/8 (9.52) Brazed	7/8 (22.2) Brazed
		in.(mm) O.D.	M109 to M126	3/4 (19.05) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M127 to M144	7/8 (22.2) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M145 to M216	7/8 (22.2) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M217 to M234	1-1/8 (28.58) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M235 to M288	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-3/8 (34.93) Brazed
		in.(mm) O.D.	M289 or above	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-5/8 (41.28) Brazed
Field drain pipe size		in.	3/4 NPT			
Net weight		lbs (kg)	117 (53)			
Sound pressure level (measured in anechoic room) *18	Rated operation	dB <A>	50			
	Defrost	dB <A>	56			
Accessories			Details refer to External Drw			
Remarks			-			

Notes:

1.Installation/foundation work, electrical connection work, insulation work, power source switch, and other items shall be referred to the Installation Manual.
2.The equipment is for R32 refrigerant.
3.Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors. (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
4.Sound pressure differs depending on the connected outdoor/heat source unit capacity or operation condition.The sound pressure level at the rated operation is the value of the cooling mode.
5.The sound pressure values were obtained in an anechoic room. Actual sound pressure level is usually greater than that measured in anechoic room due to ambient noise and deflection sound.
6.The solenoid valve switching sound is 56 dB (sound pressure level) regardless of the unit model.
7.Refrigerant piping diameter for connection of plural indoor units with 1 branch shall be referred to the Installation Manual.
8.This unit is not designed for outside installations.
9.When brazing the pipes, be sure to braze, after covering a wet cloth to the insulation pipes of the units in order to prevent it from burning and shrinking by heat.
10.The sound pressure level values were obtained at the location below 1.5m from the unit.
11.The ambient relative humidity of the BC controller needs to be kept below 80%.
12.R32 is flammable, and certain restrictions apply to the installation of units. When installing new units, moving the existing units, or changing the layout of the room, ensure that installation restrictions are observed. For detail, refer to the section in the DATA BOOK on installation restrictions.
13.For the insulation work of the piping and the installation method of the unit, follow the installation manual.
14.A minimum floor are requirement varies depending on the installation site
15.Indoor unit capacity connectable to 1 branch is changed depending on the indoor unit type and connection method. Please refer to the Installation Manual for more information.
16.The figure in parenthesis indicates the size including control box.
17.For the refrigerant pipe size, refer to Installation Manual of outdoor units/heat source units.
18.The sound pressure level measured by the conventional method in JIS for reference purpose.

Model			CMB-M106NU-MA-SV		
Number of branch			6		
Power source			1-phase 208-230V		
			60Hz		
Power input	Cooling	kW	0.02/0.02		
	Heating	kW	0.01/0.01		
Current input	Cooling	A	0.08/0.09		
	Heating	A	0.05/0.05		
External finish			Galvanized steel plate		
Connectable outdoor/heat source unit capacity			M72 to M384		
Indoor unit capacity connectable to 1 branch *15			Model M54 or smaller(Use optional joint pipe combining 2 branches when the total unit capacity exceeds M55.)		
External dimension H x W x D *16		in.	9-15/16 x 41 x 34-11/16(38-1/4)		
		mm	252 x 1040 x 880(970)		
Refrigerant piping diameter	To outdoor/heat source unit		Connectable unit capacity	High press. pipe	Low press. pipe
		in.(mm) O.D.	M72	5/8 (15.88) Brazed	3/4 (19.05) Brazed
		in.(mm) O.D.	M96	3/4 (19.05) Brazed	7/8 (22.2) Brazed
		*17 in.(mm) O.D.	M120	3/4 (19.05) Brazed	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed
		in.(mm) O.D.	M144 to M192	7/8 (22.2) Brazed	1-1/8 (28.58) Brazed
		*17 in.(mm) O.D.	M216	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	1-1/8 (28.58) Brazed or 1-3/8 (34.93) Brazed
		*17 in.(mm) O.D.	M240	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed
		in.(mm) O.D.	M264 to M288	1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed
		*17 in.(mm) O.D.	M312	1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed or 1-5/8 (41.28) Brazed
		in.(mm) O.D.	M336 to M384	1-1/8 (28.58) Brazed	1-5/8 (41.28) Brazed
	To indoor unit		Liquid pipe		Gas pipe
		in.(mm) O.D.	Indoor unit Model M18 or smaller 1/4 (6.35) Brazed bigger than M18 3/8 (9.52) Brazed		Indoor unit Model M18 or smaller 1/2 (12.7) Brazed bigger than M18 5/8 (15.88) Brazed (3/4 (19.05) , 7/8 (22.2) with optional joint pipe used.)
	To other BC controller		Total down-stream Indoor unit capacity	High press. pipe	Liquid pipe	Low press. pipe
		in.(mm) O.D.	to M72	5/8 (15.88) Brazed	3/8 (9.52) Brazed	3/4 (19.05) Brazed
		in.(mm) O.D.	M73 to M108	3/4 (19.05) Brazed	3/8 (9.52) Brazed	7/8 (22.2) Brazed
		in.(mm) O.D.	M109 to M126	3/4 (19.05) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M127 to M144	7/8 (22.2) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M145 to M216	7/8 (22.2) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M217 to M234	1-1/8 (28.58) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M235 to M288	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-3/8 (34.93) Brazed
		in.(mm) O.D.	M289 or above	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-5/8 (41.28) Brazed
Field drain pipe size		in.	3/4 NPT			
Net weight		lbs (kg)	126 (57)			
Sound pressure level (measured in anechoic room) *18	Rated operation	dB <A>	50			
	Defrost	dB <A>	56			
Accessories			Details refer to External Drw			
Remarks			-			

Notes:

1.Installation/foundation work, electrical connection work, insulation work, power source switch, and other items shall be referred to the Installation Manual.
2.The equipment is for R32 refrigerant.
3.Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors. (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
4.Sound pressure differs depending on the connected outdoor/heat source unit capacity or operation condition.The sound pressure level at the rated operation is the value of the cooling mode.
5.The sound pressure values were obtained in an anechoic room. Actual sound pressure level is usually greater than that measured in anechoic room due to ambient noise and deflection sound.
6.The solenoid valve switching sound is 56 dB (sound pressure level) regardless of the unit model.
7.Refrigerant piping diameter for connection of plural indoor units with 1 branch shall be referred to the Installation Manual.
8.This unit is not designed for outside installations.
9.When brazing the pipes, be sure to braze, after covering a wet cloth to the insulation pipes of the units in order to prevent it from burning and shrinking by heat.
10.The sound pressure level values were obtained at the location below 1.5m from the unit.
11.The ambient relative humidity of the BC controller needs to be kept below 80%.
12.R32 is flammable, and certain restrictions apply to the installation of units. When installing new units, moving the existing units, or changing the layout of the room, ensure that installation restrictions are observed. For detail, refer to the section in the DATA BOOK on installation restrictions.
13.For the insulation work of the piping and the installation method of the unit, follow the installation manual.
14.A minimum floor are requirement varies depending on the installation site
15.Indoor unit capacity connectable to 1 branch is changed depending on the indoor unit type and connection method. Please refer to the Installation Manual for more information.
16.The figure in parenthesis indicates the size including control box.
17.For the refrigerant pipe size, refer to Installation Manual of outdoor units/heat source units.
18.The sound pressure level measured by the conventional method in JIS for reference purpose.

BC controller

Model			CMB-M108NU-MA-SV			
Number of branch			8			
Power source			1-phase 208-230V			
			60Hz			
Power input	Cooling	kW	0.02/0.02			
	Heating	kW	0.01/0.01			
Current input	Cooling	A	0.09/0.10			
	Heating	A	0.06/0.06			
External finish			Galvanized steel plate			
Connectable outdoor/heat source unit capacity			M72 to M384			
Indoor unit capacity connectable to 1 branch *15			Model M54 or smaller(Use optional joint pipe combining 2 branches when the total unit capacity exceeds M55.)			
External dimension H x W x D *16		in.	9-15/16 x 41 x 34-11/16(38-1/4)			
		mm	252 x 1040 x 880(970)			
Refrigerant piping diameter	To outdoor/heat source unit		Connectable unit capacity	High press. pipe	Low press. pipe	
		in.(mm) O.D.	M72	5/8 (15.88) Brazed	3/4 (19.05) Brazed	
		in.(mm) O.D.	M96	3/4 (19.05) Brazed	7/8 (22.2) Brazed	
		*17 in.(mm) O.D.	M120	3/4 (19.05) Brazed	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	
		in.(mm) O.D.	M144 to M192	7/8 (22.2) Brazed	1-1/8 (28.58) Brazed	
		*17 in.(mm) O.D.	M216	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	1-1/8 (28.58) Brazed or 1-3/8 (34.93) Brazed	
		*17 in.(mm) O.D.	M240	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed	
		in.(mm) O.D.	M264 to M288	1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed	
		*17 in.(mm) O.D.	M312	1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed or 1-5/8 (41.28) Brazed	
		in.(mm) O.D.	M336 to M384	1-1/8 (28.58) Brazed	1-5/8 (41.28) Brazed	
	To indoor unit		Liquid pipe		Gas pipe	
		in.(mm) O.D.	Indoor unit Model M18 or smaller 1/4 (6.35) Brazed bigger than M18 3/8 (9.52) Brazed		Indoor unit Model M18 or smaller 1/2 (12.7) Brazed bigger than M18 5/8 (15.88) Brazed (3/4 (19.05) , 7/8 (22.2) with optional joint pipe used.)	
	To other BC controller		Total down-stream Indoor unit capacity	High press. pipe	Liquid pipe	Low press. pipe
		in.(mm) O.D.	to M72	5/8 (15.88) Brazed	3/8 (9.52) Brazed	3/4 (19.05) Brazed
		in.(mm) O.D.	M73 to M108	3/4 (19.05) Brazed	3/8 (9.52) Brazed	7/8 (22.2) Brazed
		in.(mm) O.D.	M109 to M126	3/4 (19.05) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M127 to M144	7/8 (22.2) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M145 to M216	7/8 (22.2) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M217 to M234	1-1/8 (28.58) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M235 to M288	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-3/8 (34.93) Brazed
		in.(mm) O.D.	M289 or above	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-5/8 (41.28) Brazed
Field drain pipe size		in.	3/4 NPT			
Net weight		lbs (kg)	139 (63)			
Sound pressure level (measured in anechoic room) *18	Rated operation	dB <A>	50			
	Defrost	dB <A>	56			
Accessories			Details refer to External Drw			
Remarks			-			

Notes:

1.Installation/foundation work, electrical connection work, insulation work, power source switch, and other items shall be referred to the Installation Manual.
2.The equipment is for R32 refrigerant.
3.Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors. (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
4.Sound pressure differs depending on the connected outdoor/heat source unit capacity or operation condition.The sound pressure level at the rated operation is the value of the cooling mode.
5.The sound pressure values were obtained in an anechoic room. Actual sound pressure level is usually greater than that measured in anechoic room due to ambient noise and deflection sound.
6.The solenoid valve switching sound is 56 dB (sound pressure level) regardless of the unit model.
7.Refrigerant piping diameter for connection of plural indoor units with 1 branch shall be referred to the Installation Manual.
8.This unit is not designed for outside installations.
9.When brazing the pipes, be sure to braze, after covering a wet cloth to the insulation pipes of the units in order to prevent it from burning and shrinking by heat.
10.The sound pressure level values were obtained at the location below 1.5m from the unit.
11.The ambient relative humidity of the BC controller needs to be kept below 80%.
12.R32 is flammable, and certain restrictions apply to the installation of units. When installing new units, moving the existing units, or changing the layout of the room, ensure that installation restrictions are observed. For detail, refer to the section in the DATA BOOK on installation restrictions.
13.For the insulation work of the piping and the installation method of the unit, follow the installation manual.
14.A minimum floor are requirement varies depending on the installation site
15.Indoor unit capacity connectable to 1 branch is changed depending on the indoor unit type and connection method. Please refer to the Installation Manual for more information.
16.The figure in parenthesis indicates the size including control box.
17.For the refrigerant pipe size, refer to Installation Manual of outdoor units/heat source units.
18.The sound pressure level measured by the conventional method in JIS for reference purpose.

Model			CMB-M1012NU-MA-SV			
Number of branch			12			
Power source			1-phase 208-230V			
			60Hz			
Power input	Cooling	kW	0.02/0.02			
	Heating	kW	0.01/0.01			
Current input	Cooling	A	0.09/0.10			
	Heating	A	0.06/0.06			
External finish			Galvanized steel plate			
Connectable outdoor/heat source unit capacity			M72 to M384			
Indoor unit capacity connectable to 1 branch *15			Model M54 or smaller(Use optional joint pipe combining 2 branches when the total unit capacity exceeds M55.)			
External dimension H x W x D *16		in.	9-15/16 x 50-5/8 x 34-11/16(38-1/4)			
		mm	252 x 1285 x 880(970)			
Refrigerant piping diameter	To outdoor/heat source unit		Connectable unit capacity	High press. pipe	Low press. pipe	
		in.(mm) O.D.	M72	5/8 (15.88) Brazed	3/4 (19.05) Brazed	
		in.(mm) O.D.	M96	3/4 (19.05) Brazed	7/8 (22.2) Brazed	
		*17 in.(mm) O.D.	M120	3/4 (19.05) Brazed	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	
		in.(mm) O.D.	M144 to M192	7/8 (22.2) Brazed	1-1/8 (28.58) Brazed	
		*17 in.(mm) O.D.	M216	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	1-1/8 (28.58) Brazed or 1-3/8 (34.93) Brazed	
		*17 in.(mm) O.D.	M240	7/8 (22.2) Brazed or 1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed	
		in.(mm) O.D.	M264 to M288	1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed	
		*17 in.(mm) O.D.	M312	1-1/8 (28.58) Brazed	1-3/8 (34.93) Brazed or 1-5/8 (41.28) Brazed	
		in.(mm) O.D.	M336 to M384	1-1/8 (28.58) Brazed	1-5/8 (41.28) Brazed	
	To indoor unit		Liquid pipe		Gas pipe	
		in.(mm) O.D.	Indoor unit Model M18 or smaller 1/4 (6.35) Brazed bigger than M18 3/8 (9.52) Brazed		Indoor unit Model M18 or smaller 1/2 (12.7) Brazed bigger than M18 5/8 (15.88) Brazed (3/4 (19.05) , 7/8 (22.2) with optional joint pipe used.)	
	To other BC controller		Total down-stream Indoor unit capacity	High press. pipe	Liquid pipe	Low press. pipe
		in.(mm) O.D.	to M72	5/8 (15.88) Brazed	3/8 (9.52) Brazed	3/4 (19.05) Brazed
		in.(mm) O.D.	M73 to M108	3/4 (19.05) Brazed	3/8 (9.52) Brazed	7/8 (22.2) Brazed
		in.(mm) O.D.	M109 to M126	3/4 (19.05) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M127 to M144	7/8 (22.2) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M145 to M216	7/8 (22.2) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M217 to M234	1-1/8 (28.58) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M235 to M288	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-3/8 (34.93) Brazed
		in.(mm) O.D.	M289 or above	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-5/8 (41.28) Brazed
Field drain pipe size		in.	3/4 NPT			
Net weight		lbs (kg)	170 (77)			
Sound pressure level (measured in anechoic room) *18	Rated operation	dB <A>	50			
	Defrost	dB <A>	56			
Accessories			Details refer to External Drw			
Remarks			-			

Notes:

1.Installation/foundation work, electrical connection work, insulation work, power source switch, and other items shall be referred to the Installation Manual.
2.The equipment is for R32 refrigerant.
3.Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors. (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
4.Sound pressure differs depending on the connected outdoor/heat source unit capacity or operation condition.The sound pressure level at the rated operation is the value of the cooling mode.
5.The sound pressure values were obtained in an anechoic room. Actual sound pressure level is usually greater than that measured in anechoic room due to ambient noise and deflection sound.
6.The solenoid valve switching sound is 56 dB (sound pressure level) regardless of the unit model.
7.Refrigerant piping diameter for connection of plural indoor units with 1 branch shall be referred to the Installation Manual.
8.This unit is not designed for outside installations.
9.When brazing the pipes, be sure to braze, after covering a wet cloth to the insulation pipes of the units in order to prevent it from burning and shrinking by heat.
10.The sound pressure level values were obtained at the location below 1.5m from the unit.
11.The ambient relative humidity of the BC controller needs to be kept below 80%.
12.R32 is flammable, and certain restrictions apply to the installation of units. When installing new units, moving the existing units, or changing the layout of the room, ensure that installation restrictions are observed. For detail, refer to the section in the DATA BOOK on installation restrictions.
13.For the insulation work of the piping and the installation method of the unit, follow the installation manual.
14.A minimum floor are requirement varies depending on the installation site
15.Indoor unit capacity connectable to 1 branch is changed depending on the indoor unit type and connection method. Please refer to the Installation Manual for more information.
16.The figure in parenthesis indicates the size including control box.
17.For the refrigerant pipe size, refer to Installation Manual of outdoor units/heat source units.
18.The sound pressure level measured by the conventional method in JIS for reference purpose.

Model			CMB-M104NU-MB-SV			
Number of branch			4			
Power source			1-phase 208-230V			
			60Hz			
Power input	Cooling	kW	0.01/0.01			
	Heating	kW	0.01/0.01			
Current input	Cooling	A	0.05/0.05			
	Heating	A	0.05/0.05			
External finish			Galvanized steel plate			
Connectable Main BC controller			CMB-M104/106/108/1012NU-MA-SV			
The maximum number of connectable Sub BC controllers			11			
The maximum connectable capacity of indoor units			M126 for each			
Indoor unit capacity connectable to 1 branch *16			Model M54 or smaller(Use optional joint pipe combining 2 branches when the total unit capacity exceeds M55.)			
External dimension H x W x D *17		in.	9-15/16 x 41 x 34-11/16(38-1/4)			
		mm	252 x 1040 x 880(970)			
Refrigerant piping diameter	To outdoor/heat source unit		Connectable unit capacity	High press. pipe	Low press. pipe	
		in.(mm) O.D.	-	-	-	
	To indoor unit		Liquid pipe		Gas pipe	
		in.(mm) O.D.	Indoor unit Model M18 or smaller 1/4 (6.35) Brazed bigger than M18 3/8 (9.52) Brazed		Indoor unit Model M18 or smaller 1/2 (12.7) Brazed bigger than M18 5/8 (15.88) Brazed (3/4 (19.05) , 7/8 (22.2) with optional joint pipe used.)	
	To other BC controller		Total down-stream Indoor unit capacity	High press. pipe	Liquid pipe	Low press. pipe
		in.(mm) O.D.	to M72	5/8 (15.88) Brazed	3/8 (9.52) Brazed	3/4 (19.05) Brazed
		in.(mm) O.D.	M73 to M108	3/4 (19.05) Brazed	3/8 (9.52) Brazed	7/8 (22.2) Brazed
		in.(mm) O.D.	M109 to M126	3/4 (19.05) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M127 to M144	7/8 (22.2) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M145 to M216	7/8 (22.2) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M217 to M234	1-1/8 (28.58) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M235 to M288	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-3/8 (34.93) Brazed
		in.(mm) O.D.	M289 or above	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-5/8 (41.28) Brazed
Field drain pipe size		in.	3/4 NPT			
Net weight		lbs (kg)	95 (43)			
Sound pressure level (measured in anechoic room) *18	Rated operation	dB <A>	41			
	Defrost	dB <A>	53			
Accessories			Details refer to External Drw			
Remarks			-			

Notes:

1.Installation/foundation work, electrical connection work, insulation work, power source switch, and other items shall be referred to the Installation Manual.
2.The equipment is for R32 refrigerant.
3.Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors. (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
4.Sound pressure differs depending on the connected outdoor/heat source unit capacity or operation condition.The sound pressure level at the rated operation is the value of the cooling mode.
5.The sound pressure values were obtained in an anechoic room. Actual sound pressure level is usually greater than that measured in anechoic room due to ambient noise and deflection sound.
6.The solenoid valve switching sound is 56 dB (sound pressure level) regardless of the unit model.
7.Refrigerant piping diameter for connection of plural indoor units with 1 branch shall be referred to the Installation Manual.
8.This unit is not designed for outside installations.
9.When brazing the pipes, be sure to braze, after covering a wet cloth to the insulation pipes of the units in order to prevent it from burning and shrinking by heat.
10.The sound pressure level values were obtained at the location below 1.5m from the unit.
11.The ambient relative humidity of the BC controller needs to be kept below 80%.
12.R32 is flammable, and certain restrictions apply to the installation of units. When installing new units, moving the existing units, or changing the layout of the room, ensure that installation restrictions are observed. For detail, refer to the section in the DATA BOOK on installation restrictions.
13.For the insulation work of the piping and the installation method of the unit, follow the installation manual.
14.A minimum floor are requirement varies depending on the installation site
15.Can't use singleness. (MAIN BC CONTROLLER is necessary)
16.Indoor unit capacity connectable to 1 branch is changed depending on the indoor unit type and connection method. Please refer to the Installation Manual for more information.
17.The figure in parenthesis indicates the size including control box.
18.The sound pressure level measured by the conventional method in JIS for reference purpose.

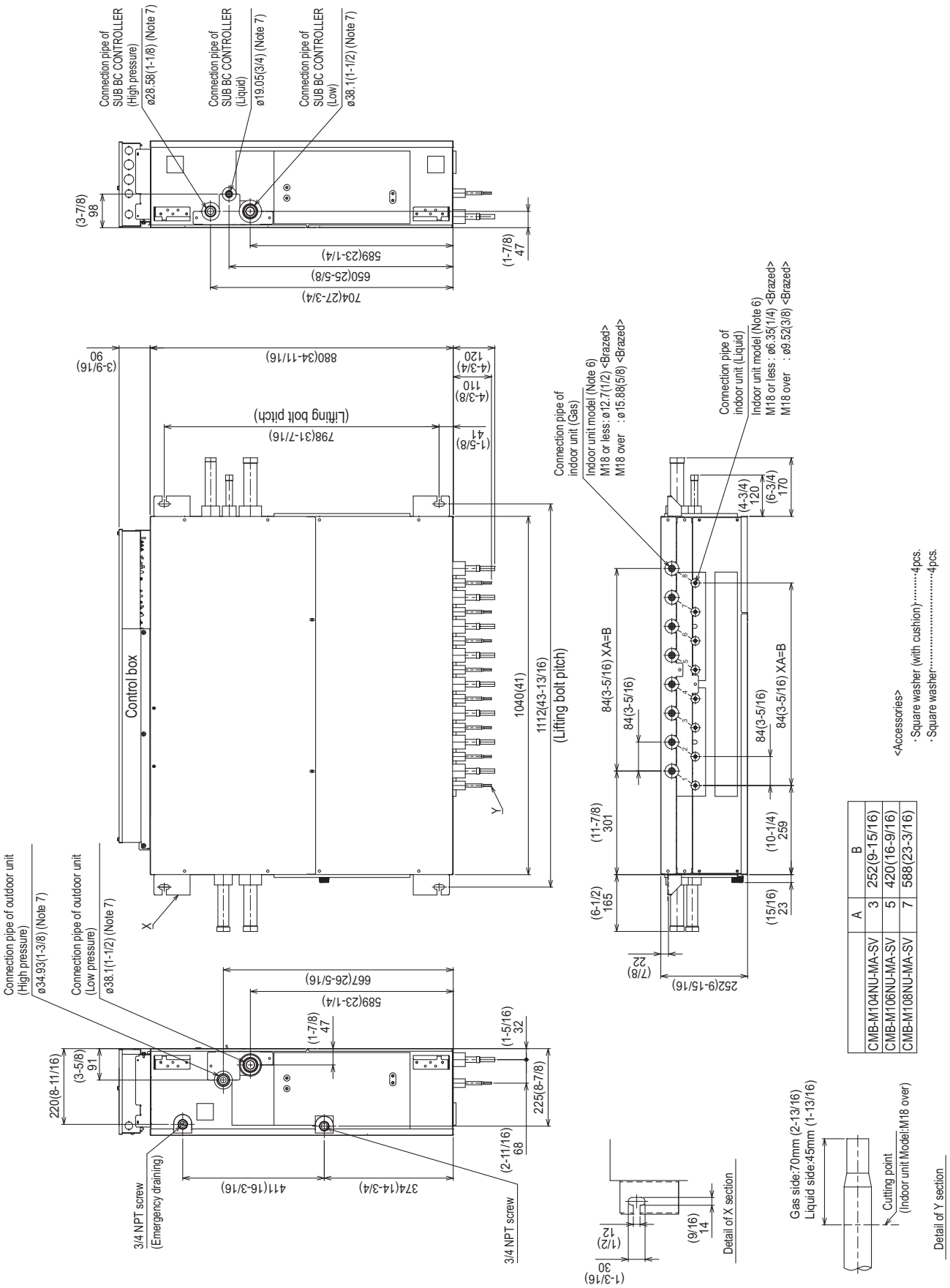
1. SPECIFICATIONS

Model			CMB-M108NU-MB-SV			
Number of branch			8			
Power source			1-phase 208-230V			
			60Hz			
Power input	Cooling	kW	0.01/0.01			
	Heating	kW	0.01/0.01			
Current input	Cooling	A	0.06/0.06			
	Heating	A	0.06/0.06			
External finish			Galvanized steel plate			
Connectable Main BC controller			CMB-M104/106/108/1012NU-MA-SV			
The maximum number of connectable Sub BC controllers			11			
The maximum connectable capacity of indoor units			M126 for each			
Indoor unit capacity connectable to 1 branch *16			Model M54 or smaller(Use optional joint pipe combining 2 branches when the total unit capacity exceeds M55.)			
External dimension H x W x D *17		in.	9-15/16 x 41 x 34-11/16(38-1/4)			
		mm	252 x 1040 x 880(970)			
Refrigerant piping diameter	To outdoor/heat source unit		Connectable unit capacity	High press. pipe	Low press. pipe	
		in.(mm) O.D.	-	-	-	
	To indoor unit		Liquid pipe	Gas pipe		
		in.(mm) O.D.	Indoor unit Model M18 or smaller 1/4 (6.35) Brazed bigger than M18 3/8 (9.52) Brazed	Indoor unit Model M18 or smaller 1/2 (12.7) Brazed bigger than M18 5/8 (15.88) Brazed (3/4 (19.05) , 7/8 (22.2) with optional joint pipe used.)		
	To other BC controller		Total down-stream Indoor unit capacity	High press. pipe	Liquid pipe	Low press. pipe
		in.(mm) O.D.	to M72	5/8 (15.88) Brazed	3/8 (9.52) Brazed	3/4 (19.05) Brazed
		in.(mm) O.D.	M73 to M108	3/4 (19.05) Brazed	3/8 (9.52) Brazed	7/8 (22.2) Brazed
		in.(mm) O.D.	M109 to M126	3/4 (19.05) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M127 to M144	7/8 (22.2) Brazed	1/2 (12.7) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M145 to M216	7/8 (22.2) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M217 to M234	1-1/8 (28.58) Brazed	5/8 (15.88) Brazed	1-1/8 (28.58) Brazed
		in.(mm) O.D.	M235 to M288	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-3/8 (34.93) Brazed
		in.(mm) O.D.	M289 or above	1-1/8 (28.58) Brazed	3/4 (19.05) Brazed	1-5/8 (41.28) Brazed
Field drain pipe size		in.	3/4 NPT			
Net weight		lbs (kg)	120 (54)			
Sound pressure level (measured in anechoic room) *18	Rated operation	dB <A>	41			
	Defrost	dB <A>	53			
Accessories			Details refer to External Drw			
Remarks			-			

Notes:
1.Installation/foundation work, electrical connection work, insulation work, power source switch, and other items shall be referred to the Installation Manual.
2.The equipment is for R32 refrigerant.
3.Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors. (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
4.Sound pressure differs depending on the connected outdoor/heat source unit capacity or operation condition.The sound pressure level at the rated operation is the value of the cooling mode.
5.The sound pressure values were obtained in an anechoic room. Actual sound pressure level is usually greater than that measured in anechoic room due to ambient noise and deflection sound.
6.The solenoid valve switching sound is 56 dB (sound pressure level) regardless of the unit model.
7.Refrigerant piping diameter for connection of plural indoor units with 1 branch shall be referred to the Installation Manual.
8.This unit is not designed for outside installations.
9.When brazing the pipes, be sure to braze, after covering a wet cloth to the insulation pipes of the units in order to prevent it from burning and shrinking by heat.
10.The sound pressure level values were obtained at the location below 1.5m from the unit.
11.The ambient relative humidity of the BC controller needs to be kept below 80%.
12.R32 is flammable, and certain restrictions apply to the installation of units. When installing new units, moving the existing units, or changing the layout of the room, ensure that installation restrictions are observed. For detail, refer to the section in the DATA BOOK on installation restrictions.
13.For the insulation work of the piping and the installation method of the unit, follow the installation manual.
14.A minimum floor are requirement varies depending on the installation site
15.Can't use singleness. (MAIN BC CONTROLLER is necessary)
16.Indoor unit capacity connectable to 1 branch is changed depending on the indoor unit type and connection method. Please refer to the Installation Manual for more information.
17.The figure in parenthesis indicates the size including control box.
18.The sound pressure level measured by the conventional method in JIS for reference purpose.

CMB-M104, 106, 108NU-MA-SV

Unit: mm (in)



<Accessories>
· Square washer (with cushion)·····4pcs.
· Square washer·····4pcs.

	A	B
CMB-M104NU-MA-SV	3	252(9-15/16)
CMB-M106NU-MA-SV	5	420(16-9/16)
CMB-M108NU-MA-SV	7	588(23-3/16)

CMB-M104, 106, 108NU-MA-SV

Unit: mm (in)

Note
1. Suspension bolt(ø10) and nut(M10) prepare in the field.
2. Take notice of service space as shown.
   (Please give attention not to occupy service space by letting ducts and pipes through.)
   The access doors in the service space are required for maintenance.
   Provide separate openings to bring down the product.
3. If the piping is routed over the inspection port, it will not be possible to replace the service part.
4. Please take service space for connection pipe of SUB BC CONTROLLER.
5. Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors.
   (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
6. Refer to the Installation Manual for refrigerant piping diameter size when connecting plural indoor units with 1 branch.
7. Refer to the Table-1,2 connection pipe of outdoor unit or SUB BC CONTROLLER diameter size.
8. Refer to the Installation Manual for insulation of connection pipe and drain piping.
9. Do not place the BC controller directly on the floor.
10. Installing pipes over the access doors will obstruct the replacement of service parts.
11. Seal the opened connection pipes of the indoor unit.
    (Recommended sealing parts are sold separately.)

Table-1. To outdoor/heat source unit (Note.7)

Connectable unit capacity	High press. Pipe	Low press. Pipe	
M72	ø15.88(5/8)	ø19.05(3/4)	
M96	ø19.05(3/4)	ø22.2(7/8)	
M120	ø19.05(3/4)	ø22.2(7/8) or ø28.58(1-1/8)	*
M144 to M192	ø22.2(7/8)	ø28.58(1-1/8)	
M216	ø22.2(7/8) or ø28.58(1-1/8)	ø28.58(1-1/8)	*
M240	ø22.2(7/8) or ø28.58(1-1/8)	ø34.93(1-3/8)	*
M264 to M288	ø28.58(1-1/8)	ø34.93(1-3/8)	
M312	ø28.58(1-1/8)	ø34.93(1-3/8) or ø41.28(1-5/8)	*
M336	ø28.58(1-1/8)	ø41.28(1-5/8)	

*For the refrigerant pipe size, refer to Installation Manual of outdoor units/heat source units.

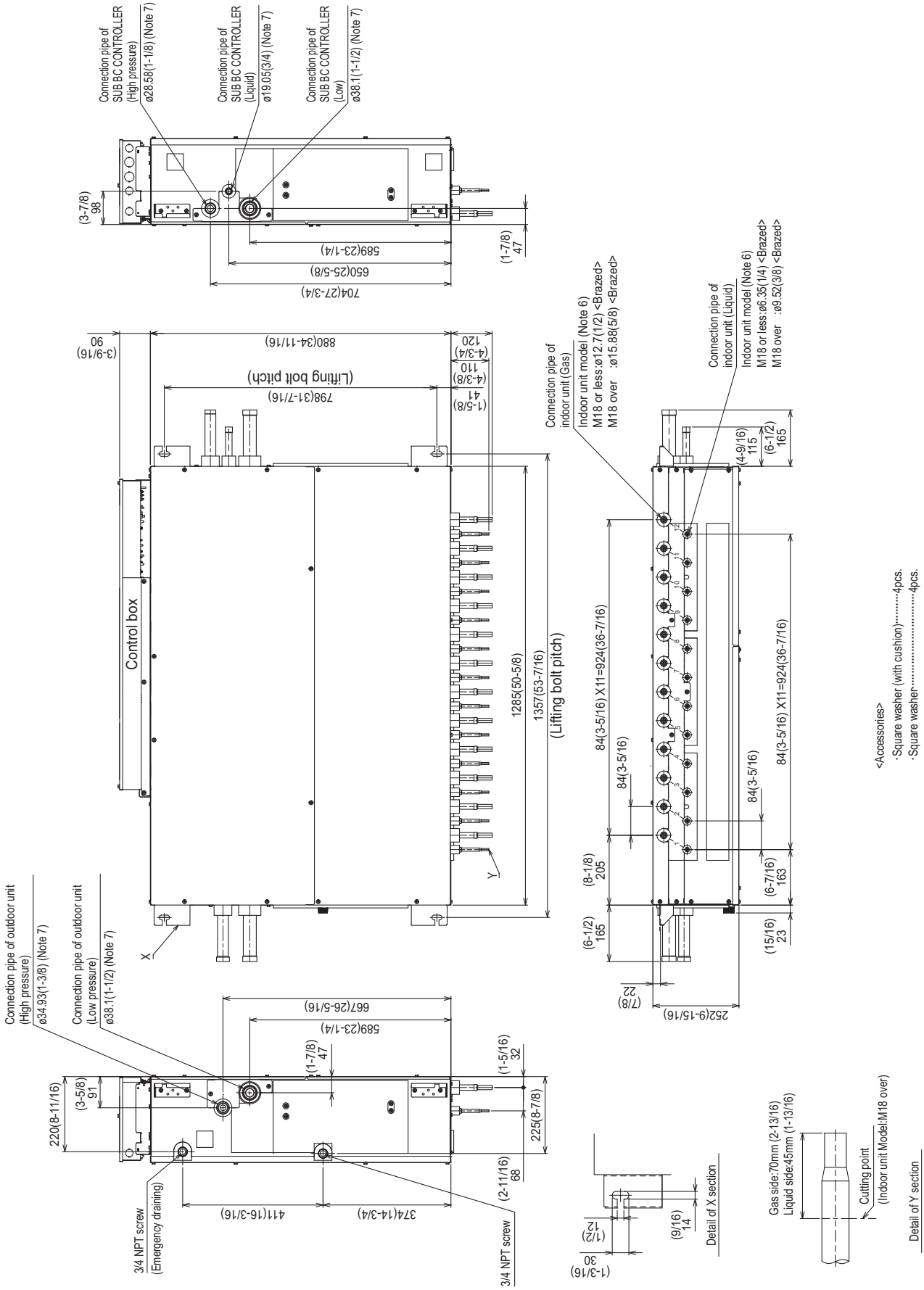
Table-2. To other BC controller (Note.7)

Total downstream Indoor unit capacity	High press. Pipe	Liquid Pipe	Low press. Pipe
M72 or less	ø15.88(5/8)	ø9.52(3/8)	ø19.05(3/4)
M73 to 108	ø19.05(3/4)	ø9.52(3/8)	ø22.2(7/8)
M109 to 126	ø19.05(3/4)	ø12.7(1/2)	ø28.58(1-1/8)
M127 to 144	ø22.2(7/8)	ø12.7(1/2)	ø28.58(1-1/8)
M145 to 216	ø22.2(7/8)	ø15.88(5/8)	ø28.58(1-1/8)
M217 to 234	ø28.58(1-1/8)	ø15.88(5/8)	ø28.58(1-1/8)
M235 to 288	ø28.58(1-1/8)	ø19.05(3/4)	ø34.93(1-3/8)
M289 or more	ø28.58(1-1/8)	ø19.05(3/4)	ø41.28(1-5/8)

BC controller

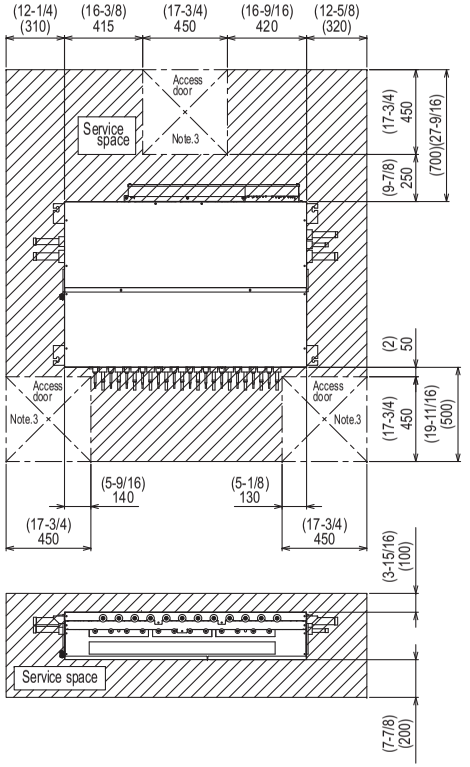
CMB-M1012NU-MA-SV

Unit: mm (in)



CMB-M1012NU-MA-SV

Unit: mm (in)



Note 1.Suspension bolt(ø10) and nut(M10) prepare in the field.
2.Take notice of service space as shown.
(Please give attention not to occupy service space by letting ducts and pipes through.)
The access doors in the service space are required for maintenance.
Provide separate openings to bring down the product.
3.If the piping is routed over the inspection port, it will not be possible to replace the service part.
4.Please take service space for connection pipe of SUB BC CONTROLLER.
5.Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors.
(For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
6.Refer to the Installation Manual for refrigerant piping diameter size when connecting plural indoor units with 1 branch.
7.Refer to the Table-1,2 connection pipe of outdoor unit or SUB BC CONTROLLER diameter size.
8.Refer to the Installation Manual for insulation of connection pipe and drain piping.
9.Do not place the BC controller directly on the floor.
10.Installing pipes over the access doors will obstruct the replacement of service parts.
11.Seal the opened connection pipes of the indoor unit.
(Recommended sealing parts are sold separately.)

Table-1.To outdoor/heat source unit (Note.7)

Connectable unit capacity	High press. Pipe	Low press. Pipe	
M72	ø15.88(5/8)	ø19.05(3/4)	
M96	ø19.05(3/4)	ø22.2(7/8)	
M120	ø19.05(3/4)	ø22.2(7/8) or ø28.58(1-1/8)	*
M144 to M192	ø22.2(7/8)	ø28.58(1-1/8)	
M216	ø22.2(7/8) or ø28.58(1-1/8)	ø28.58(1-1/8)	*
M240	ø22.2(7/8) or ø28.58(1-1/8)	ø34.93(1-3/8)	*
M264 to M288	ø28.58(1-1/8)	ø34.93(1-3/8)	
M312	ø28.58(1-1/8)	ø34.93(1-3/8) or ø41.28(1-5/8)	*
M336	ø28.58(1-1/8)	ø41.28(1-5/8)	

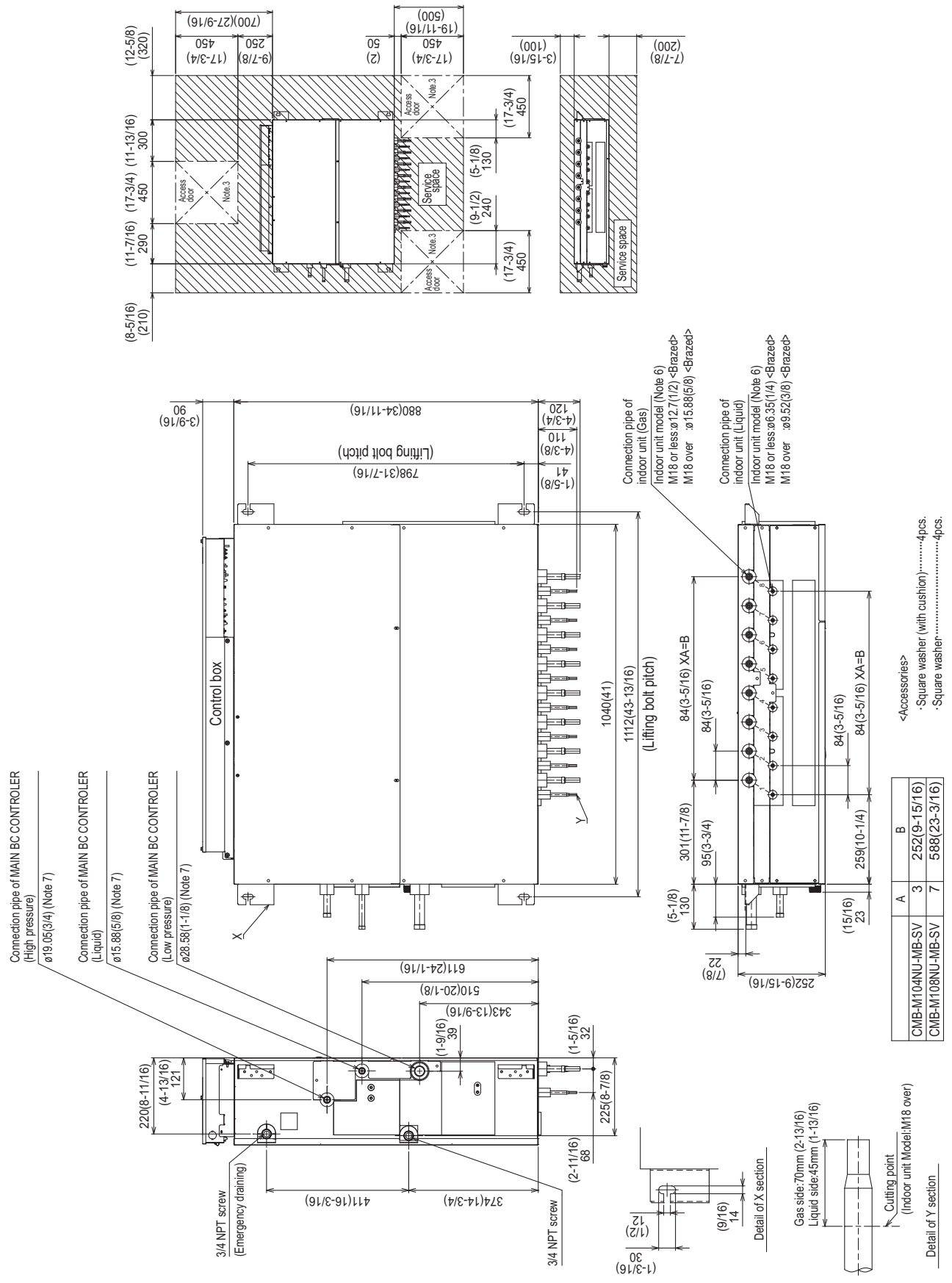
*For the refrigerant pipe size, refer to Installation Manual of outdoor units/heat source units.

Table-2.To other BC controller (Note.7)

Total downstream Indoor unit capacity	High press. Pipe	Liquid Pipe	Low press. Pipe
M72 or less	ø15.88(5/8)	ø9.52(3/8)	ø19.05(3/4)
M73 to 108	ø19.05(3/4)	ø9.52(3/8)	ø22.2(7/8)
M109 to 126	ø19.05(3/4)	ø12.7(1/2)	ø28.58(1-1/8)
M127 to 144	ø22.2(7/8)	ø12.7(1/2)	ø28.58(1-1/8)
M145 to 216	ø22.2(7/8)	ø15.88(5/8)	ø28.58(1-1/8)
M217 to 234	ø28.58(1-1/8)	ø15.88(5/8)	ø28.58(1-1/8)
M235 to 288	ø28.58(1-1/8)	ø19.05(3/4)	ø34.93(1-3/8)
M289 or more	ø28.58(1-1/8)	ø19.05(3/4)	ø41.28(1-5/8)

CMB-M104, 108NU-MB-SV

Unit: mm (in)



	A	B
CMB-M104NU-MB-SV	3	252(9-15/16)
CMB-M108NU-MB-SV	7	588(23-3/16)

CMB-M104, 108NU-MB-SV

Unit: mm (in)

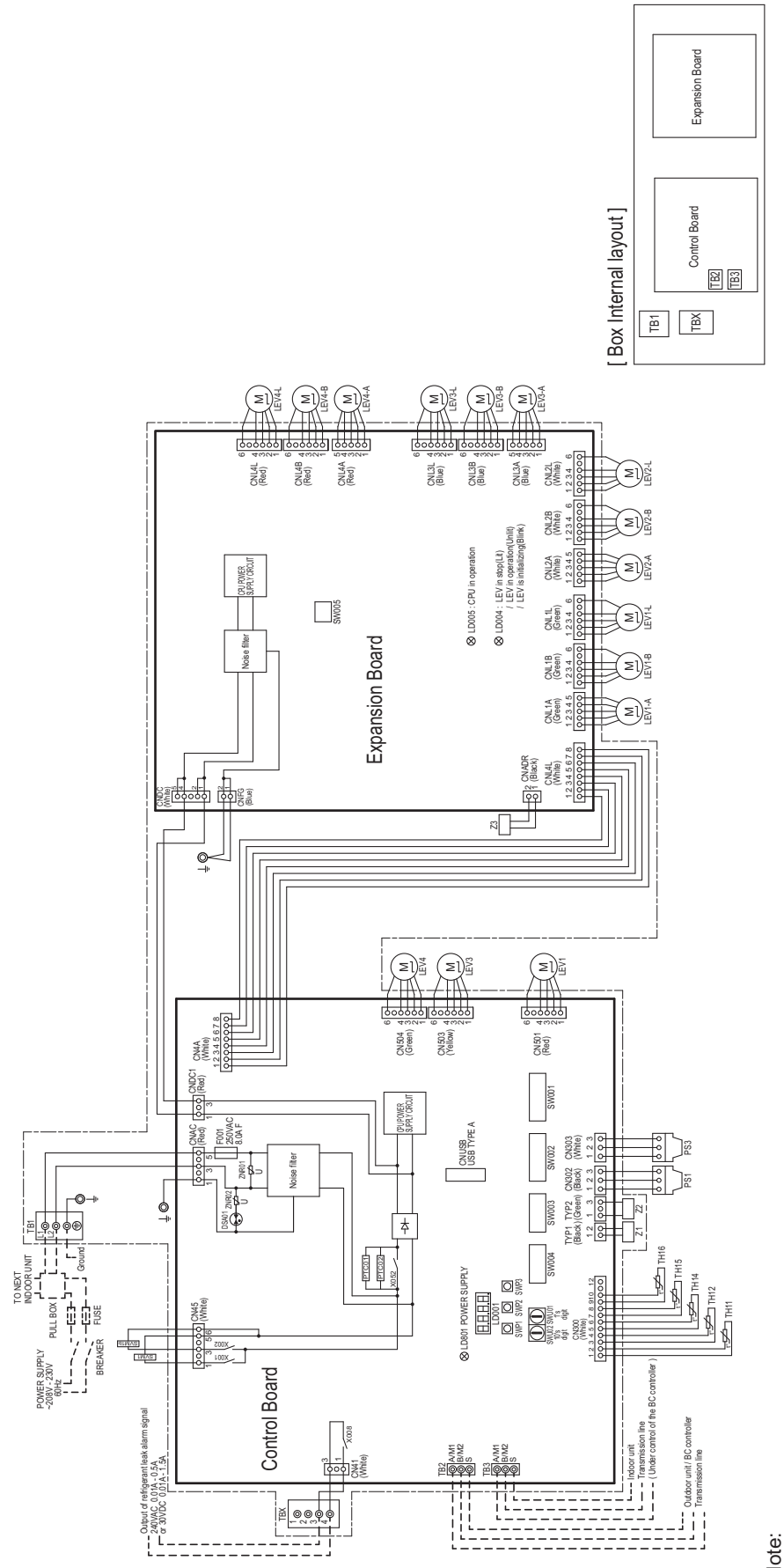
Note
1. Suspension bolt(ø10) and nut(M10) prepare in the field.
2. Take notice of service space as shown.
   (Please give attention not to occupy service space by letting ducts and pipes through.)
   The access doors in the service space are required for maintenance.
   Provide separate openings to bring down the product.
3. If the piping is routed over the inspection port, it will not be possible to replace the service part.
4. Can't use singleness. (MAIN BC CONTROLLER is necessary.)
5. Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors.
   (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
6. Refer to the Installation Manual for refrigerant piping diameter size when connecting plural indoor units with 1 branch.
7. Refer to the Table-1 for connection pipe of MAIN BC CONTROLLER.
8. Refer to the Installation Manual for insulation of connection pipe and drain piping.
9. Do not place the BC controller directly on the floor.
10. Installing pipes over the access doors will obstruct the replacement of service parts.
11. Seal the opened connection pipes of the indoor unit.
    (Recommended sealing parts are sold separately.)

Table-1.To other BC controller (Note.7)

Total downstream Indoor unit capacity	High press. Pipe	Liquid Pipe	Low press. Pipe
M72 or less	ø15.88(5/8)	ø9.52(3/8)	ø19.05(3/4)
M73 to 108	ø19.05(3/4)	ø9.52(3/8)	ø22.2(7/8)
M109 to 126	ø19.05(3/4)	ø12.7(1/2)	ø28.58(1-1/8)
M127 to 144	ø22.2(7/8)	ø12.7(1/2)	ø28.58(1-1/8)
M145 to 216	ø22.2(7/8)	ø15.88(5/8)	ø28.58(1-1/8)
M217 to 234	ø28.58(1-1/8)	ø15.88(5/8)	ø28.58(1-1/8)
M235 to 288	ø28.58(1-1/8)	ø19.05(3/4)	ø34.93(1-3/8)
M289 or more	ø28.58(1-1/8)	ø19.05(3/4)	ø41.28(1-5/8)

BC controller

CMB-M104NU-MA-SV



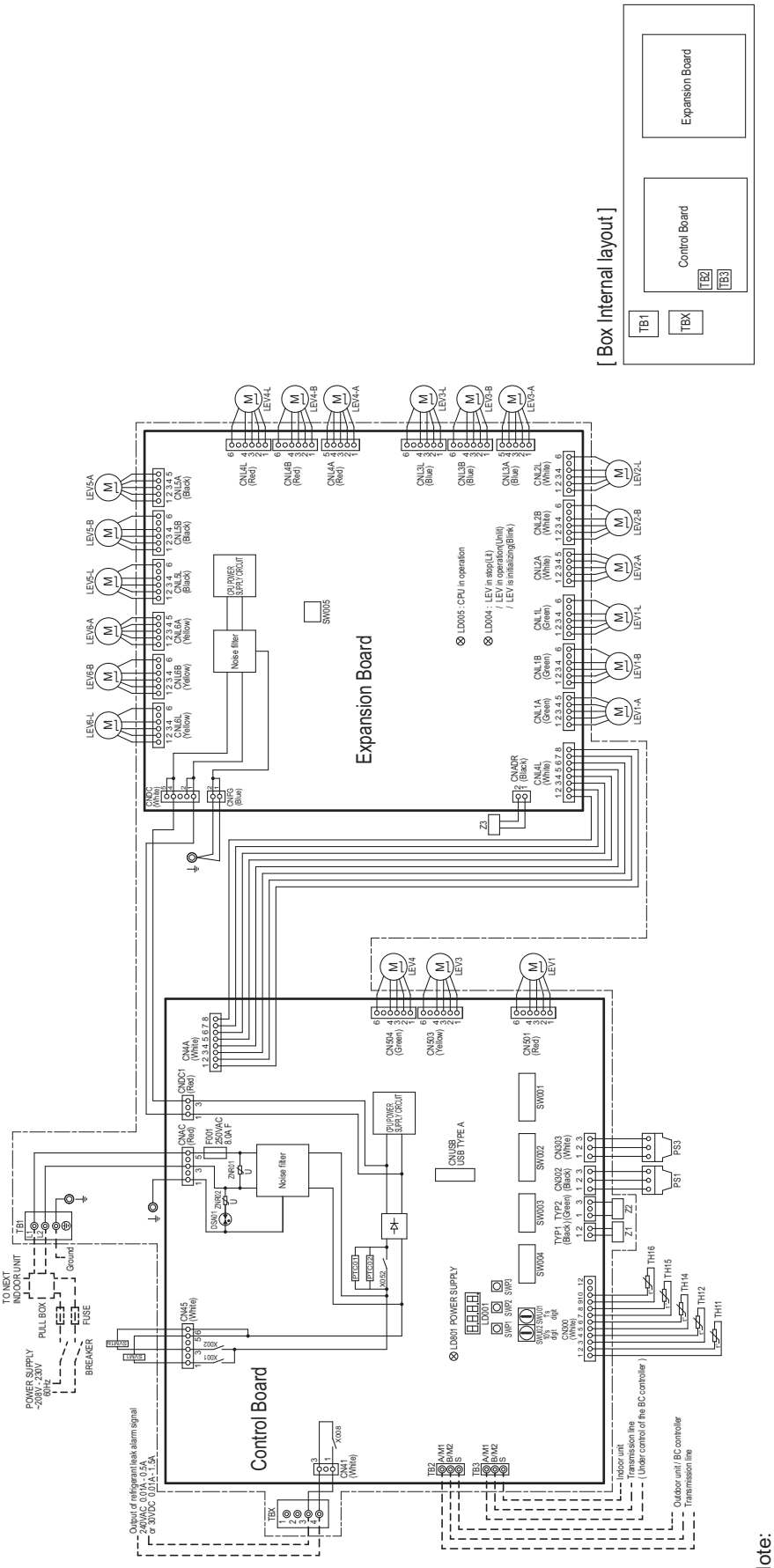
[Symbol explanation]

Symbol	Name
TH11,12,14,15,16	Thermistor sensor
LEV1,3,4	Expansion valve
PS1,3	Pressure sensor
LEV1 to 4 A, B, L	Expansion valve
SVM1, SVM1b	Solenoid valve
Z1 to Z3	Function setting connector
F001	Fuse 250VAC 8.0A F

Symbol	Name
TB1	Terminal block (for power source)
TB2 , 3	Terminal block (Transmission)
TBX	Terminal block (Output of refrigerant leak alarm signal)

Note:
1. TB2 and TB3 are transmission terminal block. Never connect power line to it.
2. The initial set values of switch on Control Board are as follows.
   SWU01:0
   SWU02:0
3. The wirings to TB1, TB2, TB3, and TBX shown in dotted lines are carried out on site.
4. Refer to the Installation Manual to carry out wirings to TB2, TB3, and TBX on site properly.
5. Dot-dash lines indicate the control box boundaries.
6. If an airtightness test, vacuum drying, refrigerant recovery, or refrigerant charging is necessary with the power off, turn off the power to the outdoor unit or heat source unit first, and then turn off the power to the BC controller and the power to the indoor units.
   When turning on the power, start the BC controller and indoor units first, and then start the outdoor unit or heat source unit.

CMB-M106NU-MA-SV



[Symbol explanation]

Symbol	Name
TH11,12,14,15,16	Thermistor sensor
LEV1,3,4	Expansion valve
PS1,3	Pressure sensor
LEV1 to 6 A, B, L	Expansion valve
SVM1, SVM1b	Solenoid valve
Z1 to Z3	Function setting connector
F001	Fuse 250VAC 8.0A F

Symbol	Name
TB1	Terminal block (for power source)
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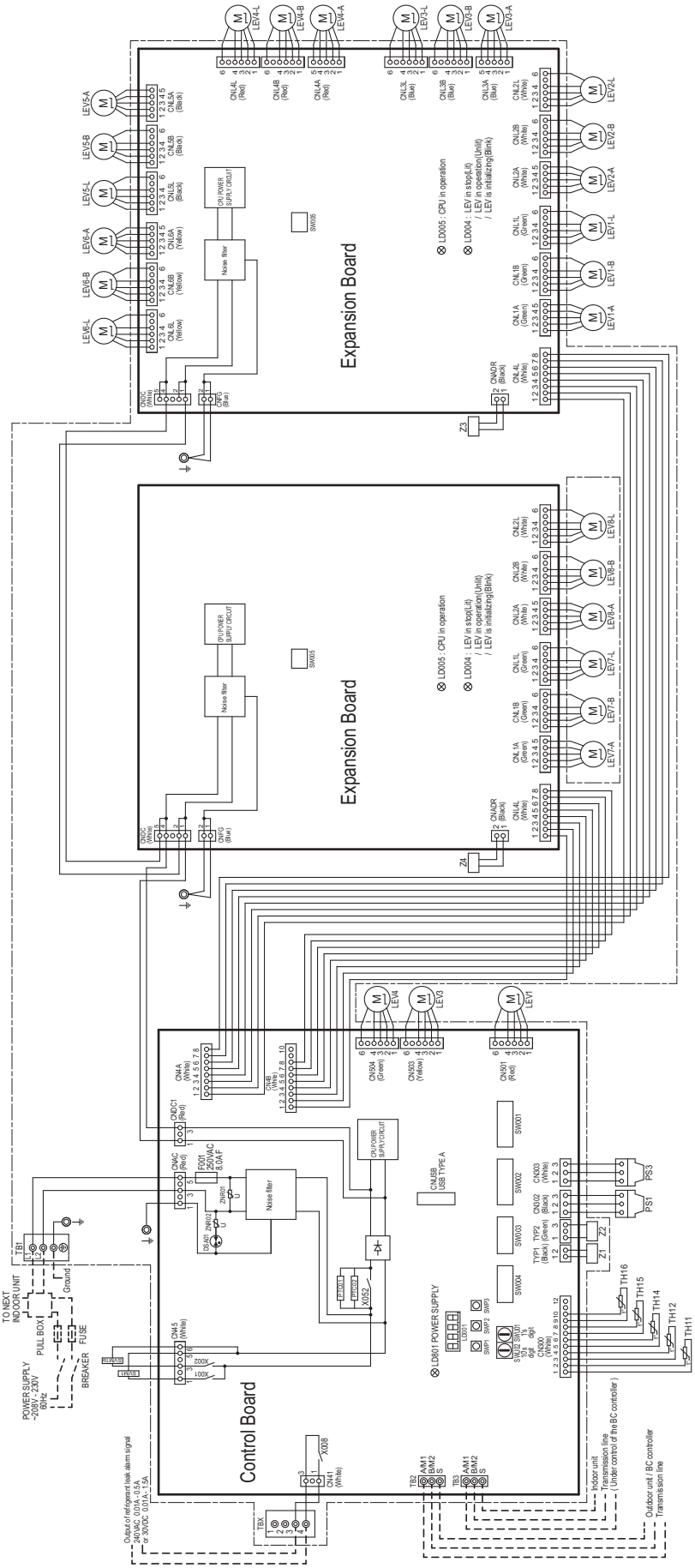
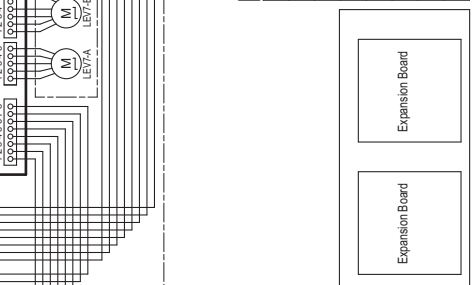
4. Refer to the Installation Manual to carry out wirings to TB2, TB3, and TBX on site properly.
5. Dot-dash lines indicate the control box boundaries.
6. If an airtightness test, vacuum drying, refrigerant recovery, or refrigerant charging is necessary with the power off, turn off the power to the outdoor unit or heat source unit first, and then turn off the power to the BC controller and the power to the indoor units.
   When turning on the power, start the BC controller and indoor units first, and then start the outdoor unit or heat source unit.

CMB-M108NU-MA-SV



[Box Internal layout]



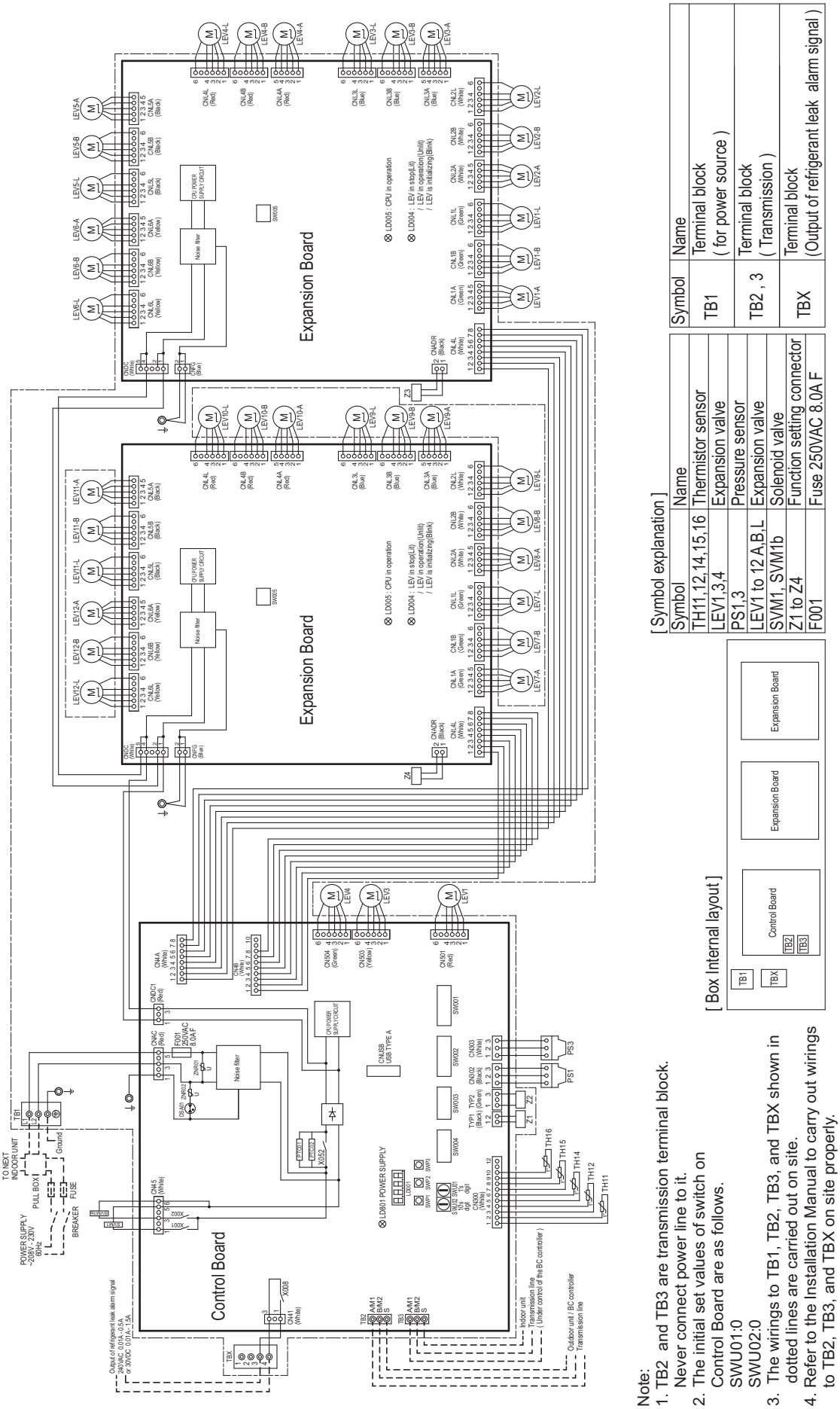
[Symbol explanation]

Symbol	Name
TH11,12,14,15,16	Thermistor sensor
LEV1,3,4	Expansion valve
PS1,3	Pressure sensor
LEV1 to 8 A, B, L	Expansion valve
SVM1, SVM1b	Solenoid valve
Z1 to Z4	Function setting connector
F001	Fuse 250VAC 8.0A F

Symbol	Name
TB1	Terminal block (for power source)
TB2 , 3	Terminal block (Transmission)
TBX	Terminal block (Output of refrigerant leak alarm signal)

Note:
1. TB2 and TB3 are transmission terminal block.
   Never connect power line to it.
2. The initial set values of switch on Control Board are as follows.
   SWU01:0
   SWU02:0
3. The wirings to TB1, TB2, TB3, and TBX shown in dotted lines are carried out on site.
4. Refer to the Installation Manual to carry out wirings to TB2, TB3, and TBX on site properly.
5. Dot-dash lines indicate the control box boundaries.
6. If an airtightness test, vacuum drying, refrigerant recovery, or refrigerant charging is necessary with the power off, turn off the power to the outdoor unit or heat source unit first, and then turn off the power to the BC controller and the power to the indoor units.
   When turning on the power, start the BC controller and indoor units first, and then start the outdoor unit or heat source unit.

CMB-M1012NU-MA-SV



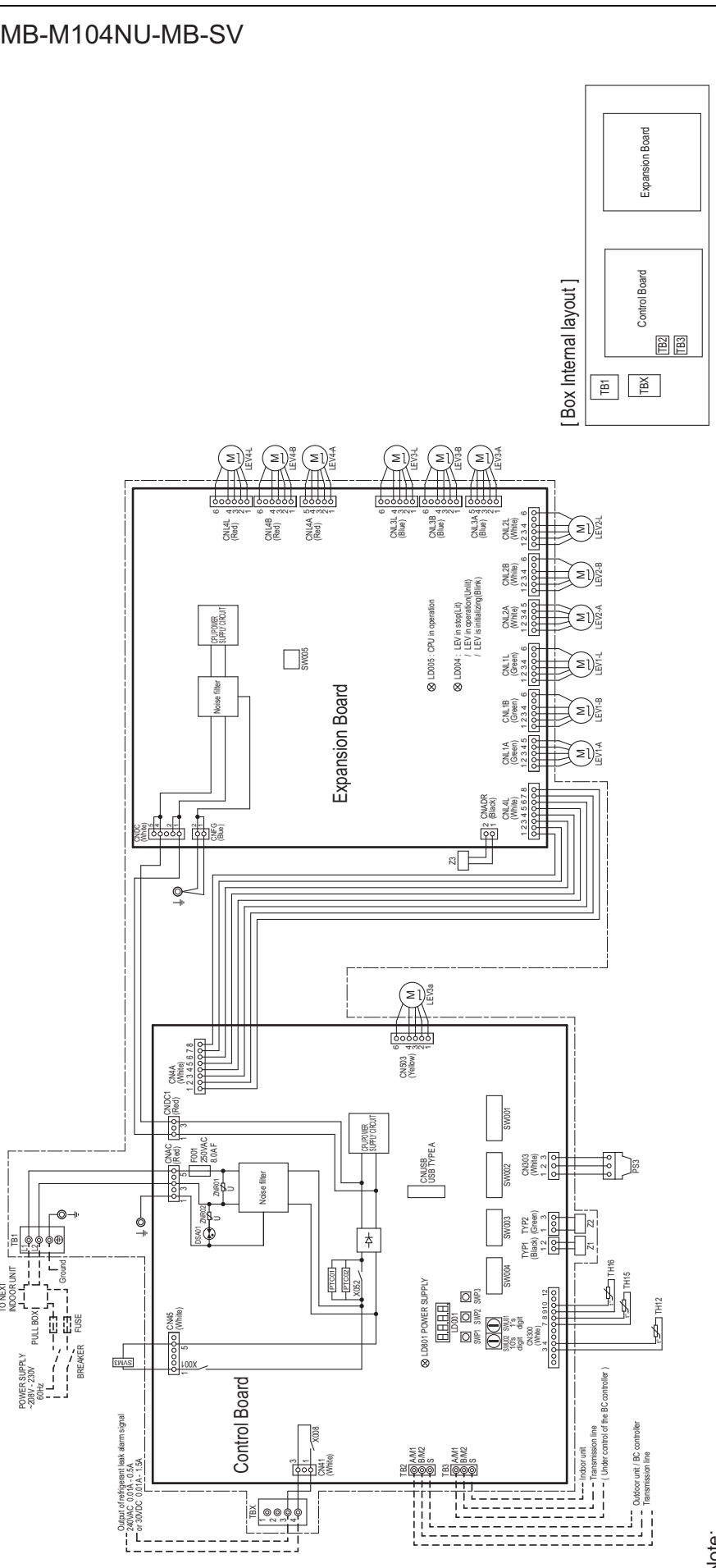
[Symbol explanation]

Symbol	Name
TH11,12,14,15,16	Thermistor sensor
LEV1,3,4	Expansion valve
PS1,3	Pressure sensor
LEV1 to 12 A,B,L	Expansion valve
SVM1, SVM1b	Solenoid valve
Z1 to Z4	Function setting connector
F001	Fuse 250VAC 8.0A F

Symbol	Name
TB1	Terminal block (for power source)
TB2 , 3	Terminal block (Transmission)
TBX	Terminal block (Output of refrigerant leak alarm signal)

Note:
1. TB2 and TB3 are transmission terminal block.
   Never connect power line to it.
2. The initial set values of switch on Control Board are as follows.
   SWU01:0
   SWU02:0
3. The wirings to TB1, TB2, TB3, and TBX shown in dotted lines are carried out on site.
4. Refer to the Installation Manual to carry out wirings to TB2, TB3, and TBX on site properly.
5. Dot-dash lines indicate the control box boundaries.
6. If an airtightness test, vacuum drying, refrigerant recovery, or refrigerant charging is necessary with the power off, turn off the power to the outdoor unit or heat source unit first, and then turn off the power to the BC controller and the power to the indoor units.
   When turning on the power, start the BC controller and indoor units first, and then start the outdoor unit or heat source unit.

CMB-M104NU-MB-SV



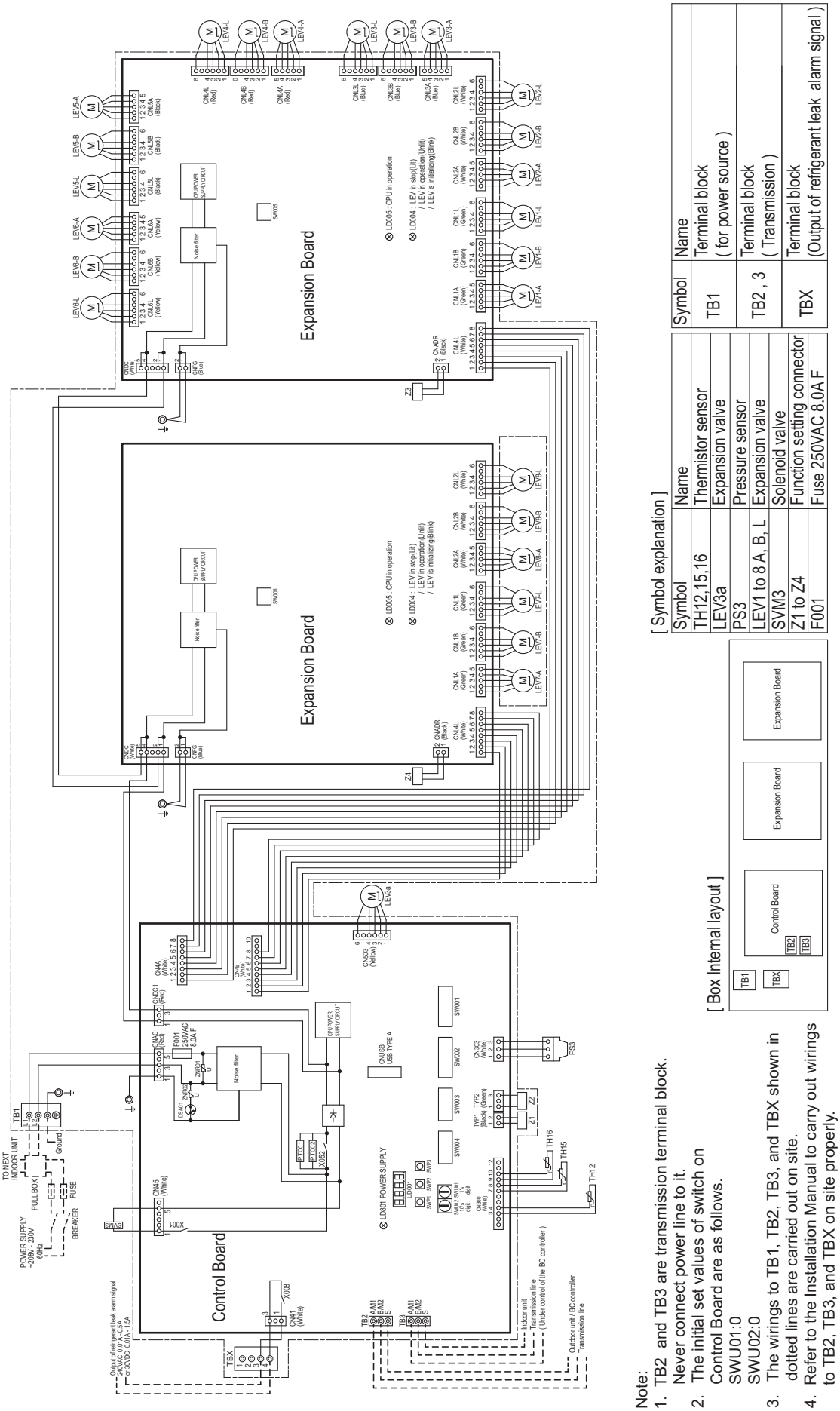
[Symbol explanation]

Symbol	Name
TH12,15,16	Thermistor sensor
LEV3a	Expansion valve
PS3	Pressure sensor
LEV1 to 4 A, B, L	Expansion valve
SVM3	Solenoid valve
Z1 to Z3	Function setting connector
F001	Fuse 250VAC 8.0A F

Symbol	Name
TB1	Terminal block (for power source)
TB2 , 3	Terminal block (Transmission)
TBX	Terminal block (Output of refrigerant leak alarm signal)

Note:
1. TB2 and TB3 are transmission terminal block.
   Never connect power line to it.
2. The initial set values of switch on Control Board are as follows.
   SWU01:0
   SWU02:0
3. The wirings to TB1, TB2, TB3, and TBX shown in dotted lines are carried out on site.
4. Refer to the Installation Manual to carry out wirings to TB2, TB3, and TBX on site properly.
5. Dot-dash lines indicate the control box boundaries.
6. If an airtightness test, vacuum drying, refrigerant recovery, or refrigerant charging is necessary with the power off, turn off the power to the outdoor unit or heat source unit first, and then turn off the power to the BC controller and the power to the indoor units.
   When turning on the power, start the BC controller and indoor units first, and then start the outdoor unit or heat source unit.

CMB-M108NU-MB-SV



[Symbol explanation]

Symbol	Name
TH12,15,16	Thermistor sensor
LEV3a	Expansion valve
PS3	Pressure sensor
LEV1 to 8 A, B, L	Expansion valve
SVM3	Solenoid valve
Z1 to Z4	Function setting connector
F001	Fuse 250VAC 8.0A F

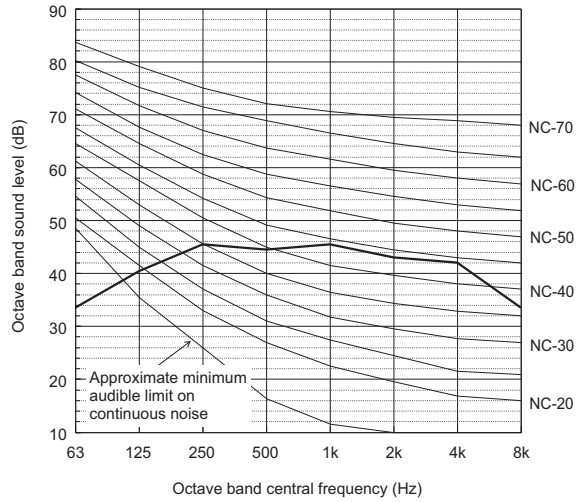
Symbol	Name
TB1	Terminal block (for power source)
TB2 , 3	Terminal block (Transmission)
TBX	Terminal block (Output of refrigerant leak alarm signal)

Note:

1. TB2 and TB3 are transmission terminal block.
   Never connect power line to it.
2. The initial set values of switch on Control Board are as follows.
   SWU01:0
   SWU02:0
3. The wirings to TB1, TB2, TB3, and TBX shown in dotted lines are carried out on site.
4. Refer to the Installation Manual to carry out wirings to TB2, TB3, and TBX on site properly.
5. Dot-dash lines indicate the control box boundaries.
6. If an airtightness test, vacuum drying, refrigerant recovery, or refrigerant charging is necessary with the power off, turn off the power to the outdoor unit or heat source unit first, and then turn off the power to the BC controller and the power to the indoor units.
   When turning on the power, start the BC controller and indoor units first, and then start the outdoor unit or heat source unit.

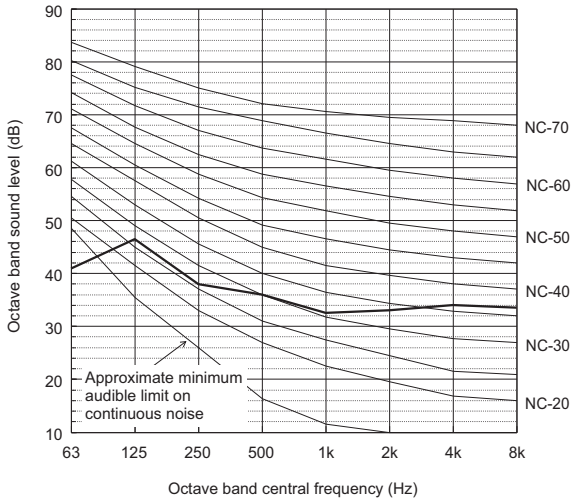
4-1. Sound levels in cooling mode

Sound level of CMB-M104-1012NU-MA-SV



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard Cooling	60Hz	33.5	40.5	45.5	44.5	45.5	43.0	42.0	33.5	50.0

Sound level of CMB-M104, 108NU-MB-SV

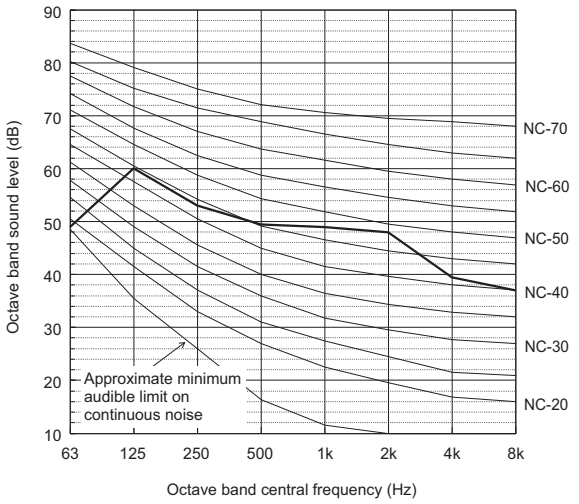


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard Cooling	60Hz	41.0	46.5	38.0	36.0	32.5	33.0	34.0	33.5	41.0

- The measuring point is the 1.5m from the bottom of the unit.
- The sound pressure level shown above indicates A-weighted sound pressure level.
- The sound pressure level measured by the conventional method in JIS for reference purpose.

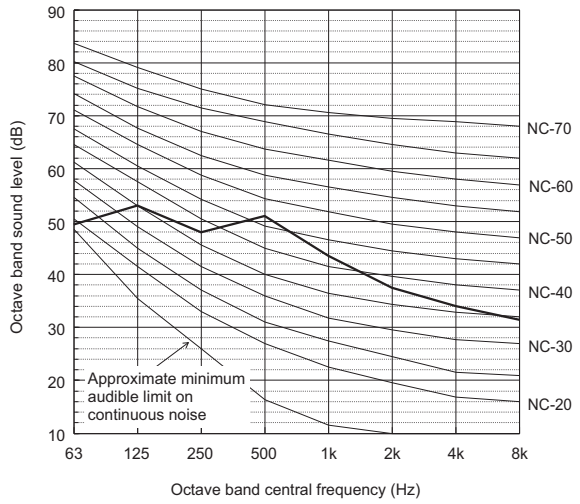
4-2. Sound levels in heating mode

Sound level of CMB-M104-1012NU-MA-SV



		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard Heating	60Hz	49.0	60.0	53.0	49.5	49.0	48.0	39.5	37.0	54.0

Sound level of CMB-M104, 108NU-MB-SV

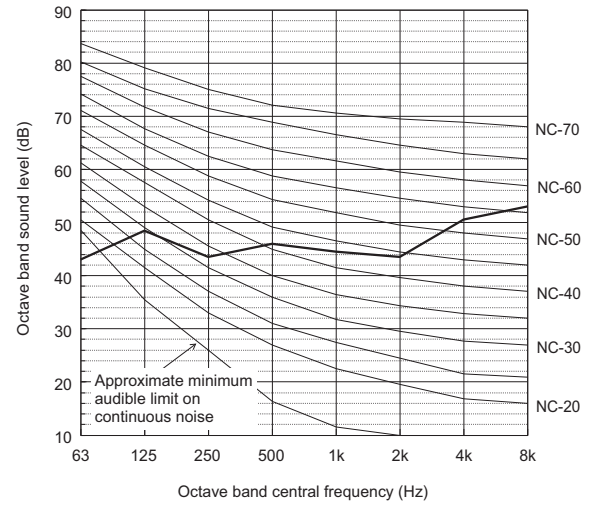


		63	125	250	500	1k	2k	4k	8k	dB(A)
Standard Heating	60Hz	49.5	53.0	48.0	51.0	43.5	37.5	34.0	31.5	50.0

- The measuring point is the 1.5m from the bottom of the unit.
- The sound pressure level shown above indicates A-weighted sound pressure level.
- The sound pressure level measured by the conventional method in JIS for reference purpose.

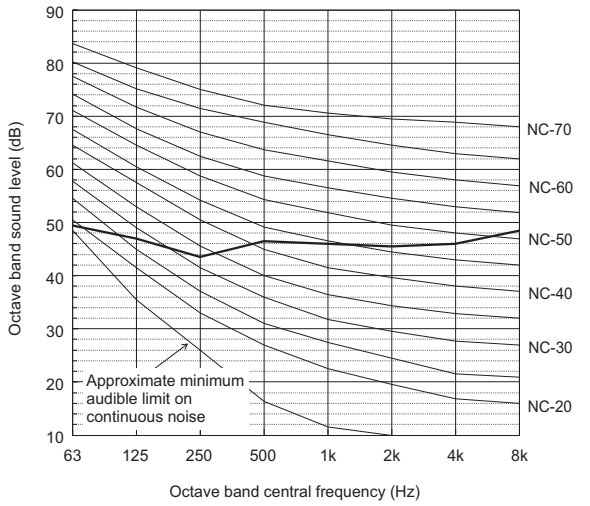
4-3. Sound levels in defrost mode

Sound level of CMB-M104-1012NU-MA-SV



		63	125	250	500	1k	2k	4k	8k	dB(A)
Defrost	60Hz	43.0	48.5	43.5	46.0	44.5	43.5	50.5	53.0	56.0

Sound level of CMB-M104, 108NU-MB-SV



		63	125	250	500	1k	2k	4k	8k	dB(A)
Defrost	60Hz	49.5	47.0	43.5	46.5	46.0	45.5	46.0	48.5	53.0

- The measuring point is the 1.5m from the bottom of the unit.
- The sound pressure level shown above indicates A-weighted sound pressure level.
- The sound pressure level measured by the conventional method in JIS for reference purpose.

Symbols: MCA: Minimum Circuit Ampacity
FLA: Full Load Amps RLA: Rated Load Amps

Model	Hz	Volts	Voltage range	MCA(A)	FLA(A)	RLA(A)
CMB-M104NU-MA-SV	60	208	Max.: 253V Min.: 188V	0.12	15	0.08
		230		0.12		0.09
CMB-M106NU-MA-SV		208		0.12		0.08
		230		0.12		0.09
CMB-M108NU-MA-SV		208		0.13		0.09
		230		0.13		0.10
CMB-M1012NU-MA-SV		208		0.13		0.09
		230		0.13		0.10
CMB-M104NU-MB-SV		208		0.07		0.05
		230		0.07		0.05
CMB-M108NU-MB-SV		208		0.08		0.06
		230		0.08		0.06

BC controller

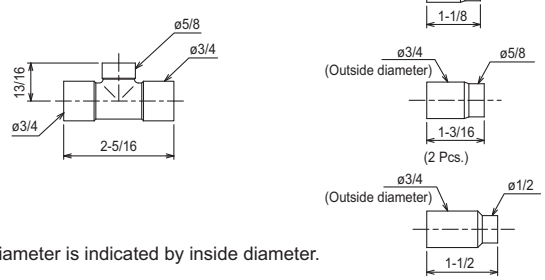
6-1. JOINT and REDUCER

CITY MULTI units can be easily connected by using Joint sets and Reducer sets provided by Mitsubishi Electric. Refer to the "Piping Design" section in the DATA BOOK of outdoor units/heat source units or the Installation Manual that comes with the Joint set or Reducer set for how to install the Joint set or Reducer set.

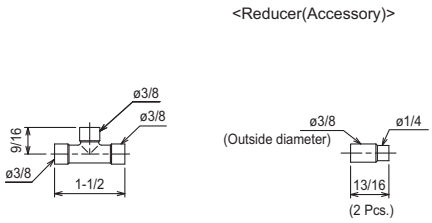
CMY-Y102SS-G2

in.

For Gas pipe:



For Liquid pipe:

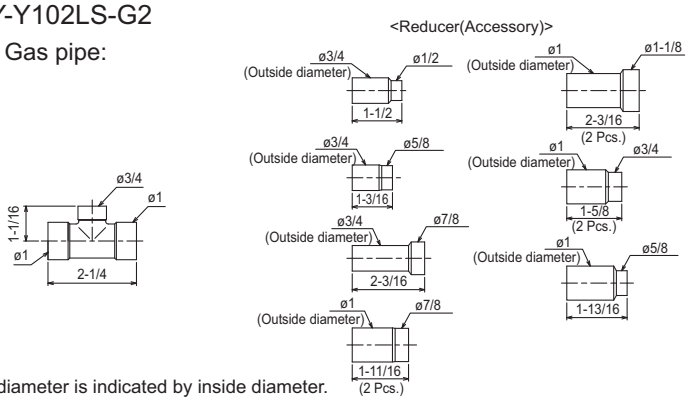


*Pipe diameter is indicated by inside diameter.

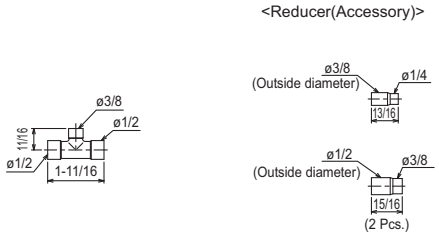
CMY-Y102LS-G2

in.

For Gas pipe:



For Liquid pipe:

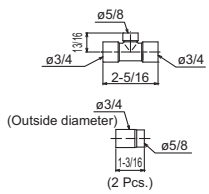


*Pipe diameter is indicated by inside diameter.

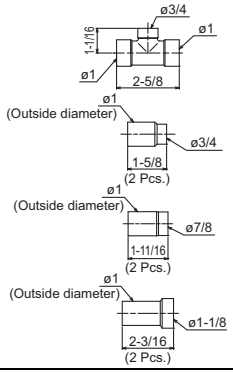
CMY-R201S-G

in.

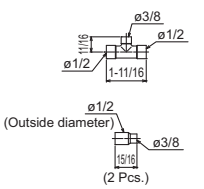
For High pressure



For Low pressure



For Liquid line

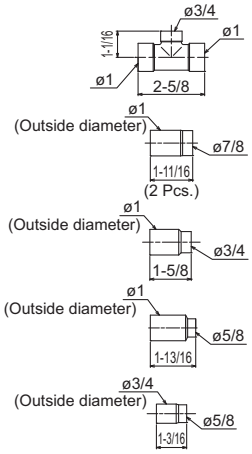


<Accessory>
• Cover ·····3 Pcs.
Note. Pipe diameter is indicated by inside diameter.

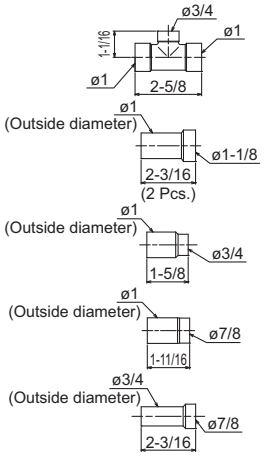
CMY-R202S-G

in.

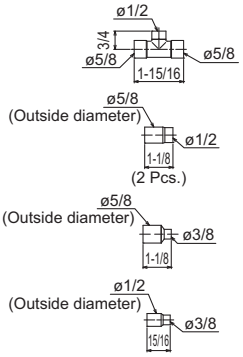
For High pressure



For Low pressure



For Liquid line

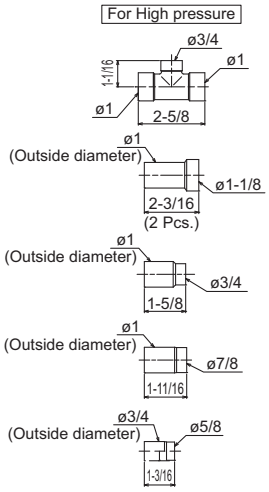


<Accessory>
• Cover ·····3 Pcs.
Note. Pipe diameter is indicated by inside diameter.

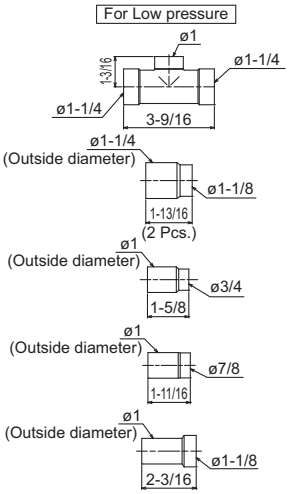
CMY-R203S-G

in.

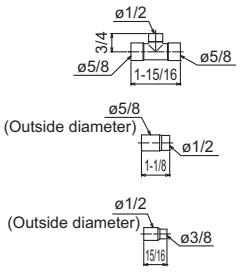
For High pressure



For Low pressure



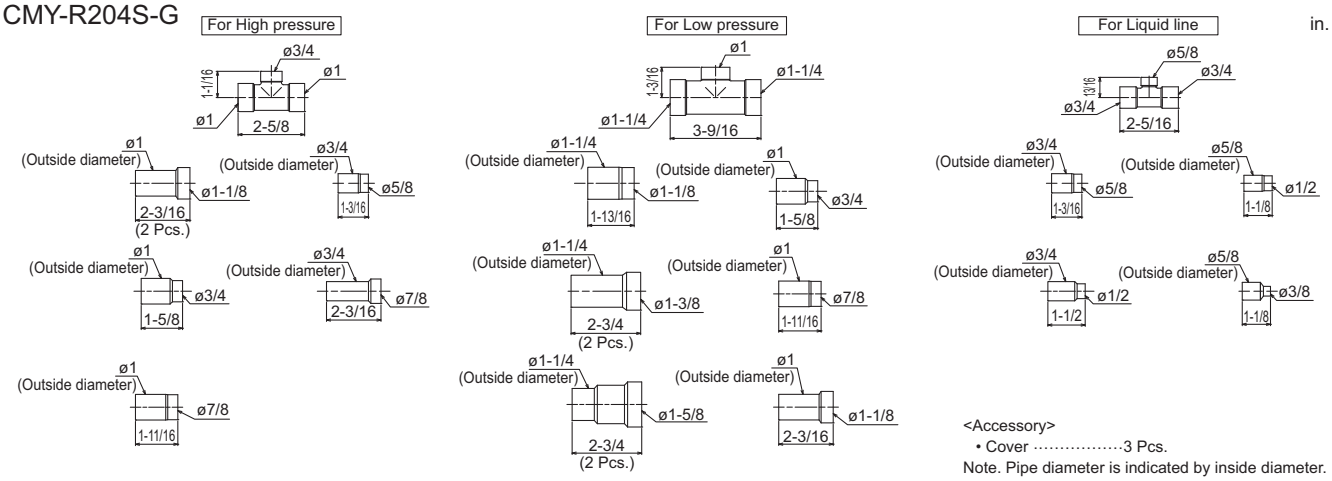
For Liquid line



<Accessory>
• Cover ·····3 Pcs.
Note. Pipe diameter is indicated by inside diameter.

CMY-R204S-G

in.

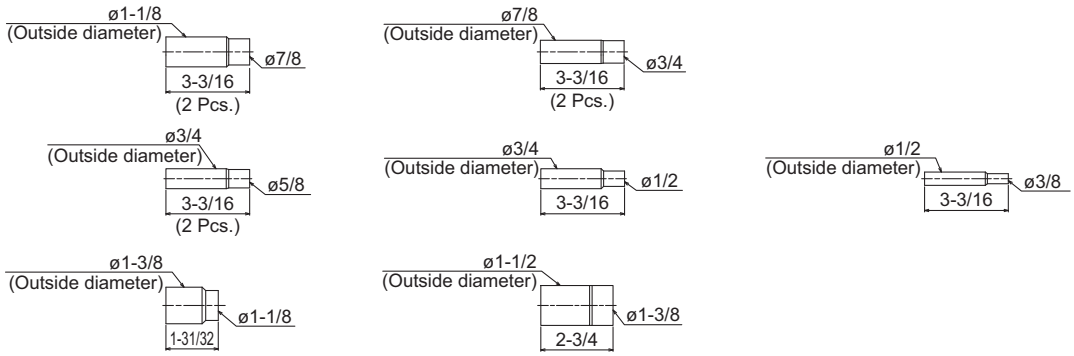


<Accessory>
• Cover ·····3 Pcs.

Note. Pipe diameter is indicated by inside diameter.

CMY-R303S-G1

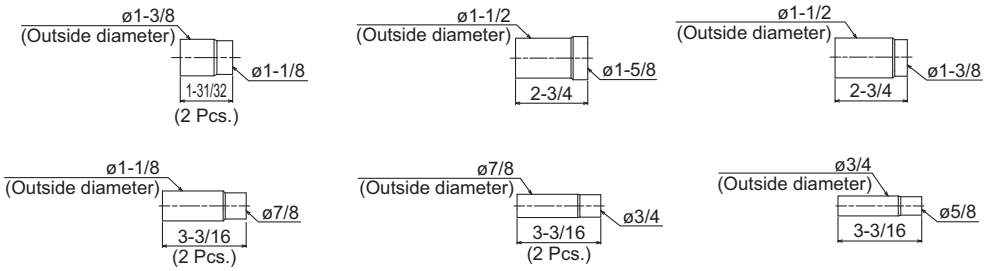
in.



Note. Pipe diameter is indicated by inside diameter.

CMY-R304S-G1

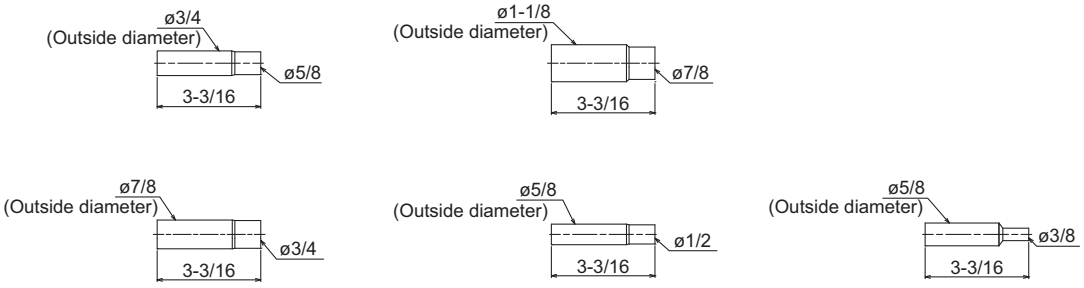
in.



Note. Pipe diameter is indicated by inside diameter.

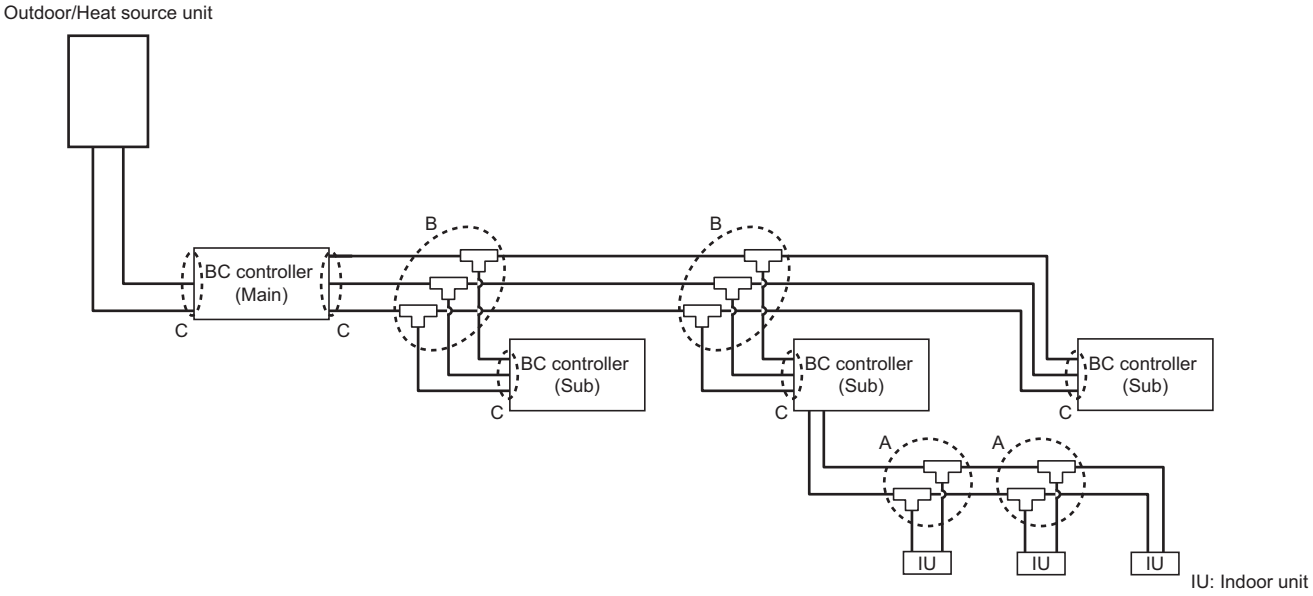
CMY-R306S-G

in.



Note. Pipe diameter is indicated by inside diameter.

How to select Joint and Reducer

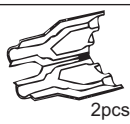
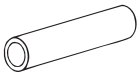
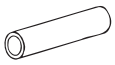
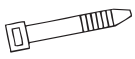
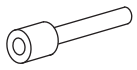
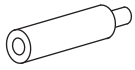


A	Branch joint	Between BC and indoor units	CMY-Y102SS-G2	Total down-stream indoor unit capacity: -M72
			CMY-Y102LS-G2	Total down-stream indoor unit capacity: M73-M96
B	Branch joint	Between Main BC and Sub BC	CMY-R201S-G	Total down-stream indoor unit capacity: -M126
			CMY-R202S-G	Total down-stream indoor unit capacity: M127-M216
			CMY-R203S-G	Total down-stream indoor unit capacity: M217-M234
			CMY-R204S-G	Total down-stream indoor unit capacity: M235-
C	Reducer	Between outdoor units and BC	CMY-R304S-G1	For MA type (Outdoor unit capacity: M72-M384)
		Between Main BC and Sub BC	CMY-R303S-G1	For MA type (When using the Sub BC controller)
			CMY-R306S-G	For MB type

6-2. JOINT KIT "CMY-R170M-E" FOR BC CONTROLLER

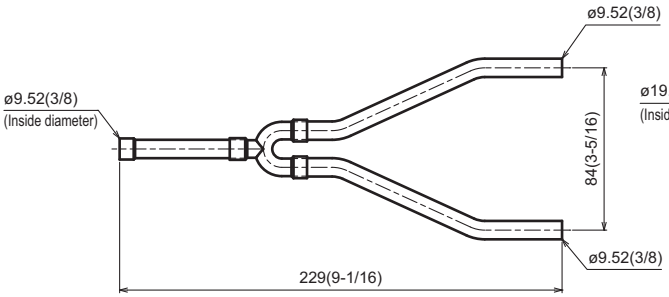
Joint kit "CMY-R170M-E" for BC controller is used to combine 2 ports of the BC controller at a PURY/PQRY system so as to enable down-stream Indoor capacity above P54 as shown in Fig. 1.

The Joint kit include following items:

①Instruction	②Joint pipe(Small)	③Joint pipe(Large)	④Cover 1	⑤Cover 2	⑥Cover 3	⑦Band	⑧Reducer 1	⑨Reducer 2
							OD19.05-ID22.2 	OD19.05-ID15.88 
This sheet 1pc	1pc	1pc	2pcs	1pc for gas side	1pc for liquid side	8pcs	1pc	1pc

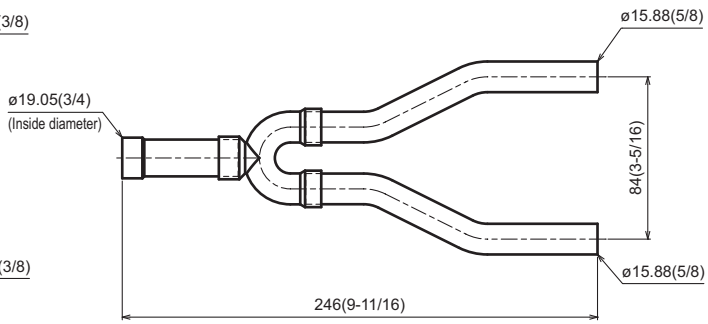
Please prepare the following items in the field. ①Tape for insulation material sealing ②Extension pipe for refrigerant circuit

②Joint pipe (for liquid side)



③Joint pipe (for gas side)

mm (in.)



1. Designing CMY-R170M-E to a PURY/PQRY system

1-1. When connecting one indoor unit to the BC controller port
- The maximum capacity index of an indoor unit that can be connected to one port is 54.
- When connecting an indoor unit having the capacity index larger than 54, use the joint pipe kit to merge two ports.

1-2. When connecting multiple indoor units to the BC controller port
- Up to three indoor units can be connected to one port. Use the branch pipes (CMY-Y102SS-G2 or CMY-Y102LS-G2) to connect the indoor units to the BC controller.
- If the total downstream capacity index is 54 or less, all the units can be connected to one port.
- If the total downstream capacity index is between 55 and 96, use the joint pipe kit to merge two ports. However, the maximum capacity index per unit is 54.
  *All the indoor units connected to the same port must be operated in the same mode.

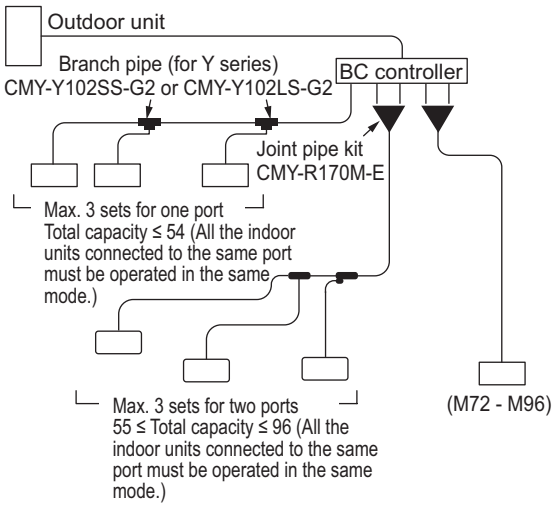
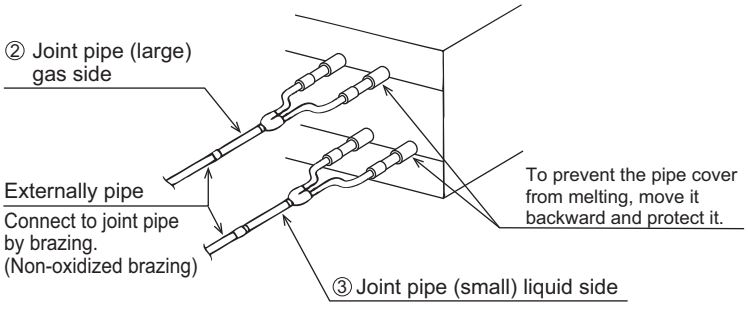


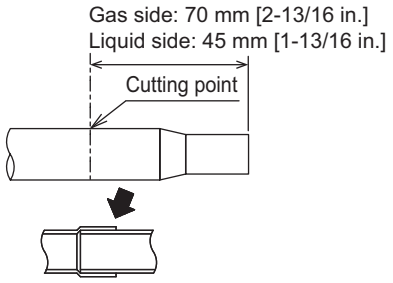
Fig.1. CMY-R170M-E applying scheme

2. Piping at the installation site

The connection of CMY-R170M-E to BC controller and pipe leading to Indoor units is referable to Fig. 2. Non-oxidized brazing is necessary. All piping must be careful to avoid foreign material getting inside.
After piping and air-tight testing, insulation work to the Joint and pipe should be done. Details is available at the Installation Manual.

mm (in.)





Have pipe expansion of indoor unit connecting port by cutting the piping at the cutting point.
Remove burr after cutting the piping to prevent entering the piping.
Check that there is no crack at the pipe expansion part.

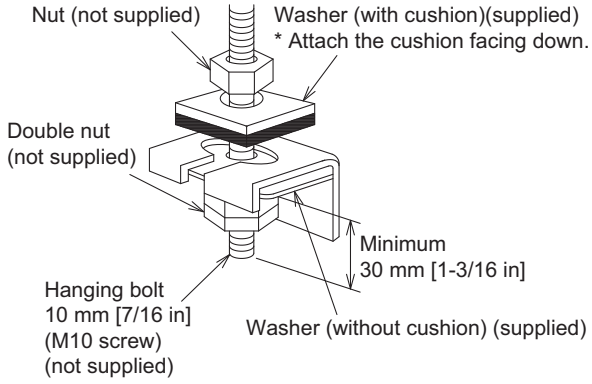
Fig.2. Connecting CMY-R170M-E

7-1. Installing BC controllers

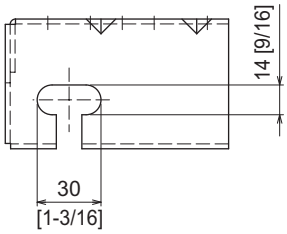
Installing hanging bolts

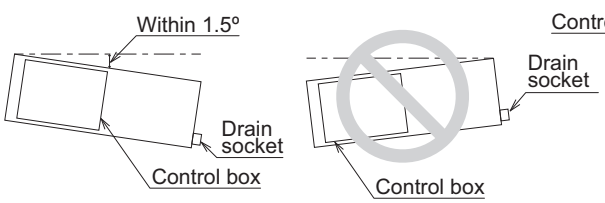
Install locally procured hanging bolts (threaded rod) following the procedure given in the figure.
The hanging bolt size is 10 mm [7/16 in] (M10 screw).
To hang the unit, use a lifting machine to lift and pass it through the hanging bolts.
Suspension bracket has an oval hole. Use a large diameter washer.

(Unit: mm [in])

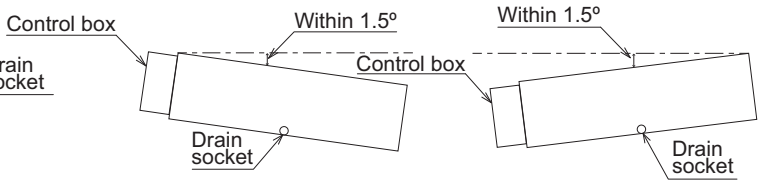


CMB-M104, 106, 108, 1012NU-MA-SV
CMB-M104, 108NU-MB-SV





<Viewed from the front of the control box>



<Viewed from the drain socket side>

►Be sure to install the BC controller horizontally, using a level. If the controller is installed at an angle, drain water may leak out. If the controller is slanted, loosen the fixing nuts on the hanging brackets to adjust its position.
►Provide a downward pitch of 1.5º or below to the BC controller.
►Do not place the BC controller directly on the floor. Doing so may cause damage to the unit or the floor.
►Install the BC controllers with the hanging length within 200 mm [7-7/8 in] or shorter.
►Seal unused drain sockets.
When local building codes require using two drain sockets, connect drain pipes with separate water routes.
- If the drain pipes are connected with the same water route, water may not be discharged if the pipes are clogged.

⚠CAUTION
Be sure to install the unit body level.

⚠Warning

■ Do not use refrigerant other than the type indicated in the manuals provided with the unit and on the nameplate.
- Doing so may cause the unit or pipes to burst, or result in explosion or fire during use, repair, or at the time of disposal of the unit.
- It may also be in violation of applicable laws.
- MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.

■ Our air conditioning equipment and heat pumps contain a fluorinated greenhouse gas, R32.

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