



EDUS371435-M

R-410A

Engineering Data General Information

VRV IV

REYQ-TTJU, 208/230V, 60Hz
REYQ-TYDN, 460V, 60Hz

VRV III

REYQ-PCTJ, 208/230V, 60Hz
REYQ-PCYD, 460V, 60Hz

**General Information EDUS371435-M
(This booklet)**

Indoor Units

Ceiling Mounted Cassette Type (Round Flow with Sensing)....	FXFQ-T	.....EDUS391400-F14
Ceiling Mounted Cassette Type (Round Flow)	FXFQ-P	.....EDUS391000-F1
4 Way Ceiling Mounted Cassette Type (2'x2').....	FXZQ-M	.....EDUS391300-F9
Slim Ceiling Mounted Duct Type	FXDQ-M	.....EDUS39-600-F2
Ceiling Mounted Duct Type.....	FXMQ-PB	.....EDUS391503-F4
Ceiling Mounted Duct Type.....	FXMQ-M	..... EDUS39-900A-F11
Ceiling Suspended Type	FXHQ-M	.....EDUS39-600-F5
Wall Mounted Type	FXAQ-P	.....EDUS391100-F6
4-Way Blow Ceiling-Suspended Type	FXUQ-P	.....EDUS391437-F15
Floor Standing Type / Concealed Floor Standing Type	FXLQ-M FXNQ-M	.....EDUS391502-F7
Vertical Air Handling Unit.....	FXTQ-PA	.....EDUS391000-F12
Single Branch Selector Unit	BSQ-T	.....EDUS391434-B
Multi Branch Selector Unit	BS-Q54T	.....EDUS391434-B

Air Treatment Equipment

Outdoor Air Processing Unit.....	FXMQ-MF	..... EDUS39-900A-F10
Energy Recovery Ventilator	VAM-G	..... EDUS711116

Outdoor Units

Heat Recovery	REYQ-T	460V EDUS371435-R1
		208 / 230V EDUS371435-R2
	REYQ-PC	460V EDUS371435-R3
		208 / 230V EDUS371435-R4

Installation of Outdoor Units..... EDUS371435-N

ControlsEDUS391000-C

Remote Controller

Navigation Remote Controller.....

BRC1E73

 **EDUS721438**

1. Introduction

1.1 Publication List of Engineering Data for VRV Products

Refrigerant	Type	Product	Series	Book No.	Type	Hz	Volts	Model name	Area	Note	Published in
R410A	Air cooled	VRV IV VRV III	Inverter T, PC	EDUS371435-M	H/R H/R H/R H/R	60Hz 60Hz 60Hz 60Hz	460V 208/230V 460V 208/230V	REYQ72-456TYDN REYQ72-456TTJU REYQ72-120PCYD REYQ72-144PCTJ	USA	General information	Aug. 2015
				EDUS371435-N	H/R H/R H/R H/R	60Hz 60Hz 60Hz 60Hz	460V 208/230V 460V 208/230V	REYQ72-456TYDN REYQ72-456TTJU REYQ72-120PCYD REYQ72-144PCTJ	USA	Installation	Jul. 2015
				EDUS371435-R1	H/R	60Hz	460V	REYQ72-456TYDN	USA	Specification	Mar. 2015
				EDUS371435-R2	H/R	60Hz	208/230V	REYQ72-456TTJU	USA	Specification	Mar. 2015
				EDUS371435-R3	H/R	60Hz	460V	REYQ72-120PCYD	USA	Specification	Mar. 2015
				EDUS371435-R4	H/R	60Hz	208/230V	REYQ72-144PCTJ	USA	Specification	Mar. 2015
		VRV IV	Inverter T	EDUS341411-M	H/P H/P	60Hz 60Hz	460V 208/230V	RXYQ72-408TYDN RXYQ72-408TTJU	USA	General information	Jan. 2015
				EDUS341411-N	H/P H/P	60Hz 60Hz	460V 208/230V	RXYQ72-408TYDN RXYQ72-408TTJU	USA	Installation	Dec. 2014
				EDUS341411-R1	H/P	60Hz	460V	RXYQ72-408TYDN	USA	Specification	Nov. 2014
				EDUS341411-R2	H/P	60Hz	208/230V	RXYQ72-408TTJU	USA	Specification	Nov. 2014
		VRV III	Inverter P(B)	EDUS391004-M	H/P H/P H/R H/R	60Hz 60Hz 60Hz 60Hz	460V 208/230V 460V 208/230V	RXYQ72-360PBYD RXYQ72-360PBTJ REYQ72-336PBYD REYQ72-336PBTJ	USA	General information	Jan. 2011
				EDUS391004-N	H/P H/P H/R H/R	60Hz 60Hz 60Hz 60Hz	460V 208/230V 460V 208/230V	RXYQ72-360PBYD RXYQ72-360PBTJ REYQ72-336PBYD REYQ72-336PBTJ	USA	Installation	Dec. 2010
				EDUS391005-R1	H/P	60Hz	460V	RXYQ72-360PBYD	USA	Specification	Dec. 2010
				EDUS391005-R2	H/R	60Hz	460V	REYQ72-336PBYD	USA	Specification	Dec. 2010
				EDUS391006-R1	H/P	60Hz	208/230V	RXYQ72-360PBTJ	USA	Specification	Dec. 2010
	EDUS391006-R2			H/R	60Hz	208/230V	REYQ72-336PBTJ	USA	Specification	Dec. 2010	
	VRV III-S		EDUS34-900-R1	H/P	60Hz	208/230V	RXYMQ36/48PVJU	USA	Specification	Feb. 2010	
	Water cooled	VRV-WIII	Inverter P(B)	EDUS301214-M	H/P H/R H/P H/R	60Hz 60Hz 60Hz 60Hz	208/230V 208/230V 460V 460V	RWEYQ72-252PTJU RWEYQ72-252PYDN	USA	General information	Dec. 2012
				EDUS301214-N	H/P H/R H/P H/R	60Hz 60Hz 60Hz 60Hz	208/230V 208/230V 460V 460V	RWEYQ72-252PTJU RWEYQ72-252PYDN	USA	Installation	Dec. 2012
				EDUS301214A-R	H/P H/R H/P H/R	60Hz 60Hz 60Hz 60Hz	208/230V 208/230V 460V 460V	RWEYQ72-252PTJU RWEYQ72-252PYDN	USA	Specification	Jan. 2014

Refrigerant	Type	Product	Series	Book No.	Type	Hz	Volts	Model name	Area	Note	Published in	
R410A	VRV Indoor units			EDUS391400-F14	—	60Hz	—	FXFQ07-48TVJU	USA	Ceiling Mounted Cassette (Round Flow with Sensing) Type	Nov. 2014	
				EDUS391000-F1	—	60Hz	—	FXFQ09-48PVJU	USA	Ceiling Mounted Cassette (Round Flow) Type	Nov. 2010	
				EDUS391300-F9	—	60Hz	—	FXZQ07-18MVJU9	USA	4 Way Ceiling Mounted Cassette (2' x 2') Type	Oct. 2013	
				EDUS39-600-F2	—	60Hz	—	FXDQ07-24MVJU	USA	Slim Ceiling Mounted Duct Type	Sep. 2006	
				EDUS391503-F4	—	60Hz	—	FXMQ07-54PBVJU	USA	Ceiling Mounted Duct Type (Middle and High Static Pressure)	Aug. 2015	
				EDUS39-900A-F11	—	60Hz	—	FXMQ72/96MVJU	USA	Ceiling Mounted Duct Type	May 2010	
				EDUS39-600-F5	—	60Hz	—	FXHQ12-36MVJU	USA	Ceiling Suspended Type	Sep. 2006	
				EDUS391100-F6	—	60Hz	—	FXAQ07-24PVJU	USA	Wall Mounted Type	Jan. 2012	
				EDUS391437-F15	—	60Hz	—	FXUQ18-36PVJU	USA	4-Way Blow Ceiling-Suspended Type	May 2015	
				EDUS391502-F7	—	60Hz	—	FXLQ07-24MVJU FXNQ07-24MVJU	USA	Floor Standing Type Concealed Floor Standing Type	Jul. 2015	
				EDUS391000-F12	—	60Hz	—	FXTQ12-54PAVJU	USA	Vertical Air Handling Unit	Sep. 2010	
				EDUS39-900A-F10	—	60Hz	—	FXMQ48-96MFVJU	USA	Outdoor Air Processing Unit	May 2010	
				EDUS391434-B	—	60Hz	—	BSQ36-96TVJ	USA	Single Branch Selector Unit	Aug. 2015	
				EDUS391434-B	—	60Hz	—	BS4-12Q54TVJ	USA	Multi Branch Selector Unit	Aug. 2015	
		Controls			EDUS391000-C	—	—	—	BRC1E71, BRC4C/7C/7E, BRC2A71 DCS302C71, DCS301C71, DST301BA61, DCS601C71 KRP1C74/75	USA	Remote controller Control devices Adapter	Aug. 2010
					EDUS721438	—	—	—	BRC1E73	USA	Navigation remote controller	Apr. 2015
		Networks			EDUS721212	—	—	—	DCM601A71 DCM601A72	USA	intelligent Touch Manager	Oct. 2012
					EDUS72-746	—	—	—	DAM602A71 DAM602A72	USA	intelligent Manager III	Dec. 2007
					EDUS72-608	—	—	—	DCS601C71	USA	intelligent Touch Controller	Dec. 2006
					EDUS72-749	—	—	—	DMS502B71	USA	Interface for use in BACnet	Oct. 2007
	Option for all type			OHUS07-1	—	—	—	For indoor and outdoor units	USA	Option handbook	Nov. 2007	
	Energy Recovery Ventilator (VAM)			EDUS711116	—	60Hz	—	VAM300-1200GVJU	USA	Energy Recovery Ventilator	Jul. 2011	

EDUS371435-M, N, R1, R2, R3, R4 as shown by .

C/O: Cooling only

H/P: Heat pump

H/R: Heat recovery

General Information

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1. Model Names of Indoor/Outdoor Units

1.1 Indoor Units

Capacity Range		0.6 ton	0.8 ton	1 ton	1.25 ton	1.5 ton	2 ton	2.5 ton	3 ton	3.5 ton	4 ton	4.5 ton	6 ton	8 ton	Power Supply, Standard	
Capacity Index		7.5	9.5	12	15	18	20	24	30	36	42	48	54	72		96
Ceiling Mounted Cassette (Round Flow with Sensing) Type	FXFQ	07T	09T	12T	15T	18T	—	24T	30T	36T	—	48T	—	—	VJU	
	FXFQ	—	09P	12P	—	18P	—	24P	30P	36P	—	48P	—	—		
4 Way Ceiling Mounted Cassette (2×2) Type		FXZQ	07M	09M	12M	15M	18M	—	—	—	—	—	—	—	VJU9	
Slim Ceiling Mounted Duct Type		FXDQ	07M	09M	12M	—	18M	—	24M	—	—	—	—	—	VJU	
Ceiling Mounted Duct Type (Middle and High Static Pressure)		FXMQ	07PB	09PB	12PB	15PB	18PB	—	24PB	30PB	36PB	—	48PB	54PB		—
Ceiling Mounted Duct Type		FXMQ	—	—	—	—	—	—	—	—	—	—	72M	96M		
Ceiling Suspended Type		FXHQ	—	—	12M	—	—	—	24M	—	36M	—	—	—		
Wall Mounted Type		FXAQ	07P	09P	12P	—	18P	—	24P	—	—	—	—	—		
4-Way Blow Ceiling-Suspended Type		FXUQ	—	—	—	—	—	18P	24P	30P	36P	—	—	—		
Floor Standing Type		FXLQ	07M	09M	12M	—	18M	—	24M	—	—	—	—	—		
Concealed Floor Standing Type		FXNQ	07M	09M	12M	—	18M	—	24M	—	—	—	—	—		
Vertical Air Handling Unit		FXTQ	—	—	12PA	—	18PA	—	24PA	30PA	36PA	42PA	48PA	54PA	—	

VJ : 1 phase, 208/230V, 60Hz

U(VJU): Standard Symbol

1.2 Outdoor Units

REYQ-TYDN, REYQ-TTJU

Capacity Range		6 ton	8 ton	10 ton	12 ton	14 ton	16 ton	18 ton	20 ton	22 ton	Power Supply, Standard	
Capacity Index		72	96	120	144	168	192	216	240	264		
Heat Recovery	460V	REYQ-	72T	96T	120T	144T	168T	192T	216T	240T	264T	YDN
	208/230V	REYQ-	72T	96T	120T	144T	168T	192T	216T	240T	264T	TJU

Capacity Range		24 ton	26 ton	28 ton	30 ton	32 ton	34 ton	36 ton	38 ton	Power Supply, Standard	
Capacity Index		288	312	336	360	384	408	432	456		
Heat Recovery	460V	REYQ-	288T	312T	336T	360T	384T	408T	432T	456T	YDN
	208/230V	REYQ-	288T	312T	336T	360T	384T	408T	432T	456T	TJU

REYQ-PCYD, REYQ-PCTJ

Capacity Range		6 ton	8 ton	10 ton	12 ton	Power Supply, Standard	
Capacity Index		72	96	120	144		
Heat Recovery	460V	REYQ-	72PC	96PC	120PC	—	YD
	208/230V	REYQ-	72PC	96PC	120PC	144PC	TJ

YD(N) : 3 phase, 460V, 60Hz

TJ : 3 phase, 208/230V, 60Hz

U(TJU): Standard Symbol

1.2.1 Combination of Outdoor Units (Heat Recovery 460V)

REYQ-TYDN

Model name	REYQ72TYDN	REYQ96TYDN	REYQ120TYDN	REYQ144TYDN	REYQ168TYDN
Outdoor unit 1	REYQ72TYDN	REYQ96TYDN	REYQ120TYDN	REYQ144TYDN	REYQ168TYDN
Model name	REYQ192TYDN	REYQ216TYDN	REYQ240TYDN	REYQ264TYDN	REYQ288TYDN
Outdoor unit 1	REYQ72TYDN	REYQ96TYDN	REYQ96TYDN	REYQ120TYDN	REYQ144TYDN
Outdoor unit 2	REYQ120TYDN	REYQ120TYDN	REYQ144TYDN	REYQ144TYDN	REYQ144TYDN
Model name	REYQ312TYDN	REYQ336TYDN	REYQ360TYDN	REYQ384TYDN	REYQ408TYDN
Outdoor unit 1	REYQ144TYDN	REYQ168TYDN	REYQ120TYDN	REYQ96TYDN	REYQ96TYDN
Outdoor unit 2	REYQ168TYDN	REYQ168TYDN	REYQ120TYDN	REYQ120TYDN	REYQ144TYDN
Outdoor unit 3	—	—	REYQ120TYDN	REYQ168TYDN	REYQ168TYDN
Model name	REYQ432TYDN	REYQ456TYDN			
Outdoor unit 1	REYQ144TYDN	REYQ144TYDN			
Outdoor unit 2	REYQ144TYDN	REYQ144TYDN			
Outdoor unit 3	REYQ144TYDN	REYQ168TYDN			

REYQ-PCYD

Model name	REYQ72PCYD	REYQ96PCYD	REYQ120PCYD
Outdoor unit 1	REYQ72PCYD	REYQ96PCYD	REYQ120PCYD

1.2.2 Combination of Outdoor Units (Heat Recovery 208/230V)

REYQ-TTJU

Model name	REYQ72TTJU	REYQ96TTJU	REYQ120TTJU	REYQ144TTJU	REYQ168TTJU
Outdoor unit 1	REYQ72TTJU	REYQ96TTJU	REYQ120TTJU	REYQ144TTJU	REYQ168TTJU
Model name	REYQ192TTJU	REYQ216TTJU	REYQ240TTJU	REYQ264TTJU	REYQ288TTJU
Outdoor unit 1	REYQ72TTJU	REYQ96TTJU	REYQ96TTJU	REYQ120TTJU	REYQ144TTJU
Outdoor unit 2	REYQ120TTJU	REYQ120TTJU	REYQ144TTJU	REYQ144TTJU	REYQ144TTJU
Model name	REYQ312TTJU	REYQ336TTJU	REYQ360TTJU	REYQ384TTJU	REYQ408TTJU
Outdoor unit 1	REYQ144TTJU	REYQ168TTJU	REYQ120TTJU	REYQ96TTJU	REYQ96TTJU
Outdoor unit 2	REYQ168TTJU	REYQ168TTJU	REYQ120TTJU	REYQ120TTJU	REYQ144TTJU
Outdoor unit 3	—	—	REYQ120TTJU	REYQ168TTJU	REYQ168TTJU
Model name	REYQ432TTJU	REYQ456TTJU			
Outdoor unit 1	REYQ144TTJU	REYQ144TTJU			
Outdoor unit 2	REYQ144TTJU	REYQ144TTJU			
Outdoor unit 3	REYQ144TTJU	REYQ168TTJU			

REYQ-PCTJ

Model name	REYQ72PCTJ	REYQ96PCTJ	REYQ120PCTJ	REYQ144PCTJ
Outdoor unit 1	REYQ72PCTJ	REYQ96PCTJ	REYQ120PCTJ	REYQ144PCTJ

1.3 Air Treatment Equipment

Outdoor Air Processing Unit

Series	Model Name			Power Supply, Standard
FXMQ	48MF	72MF	96MF	VJU

Energy Recovery Ventilator (VAM series)

Series	Model Name				Power Supply, Standard
VAM	300G	470G	600G	1200G	VJU

VJ : 1 phase, 208/230V, 60Hz

U(VJU): Standard Symbol

1.4 Branch Selector Unit

Single Branch Selector Unit for Heat Recovery

Series		Model Name			Power Supply, Standard
Heat Recovery	BSQ	36T	60T	96T	VJ

Note: No interchangeability between BSVQ-PVJU and BSQ-TVJ.

VJ: 1 phase, 208/230V, 60Hz

Multi Branch Selector Unit for Heat Recovery



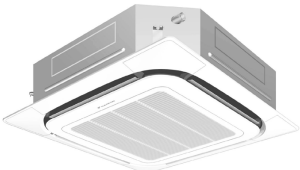




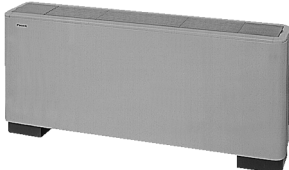

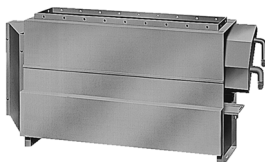


Series		Model Name				Power Supply, Standard	
Heat Recovery	BS	4Q54T	6Q54T	8Q54T	10Q54T	12Q54T	VJ

Note: No interchangeability between BSV-Q36PVJU and BS-Q54TVJ.

VJ: 1 phase, 208/230V, 60Hz

2. External Appearance



2.1 Indoor Units

<p>Ceiling mounted cassette (Round flow with sensing) type</p> <p>FXFQ-T</p>  <p>Shown with BYCQ125B-W1</p>	<p>Ceiling suspended type</p> <p>FXHQ-M</p> 
<p>Ceiling mounted cassette (Round flow) type</p> <p>FXFQ-P</p>  <p>Shown with BYCP125K-W1</p>	<p>Wall mounted type</p> <p>FXAQ-P</p> 
<p>4 way ceiling mounted cassette (2'x2') type</p> <p>FXZQ-M</p>  <p>Shown with BYFQ60B8W1U</p>	<p>4-way blow ceiling-suspended type</p> <p>FXUQ-P</p> 
<p>Slim ceiling mounted duct type</p> <p>FXDQ-M</p> 	<p>Floor standing type</p> <p>FXLQ-M</p> 
<p>Ceiling mounted duct type (Middle and high static pressure)</p> <p>FXMQ-PB</p> 	<p>Concealed floor standing type</p> <p>FXNQ-M</p> 
<p>Ceiling mounted duct type</p> <p>FXMQ-M</p> 	<p>Vertical air handling unit</p> <p>FXTQ-PA</p> 



2.2 Outdoor Units

2.2.1 REYQ-TYDN, REYQ-TTJU

Single Outdoor Units

REYQ72TYDN REYQ72TTJU	REYQ96 / 120 / 144 / 168TYDN REYQ96 / 120 / 144 / 168TTJU
	

Double Outdoor Units

REYQ192TYDN REYQ192TTJU	REYQ216 / 240 / 264 / 288 / 312 / 336TYDN REYQ216 / 240 / 264 / 288 / 312 / 336TTJU
	

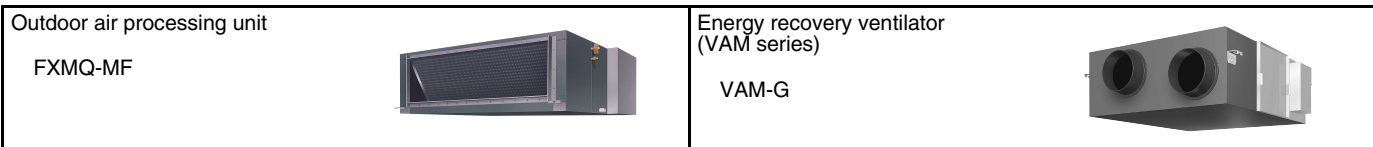
Triple Outdoor Units

REYQ360 / 384 / 408 / 432 / 456TYDN REYQ360 / 384 / 408 / 432 / 456TTJU

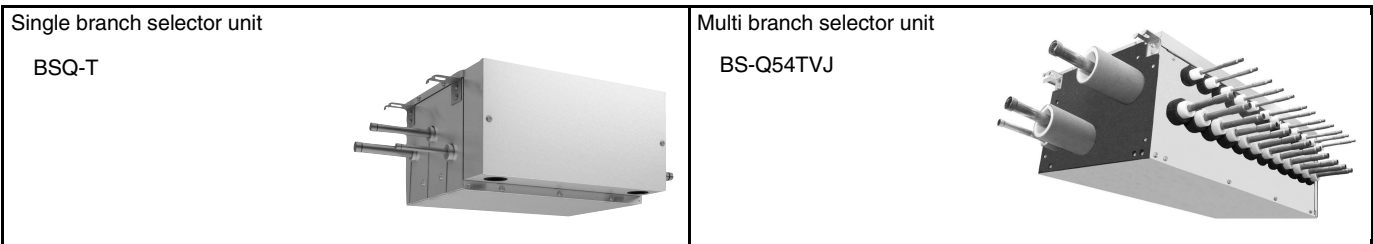

2.2.2 REYQ-PCYD, REYQ-PCTJ



2.3 Air Treatment Equipment



2.4 Branch Selector Unit



3. Combination of Outdoor Units

3.1 REYQ-TYDN, REYQ-TTJU

System capacity			Number of units	Module					Outdoor Unit Multi Connection Piping Kit ★1
Ton	HP	kW		72	96	120	144	168	
6	7.5	21.1	1	●					—
8	10	28.1	1		●				
10	12.5	35.2	1			●			
12	15	42.2	1				●		
14	17.5	49.2	1					●	
16	20	56.3	2	●		●			BHFP26P100U
18	22.5	63.3	2		●	●			
20	25	70.3	2		●		●		
22	27.5	77.4	2			●	●		
24	30	84.4	2				●●		
26	32.5	91.4	2				●	●	
28	35	98.5	2					●●	
30	37.5	105.5	3			●●●			BHFP26P151U
32	40	112.5	3		●	●		●	
34	42.5	119.6	3		●		●	●	
36	45	126.6	3				●●●		
38	47.5	133.6	3				●●	●	

Note: ★1 For multiple connection, the outdoor unit multi connection piping kit (separately sold) is required.

3.2 REYQ-PCYD

System capacity			Number of units	Module					Outdoor Unit Multi Connection Piping Kit
Ton	HP	kW		72	96	120	144	168	
6	7.5	21.1	1	●					—
8	10	28.1	1		●				
10	12.5	35.2	1			●			

3.3 REYQ-PCTJ

System capacity			Number of units	Module					Outdoor Unit Multi Connection Piping Kit
Ton	HP	kW		72	96	120	144	168	
6	7.5	21.1	1	●					—
8	10	28.1	1		●				
10	12.5	35.2	1			●			
12	15	42.2	1				●		

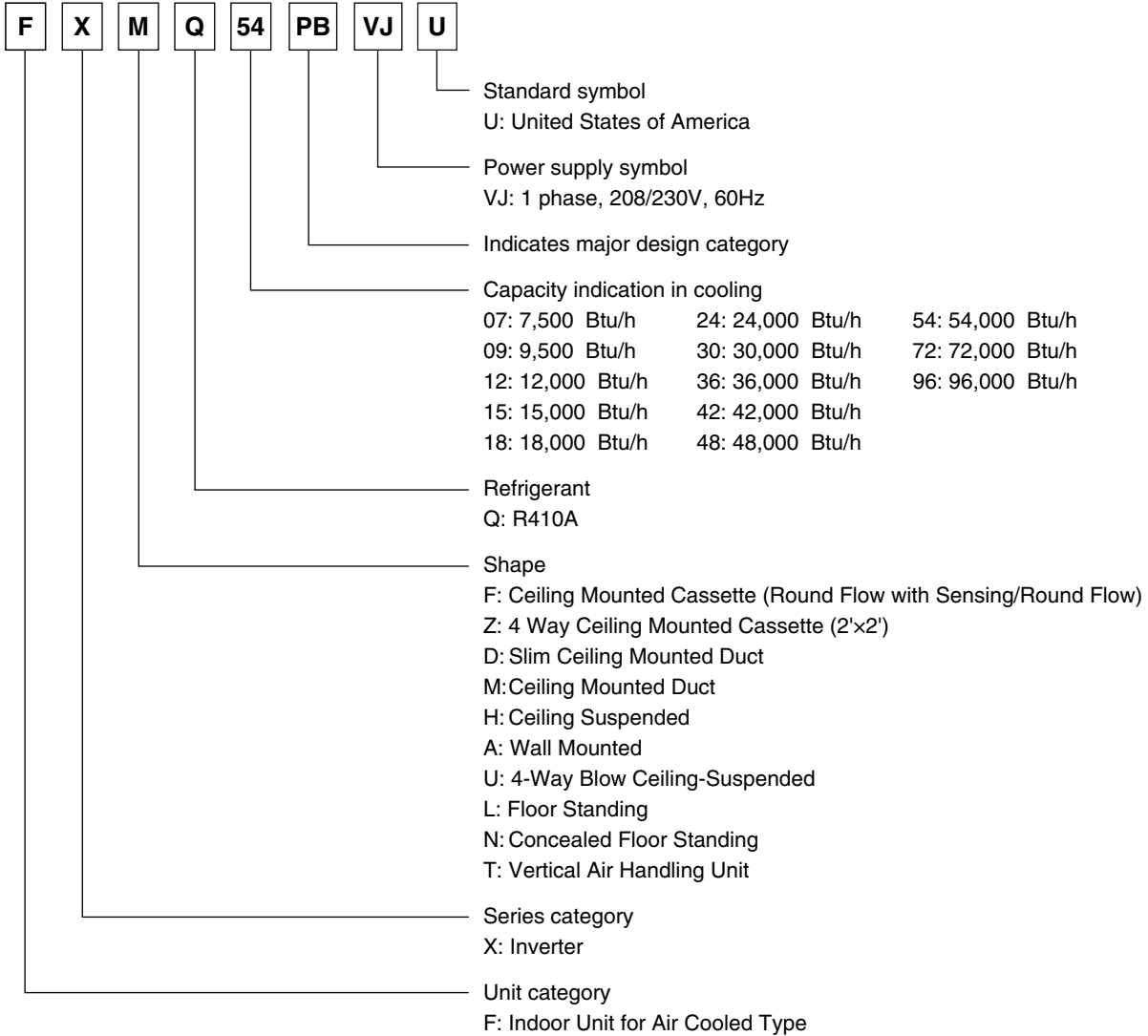
4. Interchangeability

Branch Selector unit			New Branch Selector unit		(Reference) Current Branch Selector unit		
			Single Branch Selector unit	Multi Branch Selector unit	Single Branch Selector unit	Multi Branch Selector unit	
Outdoor unit			BSQ36TVJ BSQ60TVJ BSQ96TVJ	BS4Q54TVJ BS6Q54TVJ BS8Q54TVJ BS10Q54TVJ BS12Q54TVJ	BSVQ36PVJU BSVQ60PVJU BSVQ96PVJU	BSV4Q36PVJU BSV6Q36PVJU	
<i>VRVIV</i>	Heat Recovery	REYQ-T	REYQ-TYDN	Connectable	Connectable	Not connectable	Not connectable
			REYQ-TTJU	Connectable	Connectable	Not connectable	Not connectable
<i>VRVIII</i>	Heat Recovery	REYQ-PC	REYQ-PCYD	Connectable (*1)	Connectable (*1)	Connectable (*1)	Connectable (*1)
			REYQ-PCTJ	Connectable (*1)	Connectable (*1)	Connectable (*1)	Connectable (*1)

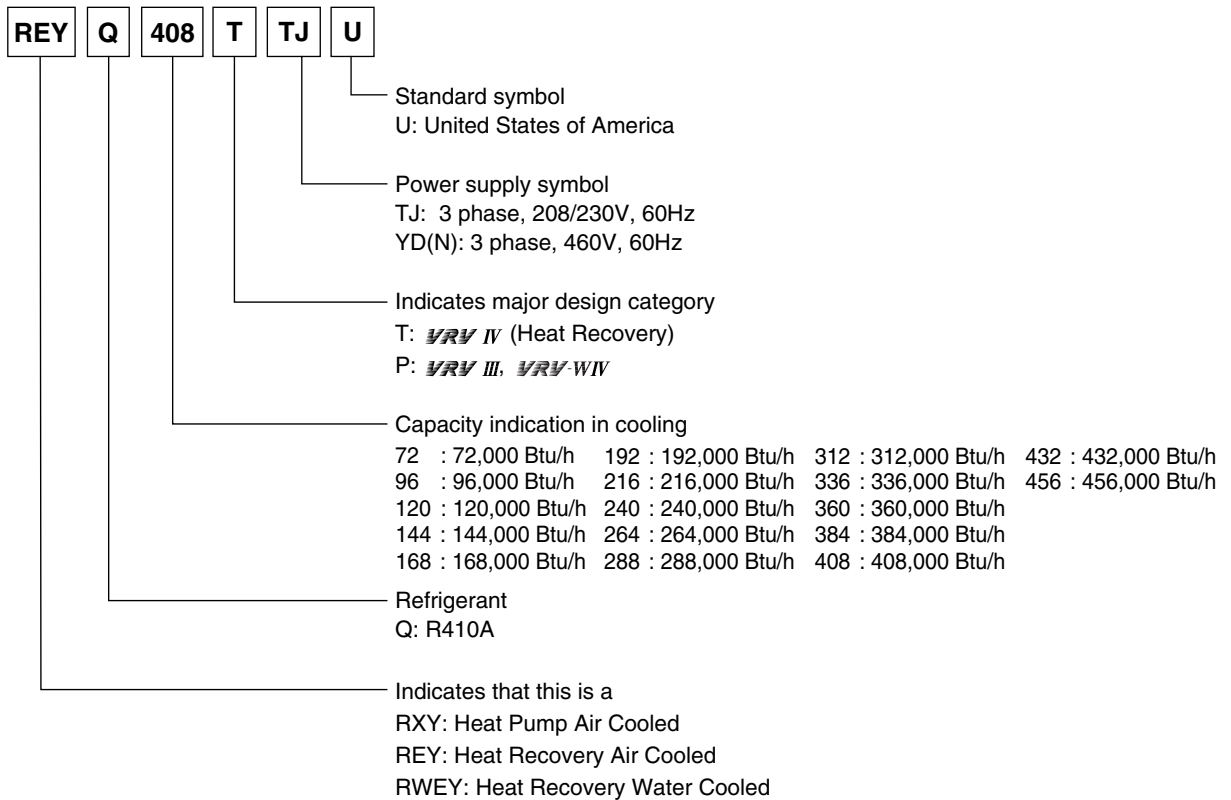
Note: *1. Combination of P-series and T-series of Branch Selector unit in a single system is not permitted. Combining the two series may cause malfunction.

5. Nomenclature

Indoor Unit

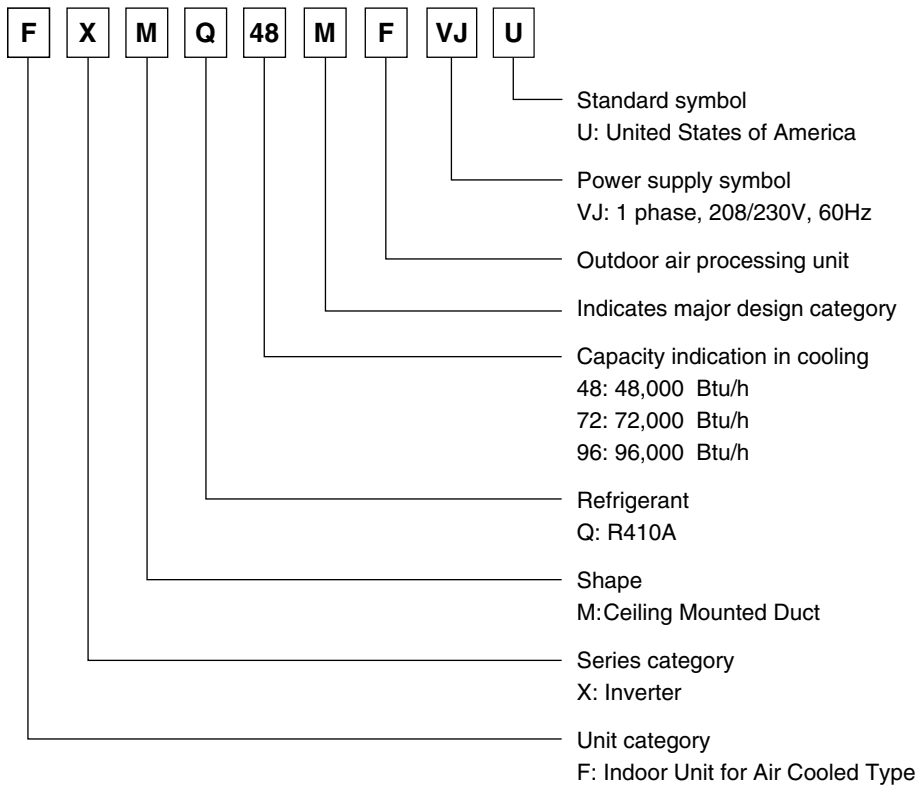


Outdoor Unit

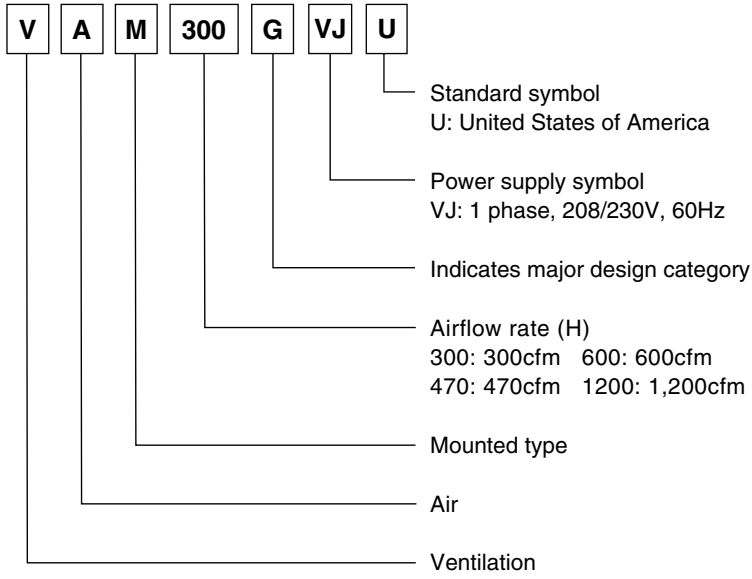


Air Treatment Equipment

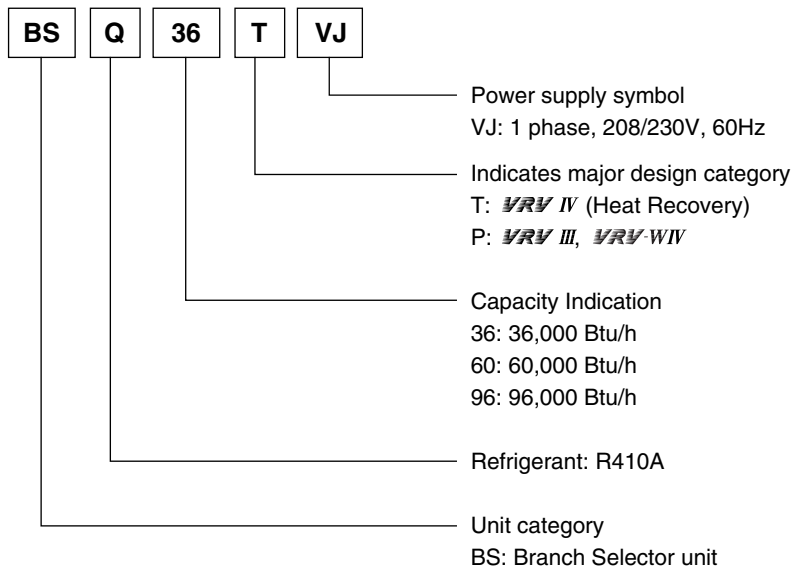
Outdoor Air Processing Unit



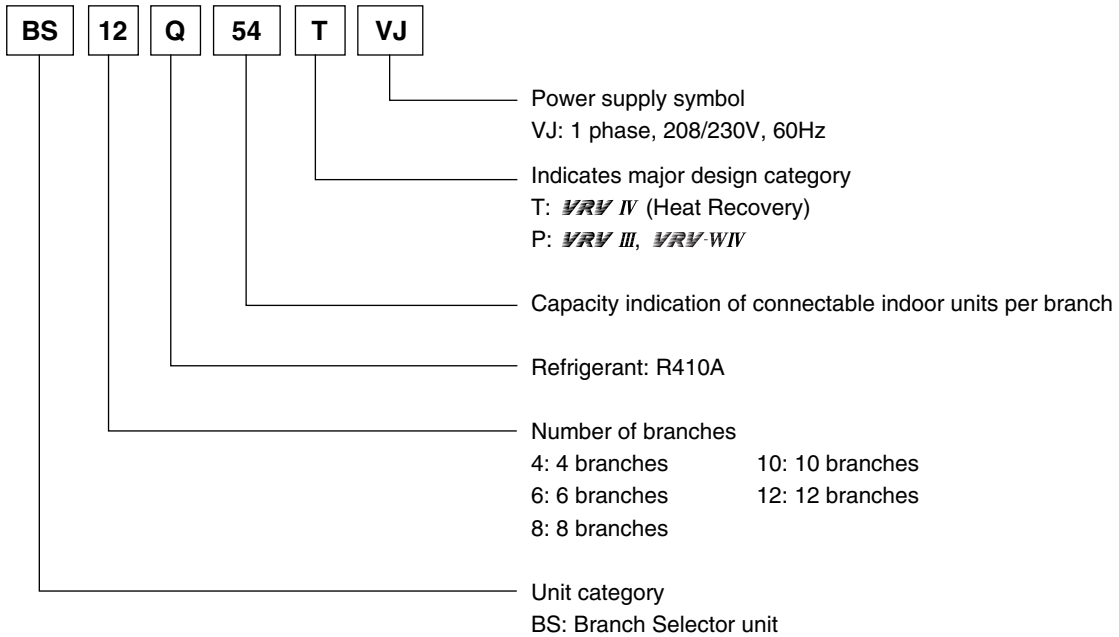
Energy Recovery Ventilator (VAM series)



Single Branch Selector unit (only necessary for Heat Recovery System)



Multi Branch Selector unit (only necessary for Heat Recovery System)



6. Capacity Range

6.1 Combination Ratio

$\text{Combination ratio} = \frac{\text{Total capacity index of the indoor units}}{\text{Capacity index of the outdoor units}}$

Type	Min. combination ratio	Max. combination ratio				
		Types of connected indoor units			Type of connected air treatment equipments	
		When using only FXDQ, FXMQ-PB, FXAQ	When using only FXTQ, or at least one FXFQ07 or FXFQ09	Other indoor unit models	FXMQ-MF	
					When FXMQ-MF is only connected	When FXMQ-MF and indoor units are connected
Single outdoor units	50%	200% *1	130%	200% *1	100%	100% *2*3
Double outdoor units				160% *1		
Triple outdoor units				130%		

- Notes:**
- *1. If the operational capacity of indoor units is more than 130%, low airflow operation is enforced in all the indoor units. Field setting now exists to configure this situation. For cooling and heating mode – see below.
 - *2. When outdoor-air processing units (FXMQ-MF) and standard indoor units are connected, the total connection capacity of the outdoor-air processing units (FXMQ-MF) must not exceed 30% of the capacity index of the outdoor units. And the connection ratio must not exceed 100%.
 - *3. It is permitted to use a maximum connection ratio of 130% in some circumstances – please contact your local Daikin representative for further details.
 - *4. For indoor units used for cooling only (do not connect to Branch Selector unit when using for heat recovery), total capacity index must be 50% or less than the capacity index of the outdoor units.

Indoor unit fan tap setting (REYQ-T only)

Indoor units fan speed limitation related to connection capacity and outdoor air temperature for energy saving.

Default value = 0

Value [2-34]	Indoor unit fan tap setting
0	Fan speed is limited to L tap when indoor units capacity \geq 130%.
1	In heating mode, fan speed is limited to L tap when indoor units capacity \geq 130%.
2	Fan speed follows a setting of the remote controller (not limited by indoor units connection capacity).
3	Fan speed is limited to L tap when outdoor air temperature goes down to below 85.1°F (29.5°C) and indoor air temperature is in condition A (*). It returns to remote controller setting when outdoor air temperature goes up to over 90.5°F (32.5°C) or indoor air temperature is in condition B (**).
4	Fan speed is limited to L tap when outdoor air temperature goes down to below 74.3°F (23.5°C) and indoor air temperature is in condition A (*). It returns to remote controller setting when outdoor air temperature goes up to over 79.7°F (26.5°C) or indoor air temperature is in condition B (**).
5	Fan speed is limited to L tap when outdoor air temperature goes down to below 66.7°F (19.3°C) and indoor air temperature is in condition A (*). It returns to remote controller setting when outdoor air temperature goes up to over 72.1°F (22.3°C) or indoor air temperature is in condition B (**).
6	Fan speed is limited to L tap when outdoor air temperature goes down to below 85.1°F (29.5°C). It returns to remote controller setting when outdoor air temperature goes up to over 90.5°F (32.5°C).
7	Fan speed is limited to L tap when outdoor air temperature goes down to below 74.3°F (23.5°C). It returns to remote controller setting when outdoor air temperature goes up to over 79.7°F (26.5°C).
8	Fan speed is limited to L tap when outdoor air temperature goes down to below 66.7°F (19.3°C). It returns to remote controller setting when outdoor air temperature goes up to over 72.1°F (22.3°C).

* Indoor condition A: Temperature difference (indoor air temperature - set temperature) is more than -2.7°F (-1.5°C) and less than 5.4°F (3°C).

** Indoor condition B: Temperature difference (indoor air temperature - set temperature) is -2.7°F (-1.5°C) or less, or 5.4°F (3°C) or more.

6.2 Outdoor Unit Combinations

REYQ-TYDN, REYQ-TTJU

Capacity Range	6 ton	8 ton	10 ton	12 ton	14 ton	16 ton	18 ton	20 ton	22 ton
REYQ	72TYDN 72TTJU	96TYDN 96TTJU	120TYDN 120TTJU	144TYDN 144TTJU	168TYDN 168TTJU	192TYDN 192TTJU	216TYDN 216TTJU	240TYDN 240TTJU	264TYDN 264TTJU
Max. Number of Connectable Indoor Units	12	16	20	25	29	33	37	41	45
Total Capacity Index of Indoor Units to be Connected *1	36~93 (144)	48~124 (192)	60~156 (240)	72~187 (288)	84~218 (336)	96~249 (307)	108~280 (345)	120~312 (384)	132~343 (422)

Capacity Range	24 ton	26 ton	28 ton	30 ton	32 ton	34 ton	36 ton	38 ton
REYQ	288TYDN 288TTJU	312TYDN 312TTJU	336TYDN 336TTJU	360TYDN 360TTJU	384TYDN 384TTJU	408TYDN 408TTJU	432TYDN 432TTJU	456TYDN 456TTJU
Max. Number of Connectable Indoor Units	49	54	58	62	64	64	64	64
Total Capacity Index of Indoor Units to be Connected *1	144~374 (460)	156~405 (499)	168~436 (537)	180~468 (468)	192~499 (499)	204~530 (530)	216~561 (561)	228~592 (592)

Note: *1 Values inside brackets are based on connection of indoor units rated at maximum capacity, 200% for single outdoor units, 160% for double outdoor units, and 130% for triple outdoor units.

REYQ-PCYD, REYQ-PCTJ

Capacity Range	6 ton	8 ton	10 ton	12 ton
REYQ	72PCYD 72PCTJ	96PCYD 96PCTJ	120PCYD 120PCTJ	144PCTJ
Max. Number of Connectable Indoor Units	12	16	20	25
Total Capacity Index of Indoor Units to be Connected *1	36~93 (144)	48~124 (192)	60~156 (240)	72~187 (288)

Note: *1 Values inside brackets are based on connection of indoor units rated at maximum capacity, 200% for single outdoor units, 160% for double outdoor units, and 130% for triple outdoor units.

6.3 Limitation of Capacity Index for Heat Recovery

Single Branch Selector unit

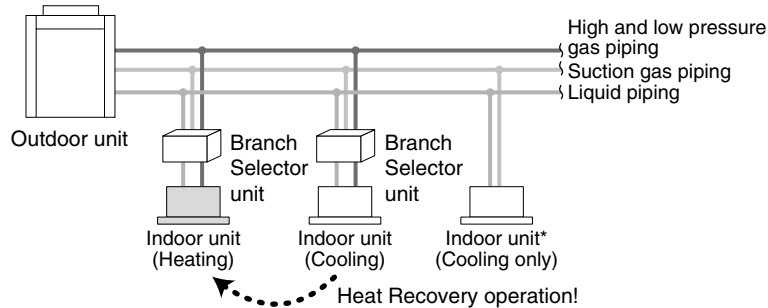
Model	BSQ36TVJ	BSQ60TVJ	BSQ96TVJ
Maximum number of connectable indoor units	4	8	8
Total capacity index of connectable indoor units	unit ≤ 36	36 < unit ≤ 60	60 < unit ≤ 96

Multi Branch Selector unit

Model	BS4Q54TVJ	BS6Q54TVJ	BS8Q54TVJ	BS10Q54TVJ	BS14Q54TVJ
Maximum number of connectable indoor units	20	30	40	41	41
Maximum number of connectable indoor units per branch	5	5	5	5	5
Number of branches	4	6	8	10	12
Maximum capacity index of connectable indoor units	144 or less	216 or less	290 or less	290 or less	290 or less
Maximum capacity index of connectable indoor units per branch (*1)	54 or less	54 or less	54 or less	54 or less	54 or less

Note: *1. When the total capacity of indoor units to be connected downstream is larger than 54 (Max. 96), use a junction pipe kit (KHRP26A250T, optional parts) to join two connections downstream from the Branch Selector unit.

Heat Recovery

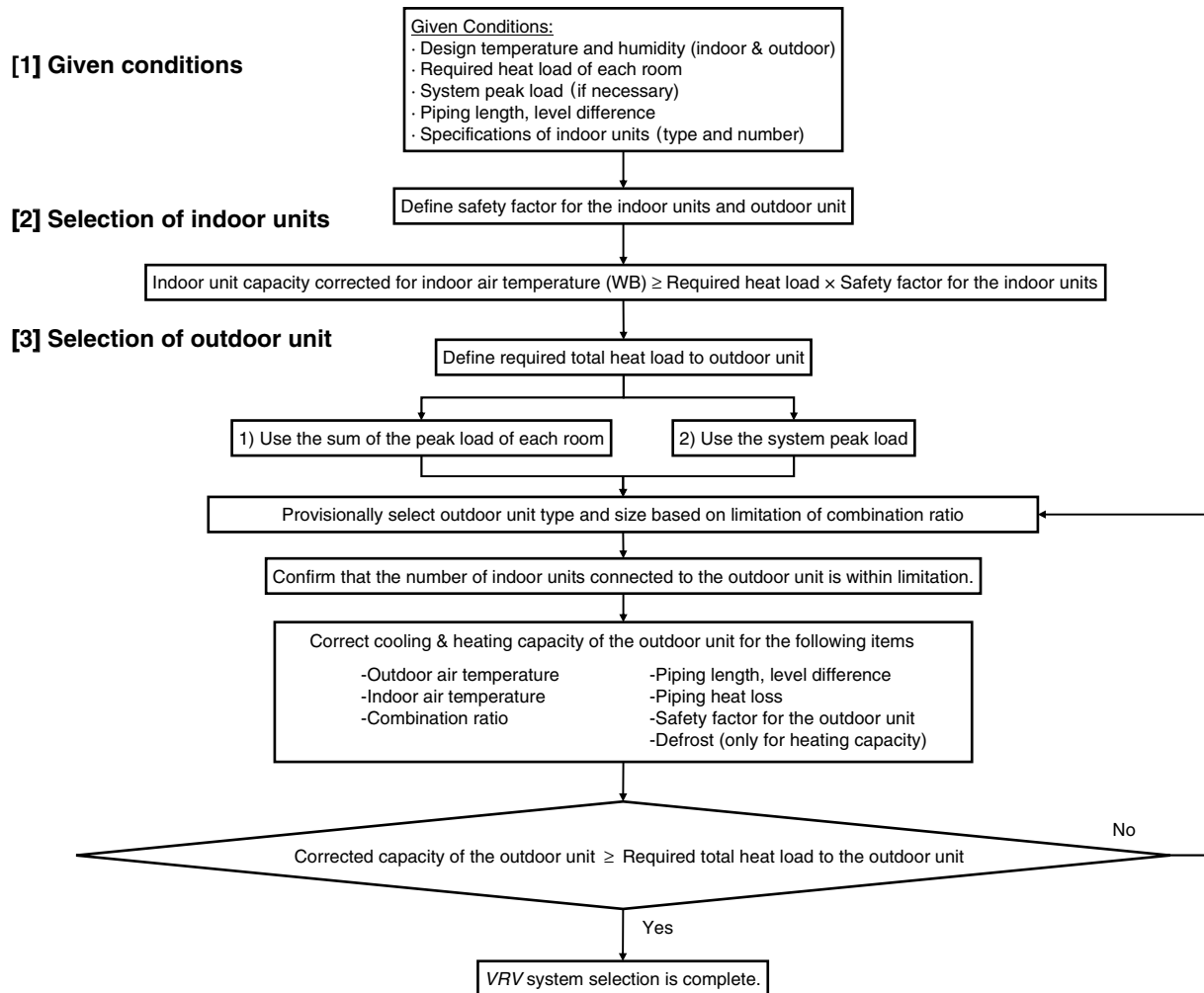


★For indoor units used for cooling only (do not connect to Branch Selector unit when using for Heat Recovery), total capacity index must be 50% or less than the capacity index of the outdoor units.

7. Selection Procedure

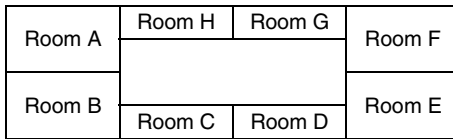
7.1 Selection Procedure

7.1.1 Flowchart



7.1.2 Selection Example

The following is a selection example based on total heat load for cooling.



Floor plan

[1] Given conditions

-Design conditions

Indoor air temperature: 67°F WB / 75°F DB, Outdoor air temperature: 93°F DB

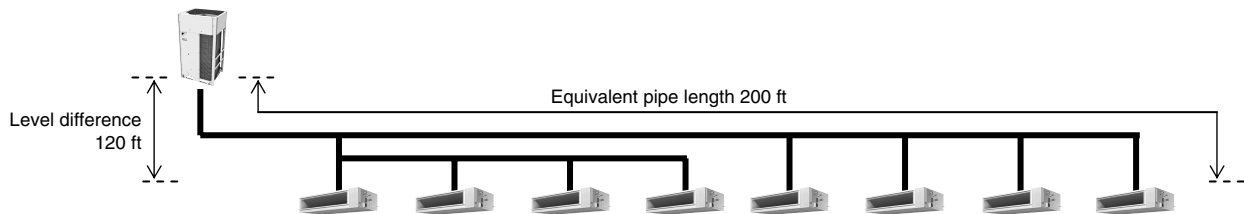
-Determine peak load of each room (and system peak load if necessary)

-Required heat load of each room

Time	Room A	Room B	Room C	Room D	Room E	Room F	Room G	Room H	Total
9:00	16.4	16.5	10.4	10.4	30.9	30.8	10.0	10.0	135.4
12:00	22.4	24.4	17.3	17.3	25.1	23.2	13.7	13.7	157.1
14:00	30.7	32.2	16.8	16.8	24.9	23.4	14.2	14.2	173.2
16:00	36.1	36.4	13.3	13.3	21.5	21.2	13.0	13.0	167.8

Total heat load (MBH)

From the above heat load calculation, the maximum heat load for the system (system peak load) is 173.2 MBH.



Select VRF indoor units FXMQ-PB series for each room.

-Safety factor

In this example, safety factor is not used. (i. e., safety factor = 1.0)

[2] Selection of indoor units

Calculate total heat capacity of indoor units corrected for indoor air temperature.

In case design temperature of the indoor air falls between temperatures listed in the table, calculate the capacity by interpolation.

The corrected total heat capacity of indoor units shall satisfy the maximum heat load of each room.

Capacity table of indoor unit
Cooling Capacity

Model	Capacity indication	Indoor air temp. °FWB (Te: 43°F (6°C))											
		61		64		67		70		72		75	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
		MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH
FXMQ07PBVJU	07	5.9	5.7	6.7	6.1	7.5	6.4	7.6	6.7	7.8	6.1	7.9	6.0
FXMQ09PBVJU	09	7.5	6.9	8.5	7.3	9.5	7.8	9.7	8.1	9.8	7.1	10.0	7.2
FXMQ12PBVJU	12	9.5	8.5	10.7	9.1	12.0	9.7	12.2	10.0	12.4	9.2	12.6	9.2
FXMQ15PBVJU	15	11.8	10.8	13.4	11.3	15.0	12.0	15.3	12.2	15.5	12.2	15.8	10.1
FXMQ18PBVJU	18	14.2	13.9	16.1	14.7	18.0	15.6	18.4	16.1	18.6	14.6	18.9	12.1
FXMQ24PBVJU	24	19.0	16.5	21.5	17.7	24.0	18.8	24.5	19.2	24.8	17.9	25.3	20.1
FXMQ30PBVJU	30	23.7	20.8	26.8	22.3	30.0	23.8	30.6	24.4	31.0	22.5	31.6	22.5
FXMQ36PBVJU	36	28.4	25.0	32.2	26.9	36.0	28.8	36.7	30.0	37.2	27.7	37.9	27.7
FXMQ48PBVJU	48	37.9	31.3	43.0	33.6	48.0	35.8	49.0	36.9	49.6	34.7	50.5	33.2
FXMQ54PBVJU	54	42.6	35.2	48.3	37.8	54.0	40.3	55.1	41.5	55.8	39.0	56.8	37.4

TC: Total capacity: MBH
SHC: Sensible heat capacity: MBH

Selection results of indoor units

	Room A	Room B	Room C	Room D	Room E	Room F	Room G	Room H
Max. heat load (MBH)	36.1	36.4	17.3	17.3	30.9	30.8	14.2	14.2
Selected IDU	FXMQ48PBVJU	FXMQ48PBVJU	FXMQ18PBVJU	FXMQ18PBVJU	FXMQ36PBVJU	FXMQ36PBVJU	FXMQ15PBVJU	FXMQ15PBVJU
Corrected TC (MBH)	48.0	48.0	18.0	18.0	36.0	36.0	15.0	15.0

*In case of selection based on Total Heat Load and Sensible Heat Load, select indoor units which satisfy not only the Total Heat Load but also the Sensible Heat Load of each room. The sensible heat capacity of indoor units is to be corrected for indoor air temperature. If the design temperature of indoor air falls between temperatures listed in table, calculate sensible heat capacity by using the bypass factor calculated by interpolation for each indoor air temperature.

[3] Selection of outdoor unit

[3] –1 Define the required total heat load from the indoor units to the outdoor unit

Define the required total heat load (A) based on (1) the sum of the peak load of each room or (2) the system peak load.

In this example, select an outdoor unit by (2).

Therefore, (A) = 173.2 MBH

[3] –2 Provisionally select outdoor unit

(1) Calculate CI (Capacity Index) of the selected indoor units.

CI of VRV indoor units

- CI of FXMQ15PBVJU = 15
- CI of FXMQ18PBVJU = 18
- CI of FXMQ36PBVJU = 36
- CI of FXMQ48PBVJU = 48

Capacity Range	0.6 ton	0.8 ton	1 ton	1.25 ton	1.5 ton	2 ton	2.5 ton	3 ton	3.5 ton	4 ton	4.5 ton	6 ton	8 ton	Power Supply Standard	
Capacity Index	7.5	9.5	12	15	18	20	24	30	36	42	48	54	72	96	VJU
Ceiling Mounted Duct Type (Middle and High Static Pressure)	FXMQ	07PB	09PB	12PB	15PB	18PB	—	24PB	30PB	36PB	—	48PB	54PB	—	VJU

Calculate the total CI of the indoor units.
 Total CI = 15 × 2 + 18 × 2 + 36 × 2 + 48 × 2 = 234

(2) Provisionally select an outdoor unit based on the total CI of the indoor units

The combination ratio of REYQ-T shall be between 50% and 130%.

As the total CI of the indoor units is 234, outdoor units from 16 ton to 38 ton are connectable.

Start from 16 ton which is the smallest outdoor unit.

REYQ-TYDN, REYQ-TTJU

Capacity Range	6 ton	8 ton	10 ton	12 ton	14 ton	16 ton	18 ton	20 ton	22 ton
REYQ	72TYDN 72TTJU	96TYDN 96TTJU	120TYDN 120TTJU	144TYDN 144TTJU	168TYDN 168TTJU	192TYDN 192TTJU	216TYDN 216TTJU	240TYDN 240TTJU	264TYDN 264TTJU
Max. Number of Connectable Indoor Units	12	16	20	25	29	33	37	41	45
Total Capacity Index of Indoor Units to be Connected	36-93 (144)	48-124 (192)	60-156 (240)	72-187 (288)	84-218 (384)	96-249 (307)	108-280 (345)	120-312 (384)	132-343 (422)

Capacity Range	24 ton	26 ton	28 ton	30 ton	32 ton	34 ton	36 ton	38 ton
REYQ	288TYDN 288TTJU	312TYDN 312TTJU	336TYDN 336TTJU	360TYDN 360TTJU	384TYDN 384TTJU	408TYDN 408TTJU	432TYDN 432TTJU	456TYDN 456TTJU
Max. Number of Connectable Indoor Units	49	54	58	62	64	64	64	64
Total Capacity Index of Indoor Units to be Connected	144-374 (460)	156-405 (499)	168-436 (537)	180-468 (568)	192-499 (499)	204-530 (561)	216-561 (561)	228-592 (592)

(3) Confirm that the number of the connected indoor units is within the limitation.

- The number of the connected indoor units = 8
- The max. number of connectable indoor units of 16 ton outdoor unit = 33

[3] –3 Calculate the corrected capacity of the outdoor unit.

- Calculate the combination ratio of the system.
 Total CI = 234, CI of REYQ192TTJU = 192
 Combination ratio = 234 / 192 = 122%

-Using the capacity table of the outdoor unit, calculate the capacity (B) corrected for outdoor air temperature, indoor air temperature, and combination ratio.

* In case the outdoor air temperature, the indoor air temperature, or the combination ratio falls between temperatures listed in the table, calculate the capacity by interpolation.

Connection ratio	120%	122%	130%
Cooling capacity	201	(B)	205

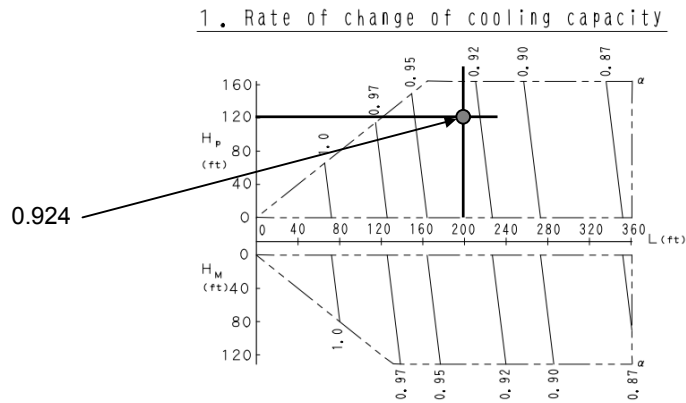
$$(B) = 201 + (205 - 201) \times (122 - 120) / (130 - 120) = 201.8$$

REYQ192TTJU Cooling Capacity for Standard Condition (Te: 43°F)

Combination %	Outdoor air temp.	Indoor air temp. °F/WB													
		57		61		64		67		70		72		75	
	FDB	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI
130	23	146	4.85	188	6.38	219	7.90	250	8.95	271	9.53	295	9.31	281	8.97
	30	146	5.00	188	6.59	219	7.85	250	9.15	265	9.44	289	9.21	275	8.87
	40	146	5.23	188	6.91	219	8.24	250	9.60	256	9.31	260	9.07	266	8.71
	50	146	5.48	188	7.26	219	8.66	242	9.54	248	9.17	251	8.91	257	8.53
	54	146	5.59	188	7.41	219	8.85	238	9.48	244	9.10	248	8.85	254	8.81
	58	146	5.71	188	7.57	219	9.03	235	9.43	241	9.23	245	9.28	250	9.36
	62	146	5.83	188	7.74	219	9.23	231	9.68	237	9.77	241	9.63	247	9.92
	66	146	5.95	188	7.91	219	9.45	228	10.2	234	10.3	238	10.4	243	10.5
	70	146	6.09	188	8.50	219	10.7	224	10.8	230	10.9	234	10.9	240	11.0
	72	146	6.24	188	8.94	217	10.9	223	11.0	229	11.1	232	11.2	236	11.3
	75	146	6.59	188	9.35	214	11.3	220	11.4	226	11.6	230	11.6	236	11.7
	79	146	7.09	188	10.1	211	11.9	217	12.0	222	12.1	226	12.2	232	12.3
83	146	7.61	188	10.9	207	12.4	213	12.5	219	12.7	223	12.8	229	12.9	
87	146	8.17	188	11.7	204	13.0	210	13.1	216	13.2	219	13.3	225	13.5	
91	146	8.76	188	12.5	200	13.5	206	13.7	212	13.8	216	13.9	219	14.0	
93	146	9.07	188	13.0	199	13.6	205	13.9	210	14.1	214	14.2	215	14.2	
95	146	9.38	188	13.5	197	14.1	204	14.2	209	14.4	210	14.4	210	14.4	
96	146	10.0	188	14.5	194	14.6	199	14.8	202	14.8	202	14.8	202	14.9	
103	146	10.8	184	15.0	190	15.2	193	15.3	193	15.3	193	15.3	193	15.3	
106	146	11.5	182	15.6	187	15.8	187	15.8	187	15.8	187	15.8	187	15.8	
110	146	12.5	178	16.5	178	16.5	178	16.5	178	16.5	178	16.5	178	16.5	
116	146	13.9	154	18.6	154	18.7	155	18.7	155	18.7	155	18.7	155	18.7	
118	133	14.1	134	14.1	134	14.1	134	14.1	135	14.2	135	14.2	135	14.2	
122	107	10.7	107	10.7	107	10.7	108	10.7	108	10.7	108	10.7	108	10.7	
120	23	135	4.45	173	5.93	202	6.93	230	8.07	259	9.24	271	9.55	276	9.25
	30	135	4.59	173	6.02	202	7.16	230	8.34	259	9.55	264	9.47	270	9.15
	40	135	4.83	173	6.31	202	7.51	230	8.75	252	9.56	256	9.34	261	9.01
	50	135	5.03	173	6.62	202	7.90	230	9.20	244	9.43	247	9.20	252	8.85
	54	135	5.12	173	6.76	202	8.06	230	9.40	240	9.37	244	9.14	249	8.78
	58	135	5.23	173	6.90	202	8.23	230	9.60	237	9.31	240	9.22	246	9.39
	62	135	5.33	173	7.05	202	8.41	228	9.63	233	9.71	237	9.76	242	9.85
	66	135	5.45	173	7.21	202	8.74	224	10.2	230	10.3	233	10.3	239	10.4
	70	135	5.66	173	7.59	202	9.46	221	10.7	228	10.8	230	10.8	235	11.0
	72	135	5.63	173	7.87	202	9.83	219	11.0	224	11.1	228	11.1	233	11.2
	75	135	5.82	173	8.33	202	10.4	217	11.4	222	11.5	225	11.6	231	11.7
	79	135	6.37	173	8.97	202	11.2	213	11.9	218	12.0	222	12.1	227	12.2
83	135	6.83	173	9.65	202	12.1	210	12.5	215	12.6	219	12.7	224	12.8	
87	135	7.33	173	10.4	201	12.9	204	13.0	211	13.1	214	13.2	220	13.4	
91	135	7.85	173	11.1	197	13.4	200	13.6	208	13.7	212	13.8	217	13.9	
93	135	8.12	173	11.5	196	13.7	201	13.8	206	14.0	210	14.1	215	14.2	
95	135	8.40	173	12.0	194	14.0	196	14.1	205	14.3	208	14.4	210	14.4	
99	135	8.99	173	12.8	190	14.5	196	14.7	201	14.8	202	14.8	202	14.9	
103	135	9.61	173	13.7	187	15.1	192	15.2	193	15.3	193	15.3	193	15.3	
106	135	10.2	173	14.7	184	15.7	187	15.8	187	15.8	187	15.8	187	15.8	
110	135	11.2	173	16.0	178	16.5	178	16.5	178	16.5	178	16.5	178	16.5	
116	133	12.4	154	16.6	154	16.7	155	16.7	155	16.7	155	16.7	155	16.7	
118	133	14.1	134	14.1	134	14.1	134	14.1	135	14.2	135	14.2	135	14.2	
122	107	10.7	107	10.7	107	10.7	108	10.7	108	10.7	108	10.7	108	10.7	

-Confirm capacity correction factor by piping length and level difference (K1)

(K1) = 0.924



-Calculate capacity correction factor by piping heat loss (K2)

(K2) = 1 + (heat loss factor per feet of piping × (equivalent piping length – 24.6 ft)) / 100

In cooling mode, heat loss factor per feet at 93°F is calculated as below.

Heat loss factor per feet = 0.072 + (0.098 – 0.072) × (93 – 86) / (95 – 86) = 0.0922

Using “Equivalent piping length = 200 ft” and “Heat loss factor per feet = 0.0922”,

(K2) = 1 + (0.0922 × (200 – 24.6)) / 100 = 1.162

Cooling	Ambient temperature							
Heat loss factor per feet of piping (%)	41°F	50°F	59°F	68°F	77°F	86°F	95°F	104°F
	0.000	0.000	0.013	0.030	0.046	0.072	0.098	0.125

Heating	Ambient temperature							
Heat loss factor per feet of piping (%)	5°F	14°F	23°F	32°F	41°F	50°F	59°F	68°F
	0.328	0.305	0.282	0.256	0.233	0.210	0.187	0.161

-Calculate the corrected capacity of REYQ192TTJU(C) by using (K1) and (K2).

Corrected capacity of REYQ192TTJU (C) = (B) × (K1) / (K2) (add defrost correction factor for heating capacity)

Therefore (C) = 201.8 × 0.924 / 1.162 = 160.5 MBH

If the corrected capacity (C) is the same or greater than the required total heat load (A), selection is complete.

If (C) < (A), return to Procedure [3]–2 and provisionally select a larger outdoor unit.

In this example, 160.5 MBH (C) < 173.2 MBH (A), so need to select a larger outdoor unit.

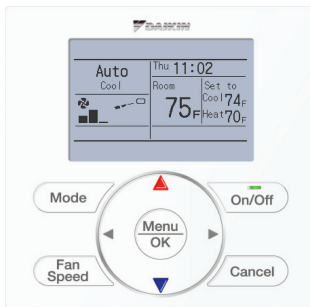
The capacity of REYQ216TTJU at the same condition is 175.6 MBH, which is more than the heat load (A): 173.2 MBH.

So the selection is complete.

8. Control Systems

8.1 Individual Control Systems

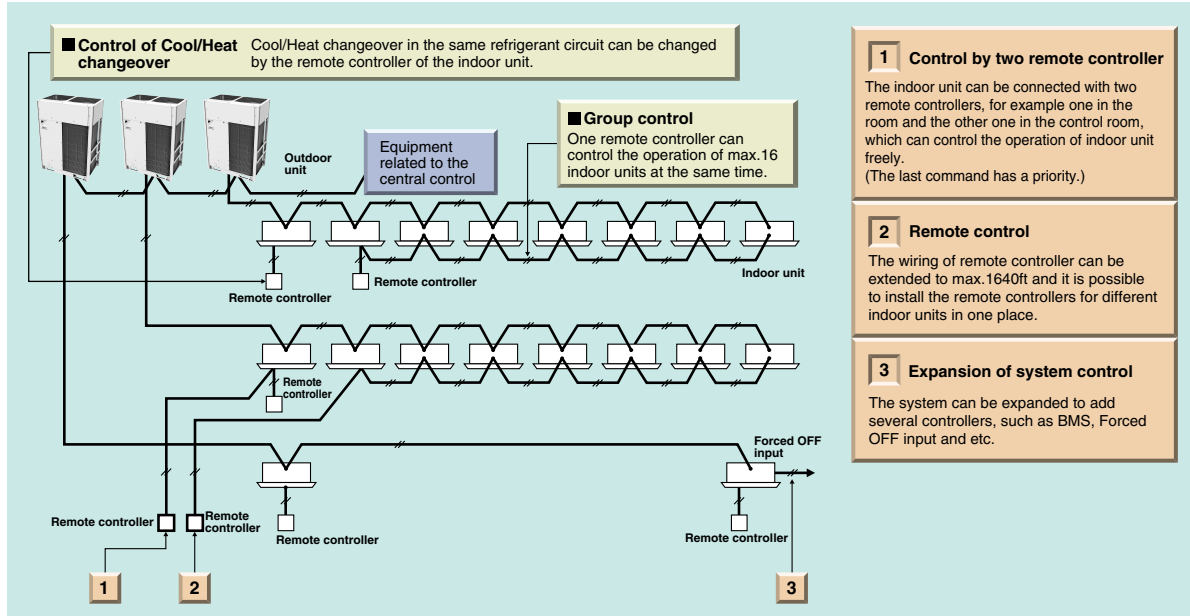
Wired remote controller (Optional) BRC1E73



Wired remote controller

- Selectable Screen Display
3 types of displays are available; Standard, Detailed and Simple.
- Clear Display
Equipped with backlight and large sized character display and buttons.
- Stylish
Basic tone is white and arrow keys are located at the center.
- Simple Operation
Simple operation used with arrow keys and menu-driven method.
- Multilingual Display
3 languages available to select: English, French and Spanish.
- Convenient Features
Schedule function and Daylight Saving Time function.

The wired remote controller supports a wide range of control functions



Wireless remote controller (Optional) BRC4C/BRC7E Type



Wireless remote controller

Signal receiver unit
(Separate type)

- ON/OFF operation
- Temperature setting
- Change of operation mode
- Airflow setting
- A compact light receiving unit to be mounted into a wall or ceiling is included.
 - A light receiving unit for ceiling-suspended type and wall-mounted type is mounted into the indoor unit.

Simplified wired remote controller (Optional) BRC2A71



Exposed type

- The remote controller has minimized the operation selections and buttons (on/off, operation mode, temperature setting and airflow volume), making itself suitable for use in hotel rooms or conference rooms.

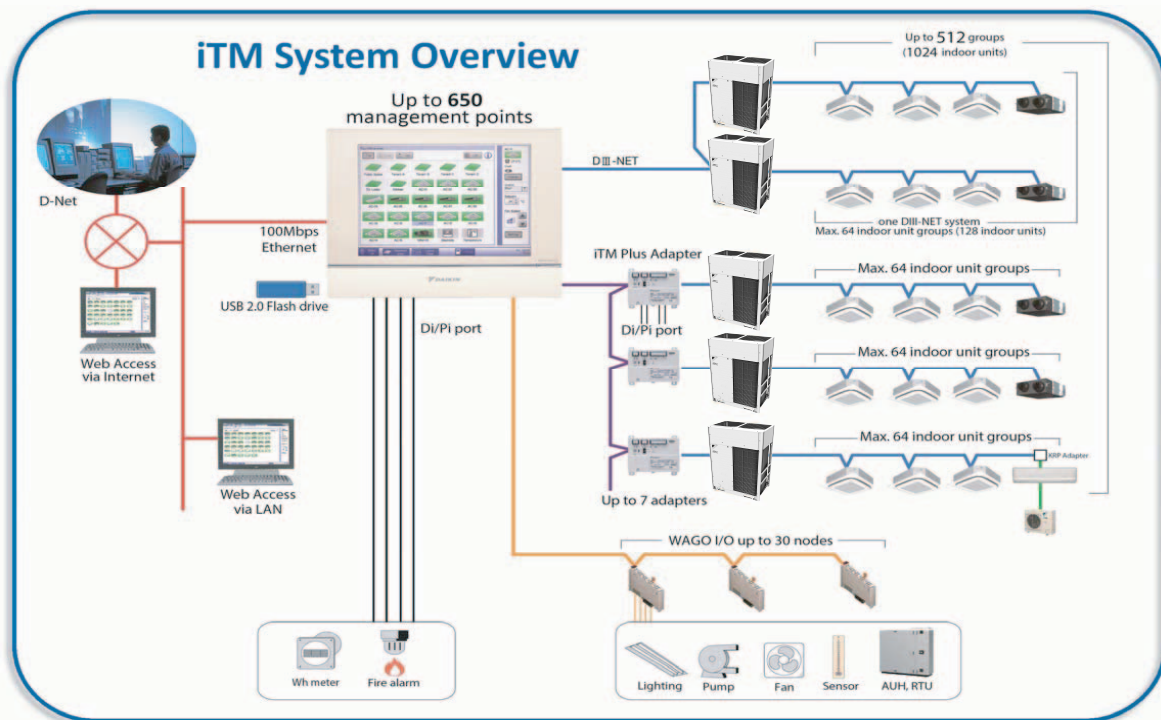
Intelligent Manager

The intelligent Touch Manager (iTM) is an **advanced multi-zone controller** that provides a very **cost-effective** way to control and monitor the Daikin VRV system.

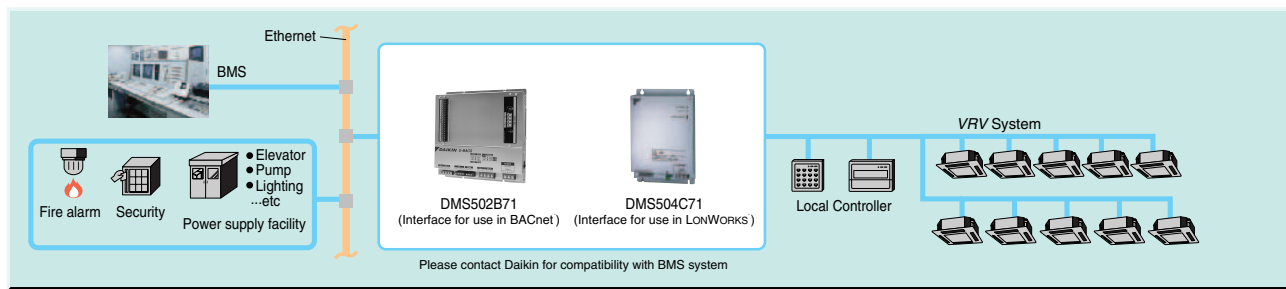
The 10.4" LCD touch screen is easy to use with different **screen views** to include the floor plan layout view and **icon menus** for system configurations. It is also easy to use with standardized remote **Web access from your PC**. It can manage a total of **650 management points** consisting of up to **512 Daikin indoor unit groups** (up to 1024 indoor units) along with general equipment control/monitoring with Digital Inputs/Output (Di/Do), Analog Input/Output(Ai/Ao) and Pulse Input (Pi) optional devices.

The new V2.0 software meets all of your control requirements such as

- Independent **Cool and Heat setpoints** or **Single setpoint** in the occupied period (when the unit is On)
- Independent **Setback setpoints** in the unoccupied period (when the unit is Off)
- Weekly Schedule with **Optimum Start** and **Timed Override**
- Auto Changeover with four configurable methods and a **tighter changeover deadband** (min 2°F)
- Fully accessible through Web access; provides Alert and Error emails
- **0.1°F room temperature** display and storage of up to **500,000 history items**
- Interlock and Emergency stop for facility management



Interface for BACnet® and LONWORKS®



DMS504C71
(Interface for use in LONWORKS®)



DMS502B71
(Interface for use in BACnet®)

Integrated control systems that recognize the trend of open protocol control systems

- Compatibility with BMS open protocols utilizing the international communication standards, BACnet® or LONWORKS®.

DMS504C71 Interface for use in LONWORKS®

- XIF file for confirming of specifications of the units.
- Connectable up to 10 outdoor units and 64 indoor unit groups.

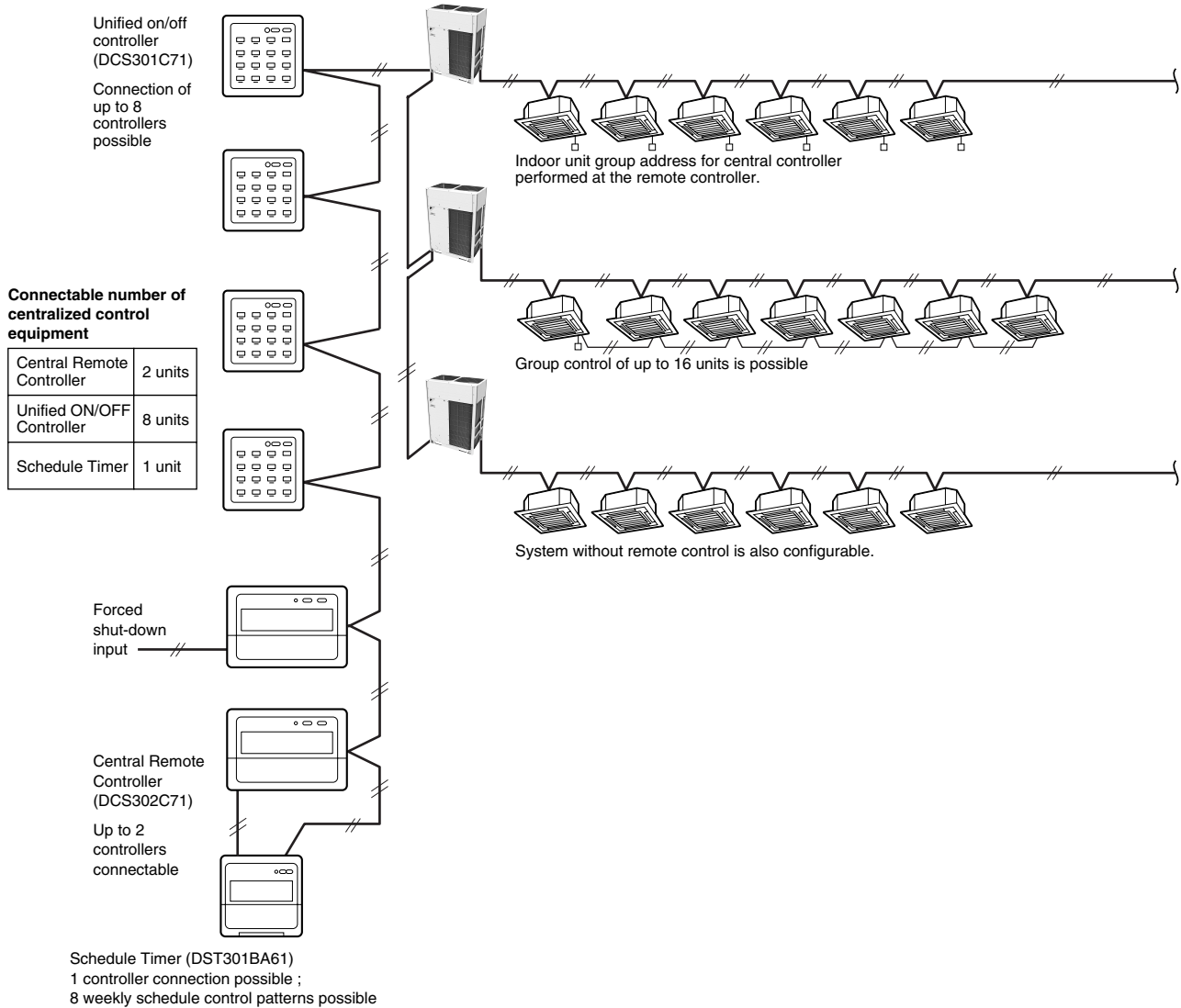
DMS502B71 Interface for use in BACnet®

- Conformance class 3 (ASHRAE 135-1995)
- Standard BACnet® Device B-ASC (ASHRAE 135-2001)
- BACnet® OPC server compatibility
- BACnet®/IP over Ethernet
- Up to 40 outdoor units and 256 indoor unit groups on one gateway. (optional expansion adapter)

8.2 DAIKIN Building Air Conditioning Control System (D-BACS)

8.2.1 System Configuration (Central Remote Controller)

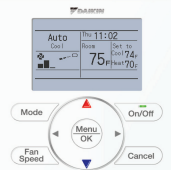
- Up to 64 groups of indoor units (128 units) can be centrally controlled.
- Optional controllers for centralized control can be combined freely, and system can be designed in accordance with building scale and purpose.
- Wiring can be run up to a total length of 6560ft, and adapts easily to large-scale system expansion.



No.	Part Name	Model No.	Function
1	Central Remote Controller	DCS302C71	Up to 64 groups of indoor units (128 indoor units) can be connected. On/off, temperature setting and monitoring can be accomplished individually or simultaneously. Connect up to 2 controllers into one system.
2	Unified ON/OFF Controller	DCS301C71	Up to 16 groups of indoor units (128 indoor units) can be turned, on/off individually or simultaneously, and both operation and malfunctions can be displayed. Can be used in combination with up to 8 controllers.
3	Schedule Timer	DST301BA61	Programmed time weekly schedule can be controlled by unified control for up to 64 groups of indoor units (128 indoor units). Can turn units on/off twice per day.

8.3 Control Method Using the Liquid Crystal Display Remote Controllers

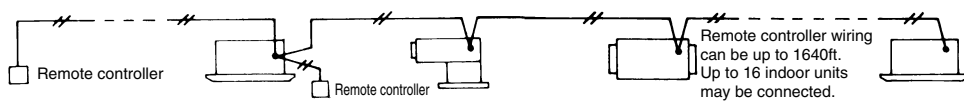
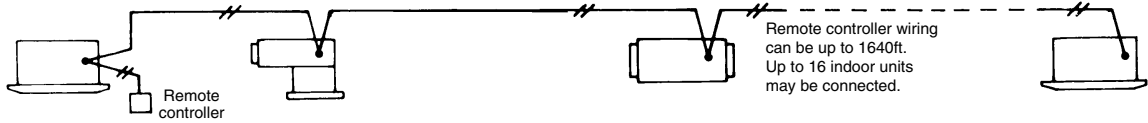
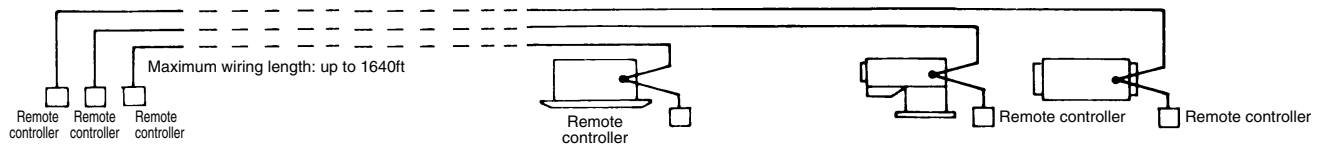
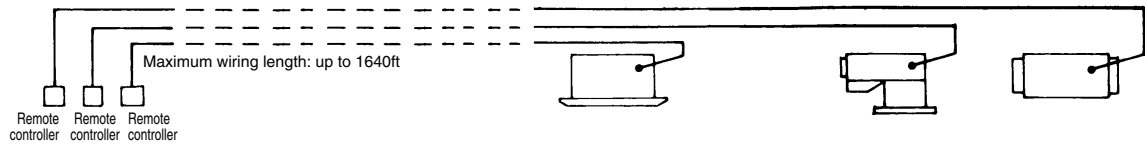
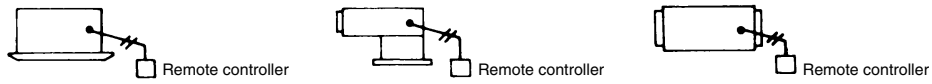
For more effective localized environmental control Daikin offers variety of control options such as single or double remote control or centralized control. This enables the construction of a variety of operational control systems which can be adapted for a wide range uses from remote control to building automation.

Control Method	Objective / Use	Unit Name and Model	Function	Standard Number of Units	
Control by Remote Controller	Local operation of remote controller	Example of typical use			
	Remote operation of remote controller	For control from multiple locations		1 remote controller controls 1 indoor unit	
	2 remote control ★3	For control from 2 places (distant or local)	BRC1E73 		2 remote controllers control 1 indoor unit
	Group control ★1	For the control of multiple indoor units at the same time	Connected to indoor units <ul style="list-style-type: none"> ■ For group control it is connected to 1 unit out of the group ■ In the case of control with 2 remote controllers both controllers are connected to the indoor unit 	Main Menu <ul style="list-style-type: none"> ■ Airflow Direction ■ Ventilation ■ Schedule ■ Off Timer ■ Celsius / Fahrenheit ■ Maintenance Information ■ Configuration ■ Current Settings ■ Clock & Calendar ■ Daylight Saving Time ■ Language Service Settings <ul style="list-style-type: none"> ■ Test Operation ■ Maintenance Contact ■ Field Settings ■ Energy Saving Options ■ Prohibit Buttons ■ Min Setpoints Differential ■ Group Address ■ Indoor unit AirNet Address ■ Outdoor unit AirNet Address ■ Error History ■ Indoor Unit Status ■ Outdoor Unit Status ■ Forced Fan ON ■ Switch Main Sub Controller ■ Filter Indicator 	1 remote controller controls up to 16 indoor units simultaneously
	★1 ★3 Group control with 2 remote controllers	For control from multiple locations			2 remote controllers control up to 16 indoor units from 2 different places simultaneously
	Forced OFF command from outside	Forced OFF for forgetting to turn equipment off, or in times of an emergency.		<ul style="list-style-type: none"> ■ Forcibly stops indoor unit operation by command from outside. ■ During remote controller group control, input a command from outside to any one of the indoor units. 	Same as the number of units controlled by remote controller

★1 In the case of group control, the controller used as the master controller must be selected with the wired remote controller connected with the indoor unit having auto-swing function.

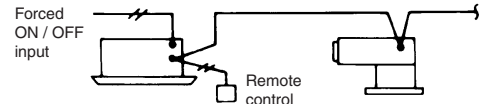
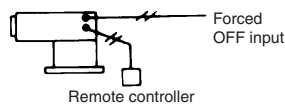
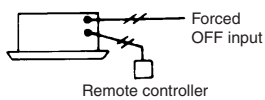
★3 In case of using BRC1E73 with 2 remote controllers, the power supply on the indoor PCB adapter and adapter for the wiring cannot be used at the same time. Only one of the adapters can be used.






Outline of System



■ For local operation of remote controller

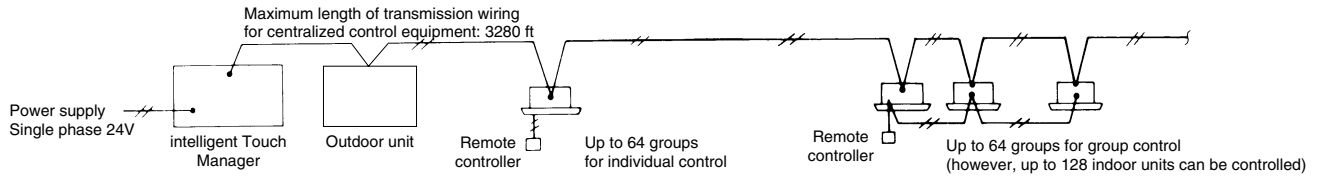
● For group control



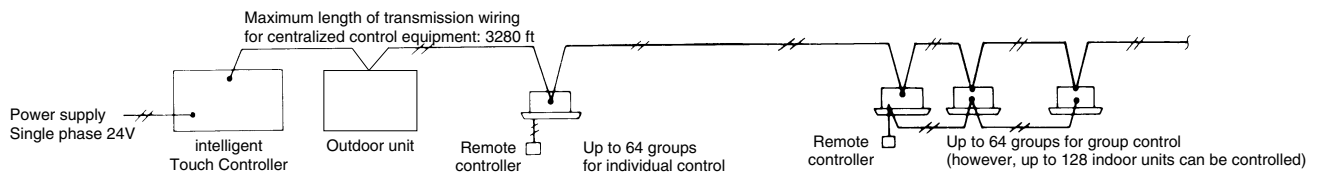
Control Method	Objective / Use	Unit Name and Model	Function	Standard Number of Units	
Central Control	intelligent Touch Manager	<p>DCM601A71/72</p> 	<ul style="list-style-type: none"> ■ Simple monitoring/operation ■ Various automatic control functions ■ Energy management ■ Remote access function ■ VRV Power Proportional Distribution function ■ Interlocking control of VRV and other equipment ■ D-NET connection ■ DOAS connection by BACnet protocol. 	Controls up to 64 groups (Max. 512 indoor units groups) with one intelligent Touch Manager. (Up to 7 iTM Plus Adapter can be use to maximize indoor unit groups count)	
	intelligent Touch Controller	<p>DCS601C71</p> 	<ul style="list-style-type: none"> ■ Adds various functions other than the functions of existing central remote controller. ■ Scheduled operation and function to distribute electricity proportionally. ■ Simple handling through a large sized liquid crystal display. ■ Adopts a touch-panel ■ D-NET connection ■ Auto Heat/Cool Change Over ■ Temperature Limitation 	Controls up to 64 groups (Max. 128 indoor units groups) with one intelligent Touch Controller. (One DIII-Net Plus Adapter can be use to maximize indoor unit groups count)	
	Schedule Timer	<p>DST301BA61</p> 	<ul style="list-style-type: none"> ■ ON/OFF time can be set by units of day, hour and minute; ON/OFF pattern can be set by time zone of twice per day in accordance with application. 	Simultaneously controls 64 groups with one schedule timer. Max. 128 indoor units	
	Central Remote Controller	For central control of indoor units	<p>DCS302C71</p> 	<p>64 groups (zones) of indoor units can be centrally controlled individually.</p> <ul style="list-style-type: none"> ■ Max. 64 groups (128 indoor units controllable) ■ Max. 128 groups (128 indoor units) are controllable by using 2 central remote controllers, which can control from 2 different places. ■ Zone control ■ Malfunction code display ■ Max. wiring length 3,280-27/32 ft (Total : 6,561-11/16 ft) ■ Combination with Unified ON/OFF controller, schedule timer and BMS system ■ Airflow rate and direction can be controlled individually for indoor units in each group operation. ■ Ventilation rate and mode can be controlled for Heat Reclaim Ventilator. ■ Up to 4 Start/Stop pairs can be set per day by connecting a schedule timer. 	One central remote controller may control a maximum of 64 groups of indoor units (Max. 128 indoor units)
	Unified ON/OFF Controller	For ON/OFF operate all indoor units	<p>DCS301C71</p> 	<ul style="list-style-type: none"> ■ Double centralized control function ■ Indoor unit ON/OFF control ■ Individual/unified operation ■ Remote controller operation rejected command (Central remote controller given priority when used in combination with central remote controller.) ■ Sequential start function 	Controls up to 16 groups of indoor units with one unified ON/OFF controller. Max. 128 indoor units

Outline of System

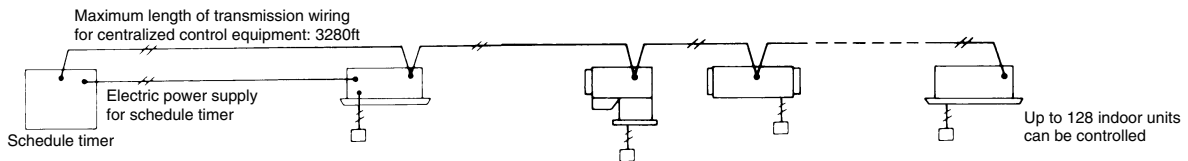
■ When using one of unit of intelligent Touch Manager



■ When using one of unit of intelligent touch controller

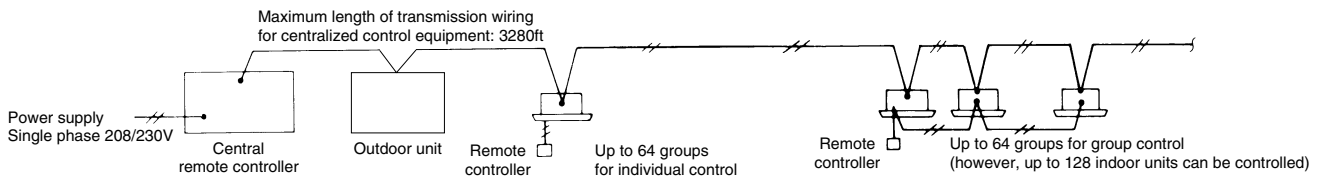


■ When using one unit of schedule timer

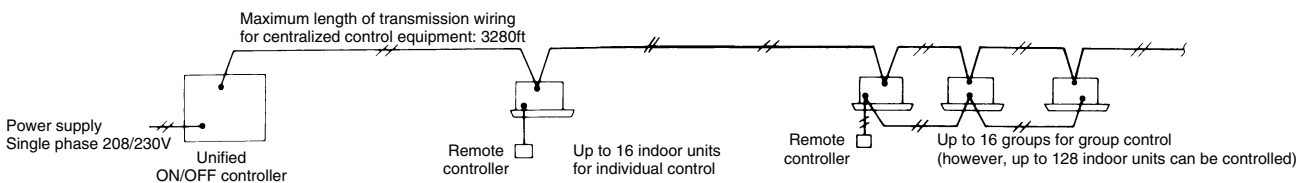


Note: For the schedule timer, take the electric power supply from the indoor unit.

■ When using one unit of central remote controller

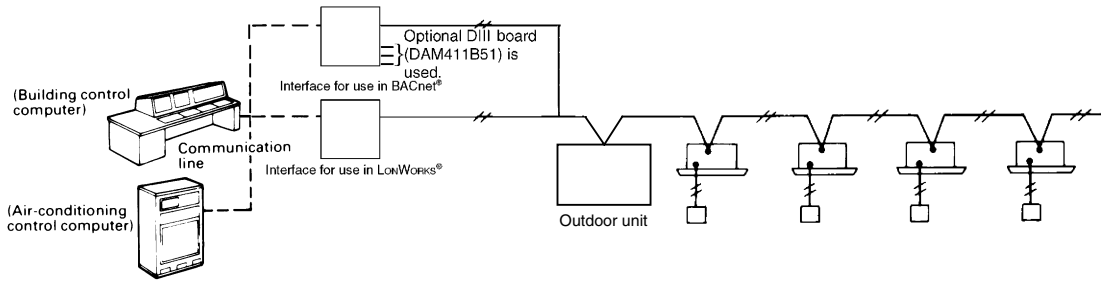


■ When using one unit of unified ON/OFF controller



Control Method	Objective / Use	Unit Name and Model	Function	Standard Number of Units	
Building Control System	Building control computer, air-conditioning control computer and control system for air-conditioning are carried out by communication and contact signal.	<ul style="list-style-type: none"> ■ Interface for use in BACnet® DMS502B71 ■ Interface for use in LONWORKS® DMS504C71 	<ul style="list-style-type: none"> ■ Interface for use in BACnet® Interface unit to allow communications between <i>VRV</i> and BMS. ■ Interface for use in LONWORKS® Interface unit to allow communication between <i>VRV</i> and BMS 	<p>Interface for use in BACnet® : Up to 256 indoor unit groups (512 indoor units) When the option DIII board is used</p> <p>Interface for use in LONWORKS® : Up to 64 indoor unit groups (128 indoor units)</p>	

Outline of System



8.4 Building Control System Introduction

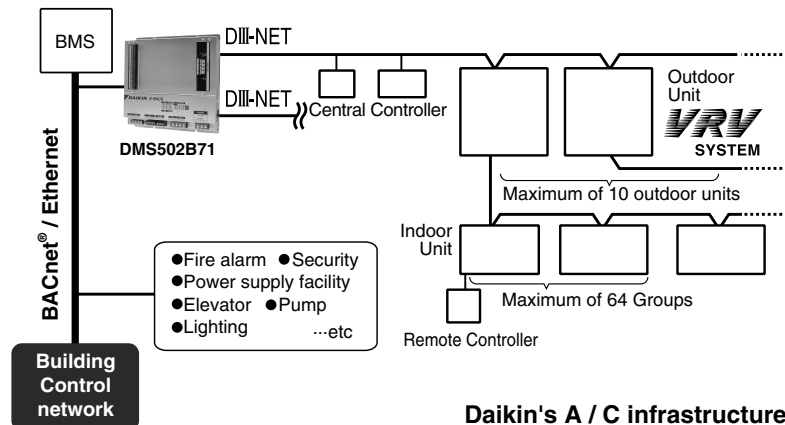
High-speed transmission type air-conditioning control system D-BACS (DAIKIN Building Air-conditioning Control System) networks up to 64 groups of indoor units (128 indoor units). There is a complete line up of variegated control equipment for D-BACS, such as a master station that can directly access a building control computer via a communication line. Changing control function to a component configuration makes D-BACS a central control system that can be flexibly combined with other equipment, which can respond to various air-conditioning control needs such as application, conditions and scale.

8.4.1 Interface for Use in BACnet®

The interface provides the control configuration, monitor and control points for each indoor unit group and monitors system status.

■ Control configuration setting function for air-conditioning equipment

System Outline



Name	Functions
Interface for use in BACnet® (DMS502B71)	Interface unit to allow communications between VRV and BMS. Operation and monitoring of air-conditioning systems through BACnet® communications.
Optional DIII board (DAM411B51)	Expansion kit, installed on the DMS502B71, to provide 2 more DIII-NET communication ports. Not for use independently.
Central Remote Controller (DCS302C71)	Functions as a backup if the building control systems fails.
Unified ON/OFF Controller (DCS301C71)	Central control panel for simple operation by ON/OFF switch and LED display. Also functions as a backup just as with the central remote controller.
Local Remote Controller (BRC1E73)	Provided in each room. Used for operating, setting and monitoring air-conditioning equipment.

Notes:

1. A group consists of several indoor units that can be started or stopped simultaneously. As shown in the figure above, a group consists of several indoor units wired to the same remote controller. For units without a remote controller, each indoor unit is treated as a group.
2. Several groups are registered as a zone with the Central Controller. By pushing 1 button of the Central Controller, all groups within the same zone can be turned on or off simultaneously.

Building management 1 system controls and monitors air-conditioning equipment by the block. A block consists of 1 or more groups (max. 32), and can be set without regard for the zones mentioned above. You must, however, take the following things into consideration.

- (1) If the air-conditioning mode is switched, as a premise, permission for cool / heat selection for indoor units (by remote controller or Central Remote Controller) must be designated within the program.
- (2) Program status is basically monitored by observing the data of a representative unit. The contents which can be monitored are therefore restricted if the representative unit is designated as an adapter, etc.

Block registration is accomplished through signal transmission from the building control system to the cooler-conditioning system. Because configuration can be changed while receiving power even after operating, maintenance from the maker of the air-conditioning equipment is not required when changing the configuration.

8.4.2 Air-Conditioning Equipment and Possible Functions








Function	Air-Conditioner Devices	Remarks
	VRV Inverter Series	
Start/Stop Control and Monitoring	○	
Air-Conditioner Error Notification	○	
Indoor Air Temperature Monitoring	○	
Temperature Setting and Monitoring	○	
Air-Conditioning Mode Setting and Monitoring	○	Air-Conditioning mode switching is effective only for indoor units for which cool/heat selection is permitted.
★1 Remote Controller Mode Setting and Monitoring	○	
Filter Sign Monitoring and Reset	○	
Cumulative Power Value Monitoring	○	
Thermostat Status Monitoring	○	
Compressor Operation Status Monitoring	○	
Indoor Fan Operation Status Monitoring	○	
Heater Operation Status Monitoring	○	
Air Direction Setting and Monitoring	○	
Airflow Rate Setting and Monitoring	○	
Forced Thermostat Off Setting and Monitoring	○ ★2	
Forced Thermostat On Setting and Monitoring	○ ★2	
Energy Efficiency Command (Setting Temperature Shift)	○	

Notes:

- ★1. Remote controller mode is for acceptance or rejection of on/off operation, temperature setting and air-conditioning mode setting by remote controller.
- ★2. If set locally, the host is not notified. Thus, monitoring cannot be accomplished from the host.
3. The meaning of ○, × are as follows
 - : Possible Functions
 - × : Impossible Functions

8.4.3 Centralized Control Equipment Combinations

The table below shows which combinations of centralized control equipment are possible and which are not.

	 intelligent Touch Manager DCM601A71	 Interface for use in LONWORKS® DMS504C71	 Interface for use in BACnet® DMS502B71	 intelligent Touch Controller DCS601C71	 Central Remote Controller DCS302C71	 Unified ON / OFF Controller DCS301C71	 Schedule Timer *1 DST301BA61
intelligent Touch Manager	OK	OK	OK	NG	OK	OK	NG
Interface for use in LONWORKS®	OK	NG	NG	OK	OK	OK	NG
Interface for use in BACnet®	OK	NG	NG	OK	OK	OK	NG
intelligent Touch Controller	NG	OK	OK	OK	OK	OK	NG
Central Remote Controller	OK	OK	OK	OK	OK	OK	OK
Unified ON/OFF Controller	OK	OK	OK	OK	OK	OK	OK
Schedule Timer *1	NG	NG	NG	NG	OK	OK	NG

*1 The Schedule Timer should be used in combination with the Central Remote Controller or Unified ON / OFF Controller.

- If using in combination with centralized control equipment, the relation between them is last command priority.
- If using in combination with centralized control equipment, the remote control mode is decided by the setting of the highest priority item in the priority rank shown in the table below.

Priority Ranking of Remote Control Mode Settings

	Interface for use in LONWORKS®	Interface for use in BACnet®	intelligent Touch Manager	intelligent Touch Controller	Central Remote Controller	Unified ON/OFF Controller	Schedule Timer
Priority Ranking	1	1	2	2	2	3	4
Hierarchy	Upper		Upper-middle			Middle	Lower

Maximum number of connections

Main	1	1(2)*	4(8)*	1
Sub	–	1(2)*	4(8)*	–

* Centralized control equipment with Main/Sub switching function can control the same VRV indoor unit from two different locations.

8.5 Specifications of the Control Wiring

Use 2-conductor, stranded non-shielded copper cable/PVC or vinyl jacket.

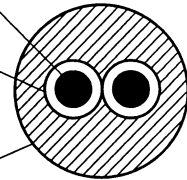
- Vinyl cab tire round cord 2-conductor, 18 AWG, stranded, non-shielded copper
- PVC or vinyl jacket
- Plenum rated if pulled through common plenum or ductwork, per code
- Control transmission wire must be kept separate from power wiring
- Using UV stabilized cable should be standard when exposed to outside elements.

<Example> Section of cord

Electrical wire

Insulation

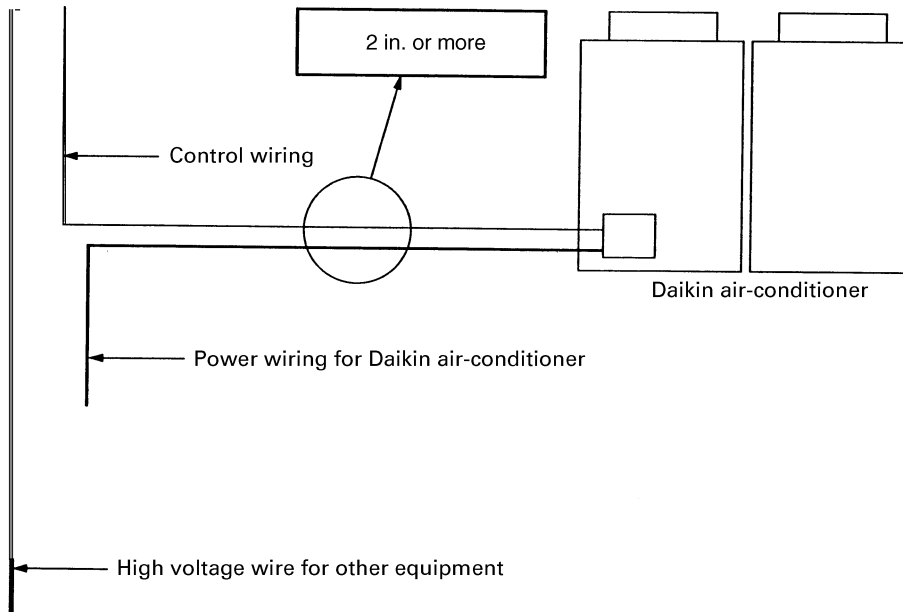
PVC or Vinyl Jacket



<Cautions>

1. 2-conductor, stranded non-shielded copper cable/PVC or vinyl jacket.
2. Never use a 3 or more core of cord or cable.
3. The size of wire should be 18AWG, maximum 1640 ft. (500m).
4. Never bundle the transmission line cables or cords.
5. Be sure to keep the transmission wiring distant from power wiring.

[Example]

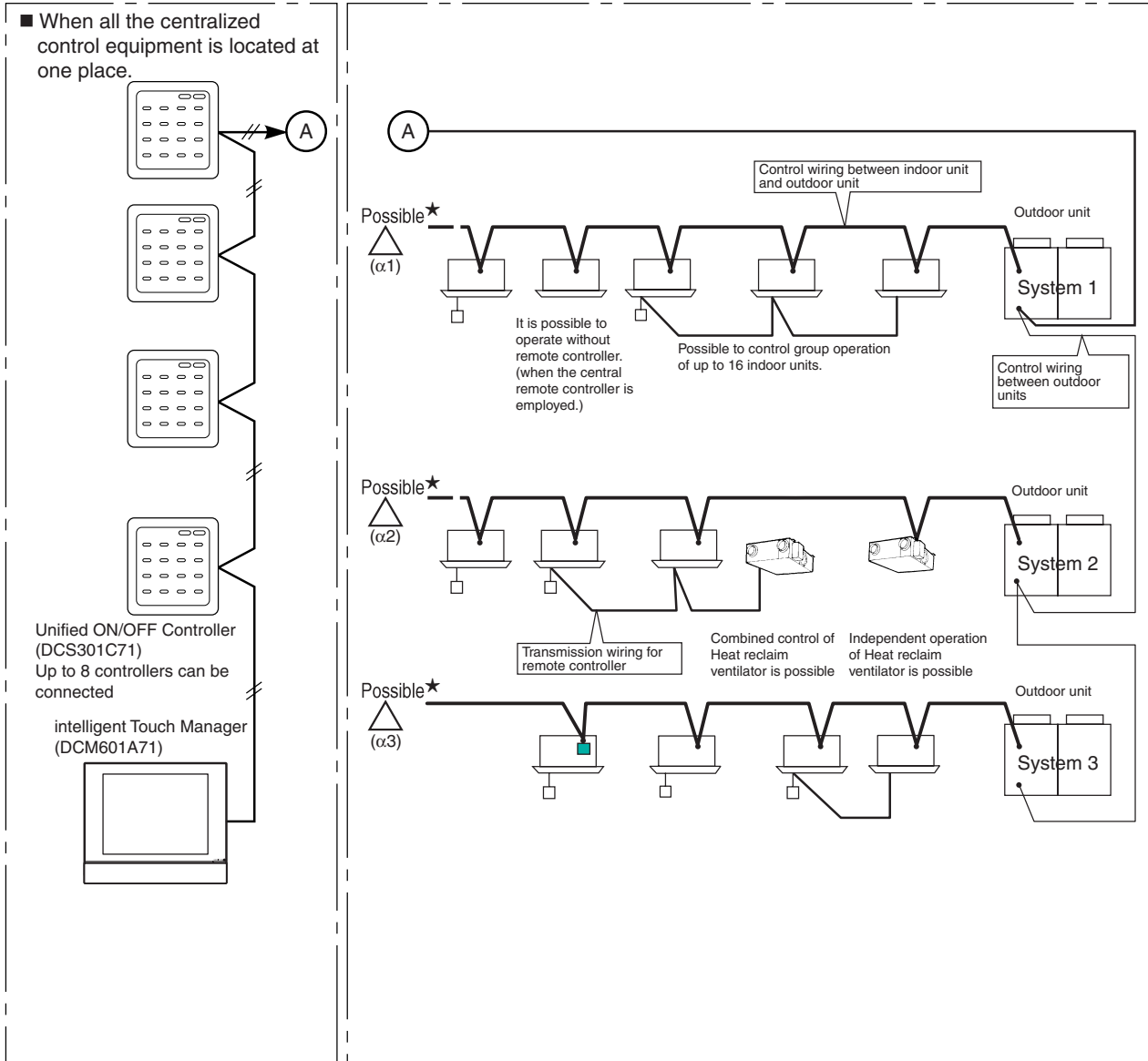


8.6 Wiring Example

Example of Control Wiring

- Be sure to connect the wiring of the centralized control equipment to control wiring between outdoor units.
When wiring connections are made between indoor and outdoor units, there may be cases where control over normal systems may become impossible if one of the connected systems should happen to fail.
- Be sure to prevent the connection of three wires on the same terminal.

<Pattern 1>



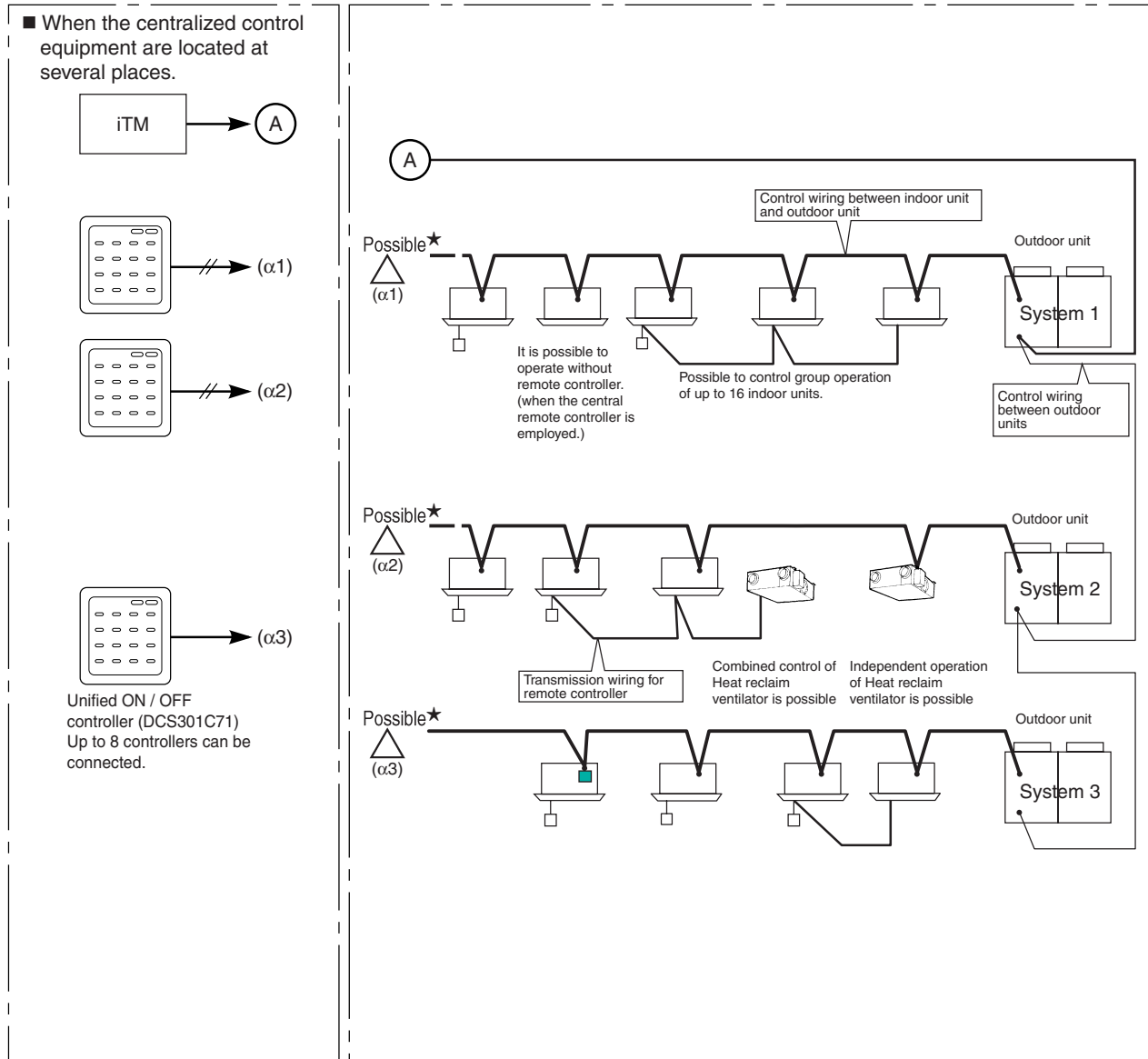
The advantages when the centralized control equipment are connected to A.

- If the centralized control equipment are connected to A, it is still possible to have a centralized control, even if the power supply of other circuit connected to the centralized control equipment is shut off. (even if the power is shut off due to long vacation etc.)

Caution:

- ★1. It is not recommended to connect the centralized control equipment on (α1), (α2), (α3), as there is a risk to lose control over all systems.
Ex.; If intelligent Touch Manager (iTm) is connected on (α1), and System1 shut down, control over System2 and System3 units is lost.

<Pattern 2>

**The advantages when the centralized control equipment are connected to A.**

- If the centralized control equipment are connected to A, it is still possible to have a centralized control, even if the power supply of other circuit connected to the centralized control equipment is shut off. (even if the power is shut off due to long vacation etc.)

Caution:

- ★1. It is not recommended to connect the centralized control equipment on (α1), (α2), (α3), as there is a risk to loose control over all systems.
Ex.; If intelligent Touch Manager (iTm) is connected on (α1), and System1 shut down, control over System2 and System3 units is lost.

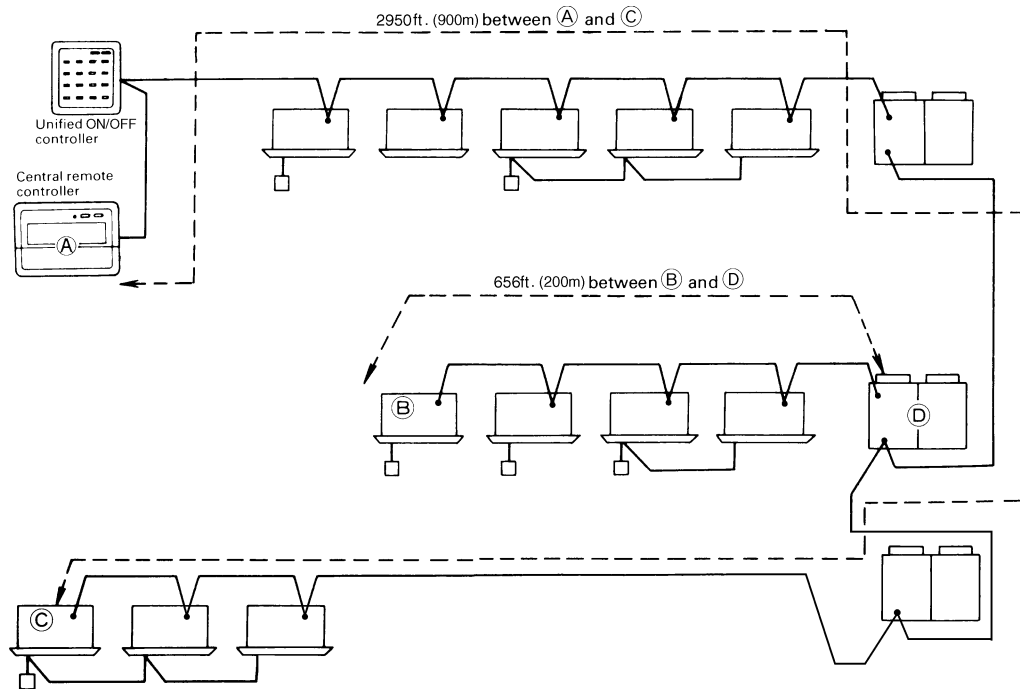
8.7 Length of Transmission Wiring

The super wiring system, which integrates the control wiring between indoor unit and outdoor unit and the transmission to the central controllers into one common wiring, should satisfy the following limitation.

The longest extension of wiring: Not exceeding 3280ft. (1000m).

Total length of wiring: Not exceeding 6560ft. (2000m).

8.7.1 Example of Wiring



- In the above system, the longest extension of wiring is 2950ft. (900m) between (A) and (C), which satisfies the limit of 3280ft. (1000m). And the total length is 3610ft. (1100m), that is the total of 2950ft. (900m) between (A) and (C) and 656ft. (200m) between (B) and (D), which also satisfies the limit of 6560ft. (2000m). The central controller functions properly, only when both the longest extension and the total length of wiring satisfies the limitation, as shown above.

Caution:

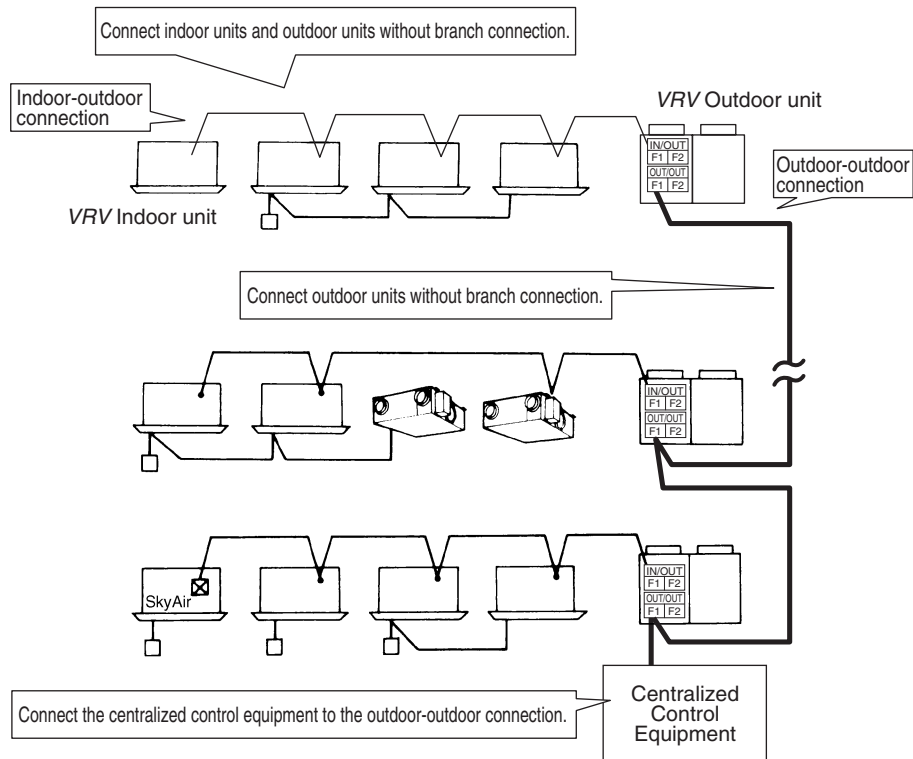
When designing the system, be sure to check both the longest extension and the total length of wiring. If it exceeds the limitation, there is no other way but to split into several systems.

8.8 Connection Method

8.8.1 Correct Wiring

- Series wiring method only should be used.

[Example]



Note:

Make sure that the outdoor to indoor communication wiring matches the refrigerant piping circuit. If communication wiring is crossed over different refrigerant circuits system errors and malfunctions can occur.

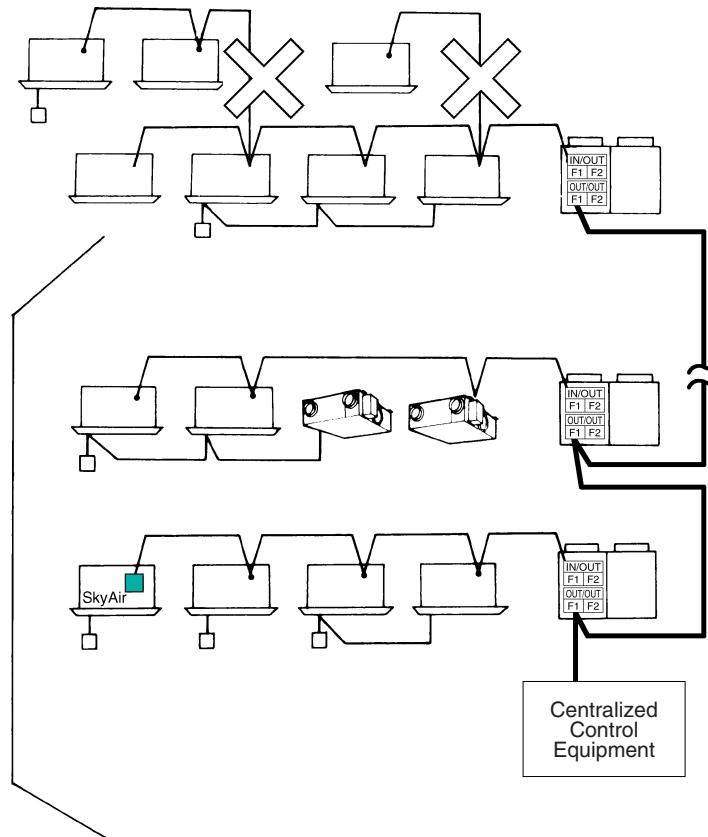
8.8.2 Incorrect Wiring Example

Caution:

Communication problems could occur.

[Incorrect Wiring 1]

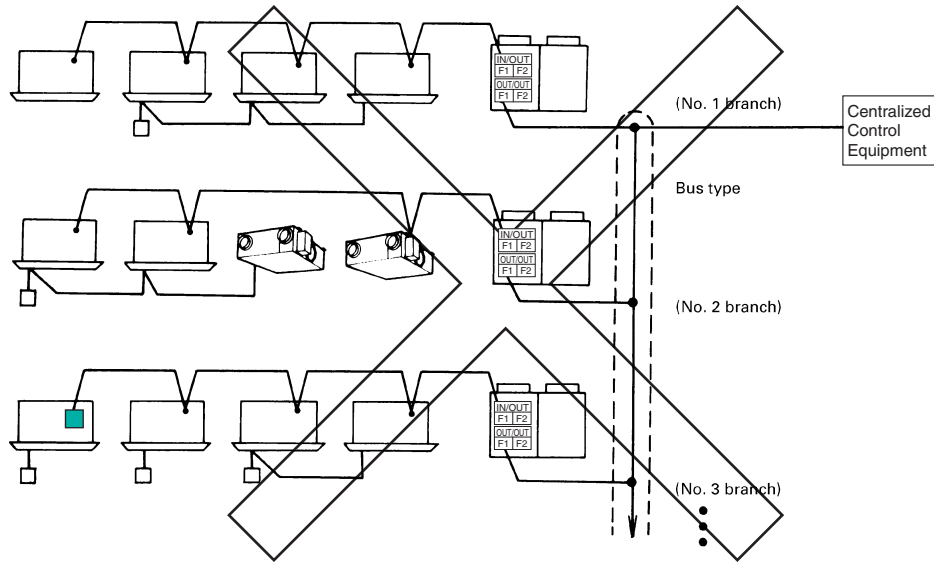
- Series wiring method only should be used.



Caution:

As shown above, the centralized control equipment should be connected to the wiring between the outdoor units, wherever possible. (If connected to the control wiring between indoor unit and the outdoor unit, it may not be able to control the units even on the normal circuit if the circuit connected to the centralized control equipment is malfunctioning.)

[Incorrect Wiring 2]

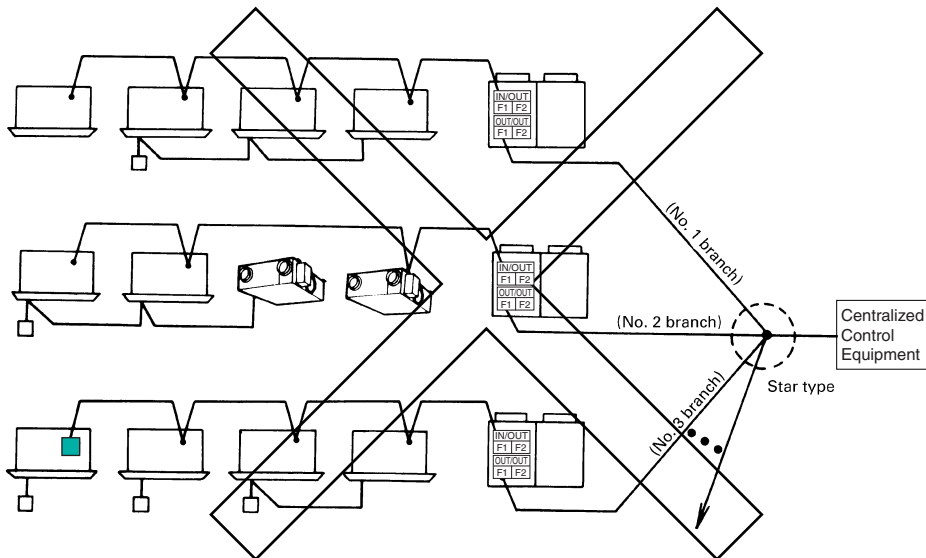


Caution:

[Reason]

Communication problems could occur.

[Incorrect Wiring 3]

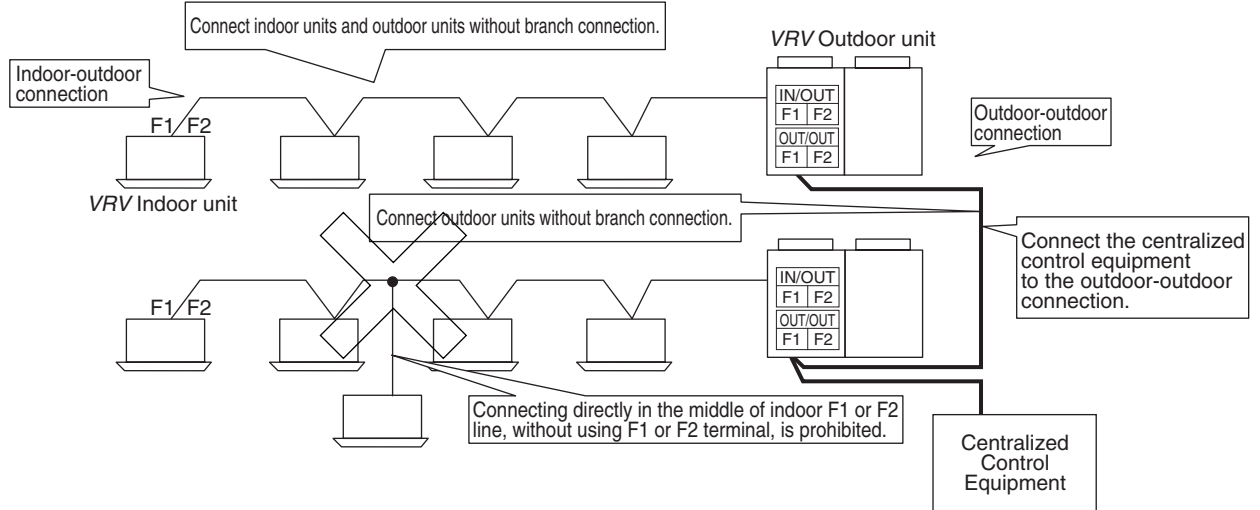


Caution:

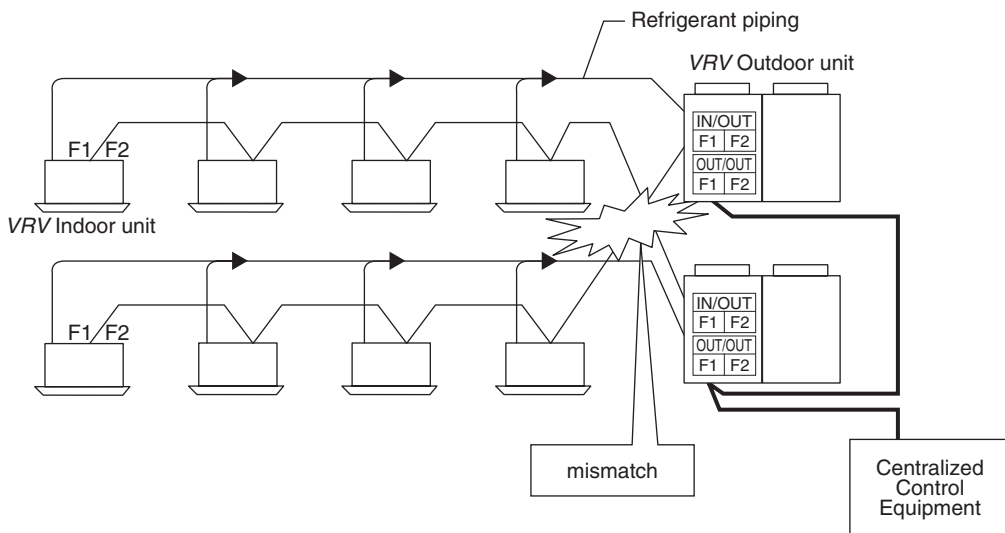
[Reason]

Communication problems could occur.

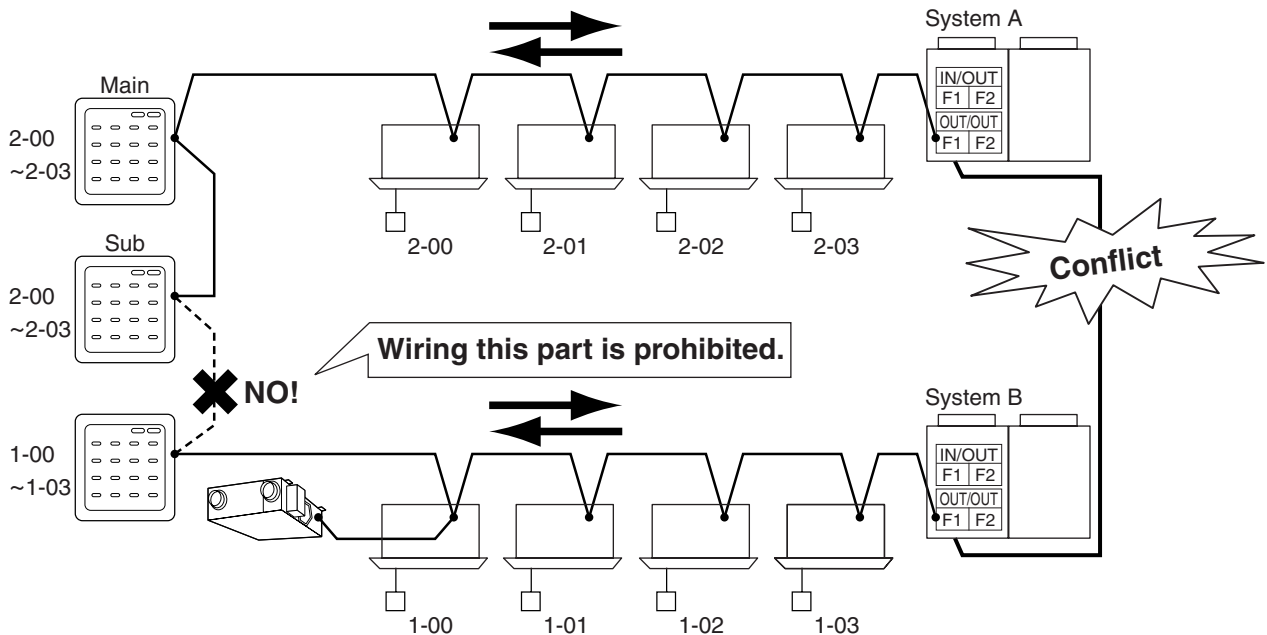
[Incorrect Wiring 4]




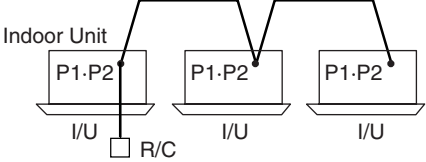
[Incorrect Wiring 5]

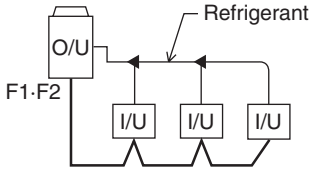
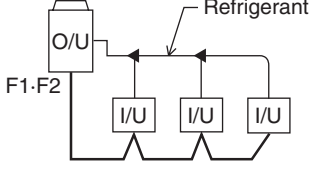
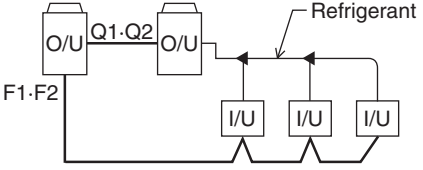
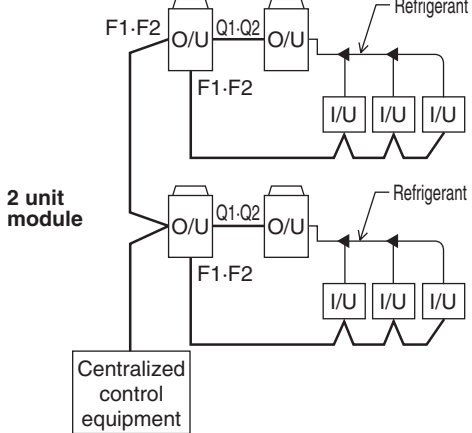


[Incorrect Wiring 6]



8.9 Unit and Group

Indoor Unit and R/C	No. of Group	No. of Indoor Unit
	1	1
	1	3

Outdoor Unit	No. of Outdoor Unit
<p>1 unit</p> 	1
<p>1 unit</p> 	1
<p>2 unit module</p> 	1
<p>2 unit module</p> 	2

I/U: Indoor unit O/U: Outdoor unit R/C: Remote controller

8.10 Number of Connectable Units

	Unit	Outdoor Unit
Target Equipment	<ul style="list-style-type: none"> ■ VRV indoor unit ■ Energy Recovery Ventilator ■ SkyAir series ■ Air-conditioners (Wiring adapter for other air-conditioner is required.) ■ Branch Selector (Note 1.) ■ Wiring adapter 	VRV outdoor unit
Number of Units	Up to 128 indoor units	Up to 10 outdoor units (Note 2)

Notes:

1. When Branch Selector is installed, Branch Selector is not counted in the number. However, the indoor units after Branch Selector should be counted.
2. An outdoor unit which consists of multiple modules is counted as one unit.

8.11 Group and Zone

8.11.1 Definition

Group control

- The group means the indoor units connected by the same control wiring for remote controller (connected to terminal P1 and P2) and all the unit in group have “the same setting” and “the same operation”.
- The indoor units in the group are controlled by the local remote controller for indoor unit.
- Up to 16 indoor units can be placed in one group.

Zone control

- The Zone means the indoor units connected by the same control wiring for centralized control equipment (connected to terminal F1 and F2) and all the unit in Zone have “the same setting”.
- The Zone control of the indoor unit is operated by the centralized control equipment.
- From 1 up to 64 Zones can be controlled by the centralized control equipment.
- The number of groups you can set in one Zone is from 1 up to 64 indoor unit groups.
- Up to 16 indoor units can be set in one group, and up to 64 indoor unit groups (up to 128 indoor units) can be connected.

Centralized control equipment is capable of controlling/monitoring up to 64 groups of indoor units (hereafter “groups”).

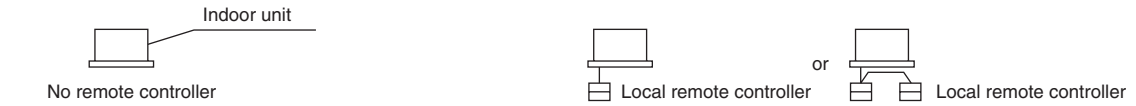
The main functions of the centralized control equipment include :

1. Collective starting/stopping of operation of the indoor units connected to the centralized control equipment.
2. Starting/stopping of operation, temperature setting, switching between temperature control modes and enabling/disabling of operation with the local remote control by zone or group.
3. Scheduling by zone or group.
4. Monitoring of the operation status by zone or group.
5. Display of the air-conditioner operation history.
6. Compulsory contact stop input from BMS (non-voltage, normally-open contact).

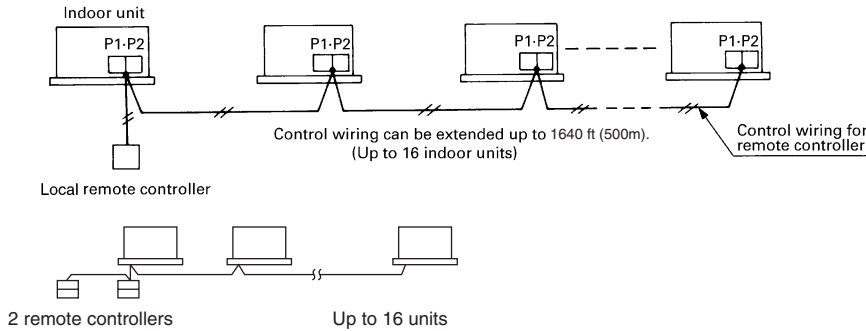
8.11.2 Patterns of Group and Zone

* A **group of indoor units** include:

- ① One indoor unit without a remote controller.
- ② One indoor unit controlled with one or two remote controllers.

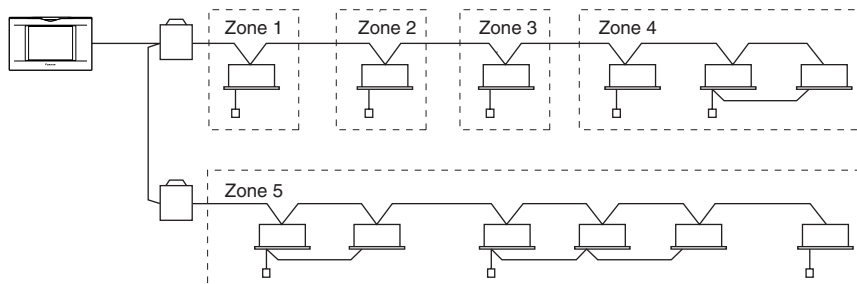


- ③ Up to 16 indoor units controlled with one or two remote controllers.



* **Zone** control with the centralized control equipment

* **Zone** control, which allows collective settings for more than one group, is available with the centralized control equipment, which facilitates the setting operations.



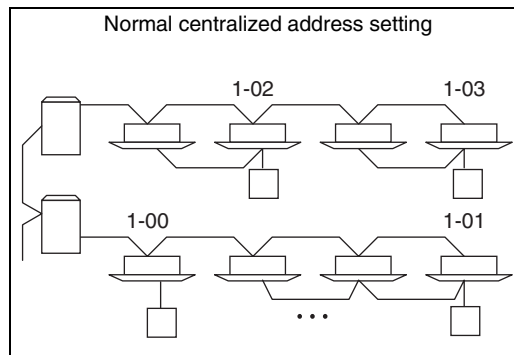
- One setting makes the same setting for all of the units in one zone.
- Up to 128 zones can be set with one centralized control equipment. (The maximum number of groups in one zone is 64.)
- Groups can be zoned at will with the centralized control equipment.
- Indoor units in one group can be divided into more than one zone. (not recommended)
- 1 Zone is not limited to 1 Group and vice versa.

8.11.3 Group Address

- Set a centralized address to a device to be connected to DIII-NET.
- The range of addresses to be set is 64 types as shown below.

1-00~1-1516 types	Total 64 types
2-00~2-15	.....16 types
3-00~3-15	.....16 types
4-00~4-15	.....16 types

- You cannot set a same group address on a same DIII-NET.
- You do not need to set a group address to a sub unit in a remote control group.
 - In case of power proportional distribution is used, you need to set a group address to a sub unit in a remote control group as well.



9. Guide Specifications

9.1 Guide Specifications

General

Unit shall be air cooled, split type multi-system air conditioner consisting of one outdoor unit and plural indoor units, each having capability to cool or heat independently for the requirements of the rooms.

Up to 12 different type indoor units can be connected to one refrigerant circuit and controlled individually.

Compressor shall be equipped with inverter controller, and capable of changing the rotating speed to follow variations in cooling and heating load.

Outdoor unit shall be suitable for mix-match connection of following models.

- Ceiling Mounted Cassette Type (Round Flow with Sensing)
- Ceiling Mounted Cassette Type (Round Flow)
- 4 Way Ceiling Mounted Cassette Type (2'x2')
- Slim Ceiling Mounted Duct Type
- Ceiling Mounted Duct Type (Middle and High Static Pressure)
- Ceiling Mounted Duct Type
- Ceiling Suspended Type
- Wall Mounted Type
- 4-Way Blow Ceiling-Suspended Type
- Floor Standing Type
- Concealed Floor Standing Type
- Vertical Air Handling Unit

- Refrigerant : R410A

9.1.1 T Series Outdoor Unit

The refrigerant piping shall be extended up to 540ft. (165m) with 164ft. (50m) (★1) level difference without any oil traps.

- Air conditioner shall operate continuously at the ambient temperature of 23°F (-5°C) in cooling -13°F (-25°C) in heating.

Both indoor unit and outdoor unit are assembled, tested, and charged with refrigerant at the factory.

★1: The value is based on the case where the outdoor unit is located above indoor unit. Where the outdoor unit is located under the indoor unit, the level difference is a maximum of 130ft. (40m).

Outdoor Unit

The outdoor unit shall be a factory assembled unit housed in a sturdy weatherproof casing constructed from rust-proofed mild steel panels coated with a baked enamel finish.

- The outdoor unit shall have two of scroll compressors and be able to operate even in case that one of compressors is out of order (except REYQ72TTJU/TYDN).
- The outdoor unit shall be modular in design and should be allowed for side by side installation.

Compressor

The compressor shall be of highly efficient hermetic scroll type and equipped with inverter control capable of changing the speed in accordance to the cooling or heating load requirement.

- The outdoor unit shall have the multi-step of capacity control to meet load fluctuation and indoor unit individual control.

Heat Exchanger

The heat exchanger shall be constructed with copper tubes mechanically bonded to aluminum fins to form a cross fin coil.

- The aluminum fins shall be covered by anti-corrosion resin film.

Refrigerant Circuit

The refrigerant circuit shall include liquid and gas shut off valves and solenoid valves.

All necessary safety devices shall be provided to ensure the safety operation of the system.

Safety Devices

The following safety devices shall be part of the outdoor unit.

High Pressure Switch, Fan Driver Overload Protector, Overcurrent Relay, Inverter Overload Protector.

Oil Recovery System

Unit shall be equipped with an oil recovery system to ensure stable operation with long refrigerant piping.

9.1.2 PC Series Outdoor Unit

The refrigerant piping shall be extended up to 540ft. (165m) with 164ft. (50m) (★1) level difference without any oil traps.

- Air conditioner shall operate continuously at the ambient temperature of 23°F (-5°C) in cooling -4°F (-20°C) in heating.

Both indoor unit and outdoor unit are assembled, tested, and charged with refrigerant at the factory.

★1: The value is based on the case where the outdoor unit is located above indoor unit. Where the outdoor unit is located under the indoor unit, the level difference is a maximum of 130ft. (40m).

Outdoor Unit

The outdoor unit shall be a factory assembled unit housed in a sturdy weatherproof casing constructed from rust-proofed mild steel panels coated with a baked enamel finish.

- The outdoor unit shall have two of scroll compressors and be able to operate even in case that one of compressors is out of order.
- The outdoor unit shall be modular in design and should be allowed for side by side installation.

Compressor

The compressor shall be of highly efficient hermetic scroll type and equipped with inverter control capable of changing the speed in accordance to the cooling or heating load requirement.

- The outdoor unit shall have the multi-step of capacity control to meet load fluctuation and indoor unit individual control.

Heat Exchanger

The heat exchanger shall be constructed with copper tubes mechanically bonded to aluminum fins to form a cross fin coil.

- The aluminum fins shall be covered by anti-corrosion resin film.

Refrigerant Circuit

The refrigerant circuit shall include liquid and gas shut off valves and solenoid valves.

All necessary safety devices shall be provided to ensure the safety operation of the system.

Safety Devices

The following safety devices shall be part of the outdoor unit.

High Pressure Switch, Fan Driver Overload Protector, Overcurrent Relay, Inverter Overload Protector.

Oil Recovery System

Unit shall be equipped with an oil recovery system to ensure stable operation with long refrigerant piping.

9.1.3 Indoor Units

Each indoor unit shall be of the Ceiling Mounted Cassette Type (Round Flow with Sensing), Ceiling Mounted Cassette Type (Round Flow), 4 Way Ceiling Mounted Cassette Type (2'x2'), Slim Ceiling Mounted Duct Type, Ceiling Mounted Duct Type (Middle and High Static Pressure), Ceiling Mounted Duct Type, Ceiling Suspended Type, Wall Mounted Type, 4-Way Blow Ceiling-Suspended Type, Floor Standing Type, Concealed Floor Standing Type, or Vertical Air Handling Unit. It shall have electronic control valve which controls refrigerant flow rate in respond to load variations of the room. The fan shall be of the multi blade type and statically and dynamically balanced to ensure low noise and vibration free operation.

- The address of the indoor unit shall be set automatically in case of individual and group control.
- In case of centralized control, it shall be set by remote controller.

Control

Computerized PID control shall be used to maintain a correct room temperature.

Unit shall be equipped with a self-diagnosis for easy and quick maintenance and service.

The LCD (Liquid Crystal Display) remote controller shall memorize the latest malfunction code for easy maintenance.

- It shall be able to control up to 16 indoor units and change fan speed and angle of swing flap individually in the group.

Central Remote Controller (Option)

A multi-functional centralized control equipment (central remote controller) shall be supplied as optional accessory.

- It shall be able to control up to 64 Zones of 64 indoor unit groups (each group consists of max. 16 indoor units) or 128 indoor units with the following functions.
 - a) Temperature setting for each Zone, or group, or indoor unit.
 - b) ON / OFF as a Zone or individual unit.
 - c) Indication of operating condition.
 - d) Select one of 10 operation modes for each Zone.
- The controller shall have wide screen LCD and can be wired by a non-polar 2-wire transmission cable to a distance of 3280 ft. (1000m) away from the indoor unit.

Unified ON / OFF Controller (Option)

Unified ON / OFF controller shall be supplied as optional accessory.

It shall be able to control up to 16 indoor unit groups (each group consists of max. 16 indoor units) or 128 indoor units with the following functions.

- a) ON/OFF as a zone or individual unit.
- b) Indication of operation condition of each group.
- c) Select one of 4 operation modes.

It shall be wired by a non-polar 2-wire transmission cable to a distance of 3280 ft. (1000m) away from indoor unit.

Schedule Timer (Option)

A schedule timer shall be supplied as optional accessory.

- It shall be able to set operation schedule of up to 128 indoor units.
The operation schedule shall include twice ON/OFF a day and holiday.
- It shall be able to set 8 patterns of schedule combined with centralized controller.

intelligent Touch Controller (Option)

Air-conditioning management system that can be controlled by a compact all-in-one unit.

intelligent Touch Manager (Option)

Air-conditioning management system that can be controlled by a compact all-in-one unit.

10. Caution for Refrigerant Leaks

10.1 Introduction

Points to note in connection with refrigerant leaks

The installer and system specialist shall secure safety against leakage according to local regulations or standards. The following standards may be applicable if local regulations are not available.

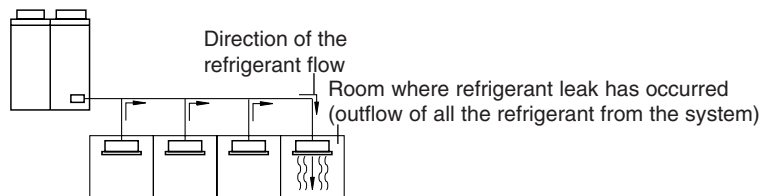
The *VRV* System, like other air conditioning systems, uses R410A as refrigerant. R410A itself is an entirely safe non-toxic, non-combustible refrigerant. Nevertheless care must be taken to ensure that air conditioning facilities are installed in a room which is sufficiently large. This assures that the maximum concentration level of refrigerant gas is not exceeded, in the unlikely event of major leak in the system and this in accordance to the local applicable regulations and standards.

Maximum concentration level

The maximum charge of refrigerant and the calculation of the maximum concentration of refrigerant is directly related to the humanly occupied space in to which it could leak.

The unit of measurement of the concentration is lbs./ft.³ (the weight in lbs. of the refrigerant gas in 1ft.³ volume of the occupied space).

Compliance to the local applicable regulations and standards for the maximum allowable concentration level is required.



Pay special attention to the place, such as a basement, etc. where refrigerant can stay, since refrigerant is heavier than air.

10.2 Procedure for Checking Maximum Concentration

Check the maximum concentration level in accordance with steps 1 to 4 below and take whatever action is necessary to comply.

Step1: Calculate the amount of refrigerant (lbs.) charged to each system separately.

Amount of refrigerant in a single unit system (amount of refrigerant with which the system is charged before leaving the factory)	+	Additional charging amount (amount of refrigerant added locally in accordance with the length or diameter of the refrigerant piping)	=	Total amount of refrigerant (lbs.) in the system
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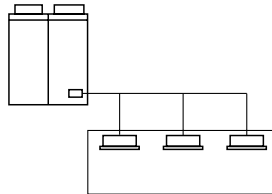
Note:

Where a single refrigerant facility is divided into 2 entirely independent refrigerant systems then use the amount of refrigerant with which each separate system is charged.

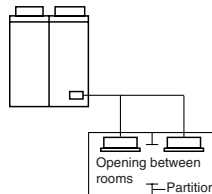
Step 2: Calculate the smallest room volume (ft.³)

In case like the following, calculate the volume of (A), (B) as a single room or as the smallest room.

(a) Where there are no smaller room divisions.

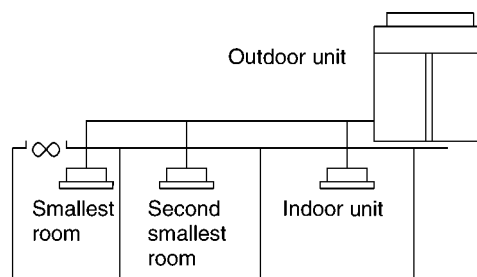


(b) Where there is a room division but there is an opening between the rooms sufficiently large to permit a free flow of air back and forth.



(Where there is an opening without a door or where there are openings above and below the door which are each equivalent in size to 0.15% or more of the floor area.)

(c) Where there is a gas leak detection alarm device linked to a mechanical ventilator in the smallest room then the next smallest room will become the measurement target.



Step 3: Calculating the refrigerant density using the results of the calculations in steps 1 and 2 above.

Total volume of refrigerant in the
refrigerant system

_____ ≤ Maximum concentration level (lbs./ft.³)
Size (ft.³) of the smallest room in which
there is an indoor unit installed

If the result of the above calculation exceeds the maximum concentration level then make similar calculations for the second then third smallest room and so until the result falls short of the maximum concentration.

Step 4: Dealing with the situations where the result exceeds the maximum concentration level.

Where the installation of a facility results in a concentration in excess of the maximum concentration level then it will be necessary to revise the system.

Please consult your Daikin supplier.

11. Safety Devices Setting

	Safety Devices	07	09	12	15	18	24	30	36	42	48	54	72	96	
FXFQ-TVJU	Printed circuit board fuse	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	-	250V 3.15A	-	-	-	
	Fan motor thermal fuse °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fan motor thermal protector °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
FXFQ-PVJU	Printed circuit board fuse	-	250V 5A	250V 5A	-	250V 5A	250V 5A	250V 5A	250V 5A	-	250V 5A	-	-	-	
	Fan motor thermal fuse °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fan motor thermal protector °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
FXZQ-MVJU9	Printed circuit board fuse	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	-	-	-	-	-	
	Fan motor thermal fuse °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fan motor thermal protector °F (°C)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	-	-	-	-	-
FXDQ-MVJU	Printed circuit board fuse	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	-	-	-	-	-	
	Fan motor thermal protector °F	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	OFF:266±9 (130±5) ON:181.4±36 (83±20)	-	-	-	-	
	Printed circuit board fuse	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	-	250V 3.15A	250V 3.15A	-	-	
FXMQ-PBVJU	Printed circuit board fuse	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	-	250V 6.3A	250V 6.3A	-	-	
	Fan motor thermal fuse °F (°C)	293 (145)	293 (145)	293 (145)	293 (145)	293 (145)	293 (145)	293 (145)	293 (145)	-	293 (145)	293 (145)	-	-	
	Printed circuit board fuse	-	-	-	-	-	-	-	-	-	-	-	250V 10A	250V 10A	
FXMQ-MVJU	Fan motor thermal fuse °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fan motor thermal protector °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Printed circuit board fuse	-	-	250V 5A	-	-	250V 5A	-	250V 5A	-	-	-	-	OFF:275±14 (ON:189±27)	
FXHQ-MVJU	Fan motor thermal fuse °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fan motor thermal protector °F	-	-	OFF:266±9 (130±5) ON:176±36	-	-	OFF:266±9 (130±5) ON:176±36	-	OFF:266±9 (130±5) ON:176±36	-	-	-	-	-	
	Printed circuit board fuse	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	250V 3.15A	-	-	-	-	-	
FXAQ-PVJU	Fan motor thermal fuse °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fan motor thermal protector °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Printed circuit board fuse	-	-	-	-	-	-	-	-	-	-	-	-	-	
FXUQ-PVJU	Drain pump thermal fuse °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fan motor thermal protector °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fan motor thermal fuse °F	-	-	-	-	-	-	-	-	-	-	-	-	-	
FXLQ-MVJU FXNQ-MVJU	Printed circuit board fuse	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	250V 5A	-	-	-	-	-	
	Fan motor thermal protector °F (°C)	OFF:275±18 (135±18) ON:248 (120) or less	OFF:275±18 (135±18) ON:248 (120) or less	OFF:275±18 (135±18) ON:248 (120) or less	OFF:275±18 (135±18) ON:248 (120) or less	OFF:275±18 (135±18) ON:248 (120) or less	OFF:275±18 (135±18) ON:248 (120) or less	OFF:275±18 (135±18) ON:248 (120) or less	OFF:275±18 (135±18) ON:248 (120) or less	OFF:275±18 (135±18) ON:248 (120) or less	-	-	-	-	-
	Printed circuit board fuse (A1P)	-	-	T3.15A, 250V	-	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	-	
FXTQ-PAVJU	Printed circuit board fuse (A2P)	-	-	T3.15A, 250V	-	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	T3.15A, 250V	-	
	Fan driver overbad protector °F	-	-	248	-	248	248	248	248	248	248	248	248	-	

C: 3D086932A C: 3D070527 C: 3D080474A C: 3D051758 C: 3D086916B C: 3D049334A C: 4D047085C C: 3D090213 C: 3D045646B



Warning



- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.