



EN

Selection guide

DZK-5

DZK
DAIKIN ZONING KIT

Project name: _____

Location: _____

Approval: _____

Engineer: _____

Date: _____

Submitted to: _____

Construction: _____

Submitted by: _____

Unit #: _____

Reference: _____

Drawing #: _____

INTRODUCTION

DAIKIN VRV

VRV is a modular, commercially applied air-conditioning and heating system that distributes refrigerant, rather than water, from the outdoor unit to multiple indoor units providing efficiency, individual user control and reliability in one package. Absolute comfort and efficiency is achieved with Daikin's industry leading variable speed Inverter compressors. This means that only the amount of energy required is used to provide the necessary cooling or heating to each individual indoor unit.

The VRV system is available with several options. One of the options is a Zoning Kit DZK that can be mounted on an indoor unit fan coil to allow conditioned air to be distributed from the unit to several individual zones.

DZK

The optional Daikin Zoning Kit (DZK and DZKS) increases the flexibility of the Daikin VRV system by adding a Zoning Box to an indoor unit fan coil (FDMQ, FXMQ, FBQ or FXSQ series) allowing several separate ducts to supply air to different individually controlled zones in the building. A zone can be a room, part of room, or several rooms. This flexible and scalable Zoning Kit integrates with the indoor unit fan coil and the controls of the VRV system.

A complete Zoning Kit consists of Zoning Box with Controls, Wired Thermostat, Wireless Thermostat and Wireless Lite Thermostat.



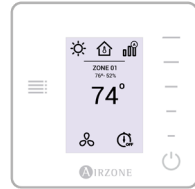
Wired Thermostat

The Wired Thermostat is a color graphic interface with capacitive screen and finished in steel and glass. It is the wired thermostat in the Daikin zoning system and it is powered from the Control Board at the Motorized Damper Plenum. It also displays temperatures and operating values and selects the operation mode for the system. Configurable as Main or Zone thermostat.



Wireless Thermostat

The Wireless Thermostat is a graphical interface with low-energy e-ink screen and capacitive buttons and finished in steel and glass. It can control the temperature for a zone while displaying the air temperature and system time. Additional functions include adjusting set point temperature, automatic configuration and local ventilation activation. It is powered by battery button CR2450 that typically last at least 2 years.



Wireless Lite Thermostat

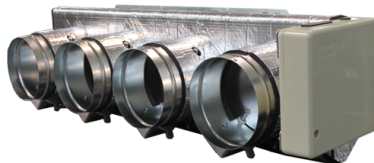
The Wireless Lite Thermostat is a thermostat with capacitive buttons for controlling the temperature of the zones in DZK systems and finished in steel and glass. It is powered by battery button CR2450 that typically last at least 2 years.



Zoning Box with Control Board

The Zoning Box in the Daikin Zoning Kit mounts easily on Daikin's indoor unit fan coils FDMQ, FXMQ, FBQ or FXSQ series. It consists of the enclosure, individually motorized dampers, and a control box. It is available in different sizes and damper configurations and by utilizing ducts for air supply it can be used to control the air temperature in up to 6 zones.

The wired thermostat and the optional wireless thermostats provide temperature inputs and user interface for programming and adjustment of the control functions for each zone.



Webserver HUB / BACnet gateway DZK-5 (optional)

Webserver for controlling DZK systems through Cloud platform. Accessible through browser or App (available for IOS and Android). Dual Wi-Fi 2.4/5Ghz or Ethernet connection. Powered through domotic bus. Mounted on DIN rail or on wall.

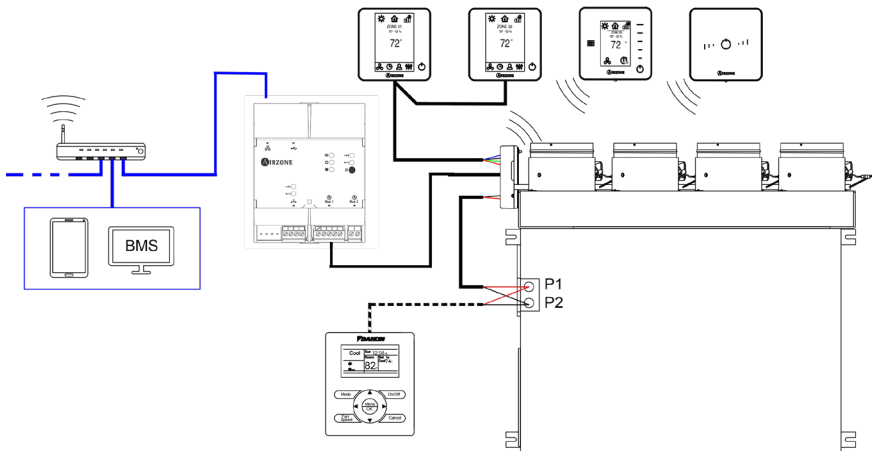


Functionalities:

- Control of up to 32 systems (one BACnet Webserver per system).
- Configuration and control of zone parameters (room and set point temp., operating mode, etc.) and system parameters via Cloud.
- Associated with router through the app via Bluetooth.
- Multi-user and multisession.
- Port for BMS integration via BACnet MS/TP protocol enabled from Airzone Cloud App.
- Allows configuration as Lutron gateway and BACnet IP through Airzone Cloud App.
- Integration via local API enabled from Airzone Cloud.
- Remote updates of the Webserver firmware and the systems connected to it.
- Remote error detection and error resolution.

Note: For a complete list of available objects, refer to the [BACnet Interface](#) installation manual.

TYPICAL CONNECTION OF THE UNITS IN THE DAIKIN ZONING KIT (4 ZONES FOR EACH INDOOR UNIT FAN COIL)



Note: Daikin BRC controller is only required for indoor unit commissioning process, but not for the normal operation of the DZK system.

SELECTION

STEP 1 - DETERMINE THE HEAT LOAD AND THE COOLING LOAD

Determine the heat load and the cooling load for the zone(s) (Part of Room, Room, and Several Rooms) to be climate controlled by the indoor unit fan coil in the VRV system.

STEP 2 - SELECT INDOOR UNIT FAN COIL AND ZONING BOX COMBINATION

Using tables 1, 2, 3 and 4, select VRV indoor unit fan coil and Zoning Box combination based on heat/cooling loads for the zone(s).

Note that the table shows nominal cooling and heating capacity for one damper with all dampers open. If all dampers except one are closed, the air flow, and capacity, from the open damper will increase by up to 75% compared to the values in the table.

STEP 3 - USING TABLE 5, SELECT THERMOSTATS REQUIRED FOR THE DZK SYSTEM

STEP 4 - WEBSERVER HUB / BACNET GATEWAY DZK-5 (OPTIONAL)

In case of BMS BACnet installation select one DZK Webserver HUB / BACnet gateway for each DZK zoning box.

Example: A DZK system for a Daikin FXMQ18PBVJU indoor unit Fan Coil supplying air to 5 zones and with requirements to connect to a BMS using BACnet/IP would require one Zoning Box (DZK030E5-5), two Wired Thermostat (DZK-MTS-5-W), two Wireless Thermostats (DZK-ZTS-5-W), one Wireless Lite Thermostat (DZK-LTS-5-W) and one Webserver HUB / BACnet gateway DZK-5 (DZK-BACNET-HUB5).

For FBQ units:

Type	Model	Zoning Box	Damper Qty	Average thermal capacity per outlet (Btu/h)		
				Cooling	Heating	
FBQ	18PVJU	DZK030E4-5	4	4,500	5,000	
		DZK030E5-5	5	3,600	4,000	
	24PVJU	DZK030E4-5	4	6,000	6,750	
		DZK030E5-5	5	4,800	5,400	
	30PVJU	DZK030E4-5	4	7,500	8,500	
		DZK030E5-5	5	6,000	6,800	
	36PVJU	DZK048E4-5	4	9,000	10,000	
		DZK048E6-5	6	6,000	6,667	
	42PVJU	DZK048E4-5	4	10,125	11,750	
		DZK048E6-5	6	6,750	7,833	
	48PVJU	DZK048E4-5	4	12,000	13,500	
		DZK048E6-5	6	8,000	9,000	
	FBQ	18TBVJU	DZKS030E4-5	4	4,425	5,150
			DZKS030E5-5	5	3,540	4,120
		24TBVJU	DZKS030E4-5	4	5,850	6,850
			DZKS030E5-5	5	4,680	4,880
30TBVJU		DZKS030E4-5	4	7,100	8,700	
		DZKS030E5-5	5	5,680	6,960	
36TBVJU		DZKS048E4-5	4	8,750	10,000	
		DZKS048E6-5	6	5,833	6,667	
42TBVJU		DZKS048E4-5	4	10,000	11,750	
		DZKS048E6-5	6	6,667	7,833	
48TBVJU		DZKS048E4-5	4	11,625	13,500	
		DZKS048E6-5	6	7,750	9,000	

Table 1

For FXMQ units:

Type	Model	Zoning Box	Damper Qty	Average thermal capacity per outlet (Btu/h)		
				Cooling	Heating	
FXMQ	15PBVJU	DZK030E4-5	4	3,550	4,250	
		DZK030E5-5	5	2,840	3,400	
	18PBVJU	DZK030E4-5	4	4,500	5,000	
		DZK030E5-5	5	3,600	4,000	
	24PBVJU	DZK030E4-5	4	6,000	6,750	
		DZK030E5-5	5	4,800	5,400	
	30PBVJU	DZK048E4-5	4	7,500	8,500	
		DZK048E6-5	6	5,000	5,667	
	36PBVJU	DZK048E4-5	4	9,000	10,000	
		DZK048E6-5	6	6,000	6,667	
	48PBVJU	DZK048E4-5	4	12,000	13,500	
		DZK048E6-5	6	8,000	9,000	
	54PBVJU	DZK048E4-5	4	13,500	15,000	
		DZK048E6-5	6	9,000	10,000	
	FXMQ	15TBVJU	DZKS030E4-5	4	5,000	5,667
			DZKS030E5-5	5	3,750	4,250
18TBVJU		DZKS030E4-5	4	4,500	5,000	
		DZKS030E5-5	5	3,600	4,000	
24TBVJU		DZKS030E4-5	4	6,000	6,750	
		DZKS030E5-5	5	4,800	5,400	
30TBVJU		DZKS048E4-5	4	7,500	8,500	
		DZKS048E6-5	6	5,000	5,667	
36TBVJU		DZKS048E4-5	4	9,000	10,000	
		DZKS048E6-5	6	6,000	6,667	
48TBVJU		DZKS048E4-5	4	12,000	13,500	
		DZKS048E6-5	6	8,000	9,000	
54TBVJU		DZKS054E6-5	6	9,000	10,500	

Table 2

For FXSQ units:

Type	Model	Zoning Box	Damper Qty	Average thermal capacity per outlet (Btu/h)		
				Cooling	Heating	
FXSQ	15TAVJU	DZKS015E3-5	3	5,000	5,667	
		DZKS015E4-5	4	3,750	4,250	
	18TAVJU	DZKS030E4-5	4	4,500	5,000	
		DZKS030E5-5	5	3,600	4,000	
	24TAVJU	DZKS030E4-5	4	6,000	6,750	
		DZKS030E5-5	5	4,800	5,400	
	30TAVJU	DZKS030E4-5	4	7,500	8,500	
		DZKS030E5-5	5	6,000	12,800	
	36TAVJU	DZKS048E4-5	4	9,000	10,000	
		DZKS048E6-5	6	6,000	6,667	
	48TAVJU	DZKS048E4-5	4	12,000	13,500	
		DZKS048E6-5	6	8,000	9,333	
	54TAVJU	DZKS054E6-5	6	9,000	10,000	
	FXSQ	15TBVJU	DZKS015E3-5	3	5,000	5,667
			DZKS015E4-5	4	3,750	4,250
		18TBVJU	DZKS030E4-5	4	4,500	5,000
DZKS030E5-5			5	3,600	4,000	
24TBVJU		DZKS030E4-5	4	6,000	6,750	
		DZKS030E5-5	5	4,800	5,400	
30TBVJU		DZKS030E4-5	4	7,500	8,500	
		DZKS030E5-5	5	6,000	12,800	
36TBVJU		DZKS048E4-5	4	9,000	10,000	
		DZKS048E6-5	6	6,000	6,667	
48TBVJU		DZKS048E4-5	4	12,000	13,500	
		DZKS048E6-5	6	8,000	9,333	
54TBVJU		DZKS054E6-5	6	9,000	10,000	

Table 3

For FDMQ units:

Type	Model	Zoning Box	Damper Qty	Average thermal capacity per outlet (Btu/h)		
				Cooling	Heating	
FDMQ	09RVJU	DZKS015E3-5	3	3,000	3,633	
		DZKS015E4-5	4	2,250	2,725	
	12RVJU	DZKS015E3-5	3	3,600	4,533	
		DZKS015E4-5	4	2,700	3,400	
	15RVJU	DZKS030E4-5	4	3,600	4,500	
		DZKS030E5-5	5	2,880	3,600	
	18RVJU	DZKS030E4-5	4	4,400	5,400	
		DZKS030E5-5	5	3,520	4,320	
	24RVJU	DZKS030E4-5	4	5,450	6,000	
		DZKS030E5-5	5	4,360	4,800	
	FDMQ	09WVJU9	DZKS015E3-5	3	3,000	3,633
			DZKS015E4-5	4	2,250	2,725
12WVJU9		DZKS015E3-5	3	3,600	4,533	
		DZKS015E4-5	4	2,700	3,400	
15WVJU9		DZKS030E4-5	4	3,600	4,500	
		DZKS030E5-5	5	2,880	3,600	
18WVJU9		DZKS030E4-5	4	4,400	5,400	
		DZKS030E5-5	5	3,520	4,320	
24WVJU9		DZKS030E4-5	4	5,450	6,000	
		DZKS030E5-5	5	4,360	4,800	

Table 4

Product		Structure			Technical data					
		N° of zones	N° of dampers	Qty of units	Height (")	Width (")	Depth (")	Weight (lb)	V max	I max
Zoning Box with controls	DZK030E4-5	2 to 4	4 x Ø 8"	One per indoor unit	10.43	43.58	10.43	18.04	120/230 Vac	250 mA
	DZK030E5-5	2 to 5	5 x Ø 6"		10.43	43.58	10.43	20.24		
	DZK048E4-5	2 to 4	4 x Ø 8"		10.43	53.46	10.43	20.24		
	DZK048E6-5	2 to 6	6 x Ø 6"		10.43	53.46	10.43	23.32		
	DZKS015E3-5	2 to 3	3 x Ø 8"	One per indoor unit	10.43	34.18	10.43	18.04	120/230 Vac	250 mA
	DZKS015E4-5	2 to 4	4 x Ø 6"		10.43	34.18	10.43	18.04		
	DZKS030E4-5	2 to 4	4 x Ø 8"		10.43	43.62	10.43	18.04		
	DZKS030E5-5	2 to 5	5 x Ø 6"		10.43	43.62	10.43	20.24		
	DZKS048E4-5	2 to 4	4 x Ø 8"		10.43	57.43	10.43	20.24		
	DZKS048E6-5	2 to 6	6 x Ø 6"		10.43	57.43	10.43	23.32		
DZKS054E6-5	2 to 6	6 x Ø 8"	10.44	66.75	9.63	27.56				
Thermostats	DZK-MTS-5-W	-	-	At least one per indoor unit						
	DZK-ZTS-5-W	-	-	One per zone minus wired thermostat						
	DZK-LTS-5-W	-	-							

Table 5

DZK

DAIKIN ZONING KIT



RECOGNIZED
COMPONENT



Intertek
4008862