



technical data



RN-E2V1B

Outdoor Units

air conditioning systems

Split Sky Air

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RN-E2V1B

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1 Features

- Outdoor units for pair application
- Daikin outdoor units are neat and sturdy and can be mounted easily on a roof or terrace or simply placed against an outside wall.
- Outdoor units are fitted with a swing compressor, renowned for its low noise and high energy efficiency

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2 Specifications

2-1 NOMINAL CAPACITY AND NOMINAL INPUT				RN50E2V1B	RN60E2V1B
For combination indoor units + outdoor units	Indoor Units			FTN50EV1B	FTN60EV1B
Nominal Capacity	Cooling	Standard	kW	5.0	6.0
Nominal input	Cooling	Standard	kW	1.55	1.99
For combination indoor units + outdoor units	EER	Cooling		3.23	3.02
	Energy Labeling Directive	Cooling		A	B
	Annual energy consumption		kWh	775	995
	Indoor Units			FLKS50BAVMB	FVKS50BAVMB
Nominal Capacity	Cooling	Standard	kW	4.9	4.8
Nominal input	Cooling	Standard	kW	1.720	1.700
For combination indoor units + outdoor units	EER	Cooling		2.85	2.82
	Energy Labeling Directive	Cooling		C	
	Annual energy consumption		kWh	860	850

2-2 TECHNICAL SPECIFICATIONS				RN50E2V1B	RN60E2V1B	
Casing	Colour			Ivory White		
Dimensions	Unit	Height	mm	735	735	
		Width	mm	825	825	
		Depth	mm	300	300	
	Packing	Height	mm	797	797	
		Width	mm	960	960	
		Depth	mm	390	390	
Weight	Unit		kg	47	47	
	Packed Unit		kg	52	52	
Heat Exchanger	Dimensions	Length	mm	845	845	
		Nr of Rows		2	2	
		Fin Pitch	mm	1.80	1.80	
		Nr of Stages		32	32	
	Tube type			Hi-Xa(8)		
	Fin	Type	Waffle fin			
		Treatment		Anti-corrosion treatment (PE)		
Fan	Type			Propeller		
	Quantity			1	1	
	Air Flow Rate (nominal at 230V)	Cooling	m ³ /min	48.9	50.9	
	Motor	Quantity			1	1
Model			KFD-380-50-8A			
Motor	Speed (nominal)	Cooling	rpm	780	810	
Fan	Motor	Output	W	53	53	
Compressor	Quantity			1	1	
	Motor	Model			2YC36BXD#A	
		Type			Hermetically sealed swing compressor	
		Motor Output	W	1100	1100	
Operation Range	Cooling	Min	°CDB	-10.0	-10.0	
		Max	°CDB	46.0	46.0	
Sound Level (nominal)	Cooling	Sound Power	dBA	61.0	63.0	
		Sound Pressure	dBA	47.0	49.0	
Refrigerant	Type			R-410A		
	Charge		kg	1.5	1.5	
Refrigerant Oil	Type			FVC50K		
	Charged Volume		l	0.65	0.65	

2 Specifications

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2-2 TECHNICAL SPECIFICATIONS				RN50E2V1B	RN60E2V1B
Piping connections	Liquid (OD)	Diameter (OD)	mm	6.35	6.35
	Gas	Diameter (OD)	mm	12.7	12.7
	Drain	Diameter (OD)	mm	18	18
	Piping Length	Maximum	m	30	30
	Additional Refrigerant Charge		kg/m	0.02/>10m	
	Max. internunit level difference		m	20.0	20.0
	Heat Insulation			Both liquid and gas pipes	
Standard Accessories	Item			Installation manual	
	Quantity			1	1
Notes				Nominal cooling capacities are based on : indoor temperature : 27°CDB, 19°CWB, outdoor temperature : 35°CDB, equivalent refrigerant piping : 7.5m, level difference : 0m.	
				Sound levels are measured in an anechoic room	
				Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to sound level drawings of this chapter.	
				The sound power level is an absolute value indicating the power which a sound source generates.	

2-3 ELECTRICAL SPECIFICATIONS				RN50E2V1B	RN60E2V1B
Power Supply	Name			V1	
	Phase			1	1
	Frequency		Hz	50	50
	Voltage		V	220-240	
	Voltage range	Minimum	V	-10%	
		Maximum	V	+10%	
Current	Nominal running current (RLA)	Cooling (A)	A	6.75	8.62
	Starting current (cooling/heating)		A	6.9	8.8
Wiring connections	For Power Supply	Quantity		3	3
	For connection with indoor	Quantity		4	4
		Remark		Included earth wiring	Including earth wiring
Power Supply Intake				Outdoor unit only	

3 Electrical data

RN+FTN50-60E

Representative unit combination		Power supply				Comp.		OFM		IFM	
Indoor unit	Outdoor unit	Hz-volts	Voltage range	MCA	MFA	RHz	RLA	W	FLA	W	FLA
FTN50EV1B	RN50E2V1B	50 - 220	Max. 50Hz 264V Min. 50Hz 198V	20	20	67	6.4	53	0.27	43	0.16
		50 - 230									
		50 - 240									
FLKS50BAVMB	RN50E2V1B	50 - 220	Max. 50Hz 264V Min. 50Hz 198V	20	20	73	7.1	53	0.27	34	0.54
		50 - 230									
		50 - 240									
FVK50BAVMB	RN50E2V1B	50 - 220	Max. 50Hz 264V Min. 50Hz 198V	20	20	74	7.0	53	0.27	14+14	0.31
		50 - 230									
		50 - 240									
FTN60EV1B	RN60E2V1B	50 - 220	Max. 50Hz 264V Min. 50Hz 198V	20	20	84	8.3	53	0.32	43	0.16
		50 - 230									
		50 - 240									

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SYMBOLS

- MCA : Min. Circuit Amps (A)
- MFA : Max. Fuse Amps (A)
- RHz : Rated operating frequency(Hz)
- RLA : Rated Load Amps (A)
- OFM : Outdoor Fan Motor
- IFM : Indoor Fan Motor
- FLA : Full Load Amps
- W : Rated motor output (W)

NOTES

1. RLA is based on the following conditions:
Indoor temp.: 27°CDB/19.0°CWB
Outdoor temp. : 35°CDB
2. Maximum allowable voltage unbalance between phases is 2%
3. Select wire size based on the larger value of MCA.
4. Instead of fuse, use circuit breaker.
5. For more details concerning conditional connections, see <http://extranet.daikineurope.com>, select "E-Data Books". Finally, click on the document title of your choice.

4 Capacity tables

4 - 1 Cooling capacity tables

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FTKS50E+ RKS50E
FTN50E+ RN50E

AFR	14.7
BF	0.28

Cooling capacity

50Hz 220-240V

Indoor		Outdoor temperature (°C)																	
EWB (°C)	EDB (°C)	20			25			30			32			35			40		
		TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14.0	20	5.12	3.61	1.19	4.89	3.49	1.30	4.66	3.37	1.42	4.56	3.32	1.46	4.42	3.25	1.53	4.19	3.13	1.65
16.0	22	5.35	3.55	1.20	5.12	3.43	1.31	4.89	3.32	1.43	4.79	3.27	1.47	4.65	3.21	1.54	4.42	3.10	1.65
18.0	25	5.58	3.69	1.20	5.35	3.58	1.32	5.12	3.47	1.43	5.02	3.43	1.48	4.88	3.37	1.55	4.65	3.26	1.66
19.0	27	5.70	3.86	1.21	5.47	3.75	1.32	5.23	3.65	1.44	5.14	3.61	1.48	5.00	3.55	1.55	4.77	3.45	1.66
22.0	30	6.04	3.71	1.22	5.81	3.62	1.33	5.58	3.52	1.45	5.49	3.49	1.49	5.35	3.43	1.56	5.11	3.35	1.67
24.0	32	6.27	3.60	1.22	6.04	3.52	1.34	5.81	3.43	1.45	5.72	3.40	1.50	5.58	3.35	1.57	5.34	3.27	1.68

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SYMBOLS

AFR:	Air flow rate	(m ³ /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Total capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)

NOTES

1. Ratings shown are net capacities which include a deduction for indoor fan motor heat
2. Shows nominal cooling capacities and power input
3. TC, PI and SHC must be calculated by interpolation using the figures in the above tables. (Figures out of the tables should not be used for calculation.)
4. SHC is based on each EWB and EDB
 $SHC^* = SHC \text{ correction for other dry bulb}$
 $SHC^* = 0.02 \times AFR \text{ (m}^3\text{/min)} \times (1-BF) \times (DB-EDB)$
 Add SHC* to SHC.
5. Capacities are based on following conditions:
 Corresponding refrigerant piping length: 7.5 m
 Level difference: 0 m
6. Air flow rate (AFR) and Bypass factor (BF) are tabulated above.

FLKS50B+ RN50E

AFR	11.4
BF	0.18

Cooling capacity

50Hz 220-240V

Indoor		Outdoor temperature (°C)																	
EWB (°C)	EDB (°C)	20			25			30			32			35			40		
		TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14.0	20	4.96	3.26	1.37	4.81	3.19	1.47	4.66	3.12	1.56	4.60	3.09	1.60	4.51	3.05	1.66	4.36	2.98	1.75
16.0	22	5.12	3.30	1.40	4.97	3.23	1.49	4.82	3.16	1.59	4.76	3.13	1.62	4.67	3.09	1.68	4.52	3.02	1.78
18.0	25	5.27	3.33	1.42	5.12	3.26	1.52	4.97	3.19	1.61	4.91	3.16	1.65	4.82	3.12	1.71	4.67	3.05	1.80
19.0	27	5.35	3.35	1.44	5.20	3.28	1.53	5.05	3.21	1.63	4.99	3.18	1.66	4.90	3.14	1.72	4.75	3.07	1.82
22.0	30	5.58	3.40	1.47	5.43	3.33	1.57	5.28	3.26	1.66	5.22	3.23	1.70	5.13	3.19	1.76	4.98	3.12	1.85
24.0	32	5.74	3.43	1.50	5.59	3.36	1.60	5.44	3.29	1.69	5.38	3.26	1.73	5.29	3.22	1.79	5.14	3.15	1.88

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SYMBOLS

AFR:	Air flow rate	(m ³ /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Total capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)

NOTES

1. Ratings shown are net capacities which include a deduction for indoor fan motor heat
2. Shows nominal cooling capacities and power input
3. TC, PI and SHC must be calculated by interpolation using the figures in the above tables. (Figures out of the tables should not be used for calculation.)
4. SHC is based on each EWB and EDB
 $SHC^* = SHC \text{ correction for other dry bulb}$
 $SHC^* = 0.02 \times AFR \text{ (m}^3\text{/min)} \times (1-BF) \times (DB-EDB)$
 Add SHC* to SHC.
5. Capacities are based on following conditions:
 Corresponding refrigerant piping length: 7.5 m
 Level difference: 0 m
6. Air flow rate (AFR) and Bypass factor (BF) are tabulated above.

6

4 Capacity tables

4 - 1 Cooling capacity tables

FVK550B+ RN50E

AFR	10.8
BF	0.23

Cooling capacity

50Hz 220-240V

Indoor		Outdoor temperature (°C)																	
EWB (°C)	EDB (°C)	20			25			30			32			35			40		
		TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14.0	20	4.86	3.15	1.35	4.71	3.08	1.45	4.56	3.01	1.54	4.50	2.98	1.58	4.41	2.94	1.64	4.26	2.87	1.73
16.0	22	5.02	3.18	1.38	4.87	3.11	1.47	4.72	3.04	1.57	4.66	3.02	1.60	4.57	2.97	1.66	4.42	2.90	1.76
18.0	25	5.17	3.22	1.40	5.02	3.15	1.50	4.87	3.08	1.59	4.81	3.05	1.63	4.72	3.01	1.69	4.57	2.94	1.78
19.0	27	5.25	3.23	1.42	5.10	3.16	1.51	4.95	3.09	1.61	4.89	3.07	1.64	4.80	3.02	1.70	4.65	2.95	1.80
22.0	30	5.48	3.29	1.45	5.33	3.22	1.55	5.18	3.15	1.64	5.12	3.12	1.68	5.03	3.08	1.74	4.88	3.01	1.83
24.0	32	5.64	3.32	1.48	5.49	3.25	1.58	5.34	3.18	1.67	5.28	3.15	1.71	5.19	3.11	1.77	5.04	3.04	1.86

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SYMBOLS

AFR:	Air flow rate	(m ³ /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Total capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)

NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat
- Shows nominal cooling capacities and power input
- TC, PI and SHC must be calculated by interpolation using the figures in the above tables. (Figures out of the tables should not be used for calculation.)
- SHC is based on each EWB and EDB
 $SHC^* = SHC \text{ correction for other dry bulb}$
 $SHC^* = 0.02 \times AFR \text{ (m}^3\text{/min)} \times (1-BF) \times (DB-EDB)$
 Add SHC* to SHC.
- Capacities are based on following conditions:
 Corresponding refrigerant piping length: 7.5 m
 Level difference: 0 m
- Air flow rate (AFR) and Bypass factor (BF) are tabulated above.

FTKS60E+ RKS60E
FTN60E+ RN60E

AFR	16.2
BF	0.29

Cooling capacity

50Hz 220-240V

Indoor		Outdoor temperature (°C)																	
EWB (°C)	EDB (°C)	20			25			30			32			35			40		
		TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
14.0	20	5.60	3.94	1.49	5.60	3.94	1.66	5.59	3.94	1.82	5.48	3.88	1.88	5.31	3.79	1.97	5.03	3.64	2.12
16.0	22	6.42	4.17	1.54	6.14	4.02	1.68	5.86	3.88	1.83	5.75	3.82	1.89	5.59	3.74	1.98	5.31	3.60	2.12
18.0	25	6.70	4.31	1.54	6.42	4.17	1.69	6.14	4.04	1.84	6.03	3.99	1.90	5.86	3.91	1.99	5.58	3.78	2.13
19.0	27	6.84	4.49	1.55	6.56	4.36	1.70	6.28	4.23	1.84	6.17	4.18	1.90	6.00	4.10	1.99	5.72	3.98	2.14
22.0	30	7.25	4.31	1.56	6.97	4.19	1.71	6.69	4.08	1.86	6.58	4.04	1.91	6.41	3.97	2.00	6.14	3.86	2.15
24.0	32	7.53	4.18	1.57	7.25	4.07	1.72	6.97	3.97	1.86	6.86	3.93	1.92	6.69	3.87	2.01	6.41	3.77	2.16

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SYMBOLS

AFR:	Air flow rate	(m ³ /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Total capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)

NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat
- Shows nominal cooling capacities and power input
- TC, PI and SHC must be calculated by interpolation using the figures in the above tables. (Figures out of the tables should not be used for calculation.)
- SHC is based on each EWB and EDB
 $SHC^* = SHC \text{ correction for other dry bulb}$
 $SHC^* = 0.02 \times AFR \text{ (m}^3\text{/min)} \times (1-BF) \times (DB-EDB)$
 Add SHC* to SHC.
- Capacities are based on following conditions:
 Corresponding refrigerant piping length: 7.5 m
 Level difference: 0 m
- Air flow rate (AFR) and Bypass factor (BF) are tabulated above.

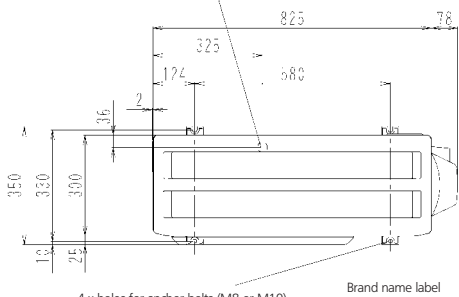
5 Dimensional drawing & centre of gravity

5 - 1 Dimensional drawing

unit (mm)

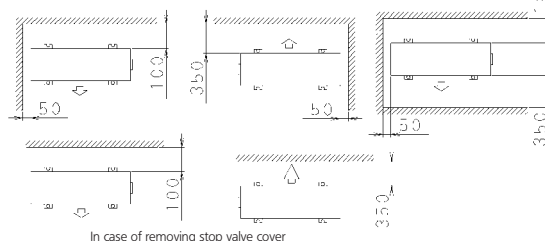
RN50-60E

Drain outlet
(I.D. ϕ 15.9 hose for connection)



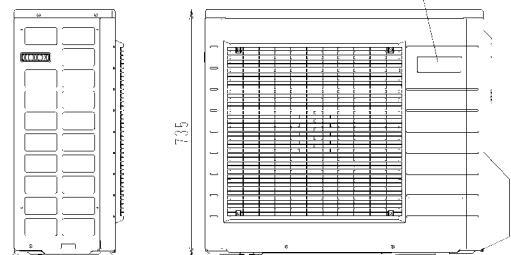
Minimum space for air passage

Wall height on air outlet side = less than 1200



4 x holes for anchor bolts (M8 or M10)

Brand name label

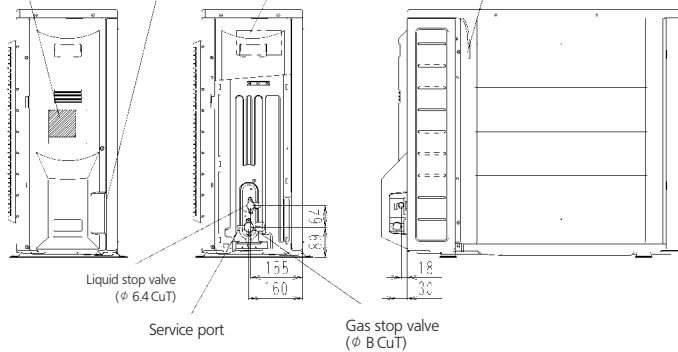


Name plate

Wiring inlet

Terminal strip with earth terminal

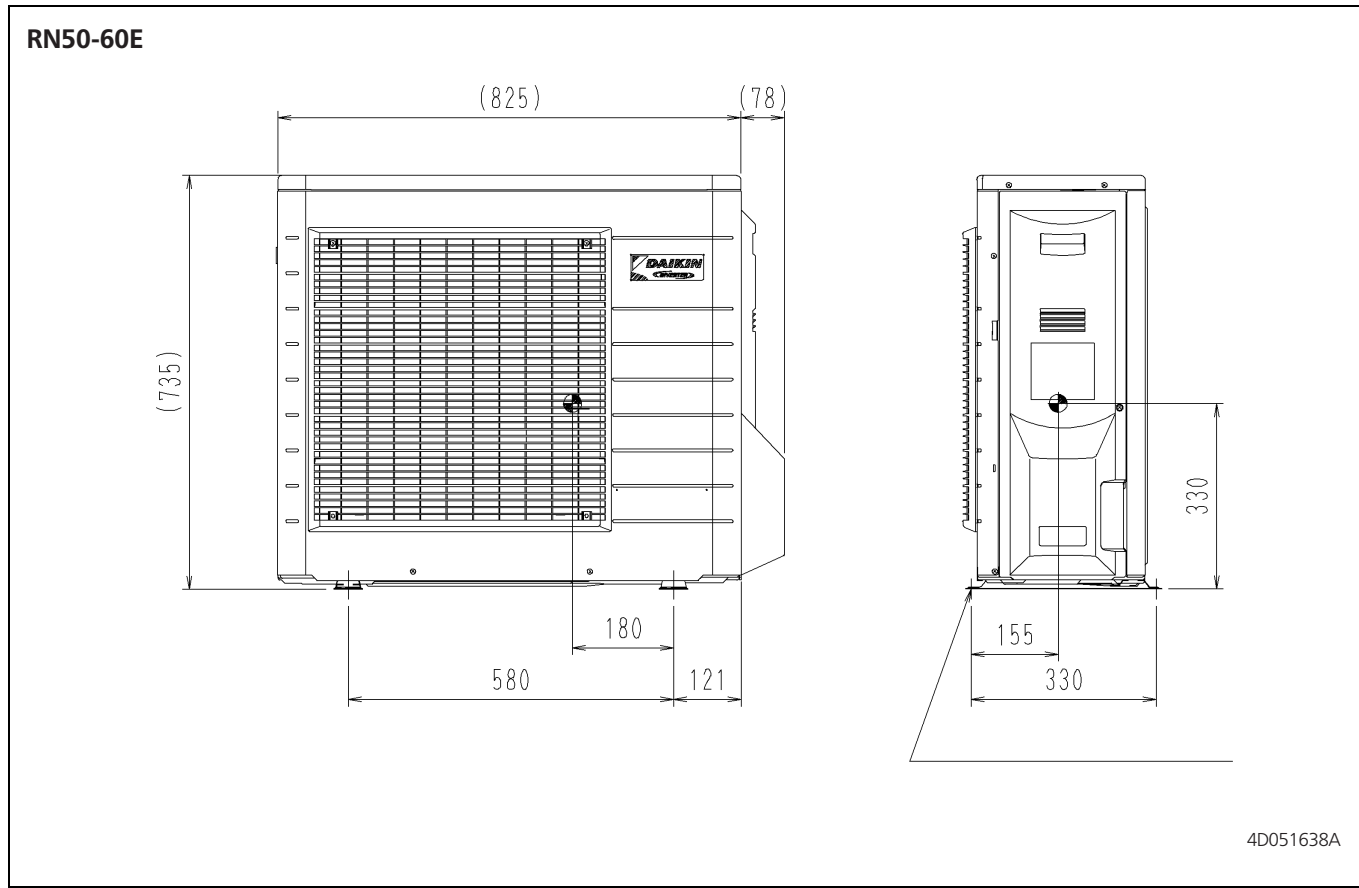
Outdoor air thermistor



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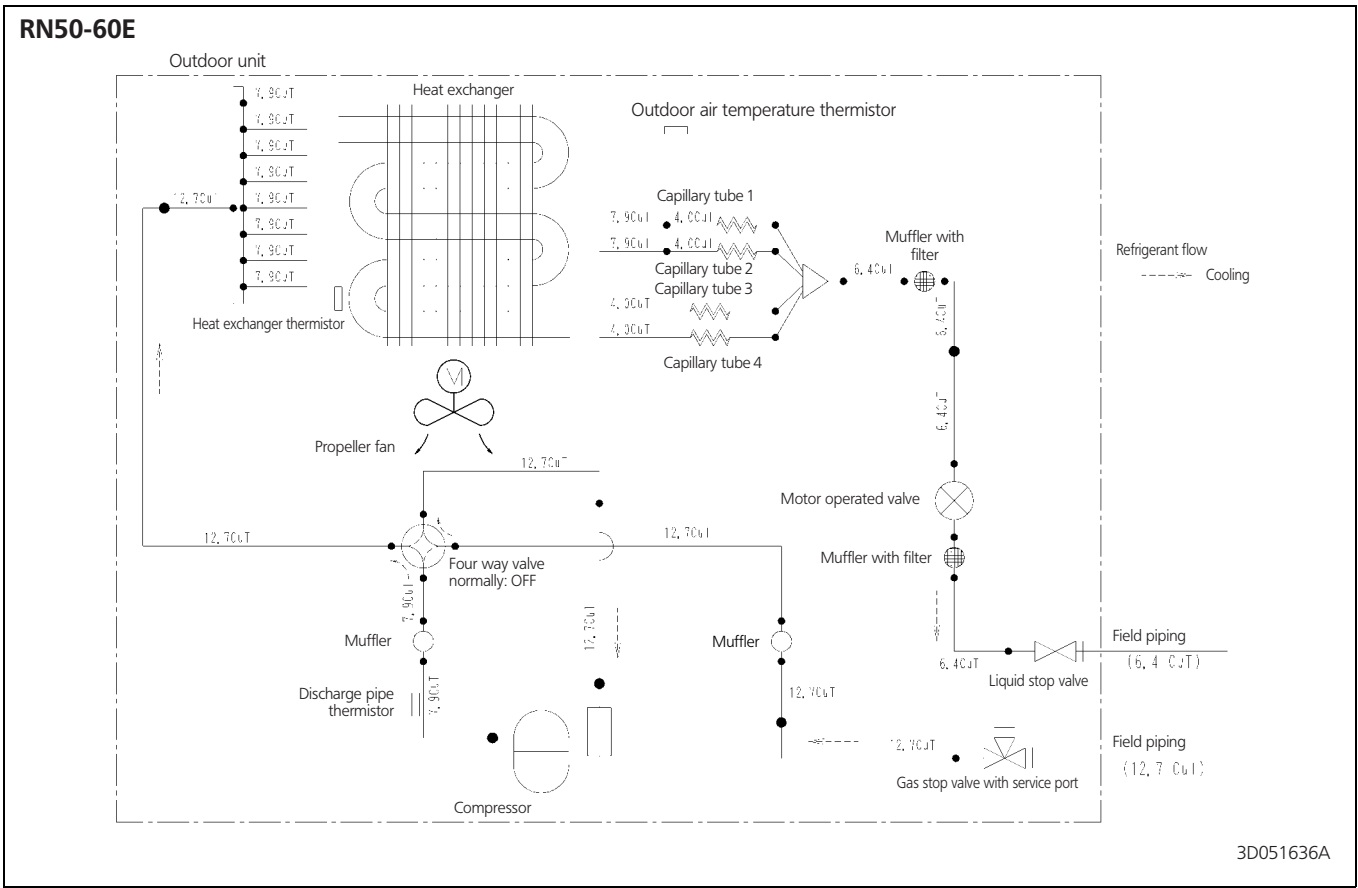
5 Dimensional drawing & centre of gravity

5 - 2 Centre of gravity



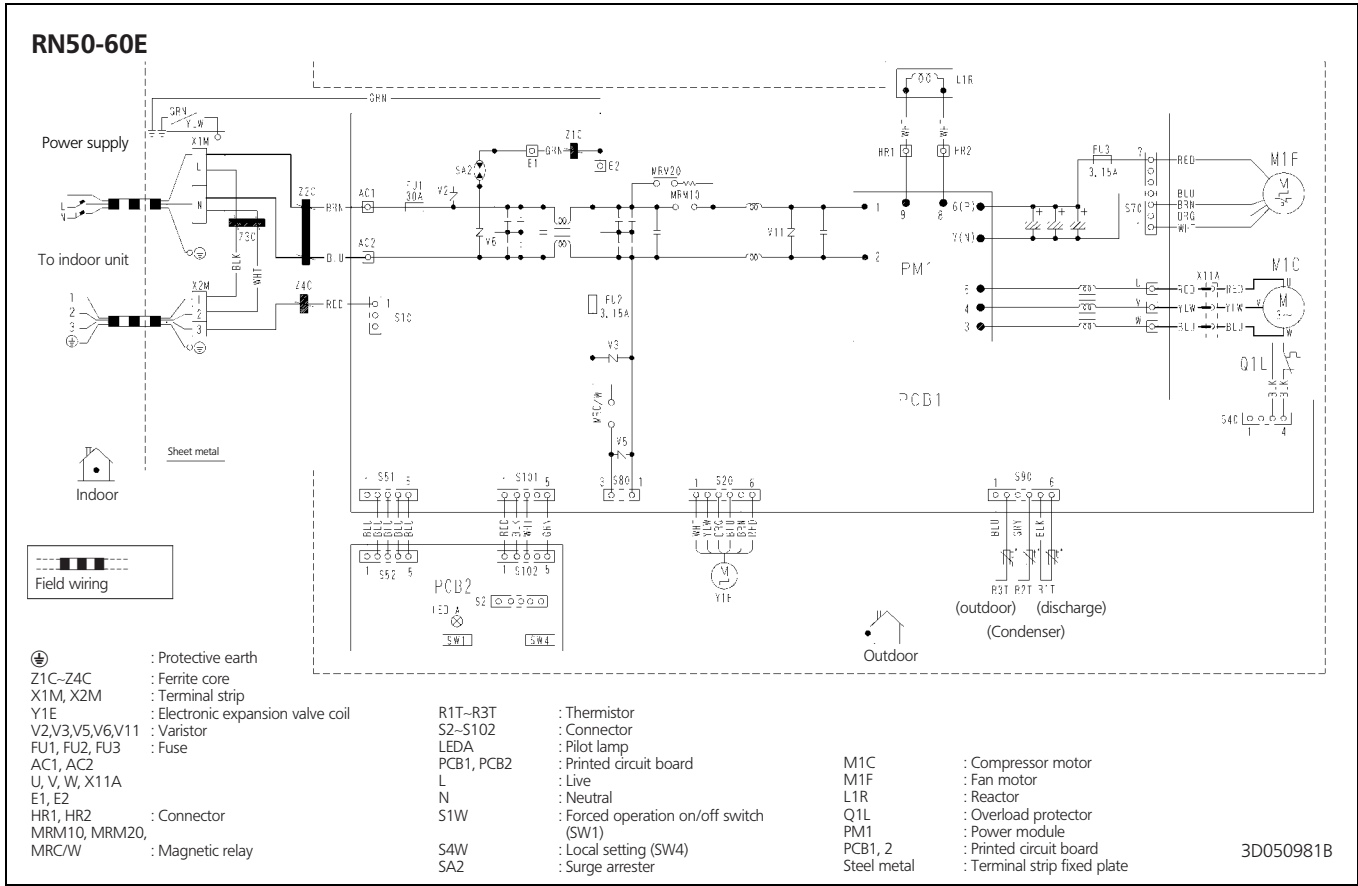
6 Piping diagram

6



7 Wiring diagram

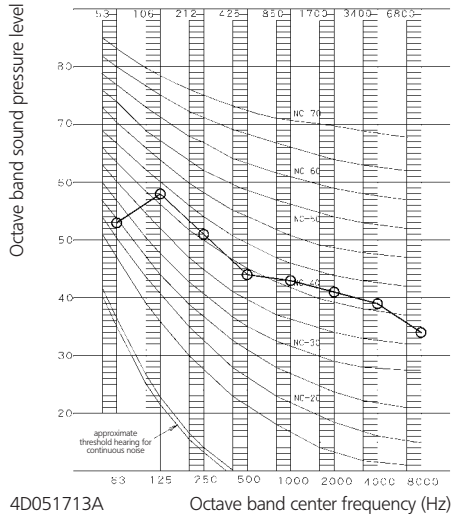
7 - 1 Wiring diagram



8 Sound data

8 - 1 Sound pressure spectrum

RN50E



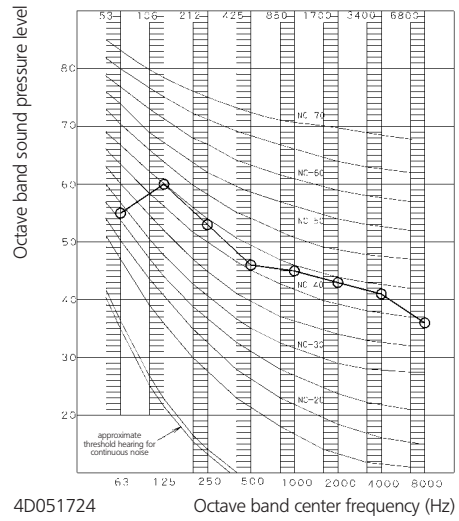
NOTES

- 1 Measured in an anechoic chamber.
- 2 Operation noise differs with operation and ambient conditions.
- 3 The operation noise measuring method is in accordance with JISC9612

Legend

○—○ 50Hz 220-240

RN60E



NOTES

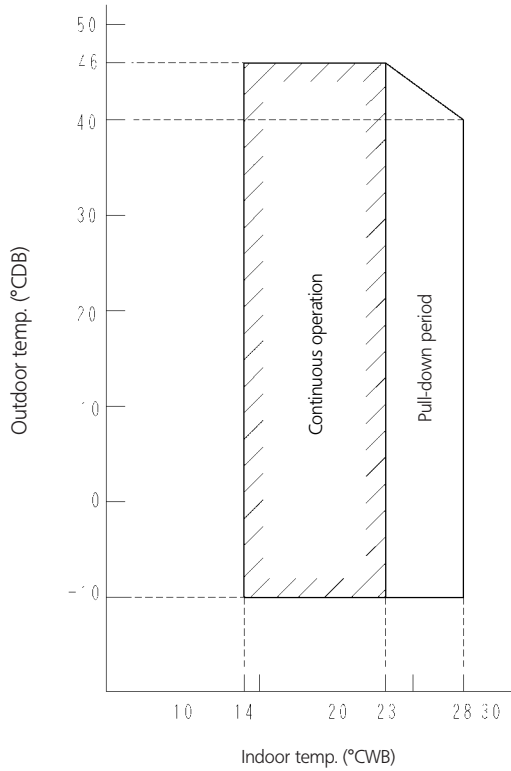
- 1 Measured in an anechoic chamber.
- 2 Operation noise differs with operation and ambient conditions.
- 3 The operation noise measuring method is in accordance with JISC9612

Legend

○—○ 50Hz 220-240

9 Operation range

RN50-60E



Notes:

- The graph is based on the following conditions:
- 1. Equivalent piping length 7.5 m
 - 2. Level difference 0 m
 - 3. Air flow rate high

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9 Operation range

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Split - Sky Air

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Daikin units comply with the European regulations that guarantee the safety of the product.



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