Panasonic

LARGE CAPACITY AIR CONDITIONERS **2013 / 2014**

EVERY BUILDING MATTERS

Panasonic Air Conditioning Designed To Care For Your Projects

With more than 30 years of experience, exporting to more than 120 countries around the world, Panasonic is unquestionably one of the leaders in the air conditioning sector. The company is also a world leader in innovation as it has filed more than 91,539 patents to improve its customers' lives. Moreover, Panasonic is determined to remain at the forefront of its market. In all, the company has produced more than 200 million compressors and its products, particularly residential air conditioners, now hold the No. 1 market share in Japan and other major countries in Asia. You can be assured of the extremely high quality of Panasonic's air conditioners.

This wish to excel has made Panasonic the international leader in air conditioning solutions. The company's industrial capacity and firm commitment to the environment has enabled it to open new avenues of research and to develop innovative technologies which enhance its customers' way of life.
Panasonic offers a range of turnkey air conditioning solutions for homes and medium-sized buildings such as offices and restaurants. These offer maximum effectiveness, comply with the strictest environmental standards and meet the most avant-garde construction requirements of our time.

At Panasonic we know what a great responsibility it is to install cooling and heating systems. Because offering you the best solutions in cooling and heating matters.

EVERY BUILDING MATTERS

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Indoor Units

- Ducted type 12 - 15
- 4-Way Cassette type 16 - 19

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Panasonic provides ideal solutions for large-capacity air conditioning needs.

INVERTER

Indoor Unit

CAPACITY (kW)	6.0kW
Ducted High Static Pressure Model Page 12-15	S-60PE1R5
4-Way Cassette * Panel is provided as an option (CZ-KPU2) Page 16-19	S-60PU1R5
Ceiling Mounted Page 20-23	S-60PT2R5

Outdoor Unit

CAPACITY (HP)	6.0kW
Page 24-39	U-60PE1R5

EVERY BUILDING MATTERS

7.1kW	10.0kW	12.5kW	14.0kW
S-71PE1R5	S-100PE1R5	S-125PE1R5	S-140PE1R5
S-71PU1R5	S-100PU1R5	S-125PU1R5	S-140PU1R5
S-71PT2R5	S-100PT2R5	S-125PT2R5	S-140PT2R5

7.1kW	10.0kW	12.5kW	14.0kW
U-71PE1R5	U-100PE1R5 U-100PE1R8*	U-125PE1R5 U-125PE1R8*	U-140PE1R5 U-140PE1R8*

(*3-phase)

Outdoor Units

DC Inverter allows both comfort and energy savings

- Complies with all necessary Safety Approvals to ensure quality and safety
- Top-class EER:4.20 / COP:4.31 (Cassette type:10.0kW)
- Compiled Demand Response (DRED Compatible)
- Cooling operation is possible when outdoor temperature is as high as 46°C
- DC inverter technology combined with R410A for excellent efficiency
- Maximum piping length:75m (Total piping length:75m)
- Cooling operation is possible when outdoor temperature is as low as -15°C
- Heating operation is possible when outdoor temperature is as low as -20°C
- One ampere starting current
- Auto restart from outdoor unit

Product Quality and Safety

All Panasonic air conditioners undergo strict quality and safety tests before sale. This rigorous process includes obtaining all necessary Safety Approvals to ensure that all air conditioners we sell are not only built to the highest market standards, but are also completely safe.

Energy-saving concept

The use of energy-saving designs for the structure of fans, fan motors, compressors and heat exchangers results in high COP values which rank amongst the highest in the industry. In addition, use of highly efficient R410A refrigerant reduces CO2 emission and lowers operating costs.

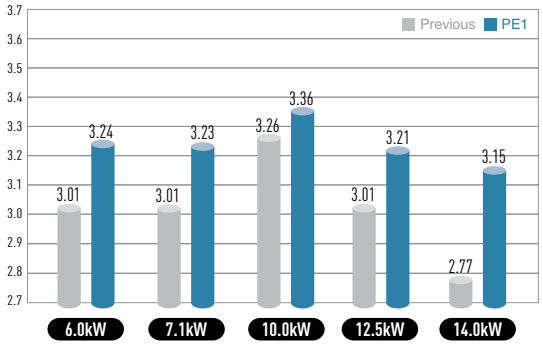
1 Compact & High-Efficiency Compressor	A large-capacity inverter compressor has been adopted. The inverter compressor is superior in performance with improved partial-load capacity.
2 Printed Circuit Board (S-LINK)	The number of PCB were reduced from 3 into 2 pieces making maintenance work easier.
3 DC fan motor	Checking load and outside temperature, the DC motor is controlled for optimum air volume.
4 New Large Diagonal (520mm) Air Flow Fan	The newly designed fan has been developed to inhibit air turbulence and to increase efficiency. As the fan diameter has been increased to 520mm, the air volume has been increased whilst maintaining a low sound level.
5 High-Efficiency Heat Exchanger	The heat exchanger and the size of the copper tubes heat exchanger have been redesigned to increase efficiency.

Outdoor Units

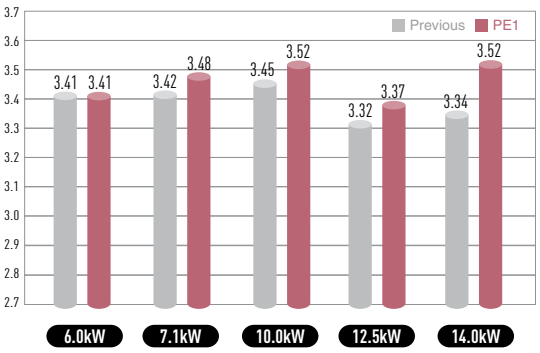
Improved Energy Savings

The operation efficiency has been improved using highly efficient R410A refrigerant, a new DC inverter compressor, a new DC motor and a newly designed heat exchanger.

Cooling (Ducted)



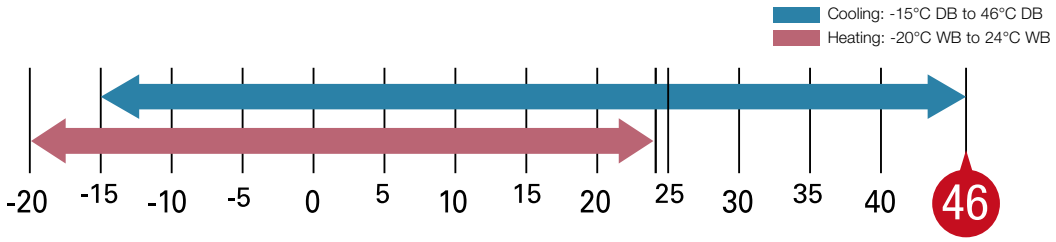
Heating (Ducted)



Wide Operating Range

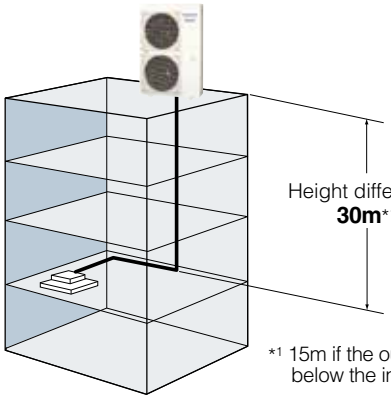
- Cooling operation is possible when outdoor temperature is as low as -15°C
- Cooling operation is possible when outdoor temperature is as high as 46°C
- Heating operation is possible when outdoor temperature is as low as -20°C

The remote controller temperature setting offers a range from 16°C to 30°C



Increased Piping Length for Greater Design Flexibility

Adaptable to various building types and sizes
Max. piping length : 75m (10.0kW, 12.5kW, 14.0kW),
50m (6.0kW, 7.1kW)



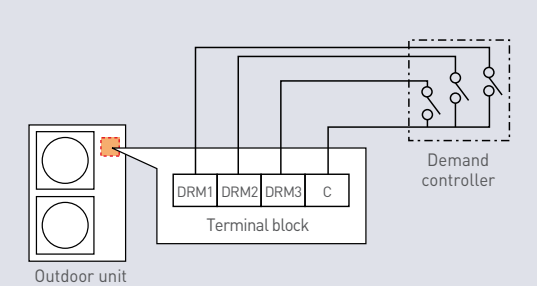
*1 15m if the outdoor unit is below the indoor unit.

Max. piping length:75m (10.0kW, 12.5kW, 14.0KW)
50m (6.0kW, 7.1kW)

Demand Response Compliant

Panasonic air conditioners are equipped with Demand Response Capability which complies to both AS 4755 and AS 3823. Panasonic continues to design and develop products that are tailored to local needs and requirements. This ensures that Panasonic products that you are installing today are compliant with the demand response standards that are likely to be implemented shortly (estimate: 2012).

The Equipment Energy Efficiency (E3) program has been supporting the development of Demand Response Enabling Device (DRED) standards for air-conditioners which should comply with AS 4755. DRED functionality is not compulsory today, however, this capability will be required for all installations in the very near future.



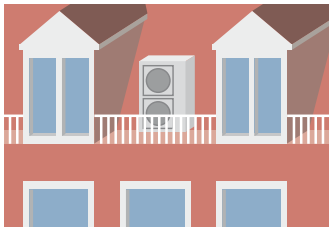
Demand control terminal is available to control 0-50-75-100% of capacities.

Compact and Lightweight

The weight is only 98kg (10.0kW, 12.5kW, 14.0kW) Hence it is easy to carry, easy to install.

Compact & Flexible-design

The slim and lightweight design can be installed in various places.

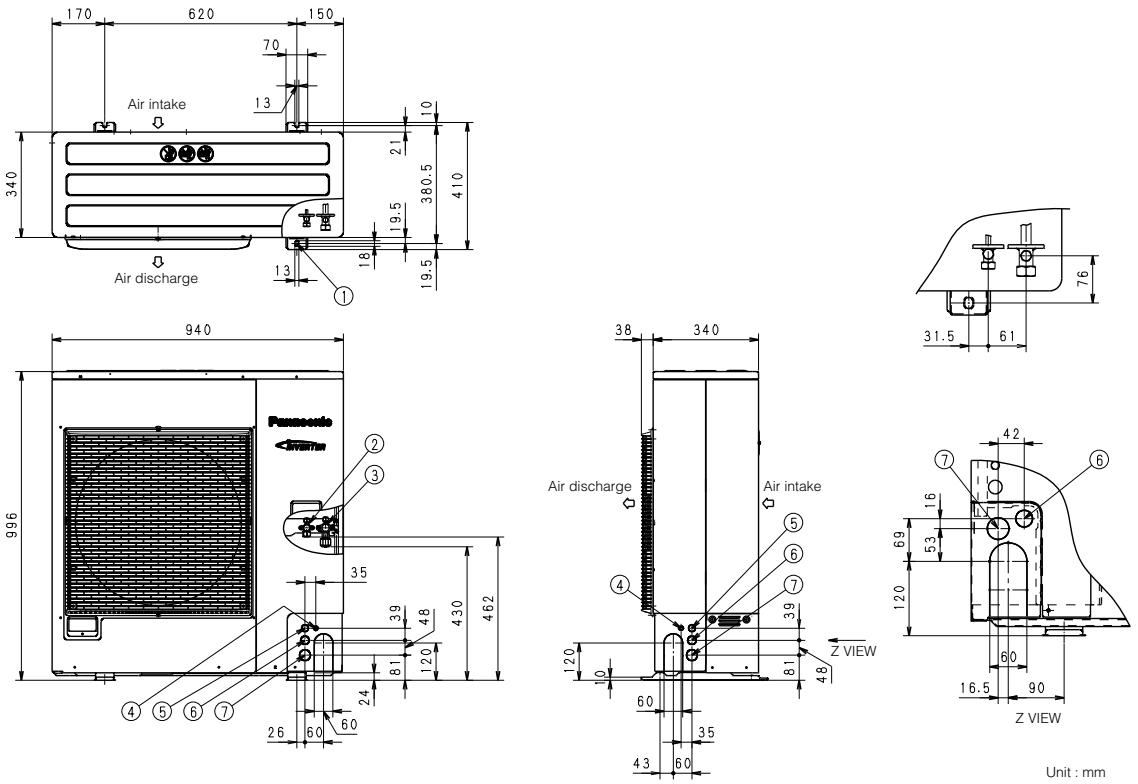


Quiet Mode

Quiet Mode reduces outdoor unit operating sound by 5dB. External input signal is also available.

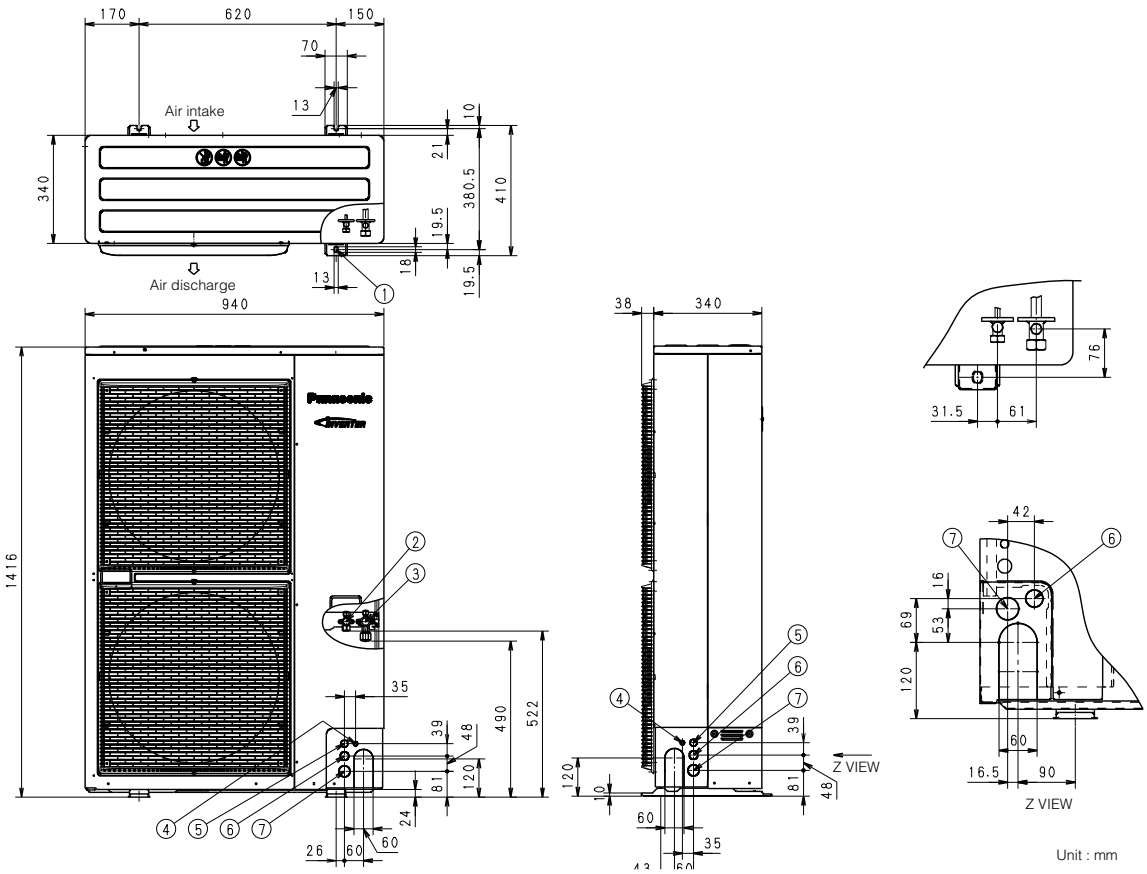
Outdoor Units

Dimensions (6.0kW - 7.1kW)



1 Mounting hole (4-R6.5), anchor bolt : M10
2 Refrigerant piping (liquid pipe), flared connection (ø9.52)
3 Refrigerant piping (gas pipe), flared connection (ø15.88)
4 Electrical wiring port (ø13)
5 Electrical wiring port (ø22)
6 Electrical wiring port (ø27)
7 Electrical wiring port (ø35)

Dimensions (10.0kW - 14.0kW)



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4 Electrical wiring port (ø13)
5 Electrical wiring port (ø22)
6 Electrical wiring port (ø27)
7 Electrical wiring port (ø35)

Indoor Units

Ducted

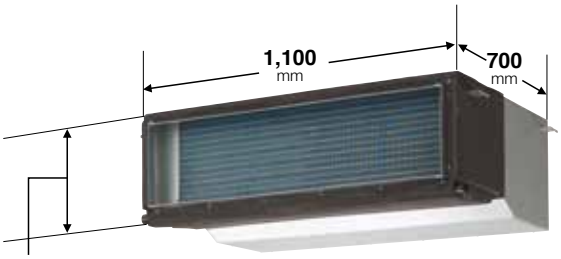
Hidden in the ceiling to provide an ideal match for luxury homes and light commercial buildings

S-60PE1R5
S-71PE1R5
S-100PE1R5

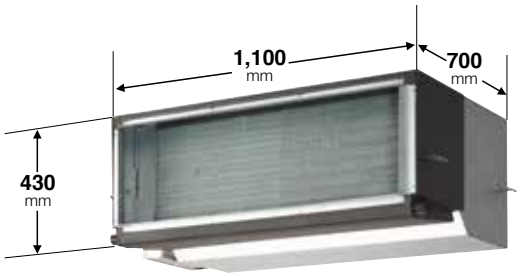
S-125PE1R5
S-140PE1R5

Compact Body Size

Hidden in the ceiling, ideal when interior decor is an important consideration such as in homes with many rooms and light commercial buildings.



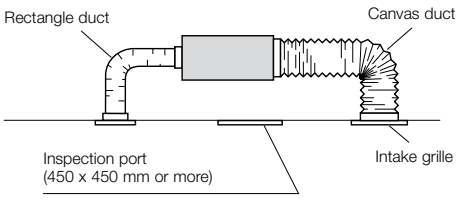
60PE, 71PE, 100PE



125PE, 140PE

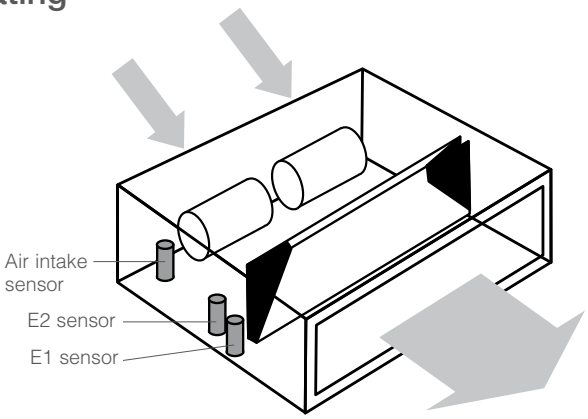
System Example

An inspection port (450 mm x 450 mm or more) is required at the control-box side of the indoor unit body.

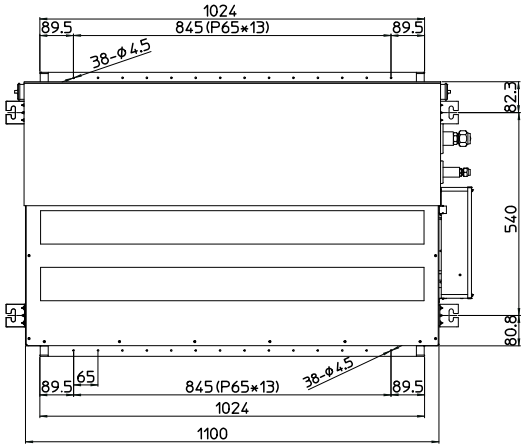


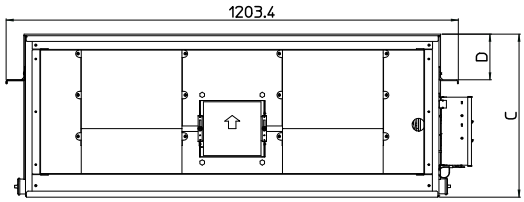
Cold Drafts Reduced During Heating

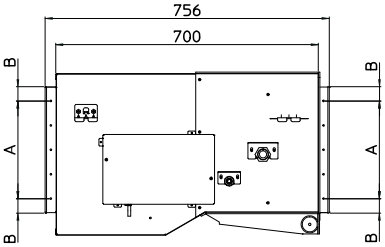
- Accurate temperature measurement by E1/E2 sensor to reduce cold drafts when in heating mode.



Dimensions



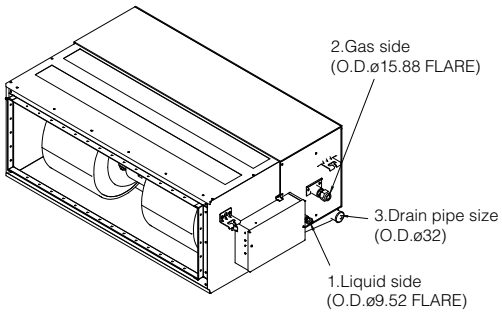




Dimensions: mm

model	A	B	C	D
S-60PE1R5	130	33.1	290	118
S-71PE1R5 S-100PE1R5	195	35.7	360	50
S-125PE1R5 S-140PE1R5	260	38.2	430	121.5

Capacity			6.0kW	7.1kW	10.0kW	
Model Name	Indoor Unit		S-60PE1R5	S-71PE1R5	S-100PE1R5	S-100PE1R5
	Outdoor Unit		U-60PE1R5	U-71PE1R5	U-100PE1R5	U-100PE1R8
Power source		Phase/Hz	1 Phase/ 50Hz	1 Phase/ 50Hz	1 Phase/ 50Hz	3 Phase/ 50Hz
		V	230V | 240V	230V | 240V	230V | 240V	400V | 415V
Cooling capacity Heating capacity		kW	6.0 (2.5 - 7.1) 7.0 (2.0 - 8.5)	7.1 (2.5 - 8.2) 8.0 (2.0 - 9.0)	10.0 (3.3 - 12.5) 11.2 (4.1 - 14.0)	10.0 (3.3 - 12.5) 11.2 (4.1 - 14.0)
		BTU/h	20,500 (8,500 - 24,200) 23,900 (6,800 - 29,000)	24,200 (8,500 - 28,000) 27,300 (6,800 - 30,700)	34,100 (11,300 - 42,700) 38,200 (14,000 - 47,800)	34,100 (11,300 - 42,700) 38,200 (14,000 - 47,800)
EER : COP		W/W	3.24 : 3.41	3.23 : 3.48	3.36 : 3.52	3.36 : 3.52
Total power input	Cooling : Heating	kW	1.85 : 2.05	2.20 : 2.30	2.98 : 3.18	2.98 : 3.18
Indoor Unit						
Current	Cooling : Heating	A	0.85 : 0.85 | 0.86 : 0.86	1.24 : 1.24 | 1.25 : 1.25	1.72 : 1.72 | 1.74 : 1.74	1.72 : 1.72 | 1.74 : 1.74
Dimensions	H × W × D	mm	290×1,100 (+100)×700	360×1,100 (+100)×700	360×1,100 (+100)×700	360×1,100 (+100)×700
Net weight		kg	35	42	44	44
Air volume	Cooling : Heating	L/s	366 : 366	500 : 500	666 : 666	666 : 666
External static pressure		Pa	70 (Max.100)	100 (Max.150)	100 (Max.150)	100 (Max.150)
Sound pressure level (H/M/L)	Cooling : Heating	dB(A)	43 / 41 / 40 : 43 / 41 / 40	45 / 44 / 43 : 45 / 43 / 44	48 / 46 / 44 : 48 / 46 / 44	48 / 46 / 44 : 48 / 46 / 44
Sound power level (H/M/L)	Cooling : Heating	dB(A)	60 / 58 / 57 : 60 / 58 / 57	62 / 61 / 60 : 62 / 61 / 60	70 / 68 / 66 : 70 / 68 / 66	70 / 68 / 66 : 70 / 68 / 66
Number of fan speeds			3	3	3	3
Drain pipe size		mm	VP-25	VP-25	VP-25	VP-25
Outdoor Unit						
Current	Cooling : Heating	A	7.85 : 8.80 | 7.65 : 8.60	9.10 : 9.30 | 8.80 : 9.00	11.8 : 12.7 | 11.40 : 12.3	3.95 : 4.25 | 3.80 : 4.10
Dimensions	H × W × D	mm	996 × 940 × 340	995 × 940 × 340	1,416 × 940 × 340	1,416 × 940 × 340
Net weight		kg	68	69	98	98
Air volume	Cooling : Heating	L/s	1,000 : 1,000	1,000 : 1,000	1,833 : 1,583	1,833 : 1,583
Sound pressure level (Silent mode)	Cooling : Heating	dB(A)	48 (46) : 50 (48)	48 (46) : 50 (48)	52 (50) : 52 (50)	52 (50) : 52 (50)
Sound power level (Silent mode)	Cooling : Heating	dB(A)	65 (63) : 67 (65)	65 (63) : 67 (65)	69 (67) : 69 (67)	69 (67) : 69 (67)
Piping connections	Liquid/Gas	mm	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88
Pipe length	min. - max.	m	5 - 50	5 - 50	5 - 75	5 - 75
Elevation difference (OU located lower, OU located higher)		m	15, 30	15, 30	15, 30	15, 30
Maximum chargeless length		m	30	30	30	30
Refrigerant at shipping, Additional gas amount		g	R410A 2,000, 50 (g/m)	R410A 2,350, 50 (g/m)	R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)
Operation ranges	Cooling : Heating	℃	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24



Optional Controller

Timer remote controller
CZ-RTC2

Wireless remote controller
CZ-RWSC2

Simplified remote controller
CZ-RE2C2

Backlit remote controller
CZ-RELC2

12.5kW		14.0kW	
S-125PE1R5	S-125PE1R5	S-140PE1R5	S-140PE1R5
U-125PE1R5	U-125PE1R8	U-140PE1R5	U-140PE1R8
1 Phase/ 50Hz	3 Phase/ 50Hz	1 Phase/ 50Hz	3 Phase/ 50Hz
230V | 240V	400V | 415V	230V | 240V	400V | 415V
12.5 (3.3 - 14.0) 14.0 (4.1 - 16.0)	12.5 (3.3 - 14.0) 14.0 (4.1 - 16.0)	14.0 (3.3 - 15.5) 16.0 (4.1 - 18.0)	14.0 (3.3 - 15.5) 16.0 (4.1 - 18.0)
42,700 (11,300 - 47,800) 47,800 (14,000 - 54,600)	42,700 (11,300 - 47,800) 47,800 (14,000 - 54,600)	47,800 (11,300 - 52,900) 54,600 (14,000 - 61,400)	47,800 (11,300 - 52,900) 54,600 (14,000 - 61,400)
3.21 : 3.37	3.21 : 3.37	3.15 : 3.52	3.15 : 3.52
3.90 : 4.16	3.90 : 4.16	4.45 : 4.55	4.45 : 4.55
1.82 : 1.82 | 1.84 : 1.84	1.82 : 1.82 | 1.84 : 1.84	2.62 : 2.62 | 2.70 : 2.70	2.62 : 2.62 | 2.70 : 2.70
430×1,100 (+100)×700	430×1,100 (+100)×700	430×1,100 (+100)×700	430×1,100 (+100)×700
48	48	53	53
833 : 833	833 : 833	1,000 : 1,000	1,000 : 1,000
100 (Max.150)	100 (Max.150)	100 (Max.150)	100 (Max.150)
49 / 47 / 45 : 49 / 47 / 45	49 / 47 / 45 : 49 / 47 / 45	51 / 49 / 47 : 51 / 49 / 43	51 / 49 / 47 : 51 / 49 / 43
71 / 69 / 67 : 71 / 69 / 67	71 / 69 / 67 : 71 / 69 / 67	73 / 71 / 69 : 73 / 71 / 67	73 / 71 / 69 : 73 / 71 / 67
3	3	3	3
VP-25	VP-25	VP-25	VP-25
16.0 : 17.2 | 15.4 : 16.6	5.30 : 5.70 | 5.10 : 5.50	17.8 : 18.1 | 17.2 : 17.5	5.80 : 5.95 | 5.55 : 5.70
1,416 × 940 × 340	1,416 × 940 × 340	1,416 × 940 × 340	1,416 × 940 × 340
98	98	98	98
2,166 : 1,833	2,166 : 1,833	2,250 : 2,000	2,250 : 2,000
53 (51) : 53 (51)	53 (51) : 53 (51)	54 (52) : 55 (53)	54 (52) : 55 (53)
70 (68) : 70 (68)	70 (68) : 70 (68)	71 (69) : 71 (69)	71 (69) : 71 (69)
Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88
5 - 75	5 - 75	5 - 75	5 - 75
15, 30	15, 30	15, 30	15, 30
30	30	30	30
R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)
-15 to 46 : -20 to 24	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24

Indoor Units

4-WAY Cassette

Provides a neat fit in the ceiling to match modern decor, uniform cooling throughout the room, plus easy installation

Self-diagnosing Function | Automatic Fan Operation | Mild dry | Intelligent Auto Swing | Automatic Restart Function | Auto Swing (Auto Flap Control) | Built-in Drain Pump

Technical focus

- Compact design
- Reduced sound levels (from previous models)
- DC fan motor for increased efficiency
- Powerful drain pump gives 850 mm lift
- Lightweight design
- Fresh air knockout
- Branch duct connection
- Optional air-intake plenum CZ-FDU2

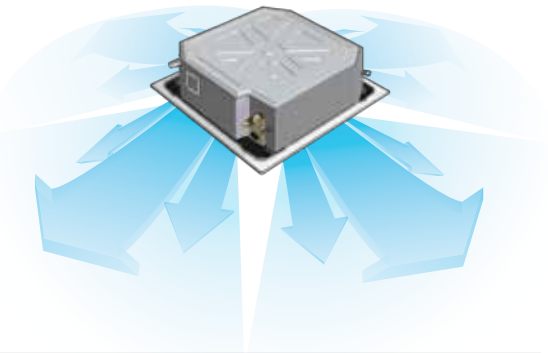
Wide & Comfortable Airflow

Comfort/Quiet

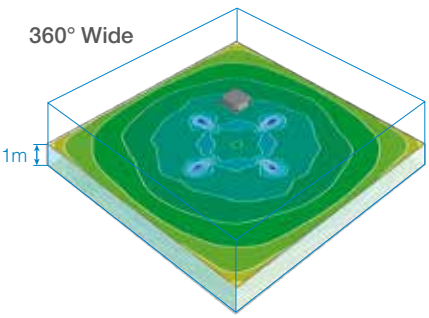
A proprietary design features wide-angle discharge outlets and flaps that are larger in the middle, featuring a shape that was selected based on both physics and testing of actual prototype units. Air coming out of the center of the discharge outlets travels farther. From the sides of each outlet, where the openings are larger, airflow spreads out to reach the corners of the room. Air is discharged across a wide area from the four sides of the unit. The curves on the room temperature distribution graph expand gently out through 360° in a circle centred on the indoor unit.

Ample airflow: 36 m³/min

Industry's highest in the 14.0kW class.



Temperature distribution by thermograph (cooling operation)



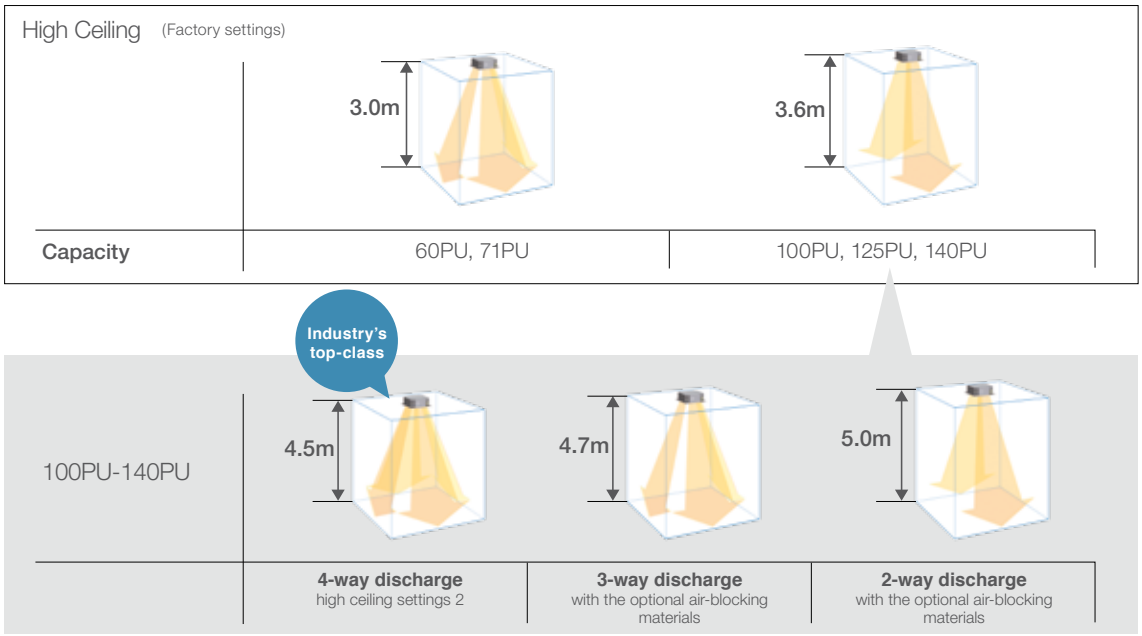
Simulation conditions:
P140 4-way ceiling-mounted cassette type in cooling mode
/ Floor area of 225 m²
/ Ceiling height of 3 m

1 Air intake box CZ-BCU2 for main unit.

2 Air intake box CZ-ATU2 for Air intake plenum.

* When using Air intake box (CZ-ATU2), Air intake plenum (CZ-FDU2) required.

High-Ceiling Installation (Up to 5 m for 10.0kW+ models)



Indoor unit \ *1 settings	4-way discharge			3-way discharge (optional air-blocking materials)	2-way discharge *2(optional air-blocking materials)
	Factory settings 1	High ceiling setting 1	High ceiling setting 2		
60PU-71PU	3.0	3.3	3.6	3.8	4.2
100PU, 125PU, 140PU	3.6	3.9	4.5	4.7	5.0

*1 When using the unit in a configuration other than the factory settings, it is necessary to make settings on site to increase airflow.
*2 Use air-blocking materials (CZ-CFU2) to completely block two discharge outlets for 2-way airflow.

Indoor Unit

4-way Cassette

Easy Maintenance and Cleaning

The flaps can be removed easily for washing with water.

It is easy to remove the washable flaps by hand.

The suction grill allows 90-degree turns.

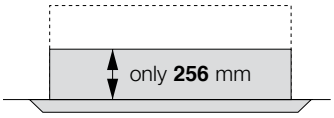
Low-Profile 33.5 mm Panel

The square panel integrates seamlessly with the ceiling. Discharge outlets close when the unit is stopped.

Lighter and Slimmer, Easier Installation

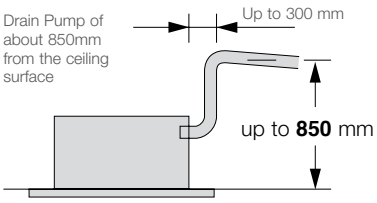
A lightweight unit at 24kg, the unit is also very slim with a height of only 256mm, making installation possible even in narrow ceilings.

* For 6.0kW, 7.1kW



A Drain Height of Approx. 850mm from the Ceiling Surface

The drain height can be increased by approximately 350mm over the conventional value by using a high-lift drain pump, and long horizontal piping is possible.

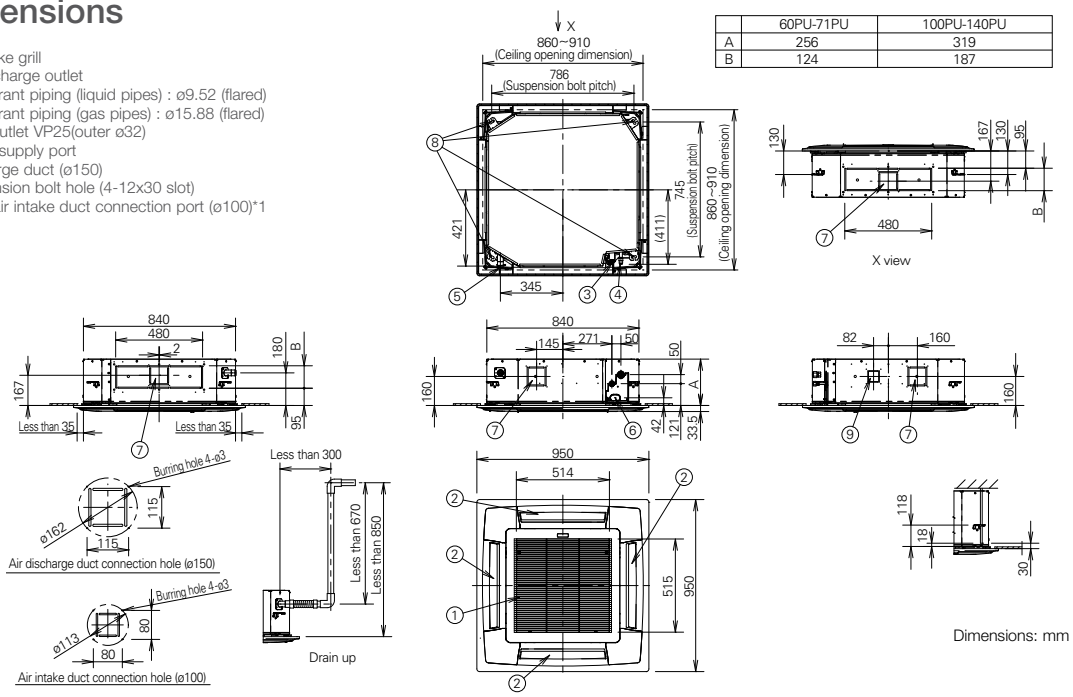


Capacity			6.0kW	7.1kW	10.0kW	
Model Name	Indoor Unit		S-60PU1R5	S-71PU1R5	S-100PU1R5	S-100PU1R5
	Outdoor Unit		U-60PE1R5	U-71PE1R5	U-100PE1R5	U-100PE1R8
	PANEL		CZ-KPU2	CZ-KPU2	CZ-KPU2	CZ-KPU2
Power source		Phase/Hz	1 phase, 50Hz	1 phase, 50Hz	1 phase, 50Hz	3 phase, 50Hz
		V	230V | 240V	230V | 240V	230V | 240V	400V | 415V
Cooling capacity Heating capacity		kW	6.0 (2.5 - 8.0) 7.0 (2.0 - 8.5)	7.1 (2.5 - 8.2) 8.0 (2.0 - 9.0)	10.0 (3.3 - 12.5) 11.2 (4.1 - 14.0)	10.0 (3.3 - 12.5) 11.2 (4.1 - 14.0)
		BTU/h	20,500 (8,500 - 27,300) 23,900 (6,800 - 29,000)	24,200 (8,500 - 28,000) 27,300 (6,800 - 30,700)	34,100 (11,300 - 42,700) 38,200 (14,000 - 47,800)	34,100 (11,300 - 42,700) 38,200 (14,000 - 47,800)
EER : COP	Cooling : Heating	W/W	4.05 : 3.87	3.94 : 4.00	4.20 : 4.31	4.20 : 4.31
Total power input	Cooling : Heating	kW	1.48 : 1.81	1.80 : 2.00	2.38 : 2.60	2.38 : 2.60
Indoor Unit						
Current	Cooling : Heating	A	0.31 : 0.30 | 0.30 : 0.29	0.33 : 0.32 | 0.32 : 0.31	0.71 : 0.65 | 0.71 : 0.64	0.71 : 0.65 | 0.71 : 0.64
Dimensions H × W × D	Indoor	mm	256 × 840 × 840	256 × 840 × 840	319 × 840 × 840	319 × 840 × 840
	Panel	mm	33.5 x 950 x 950	33.5 x 950 x 950	33.5 x 950 x 950	33.5 x 950 x 950
Net weight	Indoor	kg	24	24	27	27
	Panel	kg	4	4	4	4
Air volume	Cooling : Heating	L/s	350 : 350	366 : 366	550 : 550	550 : 550
Sound pressure level (H/M/L)	Cooling : Heating	dB(A)	36 / 31 / 28 : 36 / 31 / 28	37 / 31 / 28 : 37 / 31 / 28	44 / 38 / 32 : 44 / 38 / 32	44 / 38 / 32 : 44 / 38 / 32
Sound power level (H/M/L)	Cooling : Heating	dB(A)	53 / 48 / 45 : 53 / 48 / 45	54 / 48 / 45 : 54 / 48 / 45	62 / 55 / 49 : 62 / 55 / 49	62 / 55 / 49 : 62 / 55 / 49
Number of fan speeds			3	3	3	3
Drain pipe size		mm	VP-25	VP-25	VP-25	VP-25
Outdoor Unit						
Current	Cooling : Heating	A	6.90 : 8.20 | 6.70 : 7.95	8.10 : 9.00 | 7.90 : 8.70	10.3 : 11.4 | 9.90 : 11.0	3.50 : 3.85 | 3.40 : 3.75
Dimensions H × W × D		mm	996 × 940 × 340	996 × 940 × 340	1,416 × 940 × 340	1,416 × 940 × 340
Net weight		kg	68	69	98	98
Air volume	Cooling : Heating	L/s	1,000 : 1,000	1,000 : 1,000	1,833 : 1,583	1,833 : 1,583
Sound pressure level (Silent mode)	Cooling : Heating	dB(A)	48 (46) : 50 (48)	48 (46) : 50 (48)	52 (50) : 52 (50)	52 (50) : 52 (50)
Sound power level (Silent mode)	Cooling : Heating	dB(A)	65 (63) : 67 (65)	65 (63) : 67 (65)	69 (67) : 69 (67)	69 (67) : 69 (67)
Piping connections	Liquid/Gas	mm	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88
Pipe length	min. - max.	m	5 - 50	5 - 50	5 - 75	5 - 75
Elevation difference (OU located lower, OU located higher)		m	15, 30	15, 30	15, 30	15, 30
Maximum chargeless length		m	30	30	30	30
Refrigerant at shipping, Additional gas amount		g	R410A 2,000, 50 (g/m)	R410A 2,350, 50 (g/m)	R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)
Operation ranges	Cooling : Heating	℃	-15 - 46 : -20 - 24	-15 - 46 : -20 - 24	-15 - 46 : -20 - 24	-15 - 46 : -20 - 24

Dimensions

1 Air intake grill
2 Air discharge outlet
3 Refrigerant piping (liquid pipes) : ø9.52 (flared)
4 Refrigerant piping (gas pipes) : ø15.88 (flared)
5 Drain outlet VP25(outer ø32)
6 Power supply port
7 Discharge duct (ø150)
8 Suspension bolt hole (4-12x30 slot)
9 Fresh air intake duct connection port (ø100)*1

	60PU-71PU	100PU-140PU
A	256	319
B	124	187



* Adjust the suspension bolt length so that the gap from the lower ceiling surface becomes 30 mm or more (18 mm or more from the lower surface of the body) as shown in the figure. When the suspension bolt length is long, it hits the ceiling panel and installation is not possible.

12.5kW		14.0kW	
S-125PU1R5	S-125PU1R5	S-140PU1R5	S-140PU1R5
U-125PE1R5	U-125PE1R8	U-140PE1R5	U-140PE1R8
CZ-KPU2	CZ-KPU2	CZ-KPU2	CZ-KPU2
1 phase, 50Hz	3 phase, 50Hz	1 phase, 50Hz	3 phase, 50Hz
230V | 240V	400V | 415V	230V | 240V	400V | 415V
12.5 (3.3 - 14.0) 14.0 (4.1 - 16.0)	12.5 (3.3 - 14.0) 14.0 (4.1 - 16.0)	14.0 (3.3 - 15.5) 16.0 (4.1 - 18.0)	14.0 (3.3 - 15.5) 16.0 (4.1 - 18.0)
42,700 (11,300 - 47,800) 47,800 (14,000 - 54,600)	42,700 (11,300 - 47,800) 47,800 (14,000 - 54,600)	47,800 (11,300 - 52,900) 54,600 (14,000 - 61,400)	47,800 (11,300 - 52,900) 54,600 (14,000 - 61,400)
3.60 : 4.00	3.60 : 4.00	3.25 : 3.70	3.25 : 3.70
3.47 : 3.50	3.47 : 3.50	4.31 : 4.33	4.31 : 4.33
0.76 : 0.73 | 0.73 : 0.73	0.76 : 0.73 | 0.73 : 0.73	0.89 : 0.80 | 0.87 : 0.79	0.89 : 0.80 | 0.87 : 0.79
319 × 840 × 840	319 × 840 × 840	319 × 840 × 840	319 × 840 × 840
33.5 x 950 x 950	33.5 x 950 x 950	33.5 x 950 x 950	33.5 x 950 x 950
27	27	27	27
4	4	4	4
583 : 583	583 : 583	600 : 600	600 : 600
45 / 39 / 33 : 45 / 39 / 33	45 / 39 / 33 : 45 / 39 / 33	46 / 40 / 34 : 46 / 40 / 34	46 / 40 / 34 : 46 / 40 / 34
63 / 56 / 50 : 63 / 56 / 50	63 / 56 / 50 : 63 / 56 / 50	64 / 57 / 51 : 64 / 57 / 51	64 / 57 / 51 : 64 / 57 / 51
3	3	3	3
VP-25	VP-25	VP-25	VP-25
15.3 : 15.4 | 14.8 : 14.9	5.15 : 5.20 | 5.00 : 5.05	19.0 : 19.2 | 18.4 : 18.6	6.45 : 6.50 | 6.20 : 6.25
1,416 × 940 × 340	1,416 × 940 × 340	1,416 × 940 × 340	1,416 × 940 × 340
98	98	98	98
2,166 : 1,833	2,166 : 1,833	2,250 : 2,000	2,250 : 2,000
53 (51) : 53 (51)	53 (51) : 53 (51)	54 (52) : 55 (53)	54 (52) : 55 (53)
70 (68) : 70 (68)	70 (68) : 70 (68)	71 (69) : 71 (69)	71 (69) : 71 (69)
Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88
5 - 75	5 - 75	5 - 75	5 - 75
15, 30	15, 30	15, 30	15, 30
30	30	30	30
R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)
-15 - 46 : -20 - 24	-15 - 46 : -20 - 24	-15 - 46 : -20 - 24	-15 - 46 : -20 - 24

Optional Controller

Timer remote controller
CZ-RTC2

Wireless remote controller
CZ-RWSU2

Simplified remote controller
CZ-RE2C2

Backlit remote controller
CZ-RELC2

Indoor Unit

Ceiling Mounted

Providing outstanding energy-saving performance, comfort, and long-distance air flow distribution, these units are perfect for stores and schools.

Compact Looking, Stylish Design

With its streamlined form, the unit looks thin and compact when installed for a neat appearance in any room.

When not operating, the louver closes to provide an elegant look while also keeping the unit clean.

Energy-Saving Technology Delivering Top-Class Efficiency

Top Class Energy Savings

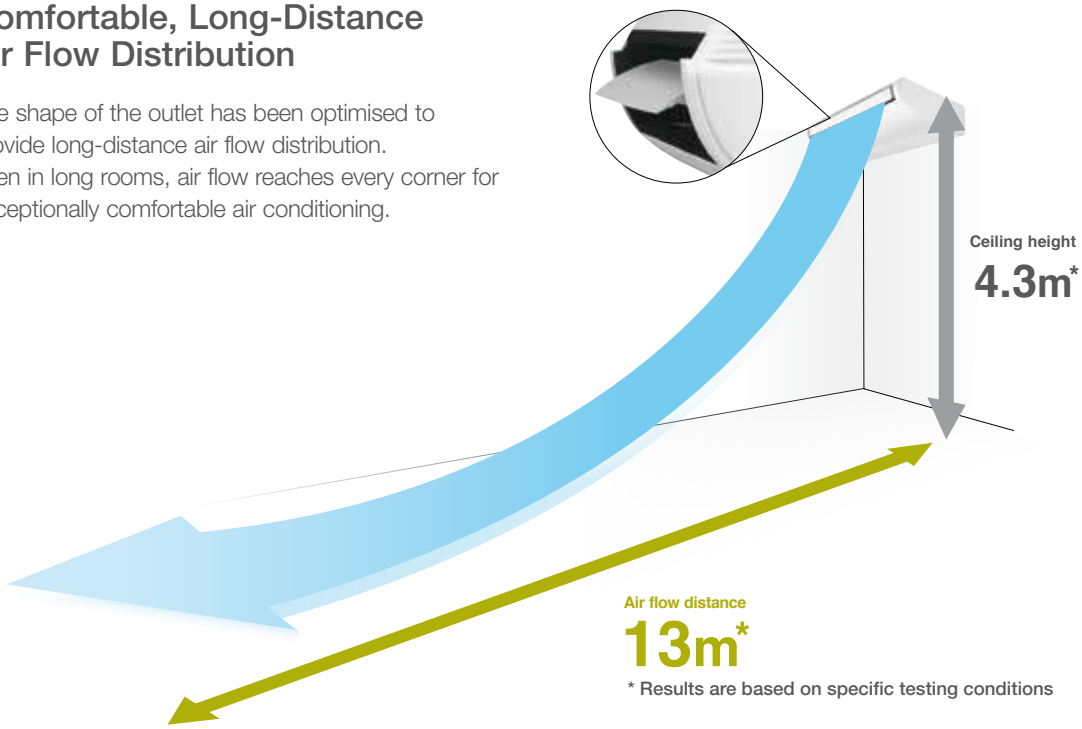
Optimisation of the shape of the casing and fan provides greater air flow and higher efficiency. Energy-saving performance is among the best in the industry. A DC fan motor is also used to maximise energy savings.

S-60PT2R5
S-71PT2R5

S-100PT2R5
S-125PT2R5
S-140PT2R5

Comfortable, Long-Distance Air Flow Distribution

The shape of the outlet has been optimised to provide long-distance air flow distribution.
Even in long rooms, air flow reaches every corner for exceptionally comfortable air conditioning.



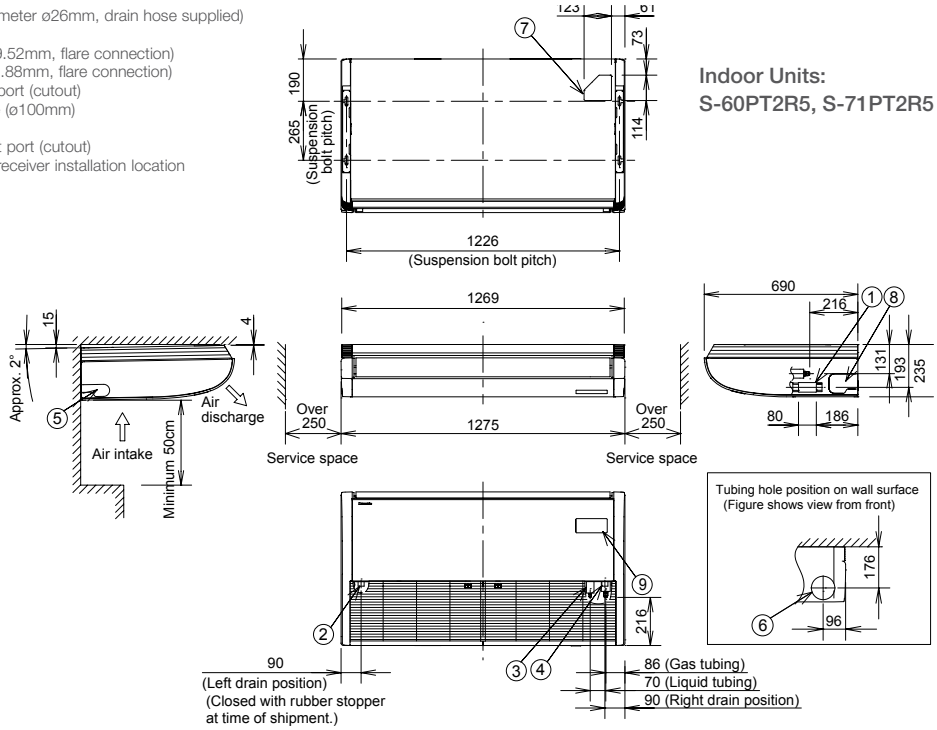
* Results are based on specific testing conditions

High Ceiling Setting *Setting by remote control	Air flow distance		
	100	125	140
4.3m	12m	13m	13m

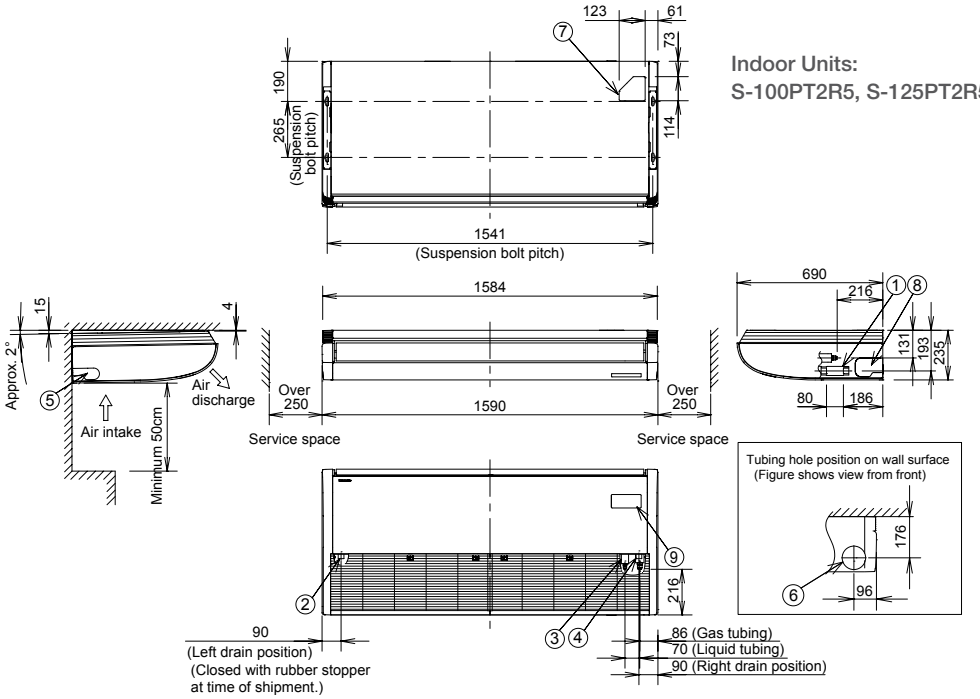
Indoor Unit
Ceiling Mounted

Dimensions

1 Drain port VP20 (inside diameter ø26mm, drain hose supplied)
2 Left drain position
3 Refrigerant liquid tubing (ø9.52mm, flare connection)
4 Refrigerant gas tubing (ø15.88mm, flare connection)
5 Left side drain hose outlet port (cutout)
6 Tubing hole on wall surface (ø100mm)
7 Upper side tubing port
8 Right side drain hose outlet port (cutout)
9 Wireless remote controller receiver installation location



Capacity			6.0kW	7.1kW	10.0kW	
Model Name	Indoor Unit		S-60PT2R5	S-71PT2R5	S-100PT2R5	S-100PT2R5
	Outdoor Unit		U-60PE1R5	U-71PE1R5	U-100PE1R5	U-100PE1R8
Power source		Phase/Hz	1 Phase/ 50Hz	1 Phase/ 50Hz	1 Phase/ 50Hz	3-Phase/ 50Hz
		V	230V | 240V	230V | 240V	230V | 240V	400V | 415V
Cooling capacity : Heating capacity		kW	6.0 (2.5 - 7.1) 7.0 (2.0 - 8.0)	7.1 (2.5 - 8.0) 8.0 (2.0 - 9.0)	10.0 (3.3 - 12.5) 11.2 (4.1 - 14.0)	10.0 (3.3 - 12.5) 11.2 (4.1 - 14.0)
		BTU/h	20,500 (8,500 - 24,200) 23,900 (6,800 - 27,300)	24,200 (8,500 - 27,300) 27,300 (6,800 - 30,700)	34,100 (11,300 - 42,700) 38,200 (14,000 - 47,800)	34,100 (11,300 - 42,700) 38,200 (14,000 - 47,800)
EER : COP	Cooling : Heating	W/W	4.03 : 4.02	3.68 : 4.15	3.95 : 4.31	3.95 : 4.31
Total power input	Cooling : Heating	kW	1.49 : 1.74	1.93 : 1.93	2.53 : 2.60	2.53 : 2.60
Indoor Unit						
Current	Cooling : Heating	A	0.41 : 0.41 | 0.40 : 0.40	0.44 : 0.44 | 0.43 : 0.43	0.67 : 0.67 | 0.65 : 0.65	0.67 : 0.67 | 0.65 : 0.65
Dimensions	H × W × D	mm	235×1,275×690	235×1,275×690	235×1,590×690	235×1,590×690
Net weight		kg	33	33	40	40
Air volume	Cooling : Heating	L/s	333 : 333	350 : 350	500 : 500	500 : 500
Sound pressure level (H/M/L)	Cooling : Heating	dB(A)	38 / 34 / 30 : 38 / 34 / 30	39 / 35 / 31 : 39 / 35 / 31	42 / 37 / 35 : 42 / 37 / 35	42 / 37 / 35 : 42 / 37 / 35
Sound power level (H/M/L)	Cooling : Heating	dB(A)	56 / 52 / 48 : 56 / 52 / 48	57 / 53 / 49 : 57 / 53 / 49	60 / 55 / 53 : 60 / 55 / 53	60 / 55 / 53 : 60 / 55 / 53
Number of fan speeds			3	3	3	3
Drain pipe size		mm	VP-20	VP-20	VP-20	VP-20
Outdoor Unit						
Current	Cooling : Heating	A	6.90 : 7.80 | 6.70 : 7.60	8.70 : 8.60 | 8.40 : 8.30	11.1 : 11.4 | 10.6 : 11.0	3.75 : 3.85 | 3.65 : 3.75
Dimensions	H × W × D	mm	996 × 940 × 340	996 × 940 × 340	1,416 × 940 × 340	1,416 × 940 × 340
Net weight		kg	68	69	98	98
Air volume	Cooling : Heating	L/s	1,000: 1,000	1,000: 1,000	1,833: 1,583	1,833: 1,583
Sound pressure level	Cooling : Heating	dB(A)	48 : 50	48 : 50	52 : 52	52 : 52
Sound power level	Cooling : Heating	dB(A)	65 : 67	65 : 67	69 : 69	69 : 69
Piping connections	Liquid/Gas	m	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88
Pipe length	min. - max.	m	5 - 50	5 - 50	5 - 75	5 - 75
Elevation difference (OU located lower, OU located higher)		m	15, 30	15, 30	15, 30	15, 30
Maximum chargeless length		m	30	30	30	30
Refrigerant at shipping, Additional gas amount		g	R410A 2,000, 50 (g/m)	R410A 2,350, 50 (g/m)	R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)
Operation ranges	Cooling : Heating	℃	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24



Indoor Units:
S-100PT2R5, S-125PT2R5, S-140PT2R5

12.5kW		14.0kW	
S-125PT2R5	S-125PT2R5	S-140PT2R5	S-140PT2R5
U-125PE1R5	U-125PE1R8	U-140PE1R5	U-140PE1R8
1 Phase/ 50Hz	3-Phase/ 50Hz	1 Phase/ 50Hz	3-Phase/ 50Hz
230V | 240V	400V | 415V	230V | 240V	400V | 415V
12.5 (3.3 - 14.0) 14.0 (4.1 - 16.0)	12.5 (3.3 - 14.0) 14.0 (4.1 - 16.0)	14.0 (3.3 - 15.0) 16.0 (4.1 - 18.0)	14.0 (3.3 - 15.0) 16.0 (4.1 - 18.0)
42,700 (11,300 - 47,800) 47,800 (14,000 - 54,600)	42,700 (11,300 - 47,800) 47,800 (14,000 - 54,600)	47,800 (11,300 - 51,200) 54,600 (14,000 - 61,400)	47,800 (11,300 - 51,200) 54,600 (14,000 - 61,400)
3.35 : 3.99	3.35 : 3.99	3.01 : 3.67	3.01 : 3.67
3.73 : 3.51	3.73 : 3.51	4.65 : 4.36	4.65 : 4.36
0.86 : 0.86 | 0.83 : 0.83	0.86 : 0.86 | 0.83 : 0.83	0.91 : 0.91 | 0.88 : 0.88	0.91 : 0.91 | 0.88 : 0.88
235×1,590×690	235×1,590×690	235×1,590×690	235×1,590×690
40	40	40	40
566 : 566	566 : 566	583 : 583	583 : 583
46 / 40 / 36 : 46 / 40 / 36	46 / 40 / 36 : 46 / 40 / 36	47 / 41 / 37 : 47 / 41 / 37	47 / 41 / 37 : 47 / 41 / 37
64 / 58 / 54 : 64 / 58 / 54	64 / 58 / 54 : 64 / 58 / 54	65 / 59 / 55 : 65 / 59 / 55	65 / 59 / 55 : 65 / 59 / 55
3	3	3	3
VP-20	VP-20	VP-20	VP-20
16.4 : 15.4 | 15.8 : 14.9	5.55 : 5.20 | 5.35 : 5.05	20.5 : 19.2 | 19.8 : 18.5	6.95 : 6.50 | 6.70 : 6.25
1,416 × 940 × 340	1,416 × 940 × 340	1,416 × 940 × 340	1,416 × 940 × 340
98	98	98	98
2,166: 1,833	2,166: 1,833	2,250: 2,000	2,250: 2,000
53 : 53	53 : 53	54 : 55	54 : 55
70 : 70	70 : 70	71 : 71	71 : 71
Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88	Ø9.52 / Ø15.88
5 - 75	5 - 75	5 - 75	5 - 75
15, 30	15, 30	15, 30	15, 30
30	30	30	30
R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)	R410A 3,400, 50 (g/m)
-15 to 46 : -20 to 24	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24	-15 to 46 : -20 to 24

Optional Controller

Timer remote controller
CZ-RTC2

Wireless remote controller
CZ-RWST3

Wireless remote controller
CZ-RWSC2

Simplified remote controller
CZ-RE2C2

Backlit remote controller
CZ-RELC2

Controllers

A wide variety of control options to meet the requirements of different applications

OPERATION SYSTEM	INDIVIDUAL CONTROL SYSTEMS				TIMER OPERATION
Requirements	Normal operation	Operation from anywhere in the room	Quick and easy operation		Daily and weekly program
External appearance					
Type, model name	Timer Remote Controller (Wired)	Wireless Remote Controller	Simplified Remote Controller	Backlit remote controller	Schedule Timer
	CZ-RTC2	CZ-RWSU2 CZ-RWSC2	CZ-RE2C2	CZ-RELC2	CZ-ESWC2
Built-in Thermostat	●	●	●		—
Number of indoor units which can be controlled	1 group, 8 units	1 group, 8 units	1 group, 8 units		64 groups, max. 64 units
Use limitations	· Up to 2 controllers can be connected per group.	· Up to 2 controllers can be connected per group.	· Up to 2 controllers can be connected per group.	—	· Required power supply from the system controller · When there is no system controller, connection is possible to the T10 terminal of an indoor unit.
Function ON/OFF	●	●	●		—
Mode setting	●	●	●		—
Fan speed setting	●	●	●		—
Temperature setting	●	●	●		—
Air flow direction	●	●	●		—
Permit/Prohibit switching	—	—	—		—
Weekly program	●	—	—		●

1. Setting is not possible when a remote control unit is present. (Use the remote controller for setting.)
All specifications subject to change without notice.

Backlit remote controller [CZ-RELC2]

Dimensions
H 120 x W 70 x D 16 mm

Backlit remote controller with simple and friendly operation

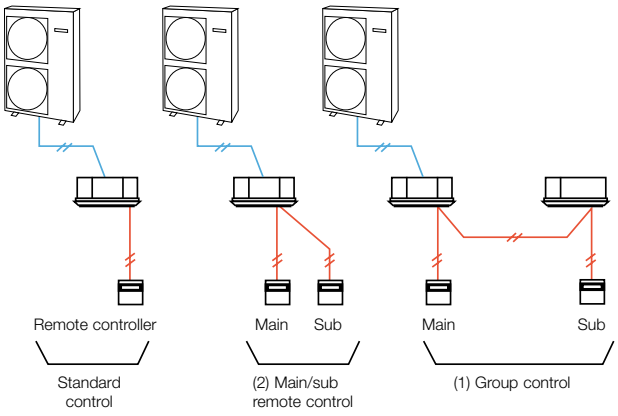
- LCD backlight display
- ON/OFF, operation mode switching, temperature setting, airflow velocity switching, airflow direction setting, alarm display and remote controller self diagnosis can be performed
- Built-in temp sensor
- Batch group control for up to 8 indoor units

	CENTRALISED CONTROL SYSTEMS				
	Operation with various function from centre station	Only ON/OFF operation from centre station	Simplified load distribution ratio (LDR) for each tenant Touch screen panel	BMS System PC Base	Connection with 3rd Party Controller
				P-AIMS **Basic Software** CZ-CSWKC2 **Optional software** CZ-CSWAC2 for Load distribution CZ-CSWWC2 for Web application CZ-CSWGC2 for Object layout display CZ-CSWBC2 for BAC net software interface *PC required (field supply) **Web Interface Systems** CZ-CWEBC2 *PC required (field supply)	**Seri-Para I/O unit for outdoor unit** **Interface adaptor** CZ-CAPC2 **Seri-Para I/O unit for each indoor unit** CZ-CAPBC2 **Communication Adaptor** CZ-CFUNC2 **LonWorks Interface** CZ-CLNC2
	System Controller	ON/OFF Controller	Intelligent Controller		
	CZ-64ESMC2	CZ-ANC2	CZ-256ESMC2 (CZ-CFUNC2)		
	—	—	—		
	64 groups, max. 64 units	16 groups, max. 64 units	64 units x 4 systems, max. 256 units		
	· Up to 10 controllers, can be connected to one system. · Main unit/sub unit (1 main unit + 1 sub unit) connection is possible. · Use without remote controller is possible.	· Up to 8 controllers (4 main units + 4 sub units) can be connected to one system. · Use without remote controller is impossible.	· A communication adaptor (CZ-CFUNC2) must be installed for three or more systems.		
	●	●	●		
	●	—	●		
	●	—	●		
	●	—	●		
	●[1]	—	●[1]		
	●	●	●		
	—	—	●		

Individual Control Systems

Control contents	Part name, model No.	Quantity
Standard Control • Control of the various operations of the indoor unit by wired or wireless remote controller. • Cooling or heating mode of the outdoor unit is decided by the first priority of the remote controller. • Switching between remote controller sensor and body sensor is possible.	Timer remote controller CZ-RTC2 Simplified remote controller CZ-RE2C2 Backlit remote controller CZ-RELC2 Wireless remote controller CZ-RWSU2 / CZ-RWSC2	1 unit each
(1) Group control • Batch remote control on all indoor units. • Operation of all indoor cells in the same mode. • Up to 8 units can be connected. • The sensor is the in-unit sensor, and thermostat ON/OFF setting in regard to the temperature set by the remote controller is possible for each indoor unit.	Timer remote controller CZ-RTC2 Simplified remote controller CZ-RE2C2 Wireless remote controller CZ-RWSU2 / CZ-RWSC2	1 unit
(2) Main/sub remote control • Max 2 remote controllers per indoor unit. (Main remote controller can be connected) • The button pressed last has priority. • Timer setting is possible even with the sub remote controller.	Main or sub Timer remote controller CZ-RTC2 Simplified remote controller CZ-RE2C2 Wireless remote controller CZ-RWSU2 / CZ-RWSC2	As required

SYSTEM EXAMPLE



Timer remote controller (CZ-RTC2)

Dimensions
H 120 x W 120 x D 16 mm

Basic remote controller ON/OFF

- Operation mode changeover (Cooling, Heating, Dry, Auto, Fan)
- Temperature setting (Cooling/Dry: 18-30 deg Heating: 16-30 deg).
- Fan speed setting H/ M/ L and Auto
- Air flow direction adjustment

Time Function 24 hours real time clock

- Day of the week indicator

Weekly Programme Function

- A maximum of 6 settings/day and 42 settings/week can be programmed

Outing Function

- This function can prevent the room temperature from dropping or rising when the occupants are out for a long time

Sleeping Function

- This function controls the room temperature for comfortable sleeping

Built in Temp Sensor

Max. 8 indoor units can be controlled from one remote controller

Remote control by main remote controller and sub controller is possible

Max. 2 remote controllers (main remote controller and sub controller) can be installed for one indoor unit

Wireless remote controller

U1 type
CZ-RWSU2

Remote control by main remote controller and sub controller is possible

- Max. 2 remote controllers (main remote controller and sub controller) can be installed for one indoor unit

When CZ-RWSC2 is used, wireless control becomes possible for all indoor units

- When a separate receiver is set up in a different room, control from that room also becomes possible
- Automatic operation by means of the emergency operation button is possible even when the remote controller has been lost or the batteries have been exhausted

In addition, there are other functions such as temperature setting, operation switching, airflow direction/fan speed setting, etc.

For all indoor units
CZ-RWSC2

Ventilation independent operation is possible

When commercial ventilation fans or heat-exchange ventilation fans have been installed, they can be operated with this remote control (interlocked operation with the indoor unit or independent ventilation ON/OFF).

Simplified remote controller (CZ-RE2C2)

Dimensions
H 120 x W 70 x D 17 mm

A remote controller with simple functions and basic operation

- Suitable for open rooms or hotels where detailed functions are not required
- ON/OFF, operation mode switching, temperature setting, airflow velocity switching, airflow direction setting, alarm display and remote controller self-diagnosis can be performed
- Batch group control for up to 8 indoor units
- Remote control by main remote controller and sub controller is possible with a simplified remote controller or a wired remote controller (up to two units)

Backlit remote controller [CZ-RELC2]

Dimensions
H 120 x W 70 x D 16 mm

Backlit remote controller with simple and friendly operation

- LCD backlight display (ideal for bedrooms)
- ON/OFF, operation mode switching, temperature setting, airflow velocity switching, airflow direction setting, alarm display and remote controller self diagnosis can be performed
- Built-in temp sensor
- Batch group control for up to 8 indoor units

System controller (CZ-64ESMC2)

Dimensions
160 x W 160 x D 21 + 69 (embedding dimension mm)

Power supply: AC 220 to 240 V
I/O part: Remote input (effective voltage: DC 24 V): All ON/All OFF Remote output (voltage-free contact): All ON/ All OFF (external Power supply within DC 30 V, max 1 A)
Total wiring length : 1 km

Individual control is possible for max 64 groups, 64 indoor units.

- **Control of 64 indoor units divided into 4 zones. (One zone can have up to 16 groups, and one group can have up to 8 units.)**
- **Control is possible for ON/OFF, operation mode, fan speed, air flow direction (only when used without a remote controller), operation monitoring, alarm monitoring, ventilation, remote controller local operation prohibition, etc.**

Individual	All operations are possible also from the remote controller. However, the contents will be changed to the contents of the controller operated last.
Central 1	The remote controller cannot be used for ON/OFF. (All other operations are possible from the remote controller.)
Central 3	The remote controller cannot be used for mode change or temperature setting change. (All other operations are possible from the remote controller.)
Central 4	The remote controller cannot be used for operation mode change. (All other operations are possible from the remote controller.)

• A control mode corresponding to the use condition can be selected from 10 patterns

A : Operation mode: Central control mode or remote control mode can be selected
Central control mode: The system controller is used as centralised control device. (Setting from a remote controller can be prohibited by prohibiting local operation from the system controller.)
Remote control mode: The system controller is used as a remote controller. (Setting from the system controller can be prohibited by prohibiting local operation from another central control unit.)

B : Controlled unit number mode: All mode or zone 1, 2, 3, 4 mode can be selected
All mode: All, zone, or group unit can be selected.
Zone 1, 2, 3, 4 mode: Setting is possible only for the indoor units of zone 1, 2, 3, or 4.

Connection example

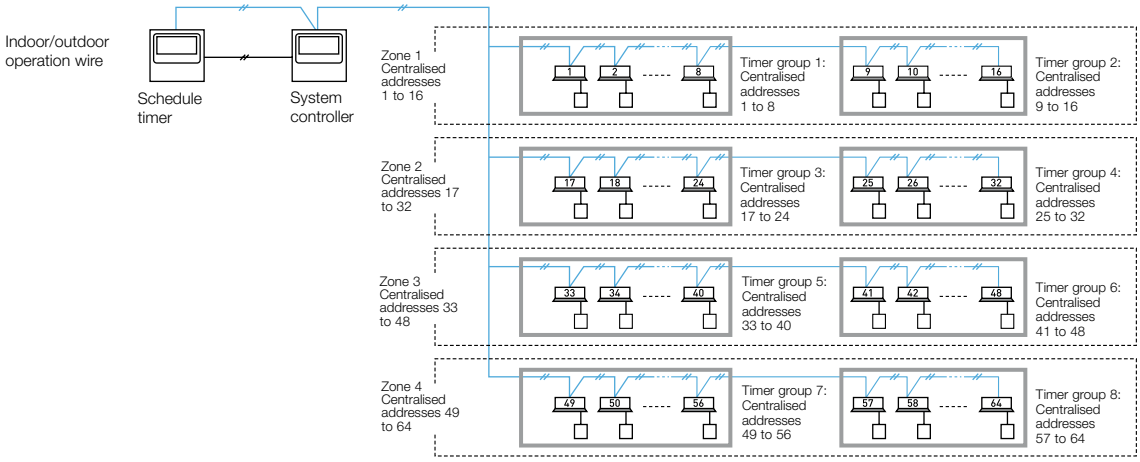
		A Operation Mode	
		Central Control Mode	**Remote Control Mode**
B Controlled unit number mode	All mode	All central control Example 1	All remote control
	Zone 1 mode	Zone 1 central control Example 2	Zone 1 remote control
	Zone 2 mode	Zone 2 central control	Zone 2 remote control Example 3
	Zone 3 mode	Zone 3 central control Example 4	Zone 3 remote control
	Zone 4 mode	Zone 4 central control	Zone 4 remote control Example 5

• Joint use with a remote controller, an intelligent controller, a schedule timer, etc. is possible

(The maximum number of connectable system controllers is 10, including other central controllers on the same circuit.)
(In case of joint use with a wireless remote controller, there are limitations for the control mode. Please use only with "Individual" and "Central 1".)

• Control of systems without a remote controller and of main/sub systems (a total of up to 2 units) is possible

Connection example 2 (POWER SUPPLY FROM THE CENTRAL CONTROLLER)



Centralised Control Systems

Schedule timer (CZ-ESWC2)

Dimensions
H 120 x W 120 x D 16 mm

Up to 64 groups (max 64 indoor units) can be controlled divided into 8 timer groups

- **Six program operations (Operation/Stop/ Local permission/ Local prohibition) per day can be set in a program for one week**

· Only operation or stop, remote controller local permission or remote controller local prohibition, and their respective combinations are possible. (Operation + local permission, stop + local prohibition, only local permission, etc.)
· Local prohibition and the combination of the three items of temperature setting, mode change, and operation/stop can be set at the time of installation.

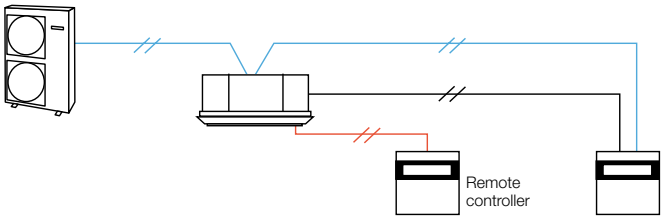
- **A function for pausing the timer in case of national holidays has been added, and timer operation also can be stopped for a long time**

· By setting holidays or operation stop within one week, the timer can be paused just for that week.
· All timer settings can be stopped with the timer "ON/OFF effective" button. (Return to timer operation is made by pressing the button again.)

The power supply for the schedule timer is taken from one of the following.
1. Control circuit board (T10) of a nearby indoor unit (power supply wiring length: within 200m from the indoor unit).
2. System controller (power supply wiring length: within 100 m from the indoor unit).

When the power supply for the schedule timer is taken from the control circuit board of the indoor unit, that indoor unit cannot be used with other control devices using the T10 terminal.
As operation mode and temperature settings are not possible with the schedule timer, it must be used together with a remote controller, a system controller, an intelligent controller, etc. Also, as it does not have an address setting function, the control function of a system controller etc. must be used for address setting.

Connection example 1 (POWER SUPPLY FROM THE INDOOR UNIT)



ON/OFF controller (CZ-ANC2)

Dimensions
H 121 x W 122 x D 14 + 52
(embedding dimension mm)

- 16 groups of indoor units can be controlled
- Collective control and individual group (unit) control can also be performed
- Up to 8 ON/OFF controller (4 main, 4 sub) can be installed in one link system
- The operation status can be determined immediately

Note: As operation mode and temperature settings are not possible with the ON/OFF controller, it must be used together with a remote controller, a system controller etc.

Power supply: AC 220 to 240 V
I/O part: Remote input (effective voltage: within DC 24 V): All ON/OFF
Remote output (allowable voltage: within DC 30 V): All ON, All alarm

Web Interface Systems

Web Interface (CZ-CWEBC2)

(Dimensions: H 248 x W 185 x D 80 mm)

AC 100 to 240 V (50/60Hz), 17 W (separate power supply)

Functions

- Access and operation by Web browser
- Icon display
- Language codes available in English, French, German, Italian, Portguese, Spanish
- Individual control possible (max. 64 indoor units) ON/OFF operation mode, set temperature, fan speed, Flap set, timer on/off alarm code monitoring, prohibit Remote Control
- Zone control *
- All Units control
- Alarm Log
- Mail Sent Log
- Program Timer set 50 daily timers with 50 actions each day, 50 weekly timers 50 weekly timers, 1 holiday timer, 5 special day timers, for each tenant
- Prohibit Remote Control set
- IP ADDRESS could be changed via Internet

*Power supply

Note: It is recommended to install a remote controller or a system controller on site to enable local control if the network experiences a problem.

Easy to set to every room by recognisable icon and user-friendly remote control window

If any of the indoor units are selected, the remote control window shown will be displayed for detailed setting modifications.

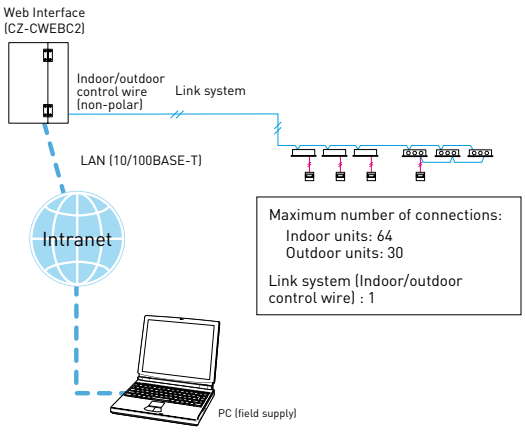
Easy to manage and monitor each tenant's use *

Each floor or tenant, or otherwise each zone can be displayed and controlled. All unit statuses can also be displayed on one screen.

Programme Timer set

50 daily timers with 50 actions each day, 50 weekly timers, holiday timer, 5 special day timers, for each tenant.

* Web interface system not applicable for load distribution.



Intelligent controller (CZ-256ESMC2)

Dimensions
H 240 x W 280 x D 138 mm
Power supply AC 100 to 240 V (50 Hz), 20 W (separate power supply)
I/O part Remote in put (voltage-free contact): All ON/OFF
Remote output (voltage-free contact): All ON, All alarm
(external power supply within DC 30 V, 0.5 A)
Total wiring length: 1 km for each system
Only for embedding in the panel

- Max 256 indoor units (4 systems x 64 units) can be controlled. In case of three or more systems (more than 129 units), a communication adapter CZ-CFUNC2 must be installed
- Operation is possible as batch, in zone units, in tenant and in group units
- ON/OFF, operation mode setting, temperature setting, for fan speed setting, air flow direction setting (when used without a remote controller), and remote controller local operation prohibition (prohibition 1, 2, 3, 4) can be done
- A system without a remote controller is possible. Joint use with a remote controller or a system controller is also possible
- Use of a schedule timer and holiday setting also can be done
- Proportional distribution of the air conditioning energy is possible. Including csv-file export via CF-card (supplementary accessory)
- NEW function: Pulse signal input from electric/gas consumption meter

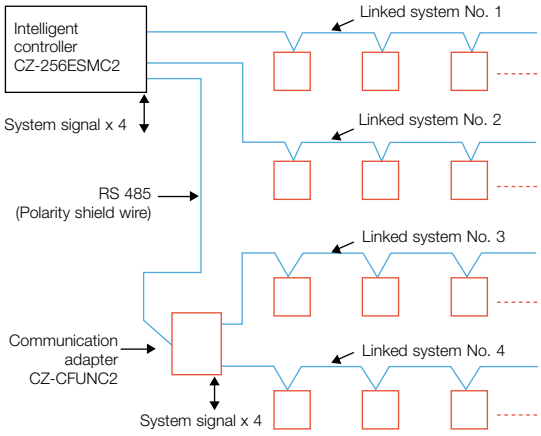
In case of joint use with a wireless remote control system, there are limitations for the control mode. Please use only with “Permission” and “Prohibition 1”.

• Limitation contents for prohibited operation

Prohibition means limitation of the operation contents from the remote controller. It is also possible to change the prohibition items.

Limitation contents (Limitations can be user defined)

Individual	There is no limitation for the operation of the remote controller. However, the contents will be changed to the contents of the controller operated last. (Last-pressed priority.)
Prohibition 1	The remote controller cannot be used for ON/OFF. (All other operations are possible from the remote controller.)
Prohibition 2	The remote controller cannot be used for ON/OFF, operation mode change and temperature setting. (All other operations are possible from the remote controller.)
Prohibition 3	The remote controller cannot be used for operation mode change and temperature setting. (All other operations are possible from the remote controller.)
Prohibition 4	The remote controller cannot be used for operation mode change. (All other operations are possible from the remote controller.)



Display sample Max. 4 links can be connected for the indoor/outdoor operation line = Max. 64 indoor units x 4 (256 units)
Max. 30 outdoor units x 4 (120 units)

Communication adaptor (CZ-CFUNC2)

* Required when more than 129 indoor units are connected.

Panasonic total air conditioning management system

P-AIMS

P-AIMS Basic software / CZ-CSWKC2

Up to 1024 indoor units can be controlled by one PC

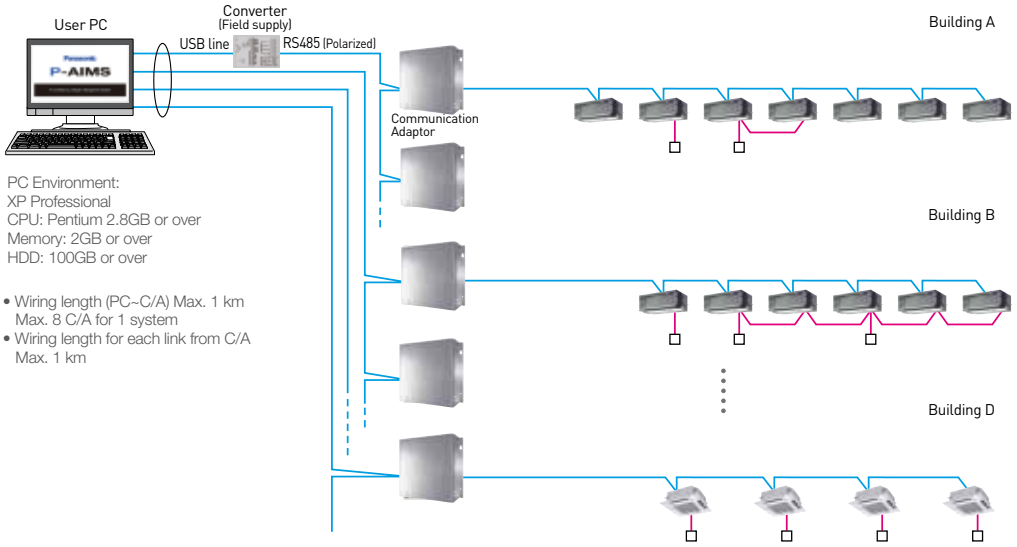
Functions of basic software

- Standard remote control for all indoor units
- Many timer schedule programs can be set on the calender
- Detailed information display for alarms
- CSV file output with alarm history, operating status
- Automatic data backup to HDD

With 4 upgrade packages the basic software can be upgraded to suit individual requirements

CZ-CFUNC2

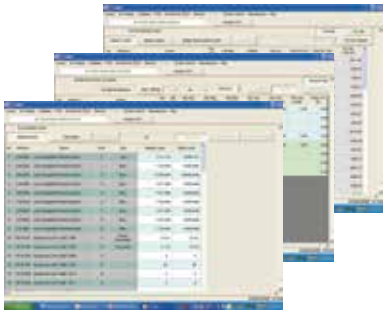
P-AIMS is ideal for large areas/buildings such as shopping centres, universities and office buildings.
Up to eight Communication Adaptors (C/A) can be connected to a P-AIMS to enable control of 1024 indoor units with one “P-AIMS” PC.



P-AIMS optional software CZ-CSWAC2 for Load distribution

Load distribution calculation for each tenant

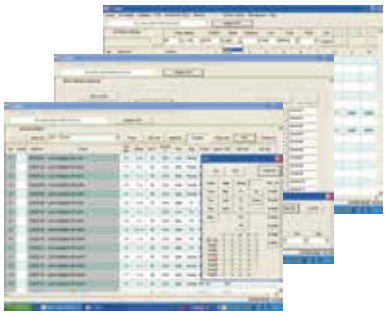
- Air-conditioner load distribution ratio is calculated for each unit (tenant) with used energy consumption data (m3, kWh)
- Calculated data is stored with CSV type file
- Data of last 365 days is stored



P-AIMS optional software CZ-CSWWC2 for Web application

Web access & control from remote station

- Accessing P-AIMS software from remote PC
- You can monitor/operate FSV systems by using Web browser (Internet Explorer)



P-AIMS optional software CZ-CSWGC2 for Object layout display

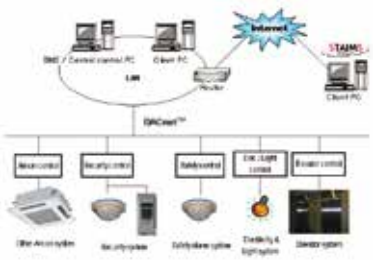
Whole system can be controlled visually

- Operating status monitor is available on the layout display
- Object's layout and indoor unit's location can be checked at once
- Each unit can be controlled by virtual remote controller on the display
- Max 4 layout screens are shown at once

P-AIMS optional software CZ-CSWBC2 for BACnet software interface

Connectable to BMS system

- Can communicate with other equipment by BACnet protocol.
- FSV systems can be controlled by both BMS and P-AIMS.
- Max 255 indoor units can be connected to 1 PC (that has P-AIMS basic & BACnet software).

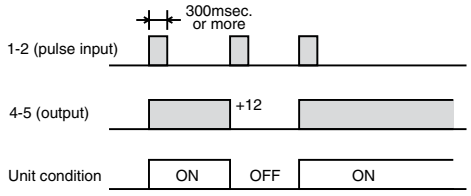


T10 Terminal for External Control (Digital Connection)

Connecting an indoor unit to an external device is easy.
The T10 Terminal featured in the electronic circuit board of all indoor units enables digital connection to external devices.

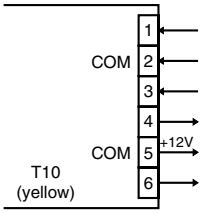
1. T10 Terminal Specification (T10:CN061 at indoor unit PCB)

- **Control items**: 1. Start/stop input
  2. Remote controller prohibit input
  3. Start signal output
  4. Alarm signal output



NOTE: The wire length from indoor unit to the Relay must be within 2.0m
Pulse signal changeable to static with JP cutting. (Refer to JP001)

- **Example of wiring**



Condition

1. 1-2 (Pulse input): Unit ON/OFF condition switching with a pulse signal. (1 pulse signal: shortage status more than 300msec.or more)
2. 2-3 (Static input): Open/ Operation with Remote is permitted.(Normal condition) Close/ Remote controller is prohibited.
3. 4-5 (Static output): 12V output during the unit ON. / No output at OFF
4. 5-6 (Static output): 12V output when some errors occur / No output at normal

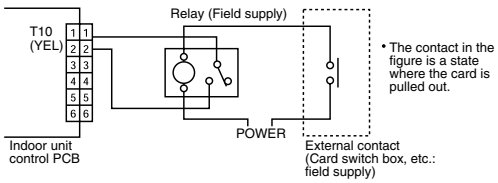
2. Usage Example

Forced OFF control

- **Condition**

1-2 (Static input): Close/ Operation with Remote is permitted. (Normal condition) Open/ Unit is forcibly OFF and Remote controller operation is prohibited.

- **Example of wiring**



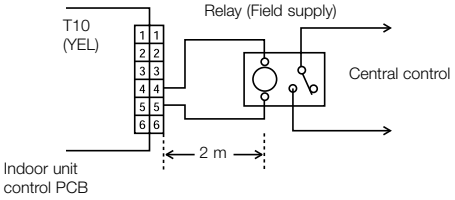
NOTE: The wire length from indoor unit to the Relay must be within 2.0m

Operation ON/OFF signal output

- **Condition**

4-5 (Static output): 12V output during the unit ON / No output at OFF

- **Example of wiring**



NOTE: The wire length from indoor unit to the Relay must be within 2.0m
Pulse signal changeable to static with JP cutting. (Refer to JP001)

Serial Interface for 3rd Party External Controller

Example of 3rd party BMS connection with CZ-CFUNC2 (For details please consult an authorised dealer)

Functions via communication adaptor [CZ-CFunC2]	
A/C unit settings	Unit ON/OFF
	Mode-change
	Room temperature setting
	Fan speed setting
	Flap setting
	Central control setting
	Filter-sign clear
	Alarm reset
A/C unit status	Unit ON/OFF status
	Operation mode
	Setting temperature
	Fan speed status
	Flap status
	Central control setting
	Filter-sign situation
	Correct/incorrect status
	Alarm code

Communication adaptor (CZ-CFUNC2)

Up to 128 indoor units can be connected to one Communication Adaptor.

Flexible Design Options

Remote temperature sensor (CZ-CSRC2)

- This is a remote sensor which can be used with indoor units to detect the room temperature when no remote controller sensor or body sensor is used. (Connection to a system without a remote controller is possible).
- For joint use with a remote control switch, use the remote control switch as main remote controller.

Dimensions
H 120 x W 70 x D 16 mm

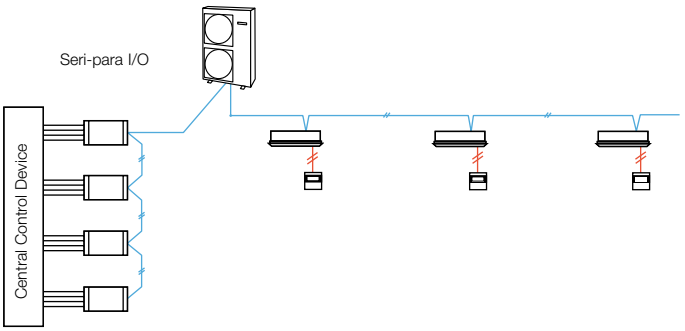
Interfaces for External Control (Digital Connection)

Seri-Para I /O unit for outdoor unit (CZ-CAPDC2)

Dimensions	H 80 x W 290 x D 260 mm
Power supply	Single phase 110-120/220-240 V AC (50/60 Hz), 18 W
Input	Batch operation/Batch stop (non-voltage contact/DC 24 V, pulse signal). Cooling/Heating (non-voltage contact/static signal). Demand 1/2 (non-voltage contact/static signal) (Local stop by switching)
Output	Operation output (non-voltage contact). Alarm output (non-voltage contact)
Wiring length	Indoor/Outdoor operation lines: Total length 1 km. Digital signal: 100 m or shorter

- This unit can control up to 4 outdoor units
- From the centre control device, mode changing and batch operation/batch stop are possible
- Required for demand control

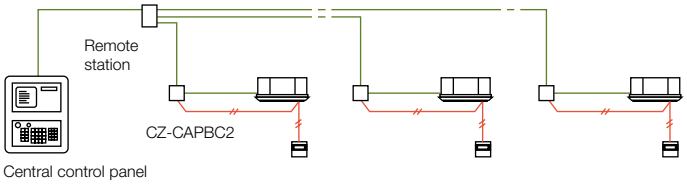
System example



Seri-Para I/O unit for each indoor unit (CZ-CAPBC2)

- Control and status monitoring is possible for individual indoor unit (1 group)
- In addition to operation and stop, there is a digital input function for air speed and operation mode
- Temperature setting and measuring of the indoor suction temperature can be performed from central monitoring
- The analog input for temperature setting is 0 to 10 V, or 0 to 140 Ohm
- Power is supplied from the T10 terminal of the indoor units.
- Separate power supply also is possible (in case of suction temperature measuring)

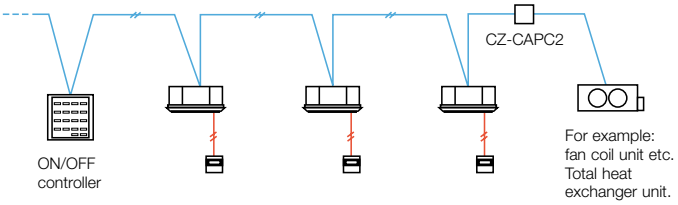
System example



Interface adaptor (CZ-CAPC2)

- Control and status monitoring is possible for individual indoor unit (or any external electrical device up to 250 V AC, 10 A) by contact signal

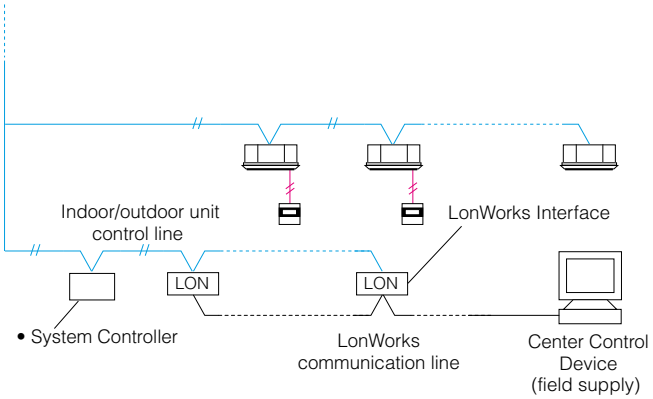
System example



LonWorks Interface (CZ-CLNC2)

- This interface is a communications converter for connecting LonWorks to the control network of FSV.
- From the host connected to LonWorks, basic settings and status monitoring is possible for up to 16 groups of A/C units

System example

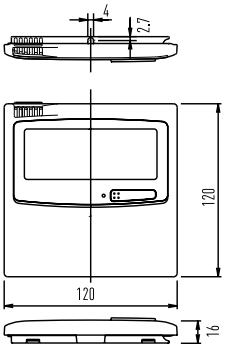


Functions

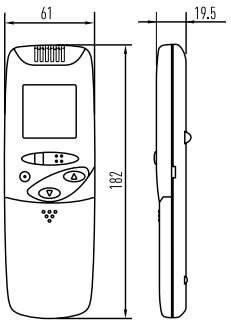
A/C unit settings from the LonWorks communicator	Settings for each group of indoor units	Start/stop
		Temp. setting
		Operation mode
		Option 1 settings(*)
		Option 2 settings(*)
	Settings for all units	Emergency stop
A/C unit status notifications made to the LonWorks communicator		Start/stop
		Temp setting
		Operation mode
		Option 1 settings(*)
		Option 2 settings(*)
		Alarm status
		Indoor units with active alarms
		Room temp.
		A/C unit status
Configuration properties		Transmission intervals settings
		Minimum time secured for transmission

Remote Controller External Dimensions

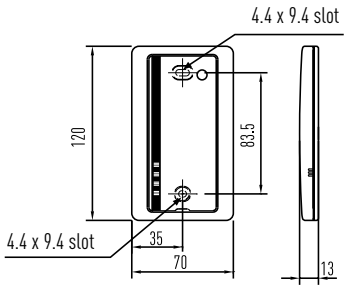
TIMER REMOTE CONTROLLER (CZ-RTC2)



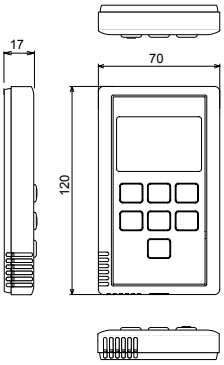
WIRELESS REMOTE CONTROLLER (CZ-RWSU2, CZ-RWSC2)



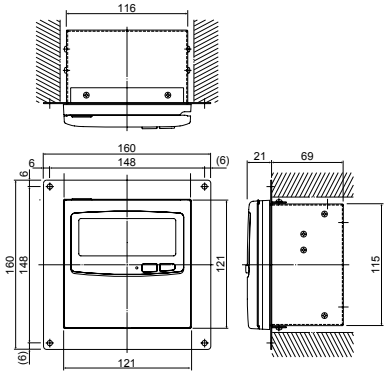
SEPARATE RECEIVER FOR WIRELESS REMOTE CONTROLLER (CZ-RWSC2)



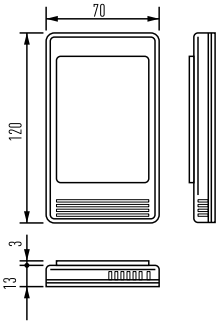
SIMPLIFIED REMOTE CONTROLLER (CZ-RE2C2)



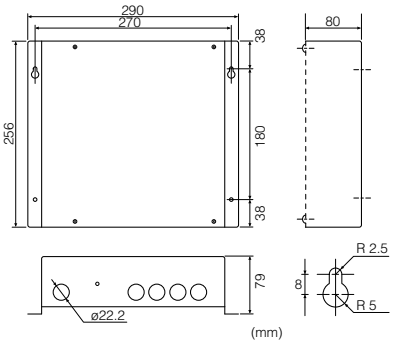
SYSTEM CONTROLLER (CZ-64ESMC2)



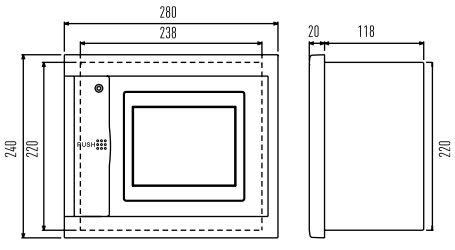
BACKLIT REMOTE CONTROLLER (CZ-RELC2)
REMOTE SENSOR (CZ-CSRC2)



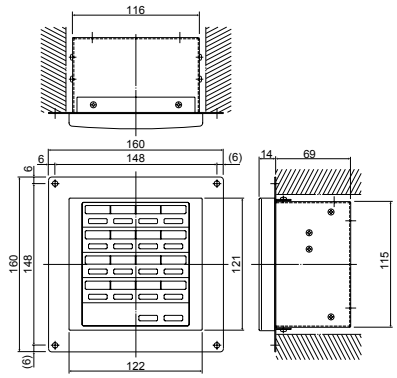
COMMUNICATION ADAPTOR (CZ-CFUNC2)



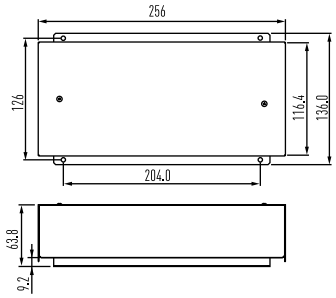
INTELLIGENT CONTROLLER (CZ-256ESMC2)



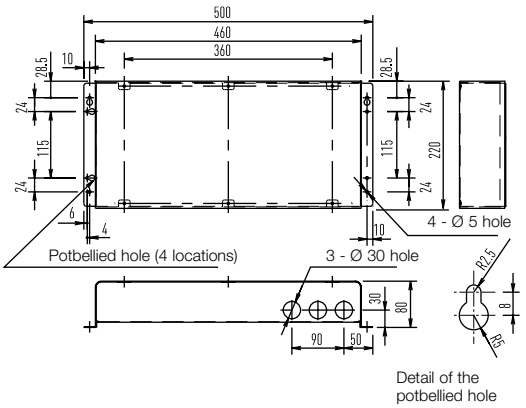
ON/OFF CONTROLLER (CZ-ANC2)



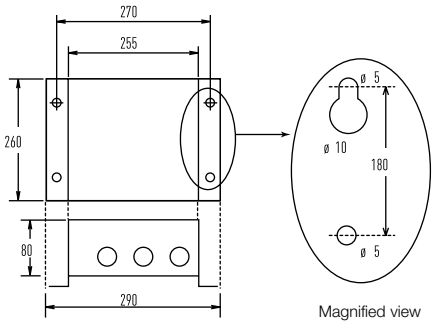
SERI-PARA I/O UNIT FOR EACH INDOOR UNIT (CZ-CAPBC2)



LONWORKS INTERFACE (CZ-CLNC2)



SERI-PARA I /O UNIT FOR OUTDOOR UNIT (CZ-CAPDC2)



EVERY BUILDING MATTERS

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