

# PAC-LBK-KIT

Installatie beschrijving

Gebruikers beschrijving

Technische beschrijving



**CLIMADIRECT.COM**  
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## 1. Veiligheid voorschriften

Lees aandachtig de waarschuwingen in deze handleiding, aangezien zij belangrijke informatie verschaffen met betrekking tot een veilige installatie, gebruik en onderhoud van de machine.

Bewaar deze handleiding zorgvuldig voor eventueel nader gebruik.

1)

Deze handleiding is een integraal en essentieel onderdeel van het product en moet in het bezit zijn van de eindgebruiker.

2)

Verzeker u ervan, dat wanneer u de verpakking heeft verwijderd het apparaat compleet en onbeschadigd is.

In geval van twijfel gebruikt u het apparaat niet en neemt u contact op met uw dealer.

De verpakkingsmaterialen ( plastic zakken, polystyreen, nietjes etc.) niet achterlaten in de buurt van kinderen, omdat zij mogelijk gevaar op kunnen leveren.

3)

Voordat u de machine aansluit, controleert u of de gegevens op het plaatje, overeenkomen met de netspanning waarvan u gebruik maakt.

Installatie moet plaatsvinden door een gekwalificeerd persoon.

Een niet correcte installatie kan schade toebrengen aan mensen, dieren of objecten, waarvoor u de fabrikant/ importeur niet aansprakelijk kunt stellen.

De elektrische veiligheidsvoorzieningen van de machine kunnen alleen gegarandeerd worden indien de machine is aangesloten op een geaard netwerk, dat voldoet aan de huidige veiligheidsvoorschriften.

Het is noodzakelijk te voldoen aan deze fundamentele veiligheidscontrole.

In geval van twijfel, vraag een controle aan door een gekwalificeerd persoon.

De fabrikant/ importeur kan niet aansprakelijk gesteld worden voor schade veroorzaakt door het niet aarden van de machine.

Controleert u of de huidige netspanning niet hoger is dan de maximaal toelaatbare spanning.

In geval van twijfel raadpleeg een gekwalificeerd persoon.

4)

Deze machine alleen gebruiken voor het doel waarvoor het gemaakt is.

De fabrikant/ importeur kan niet aansprakelijk gesteld worden voor schade veroorzaakt door onverantwoordelijk, verkeerd of onredelijk gebruik.

5)

Het gebruik van ieder elektrisch apparaat impliceert enkele fundamentele regels:

Raak de machine niet aan met natte of vochtige handen of voeten;

Gebruik het apparaat niet op blote voeten;

Gebruik geen verlengsnoeren

Sta kinderen of niet- capabele personen niet toe het apparaat te gebruiken, zonder toezicht van een volwassene.

6)

Voordat u onderhoud aan de machine verricht, zorg dat de machine spanningsloos is.

7)

Wanneer de machine niet of niet goed functioneert zet u de machine uit. Vermijd pogingen om de machine zelf te repareren of in te grijpen.

Neem contact op met een gekwalificeerd persoon of met uw dealer.

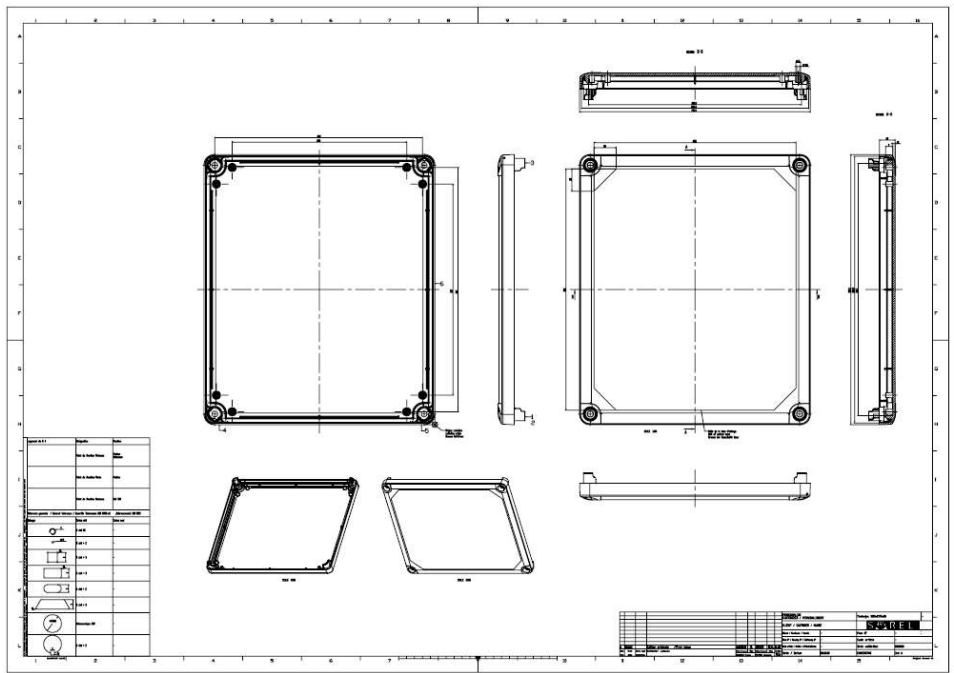
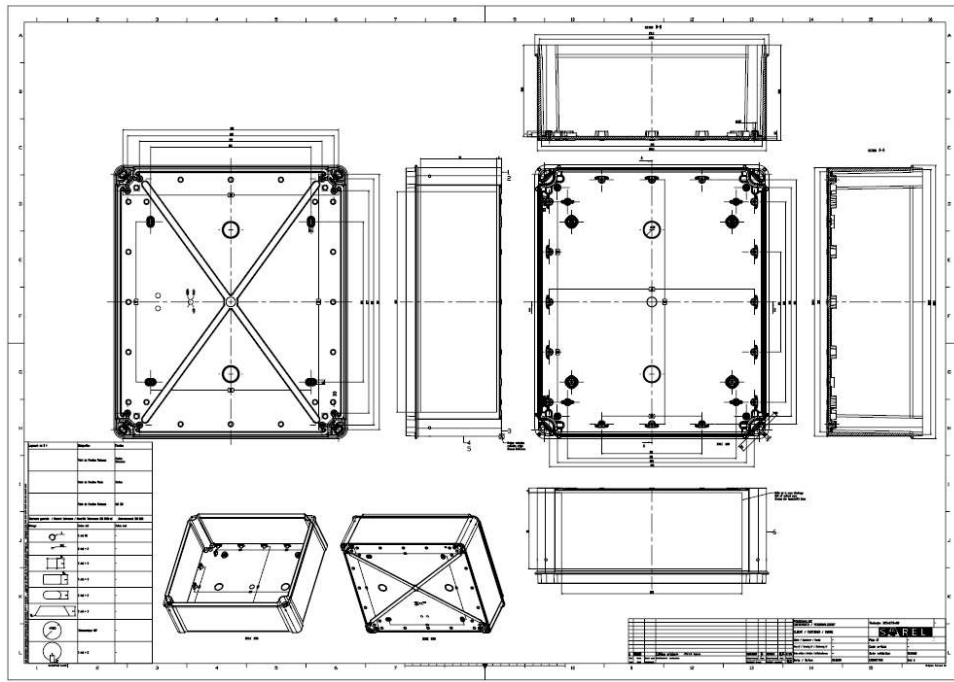
Alle reparaties dienen uitsluitend uitgevoerd te worden door de leverancier of door een daartoe gemachtigde technische dienst, gebruik makend van originele onderdelen.

Wanneer u bovenstaande regels niet in acht neemt, komt de veiligheid van het apparaat en gebruiker in het geding.

8)

Zorgt u ervoor dat de machine zijn warmte kan ventileren.

## 2.1 Specificaties



binnenmaten (mm) totalen			doos (mm)	deksel (mm)	buitenmaten (mm) totalen			min. verpakking	dozen ABS IP 66 - IK 07	schroef deksel	
h	b	d			h	b	d	deksel			
								ondoorsch	getint		
325	275	120	100	20	341	291	128	1	85019	85039	kunststof

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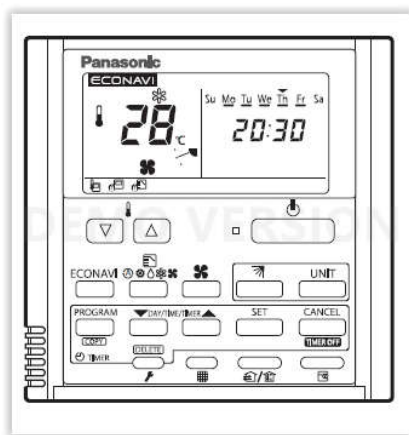
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## 2.2 afstandsbedieningen die gebruikt worden

### CZ-RTC2 ( ---- t/m 2017 )



### CZ-RTC4 ( 2017 t/m 2018 )



### CZ-RTC5 ( 2018 t/m ---- )



### 3.1 Aansluitingen klemmen strook

1	voeding 220 volt 1~ 50-60 Hz (1.5mm <sup>2</sup> )
2	nul
3	aarde
4	communicatie U1(0.8mm <sup>2</sup> afgeschermd)
5	communicatie U2 ( 0.8mm <sup>2</sup> afgeschermd )
6	afstandbediening R1 ( 0.8mm <sup>2</sup> afgeschermd )
7	afstandbediening R2 ( 0.8mm <sup>2</sup> afgeschermd )
8	sensor TA intrede lucht ( 0,8mm <sup>2</sup> ) <b>GEEN MARKERING</b>
9	sensor TA intrede lucht ( 0,8mm <sup>2</sup> ) <b>GEEN MARKERING</b>
10	sensor TF/BL uittrede lucht ( 0,8mm <sup>2</sup> ) <b>GROENE MARKERING</b>
11	sensor TF/BL uittrede lucht ( 0,8mm <sup>2</sup> ) <b>GROENE MARKERING</b>
12	sensor TCJ/E1 vloeistof verdamper in ( 0,8mm <sup>2</sup> ) <b>ROODE MARKERING</b>
13	sensor TCJ/E1 vloeistof verdamper in ( 0,8mm <sup>2</sup> ) <b>ROODE MARKERING</b>
14	sensor TC/E2 bocht midden verdamper ( 0,8mm <sup>2</sup> ) <b>ZWARTE MARKERING</b>
15	sensor TC/E2 bocht midden verdamper ( 0,8mm <sup>2</sup> ) <b>ZWARTE MARKERING</b>
16	Common digitaal in DI ( 0,8mm <sup>2</sup> )
17	digitaal in 1 Heat/ start ( 0,8mm <sup>2</sup> )
18	digitaal in 2 Cool/ start ( 0,8mm <sup>2</sup> )
19	digitaal in 3 Fan/ start ( 0,8mm <sup>2</sup> )
20	analoog in + 0-10 volt DC ( 0,8mm <sup>2</sup> ) ( eventueel een weerstand toevoegen )
21	analoog in - 0-10 volt DC ( 0,8mm <sup>2</sup> )
22	common digitaal uit 1 ( 0,8mm <sup>2</sup> )
23	digitaal uit 1 bedrijfs melding n/o ( 0,8mm <sup>2</sup> )
24	common digitaal uit 2 ( 0,8mm <sup>2</sup> )
25	digitaal uit 2 alarm melding n/o ( 0,8mm <sup>2</sup> )

#### Verklaring van de aansluitingen:

Voor specificaties en mogelijkheden van de nummers 16 t/m 25 zie documentatie van de CZ-CAPBC2 geleverd bij PAC-LBK-KIT.

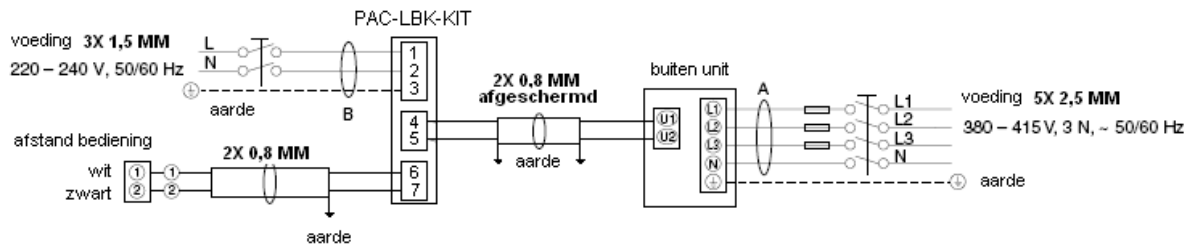
Deze kunt u vinden in hoofdstuk 6.2 op pagina 24 t/m 27.

## 3.2 Kabels

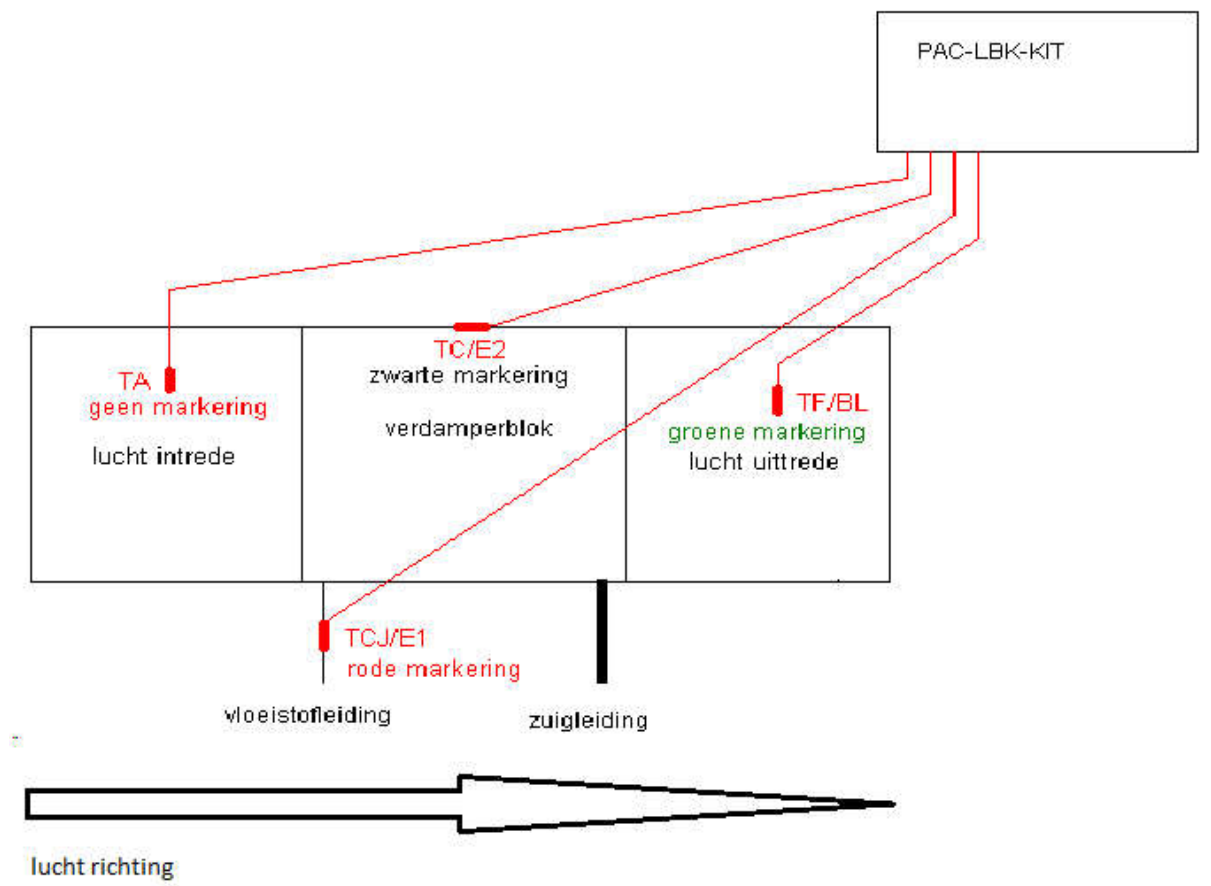
Voor de aansluit specificaties van het buitendeel raadpleeg de manual geleverd bij het buitendeel.

Voor de te gebruiken kabels voor de PAC-LBK-KIT raadpleeg het hoofdstuk 3.1

### Aansluit principe



## 3.3 Locaties van de sensoren









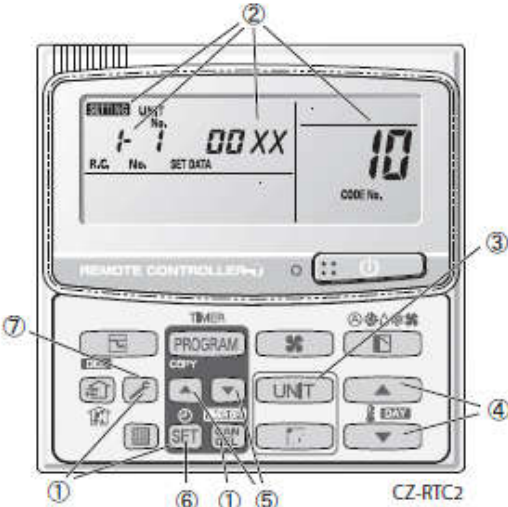


## 4. instellingen vermogen, type en temperatuur

### CZ-RTC2







**<Procedure>**

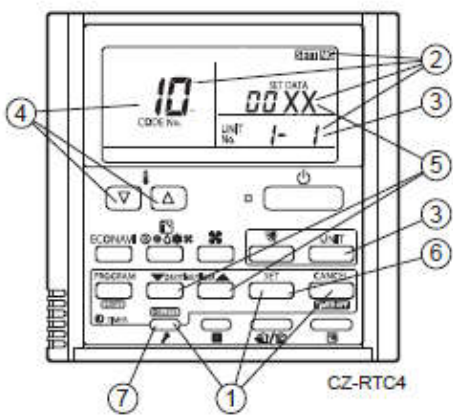
- ① Press and hold the , **SET** and **UNIT** buttons simultaneously for 4 seconds or longer.
- ② "SETTING", unit No. "1-1" (or "ALL" in the case of group control), item code "10," and settings data "00 XX" are displayed blinking on the remote controller LCD display (Fig. 7-2).  
At this time, the indoor unit fan (or all indoor unit fans in the case of group control) begins operating.
- ③ If group control is in effect, press the **UNIT** button and select the address (unit No.) of the indoor unit to set. At this time, the fan at the indoor unit begins operating.
- ④ Press the temperature setting  /  buttons to select the item code to change.
- ⑤ Press the timer time  /  buttons to select the desired setting data.  
\* For item codes and setting data, refer to the following page.
- ⑥ Press the **SET** button. (The display stops blinking and remains lit, and setting is completed.)
- ⑦ Press the  button to return to normal remote controller display.



**Fig. 7-2**

### CZ-RTC4

- ① Press and hold the , **SET** and **UNIT** buttons simultaneously for 4 seconds or longer.
- ② "SETTING", unit No. "1-1" (or "ALL" in the case of group control), item code "10," and settings data "00 XX" are displayed blinking on the remote controller LCD display (Fig. 7-3). At this time, the indoor unit fan (or all indoor unit fans in the case of group control) begins operating.
- ③ If group control is in effect, press the **UNIT** button and select the address (unit No.) of the indoor unit to set. At this time, the fan at the indoor unit begins operating.
- ④ Press the temperature setting  /  buttons to select the item code to change.
- ⑤ Press the timer time  /  buttons to select the desired setting data.  
\* For item codes and setting data, refer to the following page.
- ⑥ Press the **SET** button. (The display stops blinking and remains lit, and setting is completed.)
- ⑦ Press the  button to return to normal remote controller display.



**Fig. 7-3**

## CZ-RTC5

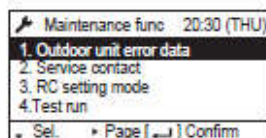
### <Procedure of CZ-RTC5A / CZ-RTC5B>



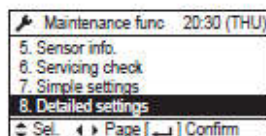
CZ-RTC5A / CZ-RTC5B

Fig. 7-4

- ① Keep pressing the , and buttons simultaneously for 4 or more seconds. The "Maintenance func" screen appears on the LCD display.



- ② Press the or button to see each menu. If you wish to see the next screen instantly, press the or button. Select "8. Detailed settings" on the LCD display and press the button.

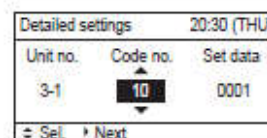


The "Detailed settings" screen appears on the LCD display.

Select the "Unit no." by pressing the or button for changes.



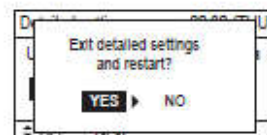
- ③ Select the "Code no." by pressing the or button. Change the "Code no." by pressing the or button (or keeping it pressed).



- ④ Select the "Set data" by pressing the or button. Select one of the "Set data" by pressing the or button. Then press the button.



- ⑤ Select the "Unit no." by pressing the or button and press the button. The "Exit detailed settings and restart?" (Detailed setting-end) screen appears on the LCD display. Select "YES" and press the button.



Item code	Item	Setting data			
		No.	Description	No.	Description
10	Type		<del>4-Way Cassette (U1)</del>		<del>Low Silhouette Ducted (E1)</del>
			<del>4-way Cassette 60 x 60 (Y1)</del>		<del>Ducted (N1)</del>
		0006	High Static Pressure Ducted (E1)		
11	Indoor unit capacity	0005	36 (Type 36)	0007	45 (Type 45)
		0009	56 (Type 50)	0011	71 (Type 60)
		0012	80 (Type 71)	0015	112 (Type 100)
		0017	140 (Type 125)	0018	160 (Type 140)
		0021	224 (Type 200)	0023	280 (Type 250)

12	System address	0001	Unit No. 1	word tijdens auto
		0002	Unit No. 2	adresseren
		0003	Unit No. 3	automatisch
			}	ingesteld
			}	
		0030	Unit No. 30	
	0099	Not set		
13	Indoor unit address	0001	Unit No. 1	word tijdens auto
		0002	Unit No. 2	adresseren
		0003	Unit No. 3	automatisch
			}	ingesteld
			}	
		0064	Unit No. 64	
	0099	Not set		
14	Group control address	0000	Individual (1:1 = Indoor unit with no group wiring)	word tijdens auto
		<del>0001</del>	Main unit (One of the group-control indoor units)	adresseren
		<del>0002</del>	Sub unit (All group-control indoor units except for main unit)	automatisch
		<del>0003</del>		ingesteld
		<del>0099</del>	Not set	

15	Presence of temperature sensor indoor unit	0031	instellen bij ECO-i VRF
		0022	instellen bij PAC-i

20	Indoor unit electronic control valve	0000	Present (Setting at time of shipping) instellen indien ECO-i
		0002	None instellen indien PAC-i
		0006	gebruiken bij een R32 buiten unit

## Instellingen temperatuur band

<b>1F</b> (Upper limit) <b>20</b> (Lower limit)	<b>Nooit lager als 0015</b>	Cooling	0018	18°C (Lower limit at time of shipping)
			0019	19°C
			}	}
			0029	29°C
			0030	30°C (Upper limit at time of shipping)
<b>21</b> (Upper limit) <b>22</b> (Lower limit)	<b>minimale temp. lucht intrede 15 graden Celcius</b>	Heating	0016	16°C (Lower limit at time of shipping)
			0017	17°C
			}	}
			0029	29°C
			0030	30°C (Upper limit at time of shipping)



## 5.1 problemen oplossen

### Code op afstand bediening.

ON: ○ Blinking: ✨ OFF: ●

Possible cause of malfunction			Display	Wireless remote controller Lamp display		
				Operation	Timer	Preparing
Serial communication errors Mis-setting	Remote controller is detecting error signal from indoor unit	Error in receiving serial communication signal (Signal from main indoor unit in case of group control) Outdoor system address, indoor system address, or indoor unit individual/main/sub setting is not set (Automatic address setting is not completed) Auto address is not completed	E01			
		Error in transmitting serial communication signal	E02	✨	●	●
	Indoor unit is detecting error signal from remote controller (and system controller)		E03			
	Setting error	Indoor unit address setting is duplicated	E08			
		Remote controller setting is duplicated	E09			
	Indoor unit is detecting error signaled from signal option	Communications error between the DC fan and the driver.	E10			
		Error in receiving serial communications signal	E11			
	Setting error	Main unit duplication in simultaneous-operation multi control (detected by outdoor unit)	E14			
	Indoor unit is detecting error signaled from outdoor unit	Error in receiving serial communications signal	E04			
		Error in transmitting serial communications signal	E05			
	Outdoor unit is detecting error signaled from indoor unit	Error in receiving serial communications signal (including unit quantity verification failure)	E06			
		Error in transmitting serial communications signal	E07	●	●	✨
	Automatic address setting failed	Indoor unit capacity too low	E15			
		Indoor unit capacity too high	E16			
		No indoor units connected	E20			
Miswiring	Faulty connection between indoor and outdoor units or missing phase in the outdoor unit power supply.	E22				
An indoor unit detected trouble in the signal from another indoor unit	Error in transmitting serial communications signal	E17	✨	●	●	
	Error in receiving serial communications signal	E18				
Communications trouble between units	Communications failure with MDC	E31	●	●	✨	
Mis-setting	Setting error	Indoor unit group settings error	L01			
		Indoor/outdoor unit type mismatch	L02	✨	●	✨
		Main unit duplication in group control (detected by indoor unit)	L03			
		Outdoor unit address duplication (system address)	L04	✨	○	✨
		Group wiring connected for independent indoor unit	L07			
		Address not set or group not set	L08	✨	●	✨
		Indoor unit capacity not set	L09			
		Outdoor unit capacity not set or setting error	L10	✨	○	✨
		Miswiring in group control wiring	L11			
		Indoor unit type setting error (capacity)	L13			

ON: ○ Blinking: ☀ OFF: ●

Possible cause of malfunction			Display	Wireless remote controller Lamp display		
				Operation	Timer	Preparing
Ceiling panel connection failure			P09			
Activation of protective device	Indoor protection	Fan protective thermostat	P01	●	☀	☀
		Float switch	P10		☀	☀
		DC fan error.	P12		☀	☀
	Outdoor protection	Discharge temperature trouble	P03			
		Open phase detected, AC power trouble	P05			
		No gas	P15			
		4-way valve locked	P19			
		High cooling load	P20	☀	●	☀
		Outdoor fan trouble	P22			
		Inverter compressor trouble (HIC PCB)	P26			
		Inverter compressor trouble (MDC)	P29			
		Simultaneous-operation multi control trouble	P31			
		Compressor current failure (overload)	H01	●	☀	●
		Thermistor fault	Thermistor open circuit ● Short circuit (indoor)	Indoor heat exchanger temperature sensor (E1)	F01	
Indoor heat exchanger temperature sensor (E2)	F02			☀	☀	●
Indoor temperature sensor	F10				☀	
Thermistor open circuit ● Short circuit (outdoor)	Discharge temperature (TD)		F04			
	Outdoor heat exchanger temperature (C1)		F06			
	Outdoor heat exchanger temperature (C2)		F07	☀	☀	○
	Outdoor air temperature (TO)		F08			
	Intake temperature (TS)		F12			
	Indoor EEPROM error		F29	☀	☀	●
	Outdoor EEPROM error		F31	☀	☀	○

Remote controller alarm display	Alarm contents	Judgement conditions	Eliminating condition of alarm	Judgement and correction
P03	Abnormal discharge temperature error. • Discharge temp. detected at or above the specified value.	Stops when temp. exceeds 115°C. Alarm output on 4 pre-trips.	Recovery at restart	1. Check refrigerant cycle (gas leak). 2. Trouble with electronic expansion valve. 3. Check discharge temperature sensor (TD).
P05	Missing phase detected. (CT disconnected or AC power supply error)	The current value transmitted from the microcomputer on the outdoor unit control substrate is low. When no AC power input for more than 3 minutes: Pre-trip 5 times.	Recovery at restart	1. Check R/S/T power supply. 2. Check HIC circuit. 3. Check outdoor unit control PCB.
P15	Insufficient gas level detected.	• Discharge temperature is 100°C or higher. • Electronic expansion valve is at Step 960. • The current value from the MDC is 6.0A (three-phase) / 3.5A (single-phase) or less. When the above has continued for 1 minute.	Recovery at restart	1. Check refrigerant cycle (gas leak). 2. Trouble with electronic expansion valve. 3. Check outdoor unit valve opening.
P19	4-way valve locked trouble. • Judged after 5 minutes had elapsed since the compressor was switched on.	The indoor unit heat exchanger temperature drops even though the compressor is switched on during the heating mode. [min(E1,E2)] is 10°C or lower. The indoor unit heat exchanger temperature rises even though the compressor is switched on during the cooling mode. E2 is 50°C or higher Pre-trip 2 times	Recovery at restart	1. Check 4-way valve. 2. Check 4-way valve wiring. 3. Check outdoor unit control PCB.
P20	High-pressure protection error caused by cooling high-load max (C1, C2) temperature.	Halted if the temperature exceeds 64°C. Error output on 4 consecutive pre-trips.	Recovery at restart	1. Overload operation of refrigerant cycle. 2. Check outdoor unit heat exchanger temperature sensor C1 and C2.
P22	Outdoor unit fan motor trouble. • Inverter protection circuit was activated, or lock was detected at outdoor unit fan motor.	Inverter stops after alarm is detected. Pre-trip 4 times	Recovery at restart	1. Position detection trouble. 2. Outdoor unit fan motor over-current Protection circuit is activated. • Check outdoor unit control PCB. • Refer to outdoor unit fan judgement methods.
P26	Inverter protector circuit was activated. G-Tr short-circuit within the HIC circuit. (Short time / 0.8 seconds or less) HIC temperature protection	Inverter stops after alarm is detected. Alarm is output when inverter stops (pre-trip) consecutively 4 times.	Recovery at restart  Temperature dropped	1. Stops immediately even when operations restarted. • Layer short on the compressor 2. Check HIC circuit. • Wiring trouble 3. Heat sink and PCB (HIC) • Contact trouble

Remote controller alarm display	Alarm contents	Judgement conditions	Eliminating condition of alarm	Judgement and correction
P29	Error in current detection circuit. • AC current value is high, even while compressor is halted.	Inverter halted after alarm detected. Alarm output on 4 consecutive (pre-trips.)	Recovery at restart	1. Stops immediately even when operations restarted. • Layer short on the compressor 2. Check HIC circuit • Wiring trouble
F04	Disconnection, open circuit or short circuit in discharge temperature sensor (TD)	Sensor detection error (90°C or more after 60 minutes has elapsed since the compressor was halted.) (Open circuit)	Automatic recovery	1. Check discharge temp. sensor (TD). 2. Check outdoor unit control PCB.
F06	Disconnection, open circuit or short circuit in outdoor unit heat exchanger temp. sensor (C1)	Open circuit or short circuit.	Automatic recovery	1. Check outdoor unit heat exchanger temperature sensor (C1). 2. Check outdoor unit control PCB.
F07	Disconnection, open circuit or short circuit in outdoor unit heat exchanger temp. sensor (C2)	Open circuit or short circuit	Automatic recovery	1. Check outdoor unit heat exchanger temp. sensor (C2). 2. Check outdoor unit control PCB.
F08	Disconnection, open circuit or short circuit in outdoor air temp. sensor (TO)	Open circuit or short circuit	Automatic recovery	1. Check outdoor air temp. sensor (TO). 2. Check outdoor unit control PCB.
F12	Disconnection, open circuit or short circuit in suction temp. sensor (TS)	Open circuit or short circuit	Automatic recovery	1. Check suction temp. sensor (TS). 2. Check outdoor unit control PCB.
F31	EEPROM trouble	Reading/writing failure	Power reset recovery	1. Check EEPROM (IC007). 2. Check outdoor unit control PCB.
L02	Indoor and outdoor units incompatible (PAC-i, ECO-i, GHP)	Indoor unit judged incompatible with the outdoor unit type.	Power reset recovery	1. Check indoor unit EEPROM. 2. Check indoor unit control PCB.
L04	Settings failure	Duplicated outdoor unit address (system address)	Automatic recovery	1. Check outdoor unit system address. 2. Check inter-unit control wiring.
L07	Settings failure	Group control wiring exists in an individually-controlled indoor unit.	Power reset recovery	1. Check inter-unit control wiring. 2. Check indoor unit EEPROM.
L10	Settings failure	Outdoor unit capacity not set.	Power reset recovery	Check outdoor unit EEPROM.
L13	Indoor and outdoor unit types	Outdoor unit judged incompatible with the outdoor unit type.	Automatic recovery	1. Check indoor unit EEPROM. 2. Check outdoor unit control PCB.
E06	Outdoor unit detected a signal error from the indoor unit	Serial signals receiving failure (including faulty unit quantity confirmation)	Automatic recovery	1. Check inter-unit control wiring. 2. Check indoor and outdoor unit control PCB.
E07	Outdoor unit sending failure to indoor unit	Serial signal sending failure	Automatic recovery	1. Check inter-unit control wiring. 2. Check outdoor unit control PCB.



Remote controller alarm display	Alarm contents	Judgement conditions	Eliminating condition of alarm	Judgement and correction
E14	Settings failure	Main unit in simultaneous operation multi control duplicated. (Outdoor unit detected)	Power reset recovery	1. Check inter-unit control wiring. 2. Check indoor unit combination.
E15	Automatic address setting failure	Insufficient indoor unit capacity.	Power reset recovery	1. Check inter-unit control wiring. 2. Check indoor and outdoor unit control PCB.
E16	Automatic address setting failure	Excessive indoor unit capacity.	Power reset recovery	1. Check inter-unit control wiring. 2. Check indoor and outdoor unit control PCB.
E20	Automatic address setting failure	Outdoor unit cannot receive any serial signals from indoor units.	Power reset recovery	1. Check inter-unit control wiring. 2. Check indoor and outdoor unit control PCB.
E22	Miswiring error	Inter-unit connection are miswiring error. Missing phase for the outdoor unit power supply.	Power reset recovery	Check wiring.
E31	Communications trouble within unit	No communication possible with MDC for 3 minutes or longer.	Automatic recovery	Check outdoor unit control PCB.
H01	Over-current error	Inverter stops after alarm is detected.	Recovery at restart	1. Refrigerant cycle abnormal overload operations. 2. Screws connecting the HIC circuit between the heat sink are loose. 3. Faulty cooling of heat sink. 4. Check outdoor unit control PCB wiring.

## 5.2 Storing melding op het buitendeel.

Contents of LED Display on Outdoor Unit Control PCB		( ○ : ON    ☀ : Blinking    ● : OFF )
LED1	LED2	Display meaning
○	○	After the power is turned ON (and automatic address setting is not in progress), no communication with the indoor units in that system is possible.
(Both ON)		
●	○	After power is turned ON (and automatic address setting is not in progress), 1 or more indoor units are confirmed in that system; however, the number of indoor units does not match the number that was set.
(OFF)	(ON)	
●	●	Automatic address setting was completed successfully. (After the power is turned ON, the number of detected indoor units connected to that system matches the number that was set, and regular communications are occurring.)
(Both OFF)		
☀	☀	Automatic address setting is in progress.
(Blinking alternately)		
☀	☀	Alarm display
(Blinking alternately)		LED 1 blinks M times, then LED 2 blinks N times. The cycle then repeats. M = 2: P alarm 3: H alarm 4: E alarm 5: F alarm 6: L alarm N = Alarm No. Example: LED 1 blinks 2 times, then LED 2 blinks 16 times. The cycle then repeats. Alarm is "P16."
☀	○	PUMP DOWN is in progress.
LED 1 : Blinking LED 2 : ON		
☀ (0.8 / 0.3)*	●	P04 (High pressure trouble) Pre-trip display
LED 1 : Blinking LED 2 : OFF		
☀ (0.5 / 0.5)	●	Other Pre-trip display
LED 1 : Blinking LED 2 : OFF		







\* Blinking (0.8 / 0.3) indicates that the lamp illuminates for 0.8 seconds, and then is OFF 0.3 seconds.

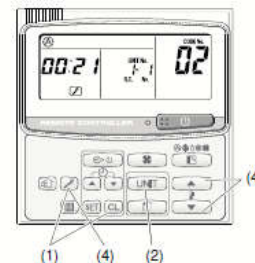
## 5.3 Uitlezen sensoren met de bediening

### CZ-RTC2

#### 5-4. Monitoring Operations: Display of Indoor Unit and Outdoor Unit Sensor Temperatures

<Operating procedure>

- (1) Press and hold the  button and  button simultaneously for 4 seconds or longer to switch to temperature monitor mode. During temperature monitoring, "Service Monitor" is lit. (The display and operations are the same as when monitor mode is started from the unit remote controller.)
  - (2) Press the  button and select the indoor unit to monitor.
  - (3) Use the temperature setting  and  buttons to select the item code of the temperature to monitor. The selected indoor unit No. and the temperature data are displayed.
  - (4) To end monitoring, press the  button. The display returns to the normal display.
- \* The display does not blink.













### CZ-RTC4

#### 7-3. Detailed Settings Function

- This allows the system address, indoor unit address, and other settings to be made for the individual or group-control indoor unit to which the remote controller used for detailed settings is connected.

When detailed settings mode is engaged, operation stops at the individual or group-control indoor unit where the remote controller used for detailed settings is connected. Simple settings items can also be set at this time.

<Procedure of CZ-RTC4>

- ① Press and hold the , , and  buttons simultaneously for 4 seconds or longer.
  - ② "SETTING", unit No. "1-1" (or "ALL" in the case of group control), item code "10", and settings data "00XX" are displayed blinking on the remote controller LCD display (Fig. 7-3). At this time, the indoor unit fan (or all indoor unit fans in the case of group control) begins operating.
  - ③ If group control is in effect, press the  button and select the address (unit No.) of the indoor unit to set. At this time, the fan at the indoor unit begins operating.
  - ④ Press the temperature setting  /  buttons to select the item code to change.
  - ⑤ Press the timer time  /  buttons to select the desired setting data.
- \*For item codes and setting data, refer to the following page.
- ⑥ Press the  button. (The display stops blinking and remains lit, and setting is completed.)
  - ⑦ Press the  button to return to normal remote controller display.

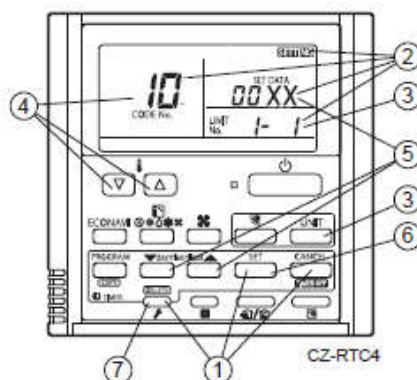


Fig. 7-3

## CZ-RTC5

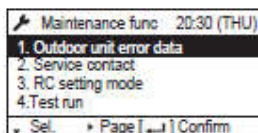
### <Procedure of CZ-RTC5A / CZ-RTC5B>



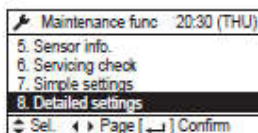
CZ-RTC5A / CZ-RTC5B

Fig. 7-4

- ① Keep pressing the , and buttons simultaneously for 4 or more seconds. The "Maintenance func" screen appears on the LCD display.

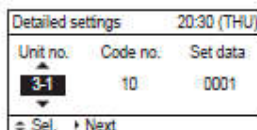


- ② Press the or button to see each menu. If you wish to see the next screen instantly, press the or button. Select "8. Detailed settings" on the LCD display and press the button.

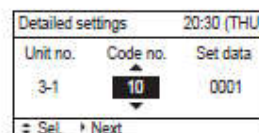


The "Detailed settings" screen appears on the LCD display.

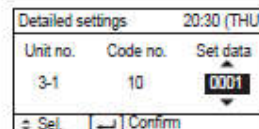
Select the "Unit no." by pressing the or button for changes.



- ③ Select the "Code no." by pressing the or button. Change the "Code no." by pressing the or button (or keeping it pressed).



- ④ Select the "Set data" by pressing the or button. Select one of the "Set data" by pressing the or button. Then press the button.



- ⑤ Select the "Unit no." by pressing the or button and press the button. The "Exit detailed settings and restart?" (Detailed setting-end) screen appears on the LCD display. Select "YES" and press the button.





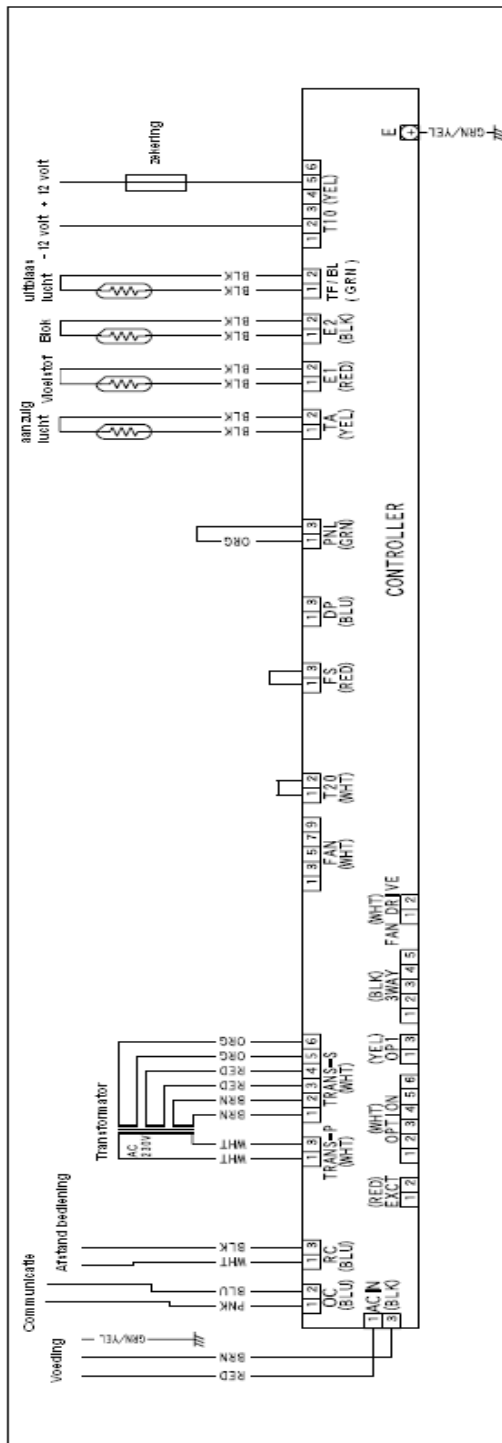
\* The display does not blink.

	Item code	Meaning of Code
Indoor unit data	02	Indoor unit intake temp.
	03	Indoor unit heat exchanger temp. (E1)
	04	Indoor unit heat exchanger temp. (E2)
	05	–
	06	–
	07	–
	08	–
	09	
	Outdoor unit data	0A
0b		–
0C		–
0d		Intake temp. (TS)
0E		Outdoor unit heat exchanger temp. (C1)
0F		Outdoor unit heat exchanger temp. (C2)
10		–
11		Outdoor air temp. ( TO )
12		–
13		Current value (CTL2)
14		Current value (CTL1)
15		Outdoor MV value (MOV1)
16		–
19	Frequency	

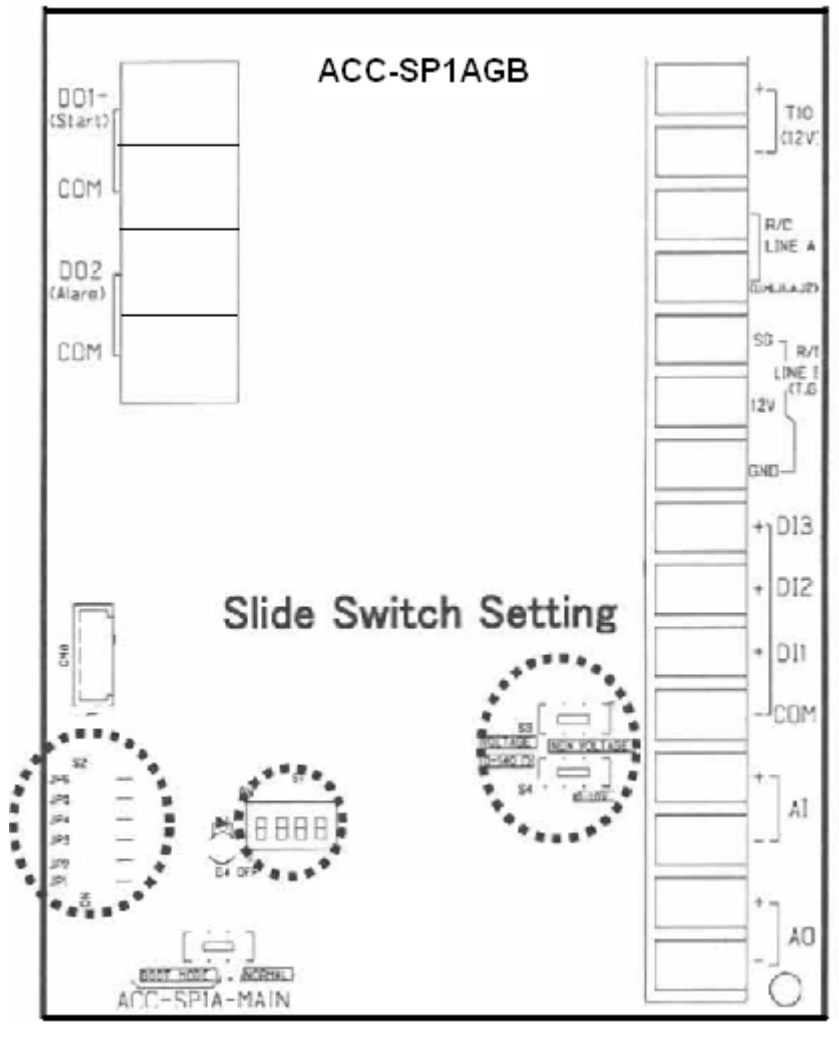
\* Depending on the model, some items may not be displayed.

## 6.1 Printen PAC-LBK-KIT

### CR-UXRP71B (regelprint)



**CZ-CAPBC2 (print voor externe aansturingen)**



## 6.2 Beschrijving CZ-CAPBC2 aanstuur print

**Panasonic**

## Seri-Para I/O Unit for each Procedures for Installation (E)

### For Your Safety

Read the following instructions carefully, and carry out secure installation and electrical work.

The precautions given in this manual consist of specific "Warning" and "Caution". They provide important safety-related information. Be sure to strictly observe all safety procedures. The labels and their meanings are as described below.

**Warning** This symbol refers to a hazard or unsafe procedure or practice that can result in severe personal injury or death.

**Caution** This symbol refers to a hazard or unsafe procedure or practice that can result in personal injury or product or property damage.

After installation is completed, perform a test run to check for operating trouble. Explain operating procedures to the customer and request the customer to store the Procedures for Installation (Electrical Work) and Test Operation of Seri-Para I/O Unit for each indoor unit.

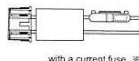

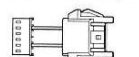


### Warning

- Be sure to arrange installation by the dealer where the system was purchased or by a professional installer. Electric shock or fire may result if an inexperienced person performs any installation or wiring procedures incorrectly.
- Be sure that this unit is securely installed in accordance with the Procedures for Installation (Electrical Work) and Test Operation of Seri-Para I/O Unit for each indoor unit. Electric shock or fire may result if any installation or wiring procedures are incorrectly performed.
- Only a qualified electrician should attempt to connect this system, in accordance with the instructions in this manual. Insufficient electrical circuit capacity or incorrect installation may cause electric shock and fire.
- Use the specified cables for the electrical connections, and connect the cables securely. Run and fasten the cables securely so that external forces or pressure placed on the cables will not be transmitted to the connection terminals. Overheating or fire may result if connections or attachments are not secure.

### Caution

- Depending on the installation conditions and location, an earth leakage breaker may be required. If an earth-leakage breaker is not installed, there is a danger of electric shock or fire.
- Ground yourself to discharge static electricity before performing any wiring.

### Accessories

No.	Accessory	Quantity	No.	Accessory	Quantity
①	T10 cable (150mm) *1 	1	④	Wire joints 	2
②	T10 cable (100mm) *2 	1	⑤	Installation plan (this manual) 	1
③	Installation screws (tapping screws φ4x8mm) 	4			

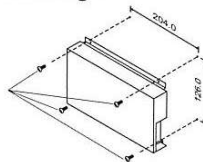
\*1 In the case of melting-down of fuse cables due to a short-circuit, wrong wiring or excessive current, change current to 125V/0.5A.

\*1 Panasonic model or SANYO 4-series or newer type

\*2 SANYO 3-series type

### Installing

Installation screws  
(tapping screws x 4  
Accessory components ③)

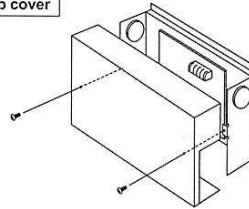


#### Note:

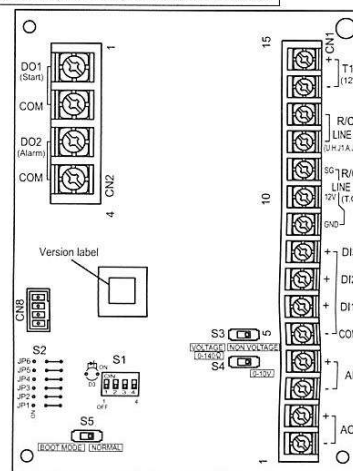
- Do not run the communication lines and power cables through the same conduit, or twist those cables together, or place the cables near one another. It can cause malfunction.
- Install it away from any sources of electrical noise.
- Avoid installing in any locations where the unit may come into contact with water, or in any extremely humid locations.
- Avoid installing in any location that is subject to excessive vibration or physical impacts.

### Wiring

#### Removing the top cover



#### Arrangement of the terminal block and switches



15	+	T10 (12V)	12 V power supply
14	-		
13		R/C LINE A	Remote control line A
12			
11	SG	R/C LINE B	Remote control line B
10	12V		
9	GND		
8	+	DI 3	Digital input
7	+	DI 2	
6	+	DI 1	
5	-	COM	
4	+	AI	Analog input (Change temperature setting / Peak cut setting)
3	-		
2	+	AO	Analog output (Room temperature monitor)
1	-		

CN2	1	DO1	Digital output 1 (Start output)
	2	COM	
	3	DO2	Digital output 2 (Alarm output)
	4	COM	

S1	Control type setting switch
S2	Detail setting switch
S3	Voltage present / absent setting switch
S4	Voltage / resistance input setting switch
S5	Not used

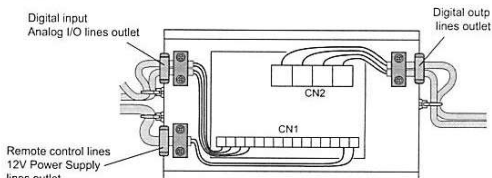
CN8	Not used
-----	----------

#### Caution:

- Always use round connectors with insulator holddown for wiring to the term block. (CN1 uses M3.0, CN2 uses M3.5)

#### Securing the wiring

Make sure to secure all wiring using the clip wires inside the unit, and the cable clamps outside the unit.



#### Caution:

- If using high-voltage wiring such as AC power supply (Digital output), make sure it wiring does not contact any component on the circuit board, or any low-voltage (C) wiring.

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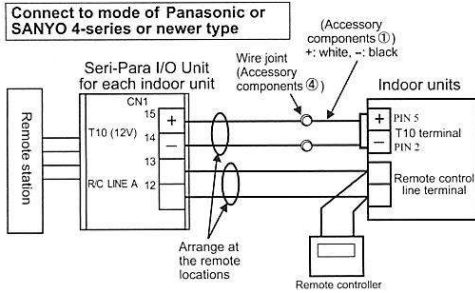
info@climadirect.nl



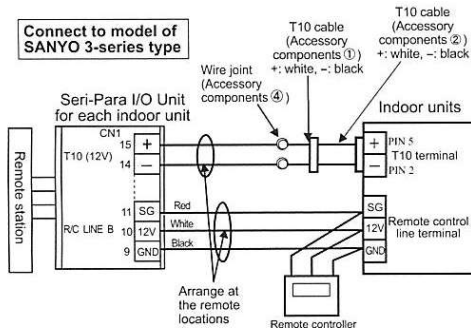
# oor unit ( CZ-CAPBC2 ) rical Work) and Test Operation

## (1) Connecting to indoor units

- Do not run the control lines and power cables in the same conduit, do not connect those lines and cables with the same wire, and do not place those lines and cables close together. (Maintain a minimum 30cm separation.)
- Wiring specifications  
Type: vinyl insulated cord with sheath  
Thickness: 0.5 to 2.0 mm<sup>2</sup>  
Length: 100 m maximum



- Remote control line**  
Connect terminals 12 and 13 (Remote Control Line A) on the Seri-Para I/O Unit terminal block CN1 to the Remote Control terminals of the indoor unit. There is no polarity for the signal wires.
- 12V power supply line**  
Connect terminals 14 and 15 (12V Power Supply Line) on the Seri-Para I/O Unit terminal block CN1 to the T10 terminal of the indoor unit. The polarity of the connection is important; make sure to connect the + and - terminals correctly. Wrong polarity wiring may result in damage to the units.



- Remote control line**  
Connect terminals 9, 10, and 11 (Remote Control Line B) on the Seri-Para I/O Unit terminal block CN1 to the Remote Control terminals of the indoor unit. The polarity of the connection is important; make sure to connect the GND, 12V and SG correctly. Wrong polarity wiring may result in damage to the units.
- 12V power supply line**  
Connect terminals 14 and 15 (12V Power Supply Line) on the Seri-Para I/O Unit terminal block CN1 to the T10 terminal of the indoor unit. The polarity of the connection is important; make sure to connect the + and - terminals correctly. Wrong polarity wiring may result in damage to the units.

## Cautions

- In addition to the Seri-Para I/O Unit, be sure to install a remote control or centralized control device (system controller, etc.) in the indoor unit.
- Two or more Seri-Para I/O Units cannot be linked within a remote control line.
- The Seri-Para I/O Unit cannot be used with a control device which uses the T10 terminal of the indoor unit (example: indoor unit relay board, schedule timer, etc.)

## (2) Connecting to the Remote Stations

- Do not run the control lines and power cables in the same conduit, do not connect those lines and cables with the same wire, and do not place those lines and cables close together. (Maintain a minimum 30cm separation.)

Name	Input/output item	Seri-Para I/O Unit side		Remote Station side	
		Input/output conditions	Terminal number	Example Circuit	Input/output conditions
Digital input/output terminal	Digital input ※1	DI1 Input DI2 Input DI3 Input  Voltage a-contact static or Voltage a-contact pulses  Allowable contact voltage and current: DC 24 V, 10 mA  Voltage present / absent switch : S3 Voltage absent: set to [NON VOLTAGE] Voltage present: set to [VOLTAGE]	CN1-8 DI 3 CN1-7 DI 2 CN1-6 DI 1 CN1-5 COM		Voltage present 12 to 24V or Voltage absent  When pulse input: 200 ms minimum
		Start output Alarm output  No-voltage a-contact static  Allowable contact voltage and current: AC 240 V, 3A DC 24 V, 3A (Minimum load 10mA)	CN2-1 DO 1 CN2-2 COM CN2-3 DO 2 CN2-4 COM		
Analog input/output terminal	Analog input ※3	For indoor temperature setting input: Input voltage: 0 to 10V or 0 to 140Ω Temperature setting range: Within the indoor units temperature setting range Temperature reading: In steps of 1°C For peak cut setting input: Input voltage: 0 to 10V Setting range: 40 to 115% and thermo off In steps of 5%  Voltage / resistance input setting switch: S4 Voltage level input: Set to [0 to 10V] Resistance connection: Set to [0 to 140Ω]	AI+ AI- FG		For analog inputs, use within 0.1% of reference accuracy
		Indoor temperature monitor output Output current: 4 to 20 mA  Temperature indication range: 5 to 36 °C, 0.5 °C step	AO+ AO- FG		Allowable load: 240 Ω maximum

### ※ 1 Digital input

- Select the control type using control type setting switch S1, according to the table below.

Control type	Input1 (DI 1)	Input2 (DI 2)	Input3 (DI 3)	Voltage a-contact static/pulses ※ 1
0	Start Fan low	Indoor units stop when all of input 1, 2, 3 are open Fan medium	Indoor units stop when all of input 1, 2, 3 are open Fan high	All input: static
1	Start Prohibit R/C Start/Stop	Stop Prohibit R/C Start/Stop	Start Accept R/C Start/Stop	Input 1, 2: static Input 3: pulse
2	Start Prohibit R/C Start/Stop	Stop Prohibit R/C Start/Stop	Accept R/C Start/Stop	Input 1, 2: static Input 3: pulse
3	Start <-> Stop Prohibit R/C Start/Stop	Start <-> Stop	Stop Prohibit R/C Start/Stop	
4	Start Prohibit R/C Start/Stop	Start Accept R/C Start/Stop	Stop Prohibit R/C Start/Stop	
5	Start Prohibit R/C Start/Stop	Accept R/C Start/Stop	Stop Prohibit R/C Start/Stop	All input: pulse
6	Start Accept R/C Start/Stop	Stop Accept R/C Start/Stop		
7	Start <-> Stop Prohibit R/C Start/Stop	Start <-> Stop Accept R/C Start/Stop	Set thermostat OFF	Release thermostat OFF Input 1, 2: pulse Input 3: static
8				
9	Heat	Cool	Fan	All input: pulse
10	Heat Start	Indoor units stop when all of input 1, 2, 3 are open Cool Start	Indoor units stop when all of input 1, 2, 3 are open Fan Start	All input: static
11				
12				
13				
14				
15	Start	Stop	Set thermostat OFF	Release thermostat OFF All input: static

※ R/C: Remote Controller

※ 1: When inputting pulses, set the pulse width to 200 ms.

#### • Wiring specifications

- Type: vinyl insulated cord with sheath
- Thickness: 0.5 to 2.0 mm<sup>2</sup>
- Length: 100 m maximum

### ※ 2 Digital output

- D01 for start output signal.
- D02 for alarm output signal.
- Maximum allowable contact voltage and current are AC 240 V and 3 A maximum or DC 24 V and 3 A maximum.
- Wiring specifications are for digital input.

### ※ 3 Analog input

Select the analog input type from the following 2 types.

Refer to JP1 of "Detail setting switch S2".

- Temperature setting type (factory default)
- Peak cut setting type

#### ■ For the temperature setting type:

• Select the temperature setting control method from the following 3 types.

- Input voltage ① (equally divided upper and lower setting temperature limits)
- Input voltage ② (fixed voltage)
- Input resistance

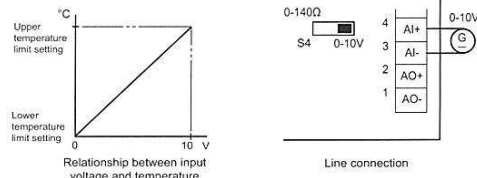
#### • For input voltage ① ②

- Set the Voltage / resistance input setting switch S4 to "0 to 10 V" (factory default)
- Wiring specifications
  - Type: vinyl insulated cord with sheath (shield line recommended)
  - Thickness: 1.25 to 2.00 mm<sup>2</sup>
  - Length: 70 m maximum

#### • Input voltage ① (equally divided upper and lower setting temperature limits)

- Performed in the input range of 0 to 10 V DC (lower setting temperature limit to upper setting temperature limit).
- Relationship between setting temperature and voltage is as the diagram below.
- Upper and lower temperature setting limits may vary according to the indoor units and operation mode.

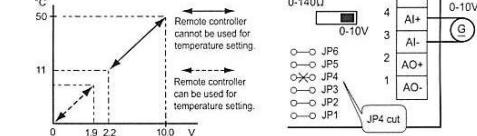
Refer to the relationship between setting temperature and voltage, described in (example 3-1 "Operation mode of a typical model [lower limit to upper limit]").



#### • Input voltage ② (fixed voltage)

- Performed in the input range of 0 to 10 V DC.
  - The effective range of the setting temperature is 2.2 V to 10 V (11 °C to 50 °C). Remote controller cannot be used for temperature in this range.
  - When the input exceeds the upper or lower setting temperature limits, it is set to the upper or lower limits.
- For example, in the case of air-conditioning (cool) [18 °C to 30 °C], and if the voltage is below 3.5 V, the temperature is set to 18 °C, and if over 6.2 V, to 30 °C.

• To set the temperature using remote controller, set the input voltage below 1.9 V.



Mapping table of setting temperature and input voltage (input voltage ②)

Temperature setting [°C]	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Input voltage [V]	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0

#### Note:

Enter the voltage after an indoor unit has been connected. The maximum input voltage is 10 V. Over 10 V input voltage may cause malfunction.

#### • Input resistance

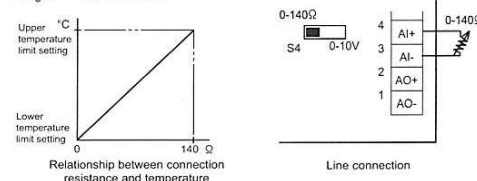
- Temperature setting (1 °C step) is performed in the range of 0 to 140 Ω.
- Relationship between setting temperature and resistance is as the diagram below.
- Upper and lower temperature setting may vary according to the indoor units and operation mode.

Refer to the relationship between setting temperature and resistance, described in (example) 3-1 "Operation mode of a typical model [lower limit to upper limit]".

- Set the Voltage / resistance input setting switch S4 to "0 to 140 Ω".

#### • Wiring specifications

- Type: vinyl insulated cord with sheath (shield line recommended)
- Thickness: 1.25 to 2.00 mm<sup>2</sup>
- Length: 70 m maximum





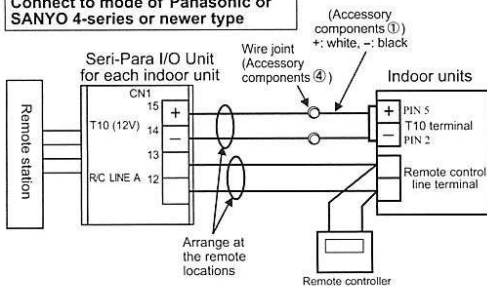
# oor unit ( CZ-CAPBC2 )

## rical Work) and Test Operation

### (1) Connecting to indoor units

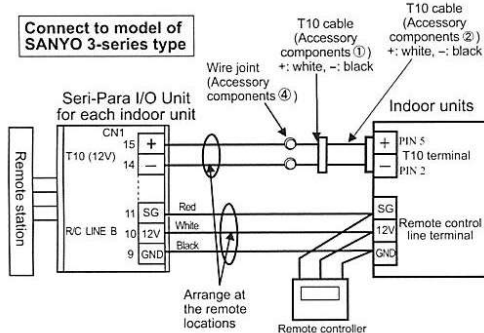
- Do not run the control lines and power cables in the same conduit, do not connect those lines and cables with the same wire, and do not place those lines and cables close together. (Maintain a minimum 30cm separation.)
- Wiring specifications  
Type: vinyl insulated cord with sheath  
Thickness: 0.5 to 2.0 mm<sup>2</sup>  
Length: 100 m maximum

Connect to mode of Panasonic or SANYO 4-series or newer type



- Remote control line**  
Connect terminals 12 and 13 (Remote Control Line A) on the Seri-Para I/O Unit terminal block CN1 to the Remote Control terminals of the indoor unit. There is no polarity for the signal wires.
- 12V power supply line**  
Connect terminals 14 and 15 (12V Power Supply Line) on the Seri-Para I/O Unit terminal block CN1 to the T10 terminal of the indoor unit. The polarity of the connection is important; make sure to connect the + and - terminals correctly. Wrong polarity wiring may result in damage to the units.

Connect to model of SANYO 3-series type



- Remote control line**  
Connect terminals 9, 10, and 11 (Remote Control Line B) on the Seri-Para I/O Unit terminal block CN1 to the Remote Control terminals of the indoor unit. The polarity of the connection is important; make sure to connect the GND, 12V and SG correctly. Wrong polarity wiring may result in damage to the units.
- 12V power supply line**  
Connect terminals 14 and 15 (12V Power Supply Line) on the Seri-Para I/O Unit terminal block CN1 to the T10 terminal of the indoor unit. The polarity of the connection is important; make sure to connect the + and - terminals correctly. Wrong polarity wiring may result in damage to the units.

### Cautions

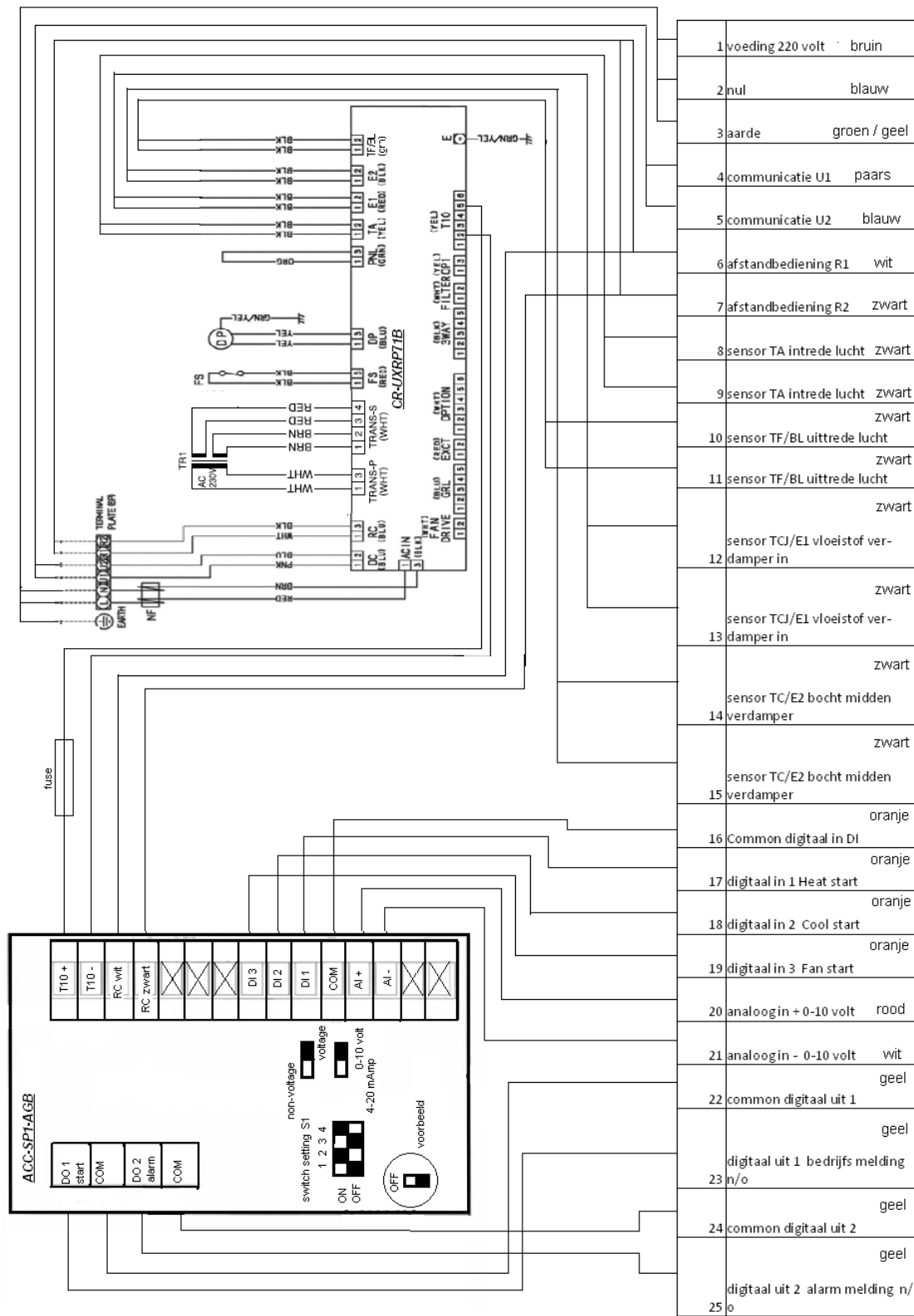
- In addition to the Seri-Para I/O Unit, be sure to install a remote control or centralized control device (system controller, etc.) in the indoor unit.
- Two or more Seri-Para I/O Units cannot be linked within a remote control line.
- The Seri-Para I/O Unit cannot be used with a control device which uses the T10 terminal of the indoor unit (example: indoor unit relay board, schedule timer, etc.)

### (2) Connecting to the Remote Stations

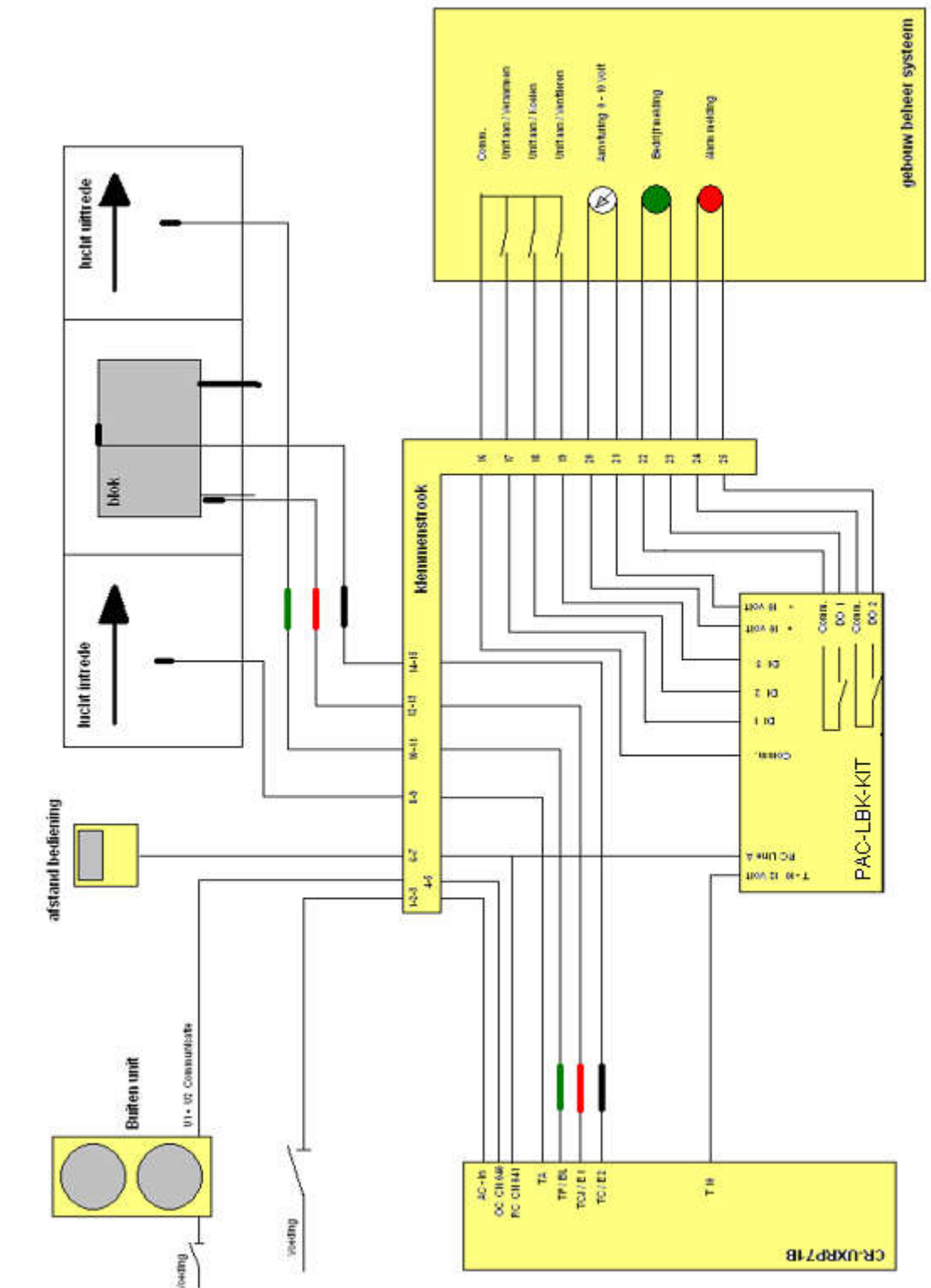
- Do not run the control lines and power cables in the same conduit, do not connect those lines and cables with the same wire, and do not place those lines and cables close together. (Maintain a minimum 30cm separation.)

Name	Input/output item	Seri-Para I/O Unit side		Remote Station side	
		Input/output conditions	Terminal number	Example Circuit	Input/output conditions
Digital input/output terminal	Digital input ※1	DI1 Input DI2 Input DI3 Input  Voltage a-contact static or Voltage a-contact pulses  Allowable contact voltage and current: DC 24 V, 10 mA  Voltage present / absent switch : S3 Voltage absent: set to <input type="checkbox"/> NON VOLTAGE Voltage present: set to <input type="checkbox"/> VOLTAGE	<ul style="list-style-type: none"> <li>For voltage absent input (factory default)</li> <li>CN1-8 DI 3</li> <li>CN1-7 DI 2</li> <li>CN1-6 DI 1</li> <li>CN1-5 COM</li> </ul>		Voltage present 12 to 24V or Voltage absent  When pulse input: 200 ms minimum
		Start output Alarm output  No-voltage a-contact static  Allowable contact voltage and current: AC 240 V, 3A DC 24 V, 3A (Minimum load 10mA)	<ul style="list-style-type: none"> <li>CN2-1 DO 1</li> <li>CN2-2 COM</li> <li>CN2-3 DO 2</li> <li>CN2-4 COM</li> </ul>		Digital input  Digital input
Analog input/output terminal	Analog input ※3	For indoor temperature setting input: Input voltage: 0 to 10V or 0 to 140Ω Temperature setting range: Within the indoor unit temperature setting range Temperature reading: In steps of 1°C For peak cut setting input: Input voltage: 0 to 10V Setting range 40 to 115% and thermo off In steps of 5%  Voltage / resistance input setting switch: S4 Voltage level input: Set to <input type="checkbox"/> 0 to 10V Resistance connection: Set to <input type="checkbox"/> 0 to 140Ω	<ul style="list-style-type: none"> <li>AI+</li> <li>AI-</li> </ul>		For analog inputs, use within 0.1% of reference accuracy
		Indoor temperature monitor output Output current: 4 to 20 mA Temperature indication range: 5 to 36 °C, 0.5 °C step	<ul style="list-style-type: none"> <li>AO+</li> <li>AO-</li> </ul>		Allowable load: 240 Ω maximum

### 6.3 Electrisc schema PAC-LBK-KIT



## 6.4 principe schema systeem



## **7.1 Werkingsprincipe**

De PAC-LBK-KIT is bedoeld als aanstuur regeling t.b.v. het gemonteerde Panasonic PAC-i buitendeel. De aansturing van het buitendeel gaat aan de hand van de door de verschillende sensoren opgenomen temperaturen. En eventueel de analoge en digitale inputs. De temperatuur bewaking maakt alleen gebruik van sensor TA welke altijd in een kanaal geplaatst dient te worden met een representatieve ruimte temperatuur.

De bediening van de PAC-LBK-KIT kan op diverse manieren gedaan worden. Namelijk door gebruik te maken van een bedrade afstandbediening waarmee handmatig de verschillende instel mogelijkheden worden ingesteld worden, of door gebruik te maken van de aanwezige digitale en analoge input aansluitingen.

Wanneer er gekozen word voor bediening middels een bedrade afstandbediening, moet deze worden aangesloten op de klemmenstrook en geplaatst worden op een voor de gebruiker wenselijke locatie. ( houd er rekening mee dat hier mee niet de LBK bediend zal worden )

Wanneer gekozen word voor bediening via de digitale en analoge input dient de bedrade bediening ook te worden aangesloten. Verdere aansturing gebeurt vanuit bijvoorbeeld een gebouwbeheersysteem of LBK. Middels een aantal maak/verbreek contacten ( statisch ) t.b.v. aan/uit schakelen, en mode keuze van het systeem. ( Verwarmen, Koelen, en Ventileren ).

En een 0-10 volt signaal t.b.v. temperatuur instelling. ( Volgens de ingestelde temperatuur band. Zie Hoofdstuk 4 van deze beschrijving).

Tevens kan het 0-10 volt signaal gebruikt worden om de belasting van het buitendeel aan te sturen. Zie hier voor ook de beschrijving van de CZ-CAPBC2. (hoofdstuk 6.2 p. 24 t/m 27)

### **Digitale in put**

Comm. + DI1 = unit aan en mode verwarmen

Comm. + DI2 = unit aan en mode koelen

Comm. + DI3 = unit aan en mode ventileren

## Digitale output

Comm. + DO1 = bedrijfsmelding

Comm. + DO2 + alarm melding

## Analoge input

AI + is 10 volt DC t.o.v. AI - bij hoogst instelbare temperatuur volgens de bedrade bediening

Temperatuur band van de bedrade bediening is in te stellen volgens de settings vermeld eerder in deze beschrijving.

Middels deze analoge ingang is het mogelijk een aansturing van gevraagd vermogen te realiseren naar het buitendeel. Omdat de band van de Panasonic niet geheel 0-10VDC is moet er op de AI -/- een weerstand van 1kΩ of 2kΩ worden geplaatst. ( zie tabel hier onder )

Input Voltage* (V)	0-0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5-10.0
Demand (% of nominal current)	Stop†	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	No limit‡	Thermo-Off§

### Nieuwe "spanning – vraag" relatie na modificatie:

Input Voltage (V)	0 - 0.55	1.1	1.65	2.2	2.8	3.35	3.9	4.45	5.0	5.55	6.1	6.65	7.2	7.8	8.35	8.9	9.45	10.0
Demand (% of nominal current)	Stop	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	No limit

## 7.2 Limiteringen DX blok

**Modellen: PACi + AHU KIT**

**Onderwerp: Maximale volume van DX koelerblok in een LBK  
Maximaal toegestane luchtvolume**

Om duidelijk inzicht over de mogelijke toepassingen van een PACi buitendeel samen met AHU KIT en LBK, vindt u hieronder de toegestane limieten betreffende:

### a) Maximaal toegestane DX koelerblok volume met gerelateerde restricties

ELITE PACi outdoor units model code	U-50PE1E5	U-60PE1E5	U-71PE1E5/8	U-100PE1E5/8	U-125PE1E5/8	U-140PE1E5/8
AHU DX COIL MAX Volume in dm <sup>3</sup>	1,5	1,8	2,2	3,00	3,00	3,00
Additional refrigerant charge max in kg	0,18	0,36	0,36	0,81	0,81	0,81
Pipe length restriction :	max. pipe length 30 m	max. pipe length 40 m	max. pipe length 40 m	max. pipe length 30 m	max. pipe length 30 m	max. pipe length 30 m
Pump Down Operation for servicing reason without external liquid receiver.	No additional limit	NO pump down with ambient temperature > +35°C	NO pump down with ambient temperature > +35°C	NO pump down with ambient temperature > +25°C	NO pump down with ambient temperature > +25°C	NO pump down with ambient temperature > +25°C
AHU DX COIL Volume without additional refrigerant charge in dm <sup>3</sup>	1,30	1,40	1,80	2,10	2,10	2,10
AHU DX COIL Volume Additional refrigerant charge in kg/dm <sup>3</sup>	0,90	0,90	0,90	0,90	0,90	0,90

BIG PACi outdoor units model code	U-200PE1E8	U-250PE1E8
AHU DX COIL MAX Volume in dm <sup>3</sup>	5,70	7,10
Additional refrigerant charge max in kg	1,25	2,51
Pipe length restriction :	No additional limit	No additional limit
Pump Down Operation for servicing reason without external liquid receiver.	No additional limit	No additional limit
AHU DX COIL Volume without additional refrigerant charge in dm <sup>3</sup>	4,30	4,30
AHU DX COIL Volume Additional refrigerant charge in kg/dm <sup>3</sup>	0,90	0,90



STANDARD PACi outdoor units model code	U-60PEY1E5	U-71PEY1E5	U-100PEY1E5/8	U-125PEY1E5/8	U-140PEY1E8
AHU DX COIL MAX Volume in dm <sup>3</sup>	1,8	2,0	2,8	2,75	2,8
Additional refrigerant charge max in kg	0,36	0,54	0,81	0,76	0,81
Pipe length restriction :	max. pipe length 40 m	max. pipe length 35 m	max. pipe length 30 m	max. pipe length 30 m	max. pipe length 30 m
Pump Down Operation for servicing reason without external liquid receiver.	No additional limit	No additional limit	NO pump down with ambient temperature > +35°C	NO pump down with ambient temperature > +25°C	No additional limit
AHU DX COIL Volume without additional refrigerant charge in dm <sup>3</sup>	1,70	1,70	1,90	1,90	1,90
AHU DX COIL Volume Additional refrigerant charge in kg/dm <sup>3</sup>	0,90	0,90	0,90	0,90	0,90

De toegevoegde koelmiddel vulling vanwege de grotere DX-koelerblok inhoud is bovenop de koelmiddel vulling wanneer de toegestane leidinglengte de standaard voorvulling overschrijdt.

Voorbeeld, berekening van toegevoegde vulling:

Unit: U-60PE1E5

Leidinglengte: 40 meter

DX-koelerblok (externe leverancier): 1,7 dm<sup>3</sup>

Voorvulling koudemiddel is tot 30m leidinglengte.

Extra koudemiddelvulling: 0,05 kg/m

DX-koelerblok extra koudemiddel vulling: 0,9 kg/dm<sup>3</sup>

Refrigerant charge at shipment fitted for AHU DX COIL Volume within 1,4 dm<sup>3</sup>

ELITE PACi outdoor units model code	U-60PE1E5
AHU DX COIL MAX Volume in dm <sup>3</sup>	1,8
Additional refrigerant charge max in kg	0,36
Pipe length restriction :	max. pipe length 40 m
Pump Down Operation for servicing reason without external liquid receiver.	NO pump down with ambient temperature > +35°C
AHU DX COIL Volume without additional refrigerant charge in dm <sup>3</sup>	1,40
AHU DX COIL Volume Additional refrigerant charge in kg/dm <sup>3</sup>	0,90

Totale toegevoegde koudemiddelberekening:

$$((1,7\text{dm}^3 - 1,4\text{dm}^3) \times 0,9\text{kg/dm}^3) + ((40 - 30) \times 0,05 \text{ kg/m}) = 0,27\text{kg} + 0,50\text{kg} = 0,77 \text{ kg}$$

## b) Maximaal toegestane luchtvolume met gerelateerde restricties

<b>ELITE PACi outdoor units model code</b>	<b>U-50PE1E5</b>	<b>U-60PE1E5</b>	<b>U-71PE1E5/8</b>	<b>U-100PE1E5/8</b>	<b>U-125PE1E5/8</b>	<b>U-140PE1E5/8</b>
AHU maximum air flow rate m <sup>3</sup> /h	1080	1600	1800	2400	2600	2700
Air inlet temperature restriction	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB
AHU max. air flow rate limit without restriction m <sup>3</sup> /h	780	960	1500	1980	2100	2160

<b>BIG PACi outdoor units model code</b>	<b>U-200PE1E8</b>	<b>U-250PE1E8</b>
AHU maximum air flow rate m <sup>3</sup> /h	4300	5400
Air inlet temperature restriction	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB
AHU max. air flow rate limit without restriction m <sup>3</sup> /h	3960	4440

<b>STANDARD PACi outdoor units model code</b>	<b>U-60PEY1E5</b>	<b>U-71PEY1E5</b>	<b>U-100PEY1E5/8</b>	<b>U-125PEY1E5/8</b>	<b>U-140PEY1E8</b>
AHU maximum air flow rate m <sup>3</sup> /h	1450	1600	2400	2500	2600
Air inlet temperature restriction	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB	cooling max. inlet 30°CDB
AHU max. air flow rate limit without restriction m <sup>3</sup> /h	960	960	1980	2100	2160

### **7.3 In bedrijf stellen van de installatie**

- 1- Stel het model en de capaciteit in via de afstand bediening zoals beschreven in hoofdstuk 4
- 2- Stel op de regelprint van het buitendeel de draai switch in op 1
- 3- Druk op de regelprint van het buitendeel op het knopje A.ADD. of sluit de 2 pennen waar A.ADD bij staat kort tot LED 1 en 2 om en om gaan knipperen.
- 4- Tijdens het zoeken en adresseren zullen LED 1 en 2 op de regelprint van het buitendeel om en om gaan knipperen
- 5- Na het adresseren zullen LED 1 en 2 op de regelprint van het buiten deel opvolgend uitgaan
- 6- Installatie is gereed voor gebruik

Indien er tijdens het adresseren een fout melding naar voren komt zal dit zich uiten in het knipperen van de LED's 1 en 2. ( zie hoofdstuk 5 codes op het buiten deel ).

De buitendelen zijn gevuld voor een bepaalde leiding lengte. Indien deze lengte overschreden wordt, dient er koudemiddel gevuld te worden ( zie documentatie bij het buiten deel of neem contact op met de leverancier ).

