Number	096
Subject	Panasonic PAC-i Install Guide (5.0kW – 28kW)
Date	29 July 2016



Wiring

Panasonic PAC-I Commercial Split Systems require a separate power supply to Indoor and Outdoor Unit.

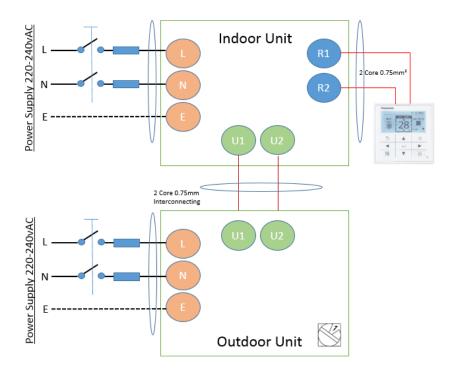
Power to Indoor Unit is via a 5 amp fused spur.

Connection	Description	
U1	Outdoor Comms	
U2	Outdoor Comms	

R1	Remote Controller
R2	Remote Controller

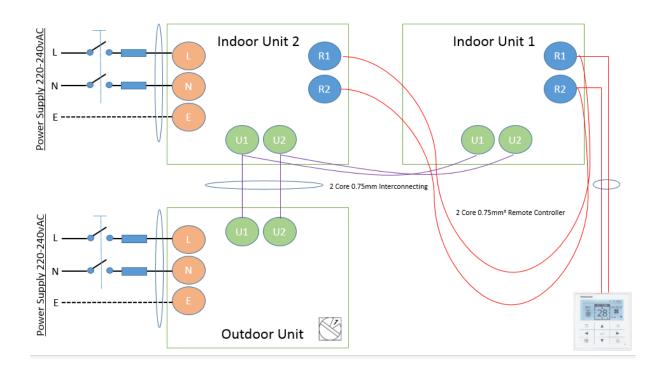
- U1/U2 and R1 and R2 are all linked unless there is more than one system/condenser.
- In this instance R1/R2 is always linked and U1/U2 is only linked to its own system/condenser.
- All indoor units require a 5 amp fused spur only.

Single Phase, Single Split example

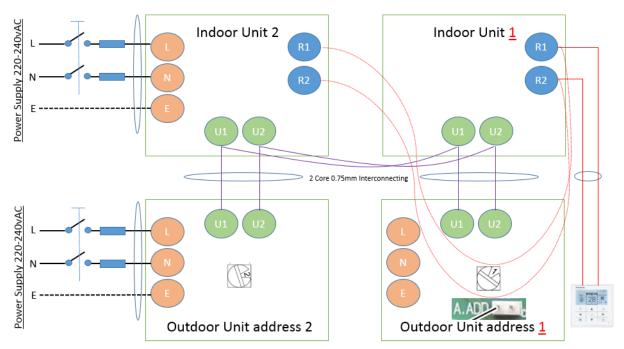




Single Phase, Twin Split example



Single Phase, Group Control example



Short-circuit the automatic address pin at the outdoor main / master unit (CN054) for 1 second or longer, then release it. This only applies to systems with more than one condenser and the systems must be addressed via the rotary switch on the condenser as shown above.

Interconnecting link between U1 & U2 is only required if a central controller is being used. Please only daisy chain the R1 & R2 if you are putting two or more single splits onto one controller.



R22 Renewal

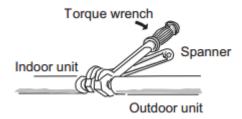
This is possible on all **PAC-***i* systems. Please check latest information with Logicool as some piping restrictions apply.

Drain

Drain elbows are *not* supplied with **PAC-***i* commercial split systems

Torque Settings

Please use a Torque Wrench as this as per manufacturers recommendations and warranty may be rejected if this practice is not followed. Depending on the installation conditions, applying excessive torque may cause the nuts to crack.



		Tightening torque (approx.)
Charging port		10.7 – 14.7 N • m {107 – 147 kgf • cm}
gg	ø6.35 (Liquid side)	14.0 – 20.0 N • m {140 – 200 kgf • cm}
/alve stem	ø9.52 (Liquid side)	20.6 – 28.4 N • m {206 – 284 kgf • cm}
Valve	ø12.7, ø15.88 (Gas side)	48.0 – 59.8 N • m {480 – 598 kgf • cm}

Valve size	Tightening torque	
α0.52	20.6N•m~28.4N•m	
ø9.52	(2.1kgf•m~2.8kgf•m)	
ø15.88	48.0N•m~59.8N•m	
Ø15.88	(4.8kgf•m~6.0kgf•m)	

Refrigerant Charge

All models are pre-charged to 30 metres. Please check outdoor unit data below for full information.

Controls





Panasonic **PAC-i** models do **not** come with a controller as standard. All controllers are optional.

All systems can also interface with Panasonic **ECO-i** VRF Systems *without* using an interface PCB.



Model Specification - Standard Inverter, Single Phase

Model	U-60PEY1E5	U-71PEY1E5
Height (mm)	569	569
Width (mm)	790	790
Depth (mm)	285	285
Weight (kG)	42	42
Airflow (m3/min)	30 / 35	39 / 39
Sound Pressure Cooling (dBA)	48	50
Sound Pressure - Set Back (dBA)		
Liquid (mm(inches))	9.52 (3/8)	9.52 (3/8)
Gas (mm(inches))	15.88 (5/8)	15.88 (5/8)
Max Pipe Run (m)	50	50
Max Pipe Lift (m)	30	30
Pre-charged to (m)	30	30
Standing Charge (kG)	1.7	1.7
Refrigerant	R410a	R410a
Phase	Single	Single
	IU (5A) and OU or OU with	IU (5A) and OU or OU with
Power Supply to	feed to IU	feed to IU
Fuse Rating (A)	16	16
Interconnecting	2C Screen 0.75mm ²	2C Screen 0.75mm ²
System Power Input (Cool/Heat) - watts	1.69/1.48	2.19/1.88

Model	U-100PEY1E5	U-125PEY1E5
Height (mm)	996	996
Width (mm)	940	940
Depth (mm)	340	340
Weight (kG)	73	73
Airflow (m3/min)	76 / 67	80 / 73
Sound Pressure Cooling (dBA)	54	56
Sound Pressure - Set Back (dBA)		
Liquid (mm(inches))	9.52 (3/8)	9.52 (3/8)
Gas (mm(inches))	15.88 (5/8)	15.88 (5/8)
Max Pipe Run (m)	50	50
Max Pipe Lift (m)	30	30
Pre-charged to (m)	30	30
Standing Charge (kG)	2.6	3.2
Refrigerant	R410a	R410a
Phase	Single	Single
	IU (5A) and OU or OU with	IU (5A) and OU or OU with
ower Supply to	feed to IU	feed to IU
use Rating (A)	25	32
interconnecting	2C Screen 0.75mm ²	2C Screen 0.75mm ²
System Power Input (Cool/Heat) - watts	3.22/2.63	4.02/3.29

Model Specification – Standard Inverter, Three Phase

Outdoor Unit Technical Data			
Model	U-100PEY1E8	U-125PEY1E8	U-140PEY1E8
Height (mm)	996	996	1416
Width (mm)	940	940	940
Depth (mm)	340	340	340
Weight (kG)	85	85	98
Airflow (m3/min)	76 / 67	80 / 73	135 / 120
Sound Pressure Cooling (dBA)	54	56	54
Liquid (mm(inches))	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)
Gas (mm(inches))	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
Max Pipe Run (m)	50	50	50
Max Pipe Lift (m)	30	30	30
Pre-charged to (m)	5 30	30	30
Standing Charge (kG)	2.6	3.2	3.4
Refrigerant	R410a	R410a	R410a
Phase	Three	Three	Three
	IU (5A) and OU or OU with	IU (5A) and OU or OU with	IU (5A) and OU or OU with
Power Supply to	feed to IU	feed to IU	feed to IU
Max Start/Run Current (A)			
Fuse Rating (A)	16	16	16
Interconnecting	2C Screen 0.75mm ²	2C Screen 0.75mm ²	2C Screen 0.75mm ²
System Power Input (Cool/Heat) - watts	3.22/2.63	4.02/3.29	4.02/3.29



Model Specification – Elite Inverter, Single Phase

Model	U-50PE1E5	U-60PE1E5A	U-71PE1E5A
Height (mm)	569	996	996
Vidth (mm)	790	940	940
Depth (mm)	285	340	340
Veight (kG)	42	68	69
Airflow (m3/min)	30/35	60/60	60/60
Sound Pressure Cooling (dBA)	1	1	1
iguid (mm(inches))	6.35 (1/4)	9.52 (3/8)	9.52 (3/8)
Gas (mm(inches))	12.7 (1/2)	15.88 (5/8)	15.88 (5/8)
Max Pipe Run (m)	40	50	50
Max Pipe Lift (m)	30	30	30
Pre-charged to (m)	30	30	30
Refrigerant	R410a	R410a	R410a
Phase	Single	Single	Single
	-	-	-
	IU (5A) and OU or OU with	IU (5A) and OU or OU with	IU (5A) and OU or OU with
Power Supply to	feed to IU	feed to IU	feed to IU
Fuse Rating (A)	16	16	16
	2C Screen 0.75mm ²	2C Screen 0.75mm ²	2C Screen 0.75mm ²
Interconnecting			
Interconnecting System Power Input (Cool/Heat) - watts Outdoor Unit Technical Data	1.350/1.430	1.480/1.810	1.800/2.000
System Power Input (Cool/Heat) - watts Outdoor Unit Technical Data		1.480/1.810 U-125PE1E5A	1.800/2.000 U-140PE1E5A
System Power Input (Cool/Heat) - watts Outdoor Unit Technical Data Model Height (mm)	1.350/1.430 <u>U-100PE1E5A</u> 996	U-125PE1E5A 1416	U-140PE1E5A 1416
Outdoor Unit Technical Data Model Height (mm) Width (mm)	1.350/1.430 U-100PE1E5A	U-125PE1E5A	U-140PE1E5A
Outdoor Unit Technical Data Model Height (mm) Width (mm)	1.350/1.430 <u>U-100PE1E5A</u> 996	U-125PE1E5A 1416	U-140PE1E5A 1416
Outdoor Unit Technical Data Model Height (mm) Width (mm) Depth (mm) Weight (kG)	1.350/1.430 U-100PE1E5A 996 940	U-125PE1E5A 1416 940	U-140PE1E5A 1416 940
Outdoor Unit Technical Data Model Height (mm) Depth (mm) Weight (kG) Airflow (m3/min)	U-100PE1E5A 996 940 340	U-125PE1E5A 1416 940 340 98 130/110	U-140PE1E5A 1416 940 340
Outdoor Unit Technical Data Model Height (mm) Width (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA)	U-100PE1E5A 996 940 340 69 110/95 1	U-125PE1E5A 1416 940 340 98 130/110 53/53	U-140PE1E5A 1416 940 340 98 135/120 54/55
Outdoor Unit Technical Data Model Height (mm) Width (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches))	U-100PE1E5A 996 940 340 69 110/95	U-125PE1E5A 1416 940 340 98 130/110	U-140PE1E5A 1416 940 340 98 135/120
Outdoor Unit Technical Data Model Height (mm) Depth (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches)) Gas (mm(inches))	U-100PE1E5A 996 940 340 69 110/95 1	U-125PE1E5A 1416 940 340 98 130/110 53/53	U-140PE1E5A 1416 940 340 98 135/120 54/55
Outdoor Unit Technical Data Model Height (mm) Width (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches)) Gas (mm(inches)) Max Pipe Run (m)	U-100PE1E5A 996 940 340 69 110/95 1 9.52 (3/8) 15.88 (5/8) 50	U-125PE1E5A 1416 940 340 98 130/110 53/53 9.52 (3/8) 15.88 (5/8) 75	U-140PE1E5A 1416 940 340 98 135/120 54/55 9.52 (3/8) 15.88 (5/8) 75
Outdoor Unit Technical Data Model Height (mm) Width (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches)) Gas (mm(inches)) Max Pipe Run (m) Max Pipe Lift (m)	U-100PE1E5A 996 940 340 69 110/95 1 9.52 (3/8) 15.88 (5/8) 50 30	U-125PE1E5A 1416 940 340 98 130/110 53/53 9.52 (3/8) 15.88 (5/8) 75	U-140PE1E5A 1416 940 340 98 135/120 54/55 9.52 (3/8) 15.88 (5/8) 75
Outdoor Unit Technical Data Model Height (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches)) Gas (mm(inches)) Max Pipe Run (m) Max Pipe Run (m) Pre-charged to (m) Pre-charged to (m)	U-100PE1E5A 996 940 340 69 110/95 1 9.52 (3/8) 15.88 (5/8) 50 30 730	U-125PE1E5A 1416 940 340 98 130/110 53/53 9.52 (3/8) 15.88 (5/8) 75 30 "30	U-140PE1E5A 1416 940 340 98 135/120 54/55 9.52 (3/8) 15.88 (5/8) 75 30
Outdoor Unit Technical Data Model Height (mm) Width (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches)) Gas (mm(inches)) Max Pipe Run (m) Max Pipe Lift (m) Pre-charged to (m) Refrigerant	U-100PE1E5A 996 940 340 69 110/95 1 9.52 (3/8) 15.88 (5/8) 50 30 730 R410a	U-125PE1E5A 1416 940 340 98 130/110 53/53 9.52 (3/8) 15.88 (5/8) 75 30 75 R410a	U-140PE1E5A 1416 940 340 98 135/120 54/55 9.52 (3/8) 15.88 (5/8) 75 30 730 R410a
Outdoor Unit Technical Data Model Height (mm) Width (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches)) Gas (mm(inches)) Max Pipe Run (m) Max Pipe Lift (m) Pre-charged to (m) Refrigerant	U-100PE1E5A 996 940 340 69 110/95 1 9.52 (3/8) 15.88 (5/8) 50 30 730	U-125PE1E5A 1416 940 340 98 130/110 53/53 9.52 (3/8) 15.88 (5/8) 75 30 "30	U-140PE1E5A 1416 940 340 98 135/120 54/55 9.52 (3/8) 15.88 (5/8) 75 30
Outdoor Unit Technical Data Model Height (mm) Width (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches)) Gas (mm(inches)) Max Pipe Run (m) Max Pipe Lift (m) Pre-charged to (m) Refrigerant	U-100PE1E5A 996 940 340 69 110/95 1 9.52 (3/8) 15.88 (5/8) 50 30 730 R410a	U-125PE1E5A 1416 940 340 98 130/110 53/53 9.52 (3/8) 15.88 (5/8) 75 30 75 R410a	U-140PE1E5A 1416 940 340 98 135/120 54/55 9.52 (3/8) 15.88 (5/8) 75 30 730 R410a
Outdoor Unit Technical Data Model Height (mm) Width (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches)) Gas (mm(inches)) Max Pipe Run (m) Max Pipe Run (m) Max Pipe Lift (m) Pre-charged to (m) Refrigerant Phase	U-100PE1E5A 996 940 340 69 110/95 1 9.52 (3/8) 15.88 (5/8) 50 30 30 8410a Single	U-125PE1E5A 1416 940 340 98 130/110 53/53 9.52 (3/8) 15.88 (5/8) 75 30 "30 R410a Single	U-140PE1E5A 1416 940 340 98 135/120 54/55 9.52 (3/8) 15.88 (5/8) 75 30 730 R410a Single
System Power Input (Cool/Heat) - watts Outdoor Unit Technical Data Model	U-100PE1E5A 996 940 340 69 110/95 1 9.52 (3/8) 15.88 (5/8) 50 30 R410a Single IU (5A) and OU or OU with	U-125PE1E5A 1416 940 340 98 130/110 53/53 9.52 (3/8) 15.88 (5/8) 75 30 730 R410a Single IU (5A) and OU or OU with	U-140PE1E5A 1416 940 340 98 135/120 54/55 9.52 (3/8) 15.88 (5/8) 75 30 R410a Single IU (5A) and OU or OU with
Outdoor Unit Technical Data Model Height (mm) Width (mm) Depth (mm) Weight (kG) Airflow (m3/min) Sound Pressure Cooling (dBA) Liquid (mm(inches)) Gas (mm(inches)) Max Pipe Run (m) Max Pipe Lift (m) Pre-charged to (m) Refrigerant Phase Power Supply to	U-100PE1E5A 996 940 340 69 110/95 1 9.52 (3/8) 15.88 (5/8) 50 30 730 R410a Single IU (5A) and OU or OU with feed to IU	U-125PE1E5A 1416 940 340 98 130/110 53/53 9.52 (3/8) 15.88 (5/8) 75 30 75 30 R410a Single IU (5A) and OU or OU with feed to IU	U-140PE1E5A 1416 940 340 98 135/120 54/55 9.52 (3/8) 15.88 (5/8) 75 30 R410a Single IU (5A) and OU or OU with feed to IU

<u>Model Specification – Elite Inverter, Three Phase</u>

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Outdoor Unit Technical Data			
Model	U-71PE1E8A	U-100PE1E8A	U-125PE1E8A
Height (mm)	996	996	1416
Width (mm)	940	940	940
Depth (mm)	340	340	340
Weight (kG)	69	69	98
Sound Pressure Cooling (dBA)	48	52	53
Liquid (mm(inches))	9.52 (3/8)	9.52 (3/8)	9.52 (3/8)
Gas (mm(inches))	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
Max Pipe Run (m)	50	50	75
Max Pipe Lift (m)	30	30	30
Pre-charged to (m)	" 30	5 30	30
Standing Charge (kG)	2.35	3.4	3.4
Refrigerant	R410a	R410a	R410a
Phase	Three	Three	Three
Power Supply to	IU (5A) and OU or OU with feed to IU	IU (5A) and OU or OU with feed to IU	IU (5A) and OU or OU with feed to IU
Max Start/Run Current (A)			
Fuse Rating (A)	10	16	16
Interconnecting	2C Screen 0.75mm ²	2C Screen 0.75mm ²	2C Screen 0.75mm ²
System Power Input (Cool/Heat) - watts	1.800/2.000	2.380/2.600	3.470/3.500
Outdoor Unit Technical Data			
Model	U-140PE1E8A	U-200PE1E8	U-250PE1E8
Height (mm)	1416	1526	1526
Width (mm)	940	940	940
Depth (mm)	340	340	340
Weight (kG)	98	118	118
Sound Pressure Cooling (dBA)	54	57	57
Liquid (mm(inches))	9.52 (3/8)	9.52 (3/8) **	12.7 (1/2)
Gas (mm(inches))	15.88 (5/8)	28.60 (1 1/8)	28.60 (1 1/8)
Max Pipe Run (m)	75	100	100
Max Pipe Lift (m)	30	30	30
Pre-charged to (m)	30	30	30
Standing Charge (kG)	3.4	5.3	6.5
Refrigerant	R410a	R410a	R410a
Phase	Three	Three	Three
	IU (5A) and OU or OU with	IU (5A) and OU or OU with	IU (5A) and OU or OU with
Power Supply to	feed to IU	feed to IU	feed to IU
Max Start/Run Current (A)			
Fuse Rating (A)	16	16	20
Interconnecting	2C Screen 0.75mm ²	2C Screen 0.75mm ²	2C Screen 0.75mm ²
System Power Input (Cool/Heat) - watts	3.470/3.500	7.640/6.150	9.550/8.200
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