

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

PAC-i
STANDARD

PAC-i
ELITE

Possible
to use on
R22 pipings
R22 RENEWAL

Wiring

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

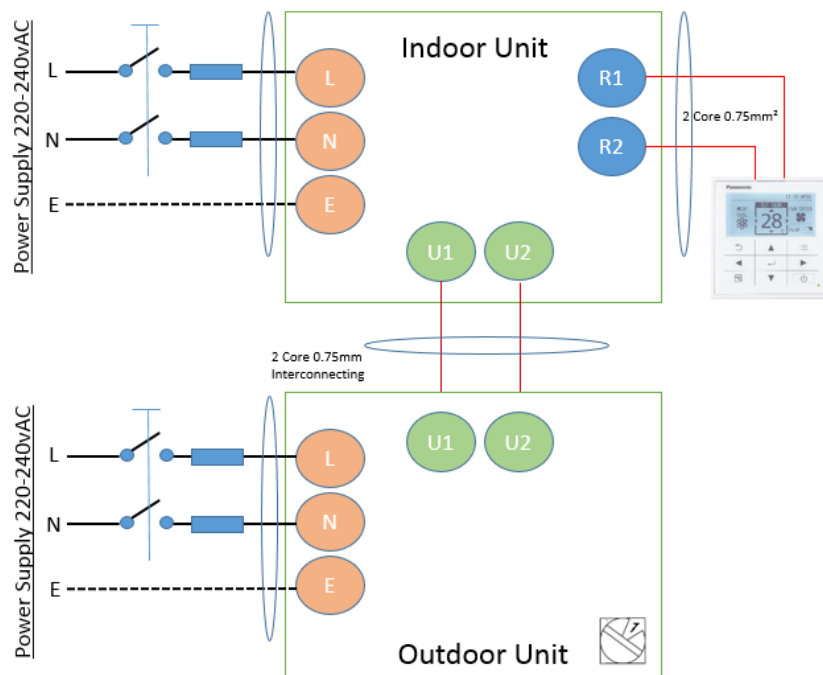
Power to Indoor Unit is via a 5 amp fused spur.

Connection	Description
U1	Outdoor Comms
U2	Outdoor Comms

R1	Remote Controller
R2	Remote Controller

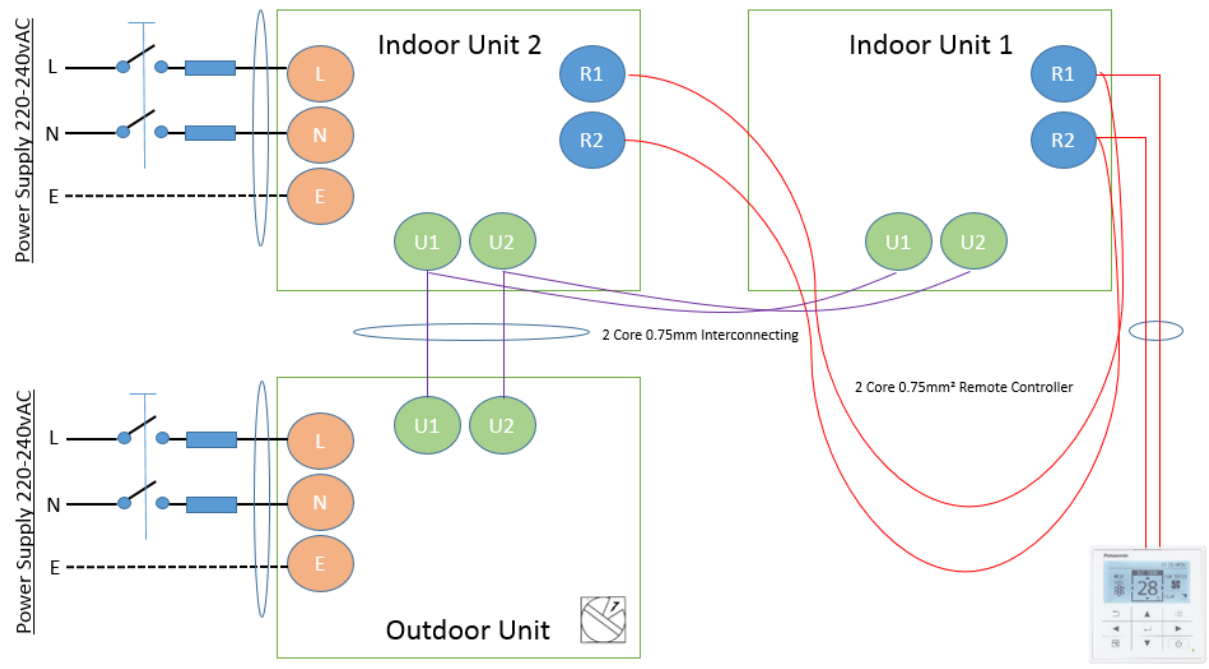
- U1/U2 and R1 and R2 are all linked unless there is more than one system/condenser.
- In this instance R1/R2 is always linked and U1/U2 is only linked to its own system/condenser.
- All indoor units require a 5 amp fused spur only.

Single Phase, Single Split example

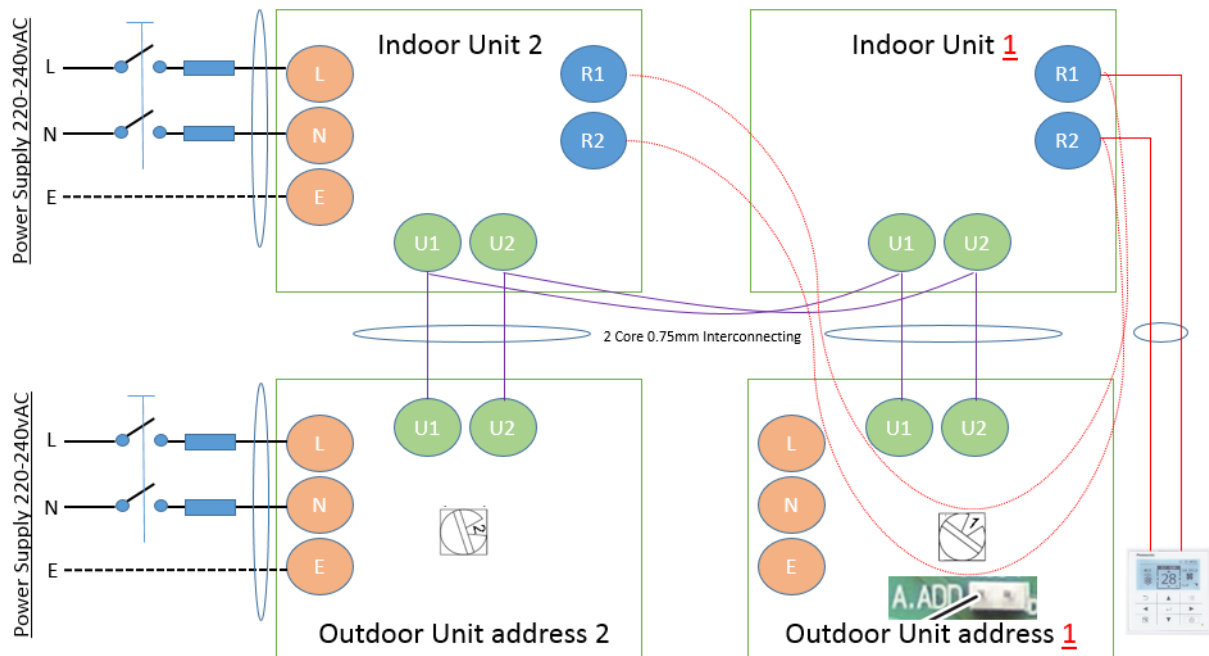


Technical Bulletin

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

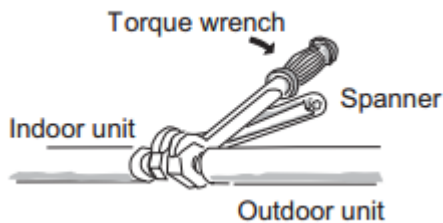
This is possible on all **PAC-i** systems. Please check latest information with Logicoool as some piping restrictions apply.

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.



Charging port		Tightening torque (approx.)	Valve size	Tightening torque
Valve stem cap	ø6.35 (Liquid side)	10.7 – 14.7 N • m {107 – 147 kgf • cm}	ø9.52	20.6N•m~28.4N•m (2.1kgf•m~2.8kgf•m)
	ø9.52 (Liquid side)	14.0 – 20.0 N • m {140 – 200 kgf • cm}		
	ø12.7, ø15.88 (Gas side)	20.6 – 28.4 N • m {206 – 284 kgf • cm}	ø15.88	48.0N•m~59.8N•m (4.8kgf•m~6.0kgf•m)
		48.0 – 59.8 N • m {480 – 598 kgf • cm}		

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

Outdoor Unit Technical Data		
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
Power Supply to	IU (5A) and OU or OU with feed to IU	IU (5A) and OU or OU with 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

Outdoor Unit Technical Data		
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
Power Supply to	IU (5A) and OU or OU with feed to IU	IU (5A) and OU or OU with feed to IU
Fuse 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
Sound Pressure - Set Back (dBA)			
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)	30	30	30
Standing Charge (kg)	2.6	3.2	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)	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

Outdoor Unit Technical Data Model	U-50PE1E5	U-60PE1E5A	U-71PE1E5A
Height (mm)	569	996	996
Width (mm)	790	940	940
Depth (mm)	285	340	340
Weight (kg)	42	68	69
Airflow (m3/min)	30/35	60/60	60/60
Sound Pressure Cooling (dBA)	1	1	1
Liquid (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
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
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	1.350/1.430	1.480/1.810	1.800/2.000

Outdoor Unit Technical Data Model	U-100PE1E5A	U-125PE1E5A	U-140PE1E5A
Height (mm)	996	1416	1416
Width (mm)	940	940	940
Depth (mm)	340	340	340
Weight (kg)	69	98	98
Airflow (m3/min)	110/95	130/110	135/120
Sound Pressure Cooling (dBA)	1	53/53	54/55
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	75	75
Max Pipe Lift (m)	30	30	30
Pre-charged to (m)	30	30	30
Refrigerant	R410a	R410a	R410a
Phase	Single	Single	Single
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
Fuse Rating (A)	25	32	32
Interconnecting	2C Screen 0.75mm ²	2C Screen 0.75mm ²	2C Screen 0.75mm ²
System Power Input (Cool/Heat) - watts	2.380/2.600	3.470/3.500	4.310/4.330

Model Specification – Elite Inverter, Three Phase

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	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
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)	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