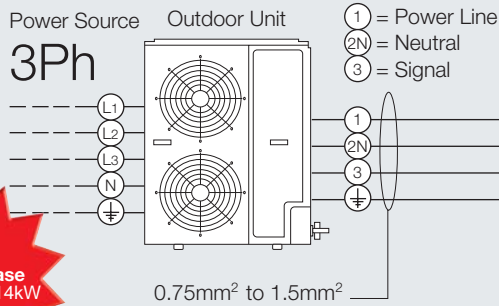


FDA Multi Systems - Technical Data

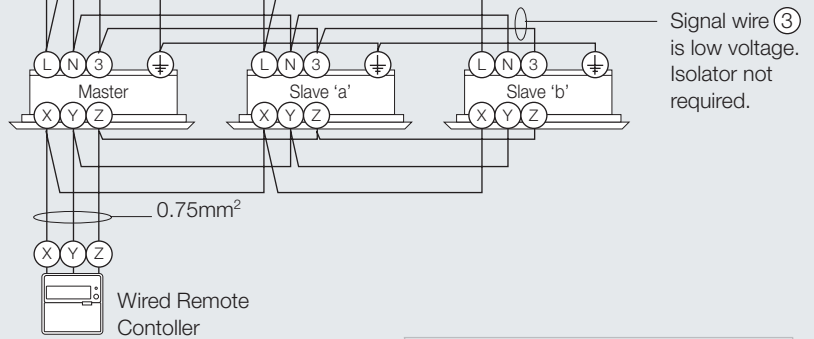
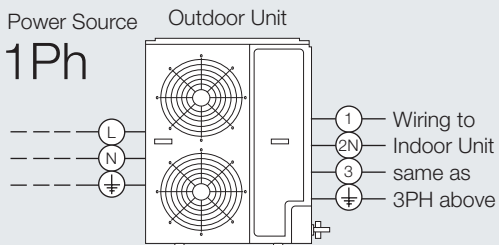
Wiring Arrangement and Master/Slave settings for Multi Systems



Mains power is to the outdoor unit first.

Check the correct power supply 1ph or 3 ph is available on site. Check the correct outdoor units are ordered to suit 1ph or 3 ph.

The EHPAC series now includes 1ph outdoor units for models 402 (11.2kW), 502 (12.5kW) and 602 (14.0kW).



| | | Indoor unit | | | |
|-------------------------|-------|-------------|-----------|-----------|-----------|
| Factory setting: Master | | Master unit | Slave 'a' | Slave 'b' | Slave 'c' |
| Indoor board | SW5-1 | OFF | OFF | ON | ON |
| address switches | SW5-2 | OFF | ON | OFF | ON |

NEW
Single Phase
10,12 & 14kW
systems

Power Supplies & Operating Current – Outdoor Units

| Outdoor Unit | Ctg/Htg kW | Power Supply to Outdoor Unit | Operating Current (c/g.) |
|------------------|--------------|------------------------------|--------------------------|
| FDCA301HEN | 7.2/7.3 | 1ph 20A | 9.8A |
| FDCA301HES | 7.2/7.3 | 3ph 15A/ph | 3.6A/ph |
| 5A start current | on following | Inverter units | |
| FDCVA402HEN | 11.2/11.2 | 1ph 20A | 12.0A |
| FDCVA502HEN | 14.0/16.0 | 1ph 25A | 17.7A |
| FDCVA602HEN | 14.8/16.8 | 1ph 30A | 20.4A |
| FDCVA802HES | 22.4/25.0 | 3ph 15A/ph | 9.1A/ph |
| FDCVA1002HES | 28.0/31.5 | 3ph 20A/ph | 12.7A/ph |

Indoor Unit Address

Indoor units connected to FDA Multi Systems are required to be addressed, to enable the controls to recognise which units are connected to each system.

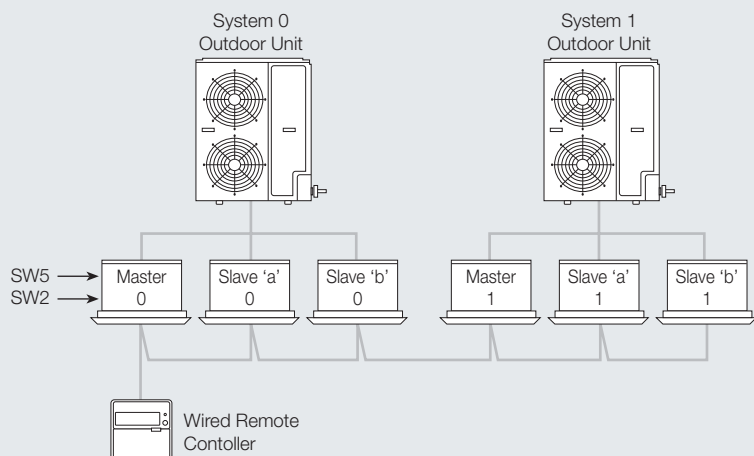
Power supplies to indoor units are connected from the outdoor unit, with an additional SIGNAL wire connected to the MASTER indoor unit - which also has the remote control connected. The other indoor units must be addressed as Slave 'a' and Slave 'b' units - see bottom of page .

Indoor Units – Operating Current

| Outdoor Unit | FDT | FDE | FDUR | FDK |
|--------------|------|------|------|------|
| 151 | 0.3A | 0.2A | | 0.2A |
| 201 | 0.3A | 0.2A | 0.9A | 0.2A |
| 251 | 0.3A | 0.4A | 1.0A | 0.2A |
| 301 | 0.3A | 0.4A | 1.3A | 0.5A |
| 401 | 0.6A | 0.5A | 1.7A | |
| 501 | 0.7A | 0.6A | 2.0A | |

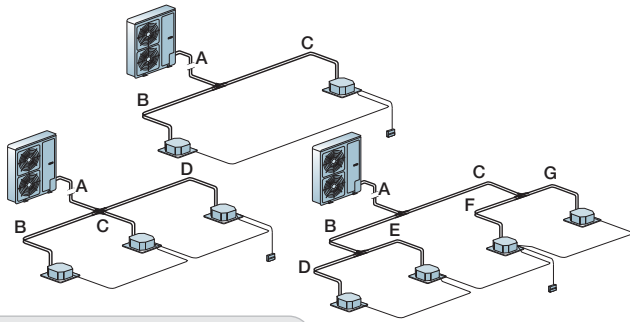
Group Control

Where Multi Systems are controlled on a Group arrangement (up to 16 systems) using a single remote controller, it is necessary to adjust SW2 so each individual Multi System has indoor units with the same address number, ie. 0-0-0,1-1-1, 2-2-2, etc.



The **Master/Slave** addresses must also be adjusted using SW5 - see page opposite.

FDA Multi Systems - Installation



Pipe Length Limitations

Height Difference (all systems)

Outdoor unit above max. height difference is 30m
 Outdoor unit below max. height difference is 15m
 Difference between indoor units max. height difference is 0.5m

Twin Systems 7.2kW to 14.8kW

A = main piping, B = branch piping, C = branch piping
 A + B + C Maximum is 50 metres
 Difference between B & C No more than 10 metres
 B Maximum is 20 metres
 C Maximum is 20 metres

Triple Systems 14.8kW

A + B + C + D Maximum is 50 metres
 Difference between B & C or C & D No more than 10 metres
 B Maximum is 20 metres
 C Maximum is 20 metres
 D Maximum is 20 metres

Quad Systems 14.3kW

Contact 3D for details

Twin Systems 20.0 & 25.0 kW – FDCA802 & 1002

Outdoor unit to furthest indoor unit Maximum is 70 metres
 Difference between B & C no more than 10 metres
 B Maximum is 30 metres
 C Maximum is 30 metres

Triple Systems 20.0 & 25.0 kW – FDCA802 & 1002

Outdoor unit to furthest indoor unit Maximum is 70 metres
 Difference between B & C & D no more than 10 metres
 B Maximum is 30 metres
 C Maximum is 30 metres
 D Maximum is 30 metres

Quad Systems 20.0 & 25.0 kW – FDCA802 & 1002

Outdoor unit to furthest indoor unit Maximum is 70 metres
 Difference between B & C no more than 10 metres
 Difference between D, E, F, G no more than 10 metres
 B + D Maximum is 30 metres
 B + E Maximum is 30 metres
 C + F Maximum is 30 metres
 C + G Maximum is 30 metres

Refrigerant Pipe Sizes

| Outdoor Unit | Clg/Htg kW | System Type | Pipe sizes o.d. (in) | | | |
|----------------|------------|-------------|----------------------|---------|----------|---------|
| | | | A | B | C(& D) | D,E,F,G |
| FDCA301HEN | 7.2/7.3 | TWIN | 3/8 5/8 | 3/8 1/2 | 3/8 1/2 | |
| FDCA301HES | 7.2/7.3 | TWIN | 3/8 5/8 | 3/8 1/2 | 3/8 1/2 | |
| INVERTER UNITS | | | | | | |
| FDCVA402HEN | 11.2/12.5 | TWIN | 3/8 5/8 | 3/8 1/2 | 3/8 1/2 | |
| FDCVA502HEN | 14.0/16.0 | TWIN | 3/8 5/8 | 3/8 5/8 | 3/8 5/8 | |
| FDCVA602HEN | 14.8/16.8 | TWIN | 3/8 5/8 | 3/8 5/8 | 3/8 5/8 | |
| FDCVA602HEN | 14.8/16.8 | TRIPLE | 3/8 5/8 | 3/8 1/2 | 3/8 1/2 | |
| FDCVA802HEN | 22.4/25.0 | TWIN | 3/8 7/8 | 3/8 5/8 | 3/8 5/8 | |
| FDCVA802HES | 22.4/25.0 | TRIPLE | 3/8 7/8 | 3/8 5/8 | 3/8 5/8 | |
| FDCVA802HES | 22.4/25.0 | QUAD | 3/8 7/8 | 3/8 5/8 | 3/8 5/8 | 3/8 1/2 |
| FDCVA1002HES | 28.0/31.5 | TWIN | 1/2 7/8 | 3/8 5/8 | 3/8 5/8 | |
| FDCVA1002HES | 28.0/31.5 | TRIPLE | 1/2 7/8 | 3/8 5/8 | 3/8 5/8* | |
| FDCVA1002HES | 28.0/31.5 | QUAD | 1/2 7/8 | 3/8 5/8 | 3/8 5/8 | 3/8 5/8 |

*For 201 / 401 / 401 (indoors) Triple, use 3/8 & 1/2 for the 201 connection

Refrigerant Pipework must be installed within limitations detailed in the table below. Each system is supplied with the appropriate branch pipe. Pipe connections to the branch kits must be brazed and it is essential to use nitrogen purge while making the connections.

Outdoor Units for Multi Systems



Outdoor Unit Dimensions & Weights

| mm | H | W | D | Kg |
|-----------|------|-----|-----|-----|
| FDCA301 | 845 | 880 | 340 | 75 |
| FDCVA402 | 845 | 970 | 370 | 61 |
| FDCVA502 | 845 | 970 | 370 | 61 |
| FDCVA602 | 845 | 970 | 370 | 63 |
| FDCVA802 | 1300 | 970 | 370 | 122 |
| FDCVA1002 | 1505 | 970 | 370 | 140 |