

Technical Bulletin

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| Number | 075 |
| Subject | Mitsubishi Mr. Slim Power Inverter Split Models (3.5kW – 14kW) |
| Date | 08 May 2013 |

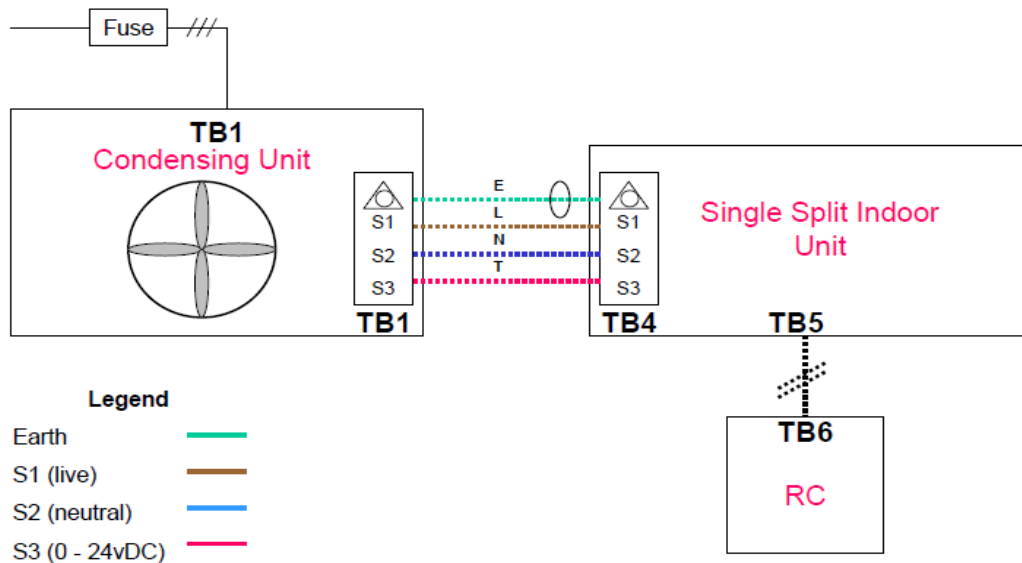
Wiring

Mitsubishi Electric Mr. Slim require the main power supply to be provided to the outdoor unit.

The interconnecting cable is Four Core and is as follows

| Connection | Description |
|------------|---------------|
| S1 | Live |
| S2 | Neutral |
| S3 | 0-30vDC Comms |
| E | Earth |

All indoor units require a 5 amp fused spur only.



Note that there is an optional adapter available should you wish to provide main power to the indoor unit separately. In this instance only use S2 and S3 for interconnecting. Please refer to Logicool Bulletin 058 for more information.

Drain

Drain elbow is **optional** on all models.

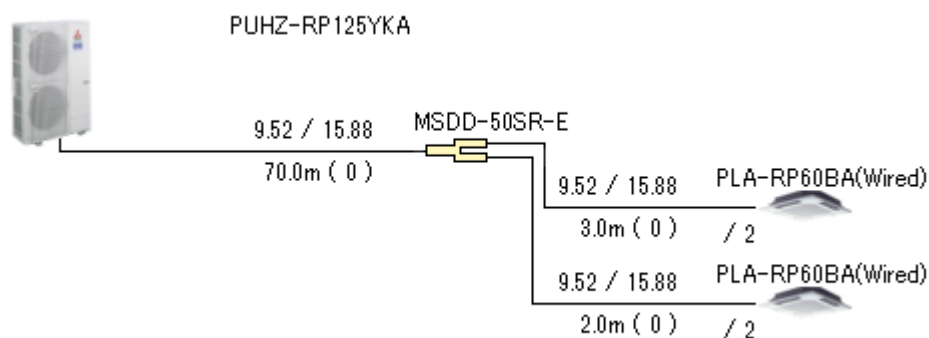
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Piping Specifics

Power Inverters have a longer piping separation than Standard Inverters. Maximum pipe run to 7kW is 50 metres and over 10kW is 75 metres.

When using more than one indoor unit the total pipe run includes all branches added together as per the example below.

Logicool can provide schematics for anything from a simple split system to a large VRF.



Torque Settings

| Copper pipe O.D. (mm) | Flare nut O.D. (mm) | Tightening torque (N-m) |
|--------------------------|------------------------|----------------------------|
| ø6.35 | 17 | 14 - 18 |
| ø6.35 | 22 | 34 - 42 |
| ø9.52 | 22 | 34 - 42 |
| ø12.7 | 26 | 49 - 61 |
| ø12.7 | 29 | 68 - 82 |
| ø15.88 | 29 | 68 - 82 |
| ø15.88 | 36 | 100 - 120 |
| ø19.05 | 36 | 100 - 120 |

Optional M-Net Integration

All Mitsubishi Mr. Slim models can interface directly with a Central Controller such as the AG-150, GB50 or AT-50.

Item required in this instance is a PAC-SF81M (PUHZ Condensers only)

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Refrigerant Charge

All models are pre-charged to 30 metres. Please check below table for additional charge.

| Model | Permitted pipe length | Permitted vertical difference | Additional refrigerant charging amount | | | |
|-----------|-----------------------|-------------------------------|--|-----------|-----------|-----------|
| | | | 31 - 40 m | 41 - 50 m | 51 - 60 m | 61 - 75 m |
| RP35, 50 | -50 m | -30 m | 0.2 kg | 0.4 kg | — | — |
| RP60, 71 | -50 m | | 0.6 kg | 1.2 kg | — | — |
| RP100-140 | -75 m | | 0.6 kg | 1.2 kg | 1.8 kg | 2.4 kg |

Replacement Technology

All Mitsubishi Power Inverter units include HAB oil which is miscible with mineral and polyester oil. The system must be clean, pressure tested to BS:EN378a recommendations and triple vacuumed when re-using existing pipework,

Controls



Typically, Mitsubishi Mr. Slim models do **not** come with a controller as standard.

Please see table below.

| Model | Controller supplied with unit? |
|------------------|-------------------------------------|
| PL Cassette | No |
| SL Cassette | No |
| PC Under Ceiling | No |
| PE Ducted | No |
| SE Ducted | No |
| PK Wall | Infra Red |
| PS Floor | Integrated Hard Wired |
| HP Air Curtain | Hard Wired (not Mitsubishi product) |

Optional Controllers are

- PAR-30MAA - Standard Controller with 7-Day Timer
- PAC-YT51CRB - Simplified Controller
- PAR-FL32MA - Wireless Remote Controller

All systems can also interface with Mitsubishi M-Net Central and Web-Based controllers.

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Enhanced Control Functions – PAR-30MAA

The PAR-30MAA controller includes a Leak Detewction and Back/Up Rotate function as standard.

The leak detection mode should be run when commisioning the system to enable this feature for future use.

The Back/Up rotate function can be used when using two systems in a Server Room as 100% redundancy. Please contact Logicool for details on how to set this up.

Model Specification – Models 35 – 140 (Power Inverter)

Single Phase

| Max Indoors | Model Reference | Replace Technology? | Nominal Cooling (kw) | Nominal Heating (kw) | Max Pipe (m) | Outdoor Fuse (Amps) | I/C Cable (Core) | Pipe Size Gas | Pipe Size Liquid | Power to |
|-------------|-----------------|---------------------|----------------------|----------------------|--------------|---------------------|------------------|---------------|------------------|----------|
| 2 | PUHZ-RP35VHA | Yes | 3.60 | 4.10 | 50 | 16 | 3C + E | 1/2 | 1/4 | Outdoor |
| 2 | PUHZ-RP50VHA | Yes | 5.00 | 6.00 | 50 | 16 | 3C + E | 1/2 | 1/4 | Outdoor |
| 2 | PUHZ-RP60VHA | Yes | 6.00 | 7.00 | 50 | 25 | 3C + E | 5/8 | 3/8 | Outdoor |
| 2 | PUHZ-RP71VHA | Yes | 7.10 | 8.00 | 50 | 25 | 3C + E | 5/8 | 3/8 | Outdoor |
| 3 | PUHZ-RP100VKA | Yes | 10.00 | 11.20 | 75 | 32 | 3C + E | 5/8 | 3/8 | Outdoor |
| 3 | PUHZ-RP125VKA | Yes | 12.50 | 14.00 | 75 | 32 | 3C + E | 5/8 | 3/8 | Outdoor |
| 3 | PUHZ-RP140VKA | Yes | 14.00 | 16.00 | 75 | 40 | 3C + E | 5/8 | 3/8 | Outdoor |

Three Phase

| Max Indoors | Model Reference | Replace Technology? | Nominal Cooling (kw) | Nominal Heating (kw) | Max Pipe (m) | Outdoor Fuse (Amps) | I/C Cable (Core) | Pipe Size Gas | Pipe Size Liquid | Power to |
|-------------|-----------------|---------------------|----------------------|----------------------|--------------|---------------------|------------------|---------------|------------------|----------|
| 3 | PUHZ-RP100YKA | Yes | 10.00 | 11.20 | 75 | 10 | 3C + E | 5/8 | 3/8 | Outdoor |
| 3 | PUHZ-RP125YKA | Yes | 12.50 | 14.00 | 75 | 16 | 3C + E | 5/8 | 3/8 | Outdoor |
| 3 | PUHZ-RP140YKA | Yes | 14.00 | 16.00 | 75 | 16 | 3C + E | 5/8 | 3/8 | Outdoor |
| 4 | PUHZ-RP200YKA | Yes | 19.00 | 22.40 | 120 | 32 | 3C + E | 1 1/8 | 3/8 | Outdoor |
| 4 | PUHZ-RP250YKA | Yes | 22.00 | 27.00 | 120 | 32 | 3C + E | 1 1/8 | 1/2 | Outdoor |