

# Technical Bulletin

Number	076
Subject	Mitsubishi Mr. Slim Standard Inverter Split Models (3.5kW – 14kW)
Date	08 May 2013

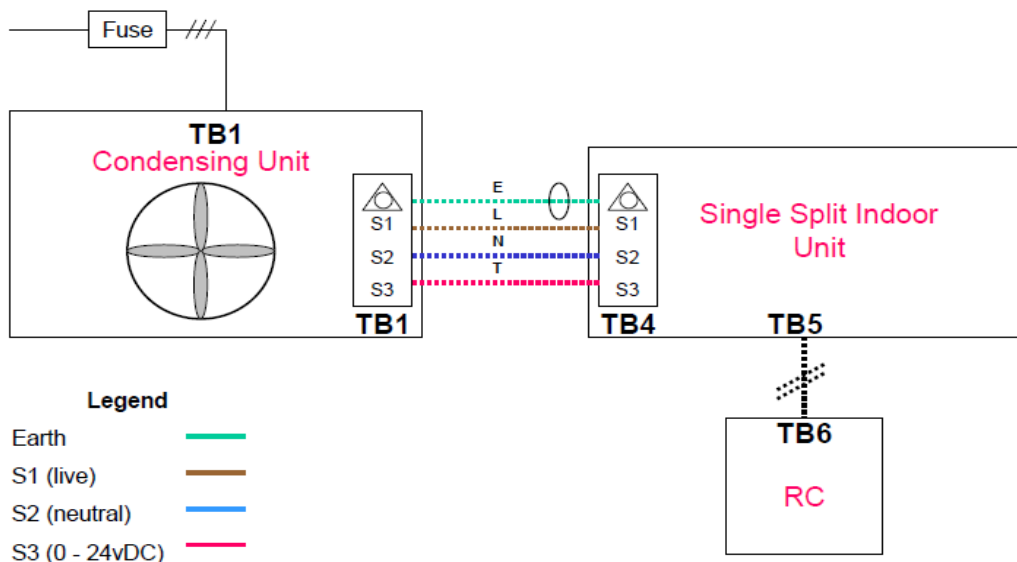
## Wiring

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

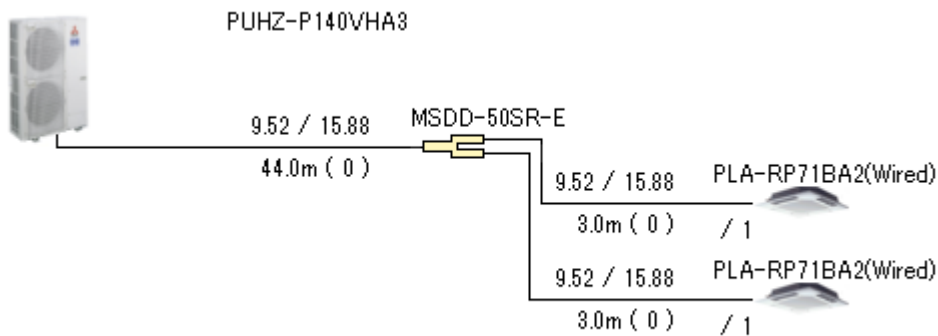
Drain elbow is **optional** on all models.

## Piping Specifics

Standard Inverters have a limited piping separation compared to Power Inverters. Maximum pipe run to 3.5kW is 20 metres, 5kW to 7.1kW is 30 meters and over 10kW is 50 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) or a MAC-3991F (SUZ Condenser only)

## Refrigerant Charge

All models are pre-charged to 7 or 20 metres. Please check outdoor unit data below for full information.

Pipe length	Up to 7 m	No additional charge is required.
	Exceeding 7 m	Additional charge is required. (Refer to the table below.)
Refrigerant to be added	SUZ-KA25/KA35 type	30 g × (refrigerant piping length (m) -5)
	SUZ-KA50/KA60 type	20 g × (refrigerant piping length (m) -7)
	SUZ-KA71 type	55 g × (refrigerant piping length (m) -7)

Model	Permitted pipe length	Permitted vertical difference	Additional refrigerant charging amount		
			21 - 30 m	31 - 40 m	41 - 50 m
P100	-50 m	-30 m	0.6 kg	1.2 kg	1.8 kg
P125, P140			-	0.6 kg	1.2 kg

## 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 (Standard 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
1	SUZ-KA25VA	No	2.50	3.20	20	10	3C + E	3/8	1/4	Outdoor
1	SUZ-KA35VA	No	3.50	4.00	20	10	3C + E	3/8	1/4	Outdoor
1	SUZ-KA50VA	No	4.60	5.00	30	20	3C + E	1/2	1/4	Outdoor
1	SUZ-KA60VA	No	6.10	6.90	30	20	3C + E	5/8	1/4	Outdoor
2	SUZ-KA71VA	No	7.10	8.00	30	20	3C + E	5/8	3/8	Outdoor
3	PUHZ-P100VHA	No	9.40	11.20	50	32	3C + E	5/8	3/8	Outdoor
3	PUHZ-P125VHA	No	12.30	14.00	50	32	3C + E	5/8	3/8	Outdoor
3	PUHZ-P140VHA	No	13.60	16.00	50	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-P100YHA	No	9.40	11.20	50	16	3C + E	5/8	3/8	Outdoor
3	PUHZ-P125YHA	No	12.30	14.00	50	16	3C + E	5/8	3/8	Outdoor
3	PUHZ-P140YHA	No	13.60	16.00	50	16	3C + E	5/8	3/8	Outdoor
4	PUHZ-P200YHA	No	19.00	22.40	70	32	3C + E	1 1/8	3/8	Outdoor
4	PUHZ-P250YHA	No	22.00	27.00	70	32	3C + E	1 1/8	1/2	Outdoor