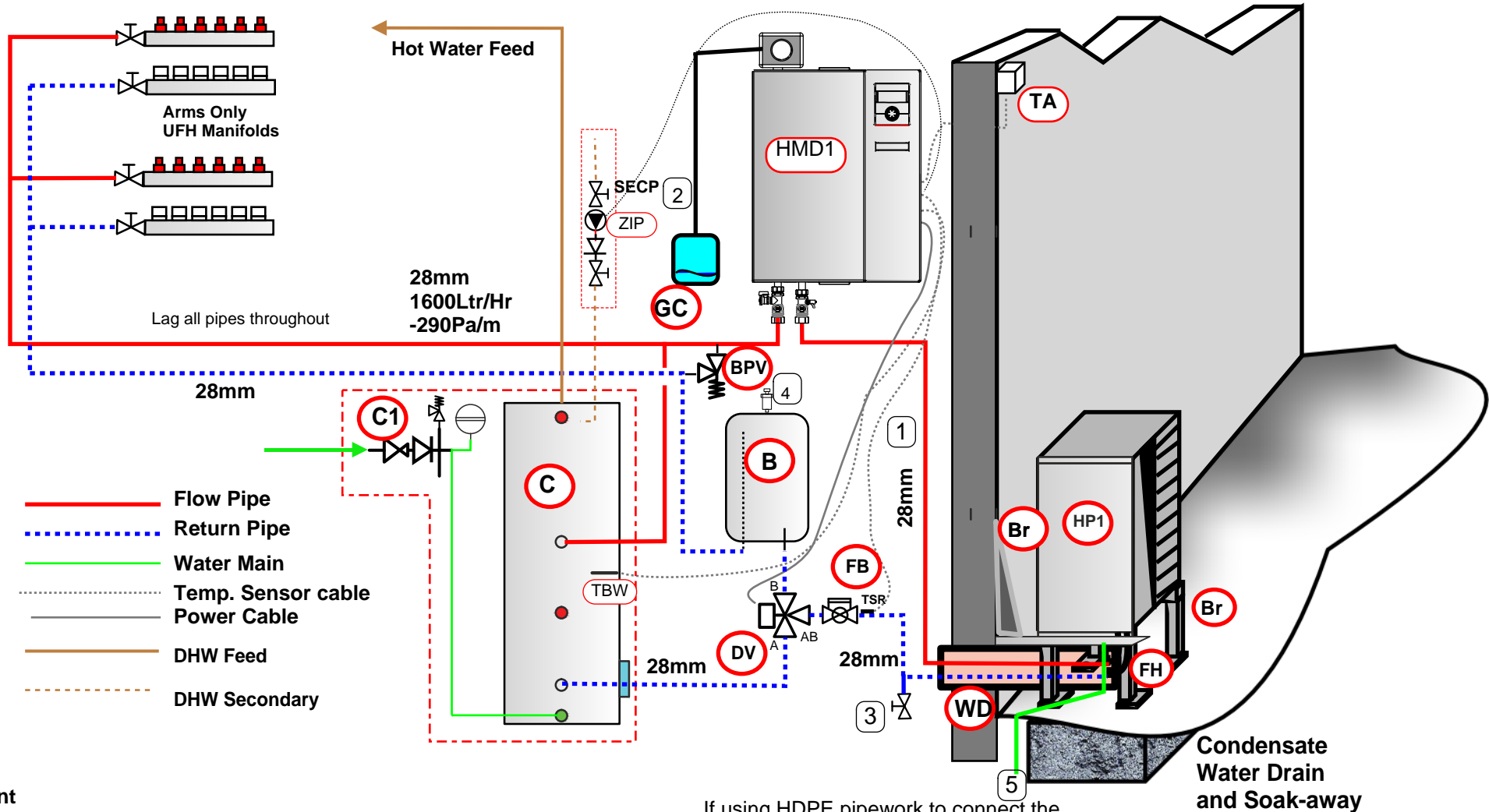


Omnie Heat Pump Pack 2 Installation Guide



Important

These guides are intended to compliment the instructions given in the Operating Manuals supplied with the heat pump.

See page 2 for wiring guide
See page 3 for details of supply and installation

The system must be filled with antifreeze mixture with freeze protection to -10degC. Premixed solution with inhibitors can be supplied by Omnie ready for use.

If using HDPE pipework to connect the outdoor unit 32mm is suitable up to 10m separation. Pre-insulated/ducted pipe is recommended buried to a depth of 700mm and bedded in sand. Cables should be run in plastic duct with the LIN cable in a separate duct 100mm separation.

Start-up Guide Hydraulic Number 102



Pack 2 - LWD70A/SX + HMD1

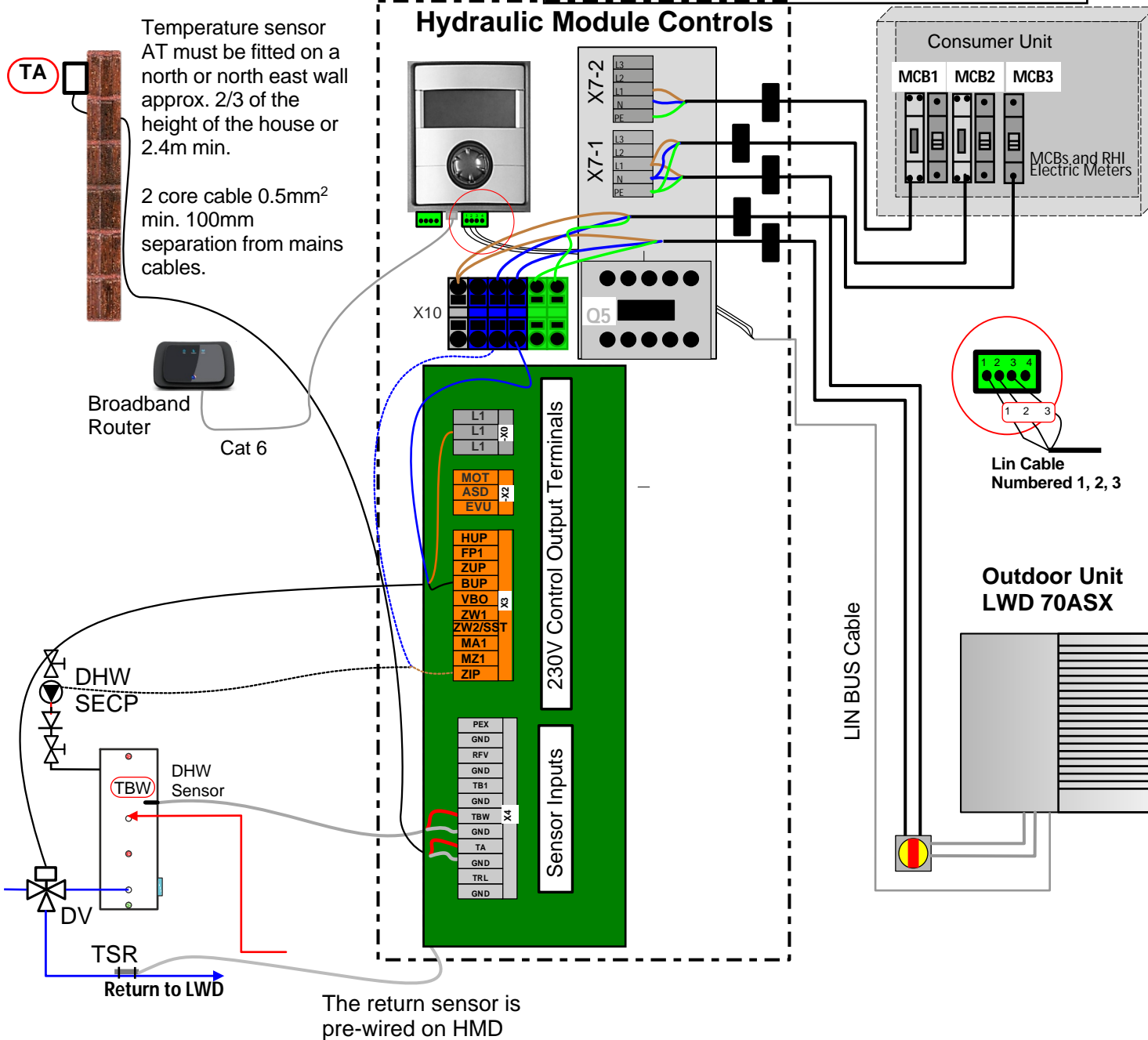
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Omnie Heat Pump Pack 2 Installation Guide



Temperature sensor AT must be fitted on a north or north east wall approx. 2/3 of the height of the house or 2.4m min.

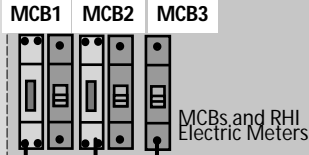
2 core cable 0.5mm² min. 100mm separation from mains cables.

Broadband Router
Cat 6

DHW SECP
DHW Sensor TBW
DV
TSR
Return to LWD

Hydraulic Module Controls

Consumer Unit



Legend

Consumer Unit

- MCB1 Back up Heater MCB 32A Type B
- MCB2 Compressor MCB 20A Type C
- MCB3 Control Circuit MCB 16A Type B

Power Terminal Blocks

- X7-1 HP1 Compressor Supply 230V 18A
- X7-2 Back up Heater Supply 230V 25A
- X10 - Controls Supply 230V 230V 16A

230V Control Output Terminals

- ZIP - DHW SecP 230V 0.5A
- BUP - DV Diverter Valve SW live 230V 0.5A

Sensor Input Terminals

- TA/GND - Outdoor Temp. Sensor
- TBW/GND - DHW Cylinder Temp.

Remote Monitoring

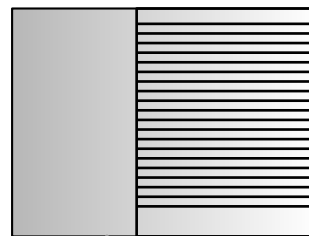
Include a Cat 6 Ethernet cable to the Broadband Router for connection to the remote server.

Note

All sensor cables must be kept away from mains cables with minimum separation 100mm. Sensor cables can be extended up to 25m using 0.5mm² 2 core flex.

YSLYSY cable is suitable for extending the LIN cable up to 25m. use 0.75mm² min 3 core. connect the sheath to the screen at the heat pump and to the HMD. Encase the junction in a metal box and prevent water ingress.

Outdoor Unit LWD 70ASX



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Pack 2 - LWD70A/SX + HMD1

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The return sensor is pre-wired on HMD

Omnie Heat Pump Pack 2 Installation Guide

System Components

Items Included in the Pack

HP1 - Outdoor Heat Pump unit	1 x LWD 70A/SX
HMD1 Hydraulic Module HMD1	1 x HMD1SE
WM/FM- Wall or Floor Mounting Brackets	1 x Pair of either.
AT - Outdoor Air Temperature Sensor	1 x Included in HMD1
FH- Flexible Hoses	1 x IPW1"
B - Buffer Tank	1 x WPS61 Inc 1-1/2" x 1" reducers
C - DHW Cylinder Inc. Unvented Kit	1 x TIM xxx
C1 - DHW Safety Group Set	Inc. with DHW Cylinder
DV- 3 port Diverter Valve 28mm	1 x HP-066109 + HP-066061
BPV - By-Pass Valve 3/4"	1 x UVD3/4"
FB - Strainer Isolation Valve	1 x Filterball 1"

Essential items listed in Quote Options - available from Omnie or by others

WD - Wall Duct Kit (includes hoses)	1 x WDF (Wall Penetration Kit)
GC - Glycol Catcher	1 x SOL-DCVS

Essential Items Supplied By Others not by Omnie

- 1 - All interconnecting Pipe, fittings, clips and insulation
- 2 - DHW Secondary Return Pump (if needed)
- 3 - Drain Valve ¾ BSP
- 4 - Auto or manual Vent
- 5 - Defrost Drain Pipe 40mm plastic push fit with waterproof lagging

The list is not extensive and will vary depending on the project, refer to the Quote or Delivery note for full details of what is included.

Electrical Items/Voltage, terminals on the control PCB

Sensors

TA = AT Outdoor Ambient Temperature Sensor
TSR = TRL Return Temperature Sensor
TBW = Temperature Sensor DHW

Pumps and Valves 230V

BUP = DV - Diverter Valve Actuation Terminal L/N/SL
ZIP = SECP - Secondary DHW Circulation pump L/N/PE

MCS Metering For Performance

Electricity meters are shown on both the compressor and the back-up heater. These can be supplied by Omnie and are recommended on all installations to allow the user to monitor their energy consumption.

Refer to the Operating Manuals for detailed information on installing the system. Each main item has its own manual. See the main and supplementary manuals for the LWD and HMD. The set of Operating Manuals must be left with the customer.

Pipe sizes are provided for guidance only. The sizes given are for copper tube, if using an alternative material use the equivalent bore size. If the external runs are longer than 5m use the next size up. If using HDPE pipework 32mm is equal to 28m copper and is suitable up to 10m pipe run, if longer use 40mm. Avoid using elbows, pulled bends have lower pressure loss.

Maximum separation between outdoor unit and HMD is 25m pipework and cable.

All pipework must be well lagged, recommended 19mm wall thickness closed cell foam. Tape up slit pipe lagging, elbows and valves. Protect all external lagging from UV, rodent and bird damage. External lagging must be waterproof.

The pressure relief on the HMD must be run to a catchment vessel not to main drains. Glycol solution would be discharged in the event of a high pressure incident or when testing. This can be returned to the system if clean.

Enter the Hydraulic Diagram Number (102) in the Start up Guide at start-up.

Attention

This schematic is provided as a guide to the function of the heat pump system. It shows the general arrangement of the system components and is not a full system design. The installer is responsible for the final as installed design as fits the needs of the application and that the complete heating system complies with all statutory regulations and industry standards.

Isolating valves, pipe brackets, vents, filling flushing and drain points may have been omitted for clarity of function.

The safety devices shown are indicative only and the installer is responsible for ensuring that the system complies with all statutory regulations and that it functions in a safe and efficient manner.

Frost Protection and System Cleanliness are both vital to the longevity of the system. Fill the system initially with water to flush out debris and to hydraulically pressure and leak test. After disinfecting the system with biocide fill with premixed antifreeze solution. Omnie recommend a propylene glycol/demineralised water solution with inhibitors. This can be ordered from Omnie in 20ltr drums. System failures caused by scaling or freezing may invalidate the heat pump warranty.



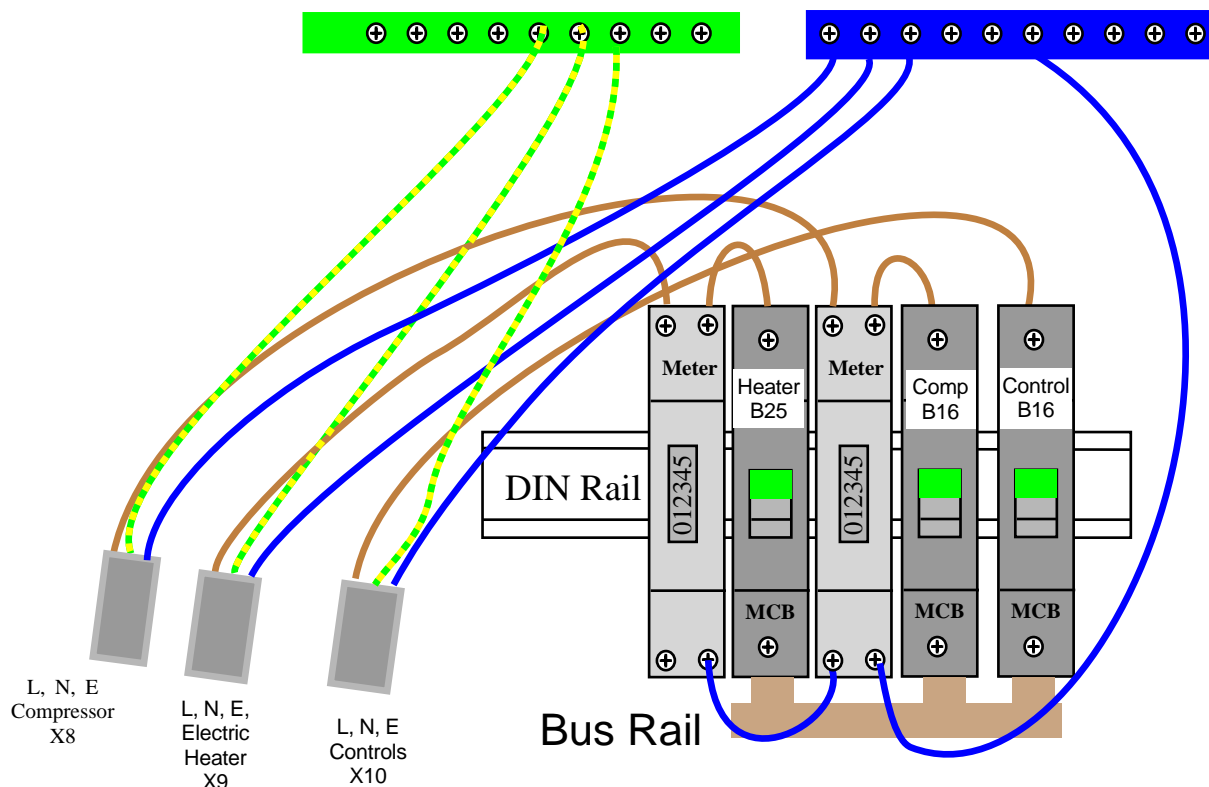
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RI-18-45-P 230V 5(45)A LCD Electric Meter Installation

For compliance with the RHI “Metering for Performance” rule electric meters must be fitted to the supplies of the heat generating devices.

The illustration shows the meters fitted in the consumer unit next to the MCBs for the load being recorded. The meters could alternatively be located in a separate box if there are no spare ways in the consumer unit. The live from the MCB should connect to terminal 1 on the meter and the live to the load to terminal 2.

All electrical wiring must be carried out by a qualified installer to BS EN 7671 latest edition. The installer must ensure that the meters and installation are safe and fit for purpose. No responsibility is accepted by Omnie for damage or injuries associated with this guide.

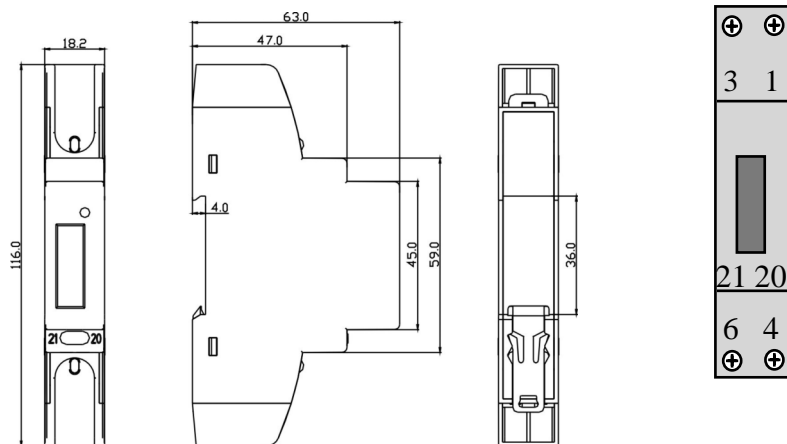
The meters must be labelled as should the MCBs.

The meters supplied by Omnie are rated at 45A 230V which is sufficient for all single phase heat pumps.

The meters can be connected to a remote monitoring system:- pulsed output at terminals 20-21. Find further information from the monitoring device supplier.

See also RHI and MCS guides to metering.

RI-D175-C Instructions are on the next page.



RI-18-45-P 230V 5(45)A LCD

1 Live In	3 Live Out
4 Neutral	6 Neutral
21 Pulse -	20 Pulse +



Pack 2 - LWD70A/SX + HMD1

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