CDL
Cool Designs Ltd

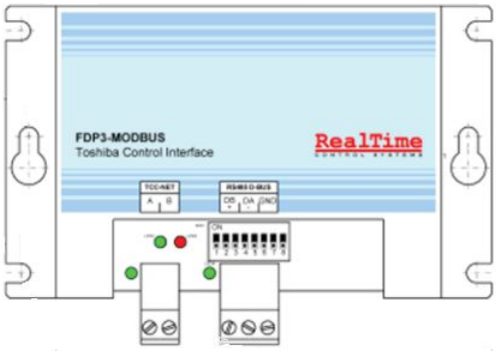
Air Conditioning Design & Distribution

Pocket Quick Reference Guide

On TOSHIBA / RealTime

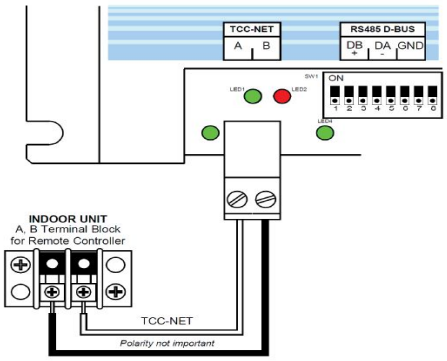
FDP3-ModBus AHU Control Interface

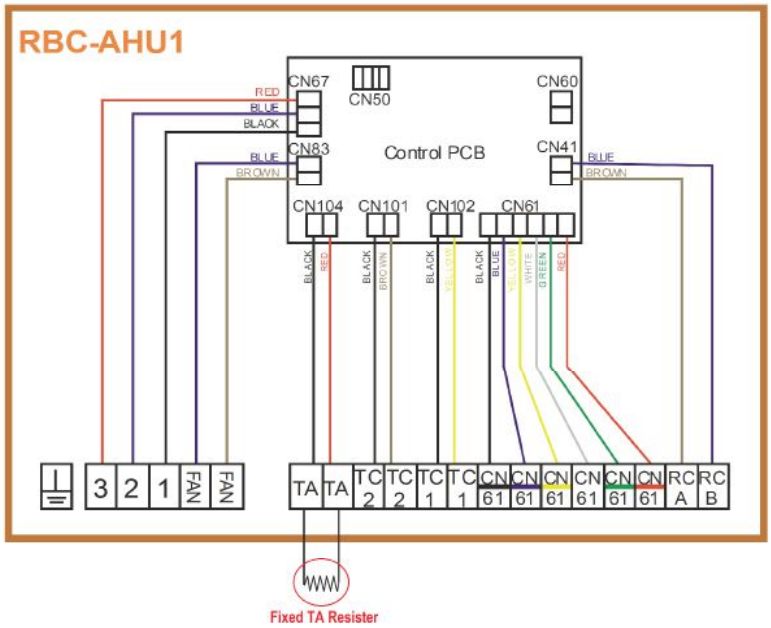
FDP3 ModBus AHU Control interface.



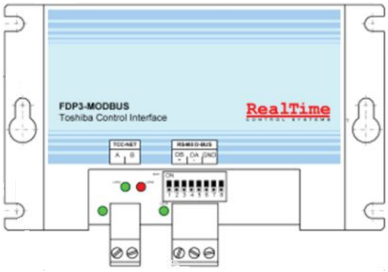
The FDP3 ModBus contains modified software to act as a controller to the TOSHIBA RBC-AHU1 air handling unit interface.

It is connected to the AB connection on the RBC-AHU1.





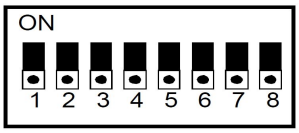
The Fixed resistance in the TA sensor connection on the AHU1 must be left in place.



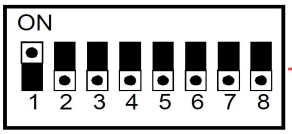
Dip Switch Setting

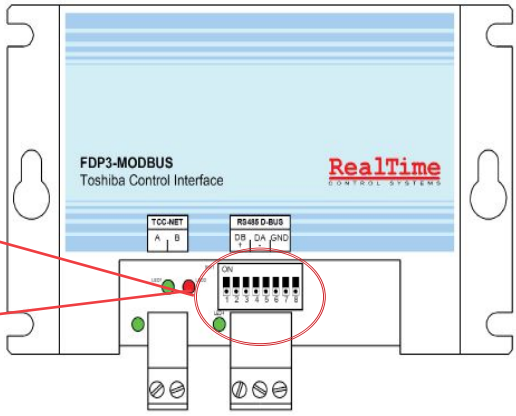
Depending upon the position of SW1 on the FDP3, the FDP3-AHU controller will operate in different modes. The outdoor unit will run at either full demand or at a demand dependant upon the supplied command from the ModBus device.

SW1 OFF Full demand



SW1 ON Demand Depending upon ModBus Registers



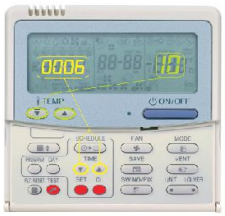


Unit DN Code Settings

The Configuration settings below need to be made by accessing the (Set,Spanner and Clear on the Remote Controller (Toshiba RBC-AMT32E/AMS41E, for instructions how to undertake configuration settings with the Toshiba RBC-AMS51-ES please refer to our web site for the "Pocket Guide" for this controller) and changing the DN codes as below).

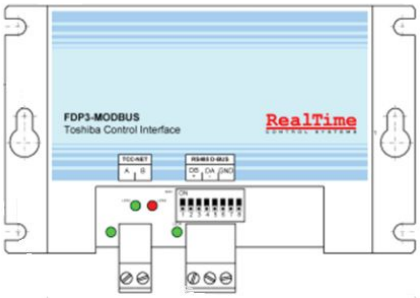
Note: Configuration setting is not possible with the Toshiba RBC-AS41E remote controller.

Press and hold
Test(Spanner), Set & CL



DN code = 10 (Right Hand Display)
Set Left Hand Display to 0006
(Via TImer up and Down Buttons)
Press Set
DN 10 = 0006

DN code = 6 (Via Temp up & Down Buttons)
Set Left Hand Display to 0000
(Via Timer up and Down Buttons)
Press Set then Test (Spanner)
DN 06 = 0000



ModBus Registers

Operation Procedure

Virtual C3
ModBus Register 11003
This register tells the unit to start and stop, a signal of 0 = Off and 100 = Run

Virtual C2
ModBus Register 11002
This register tells the unit which mode to operate in, 0= Cool and 100 = Heating

Virtual C1 (If using demand level control)
ModBus Register 11001
This register tells the compressor what speed to operate at for capacity control. 0=minimum and 1500 is the maximum

*** Values should be scaled by 1/100 if ModTool software used for adjustment**

The ModBus based BMS should be sending the following commands to the FDP3 for cooling and heating operation:-

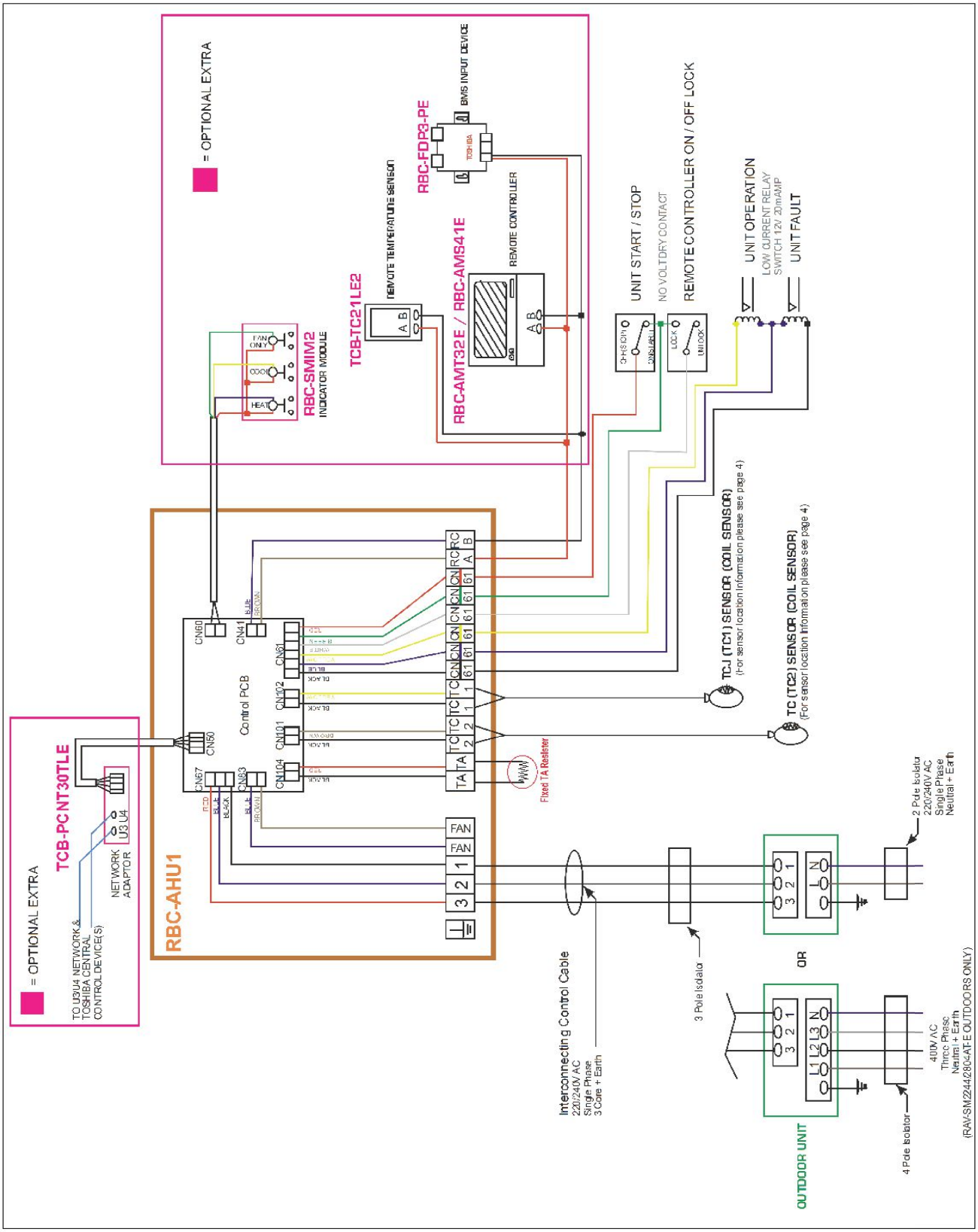
Cooling Operation

C3 (Register 11003)	100 (Run)
C2 (Register 11002)	0 (Cool)
C1 (Register 11001)	A figure between 0 and 1500 depending on capacity required

Heating Operation

C3 (Register 11003)	100 (Run)
C2 (Register 11002)	100 (Heat)
C1 (Register 11001)	A figure between 0 and 1500 depending on capacity required

Wiring Diagram



Notes

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Contact details;

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Web site: www.cdlweb.info

Toshiba Air Conditioning

24/7 technical support

0870 843 0333 (Option 7)

Text back service

07624 803 017

(Type fault code in lower case, no spaces)

Try our on-line training videos on youTube

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