

Technical Specification

Version 1.2



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Controller

The Airtopia controller is a versatile, universal control device for integrating split-system air conditioners (also known as heat pumps) with smart devices and home or building control systems. Local Temperature and power consumption sensing capability can be added through an external remote temperature sensor (sold separately).

Airtopia has a range of interface options that allow for the integration into almost any system. A comprehensive control protocol allows access to set-point adjustment, system mode, fan speed control, on/off status and swing control. Climate control features include separate heating and cooling set-points along with optional automatic changeover between heating and cooling.

Multiple Airtopia controllers may be networked on an Ethernet network, enabling global temperature and humidity adjustment from any control system or compatible smart device. Automation functions can be integrated through the simple protocol API into many control systems.

With connection to third party control systems, full control and scheduling of controlled system throughout the home is possible. If communication with the control system is disrupted for any reason, the air conditioners own remote control device can still provide control as normal.

Optional remote temperature and current measurement sensors can be connected to the Airtopia controller for enhanced flexibility and optimised performance.

Outdoor climate can also be monitored via a second sensor, enabling outdoor low or high temperature compensation to optimize the operation of the air conditioner.

Key Features

- Compatible with most split-system (heat pump) style air conditioners
- Option for direct connection to the Clipsal C-Bus control system
- Option for direct connection to Modbus over TCP/IP
- Powered from 12-48Vdc (24Vac) supply or by Power Over Ethernet (PoE)
- On-board connection for status feedback through Current Transformer (CT)
- On-board connection for digital temperature sensor
- On-board connection for programmable dry contact logic input
- Large library of control codes for most major brands of air conditioners
- Fast learning algorithm allowing intelligent deciphering of systems not stored in the library
- Networkable feature, allowing for multiple controllers on a single network installation
- Suitable for both residential and commercial applications
- On-board scheduling and monitoring of controlled system
- Over the Air (OTA), field upgradable firmware
- Basic Remote Access through web portal access service (First 12 months access included with controller)
- Advanced Remote Access* through web portal include On-going remote access to Temperature, Status, Power (in real-time), Schedules, Usage Alerts, Software Updates, Event and Data Logging



Control Attributes

Status	On/Off
Mode	Heat, Cool, Auto (heat/cool), Dehumid / Dry, Fan
Fan Speed	Low, Medium, High, Auto
Swing Control	On, Vertical, Horizontal, Vertical and Horizontal
Set Point	14-32°C
Status Feedback	On/Off (requires CT)

General Specifications

Operating Temperature	5-50 degrees C
Operating Humidity	0-90% Relative Humidity, non-condensing
Weight	170g

Electrical Specifications

Supply Voltage	12 - 48V dc 24Vac
Current Consumption	62mA @ 12V dc
Power Connector	2 screw edge terminal connection
Power Over Ethernet (PoE)	802.3af, class 1, 48V
Ethernet connection	1 x RJ45 connector 10/100 auto-MDIX
Emitter connection	2 screw edge terminal connection
Maximum current to emitter	20 mA
Maximum emitter cable length	20 metres
C-Bus Connection	2 screw edge terminal connection
C-Bus current consumption	18mA

Airtopia is not powered from the CBus network.

Current Transformer

Connection	2 screw edge terminal
Range	0-40A
Accuracy	+/- 2%

Temperature Sensor (TS)

Type	Dallas 1-wire sensor using parasite power
Connection	2 screw terminal edge connection
Sensing Range	0-50 degrees C
Accuracy	+/- 0.5 degrees C

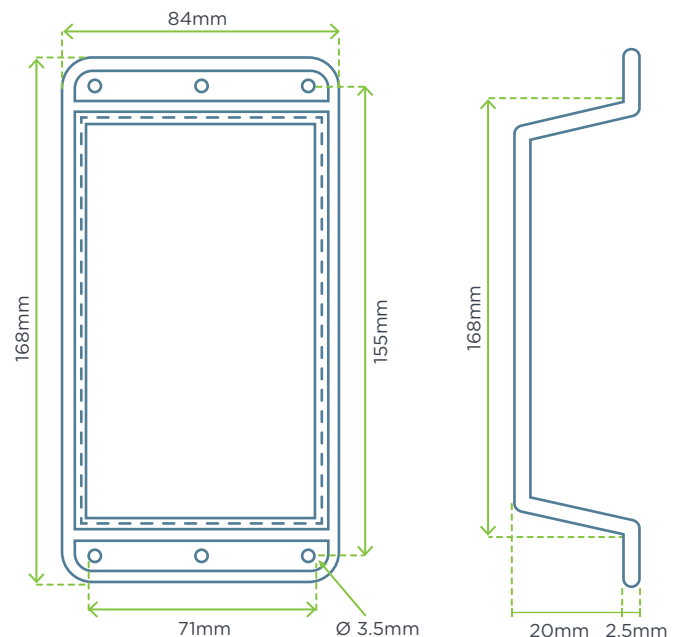
Dry Contact Input

Type	Logic
Connection	2 screw terminal edge connection

Programmable actions based on open and closed

Catalogue Number

IR-Z01	Airtopia Controller with Ethernet
IR-Z02	Airtopia controller with Clipsal C-Bus interface & Ethernet
CT-01	0-40A Current Transformer (turns ratio 3000:1)
TS-01	Flat type stainless steel capped
TS-02	Drywall screw type with surface mount sensor



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