



AstroDrive 7072 Control Console



The AstroDrive 7072 Control Console is a custom-programmed 7" Color Touchscreen console that intelligently controls & monitors AstroFan™ EC FFUs. The console can display custom floorplan layouts with an easy-to-use wall mounted package capable of controlling up to 50 Rooms/Zones and 400 FFUs. The AstroDrive 7072 console provides facility management fully customizable to each customer's needs.

Main Functions

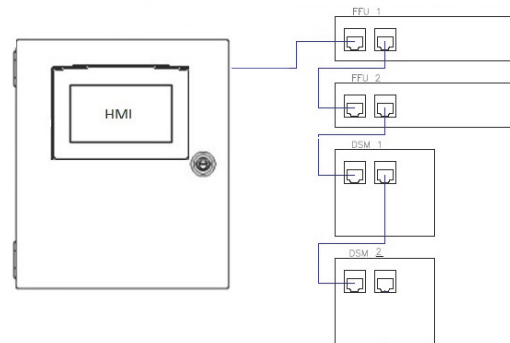
- Touchscreen HMI control
- Custom tailored program to match your controlled space including graphics of the floorplan and the precise location of FFUs and/or sensors within the space.
- Monitor FFUs and Identify Error Modes
- Monitor and alarm from sensor values including: Pressure, Temperature, Humidity, and Particle counters
- 3 levels of FFU Speed control for Run & Standby modes (Global, Zone, and individual level)
- 4 Different operating Modes (see table below)
- Central Monitoring of fault conditions
 - Pressure Switch Feedback — AC FFU
 - RPM Feedback — EC FFU
 - CFM Feedback — CFM FFU
- High/low limit control for RPM and CFM
- High/low limit sensors for alarming
- Multiuser capability: View only, User, and Master
- Error Logging
- Supports 3 protocols to BMS
 - ~ MODBUS TCP/IP
 - ~ BACnet MS/TP*
 - ~ BACnet IP*

Features

- 7" Color touchscreen
- Supports up to 50 Zones
- Supports up to 400 FFUs (200 per port)
- Built in audible and visual alarming

System Diagram

Daisy Chain with Cat5e Cables



*Requires specification of gateway to provide BACnet protocols

Color Coded Mode and Status	
Run	Normal operating speed
Standby	Setback operating speed
Auto (Run/Standby)	Automatic operating speed
Stop	Stops the FFU from operating
Offline	Disables communication from the Console to the FFU
Error	Reports an error in the FFU

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Main Functions

FFU Types	EC FFU—RPM Feedback CFM FFU—CFM Feedback AC FFU—Pressure Switch Fault Feedback
User Interface	Color Touchscreen
# of FFUs to control	Up to 400 FFUs (200 per com port)
Password Protection	Yes, 3 modes available Master, User and View
Communication Protocol	Modbus RTU, RS485 2 Wire for FFU Cntrl Modbus TCP/IP, Ethernet for BMS Integration

Display

Type	LCD 7 TFT Resolution 800x480
Colors	65,536 (16-bit)
Touch Panel	Yes

Environmental

Operating Temperature	0 to 50°C
Storage Temperature	-20 ~ + 60°C
Humidity	10 ~ 95% RH Non-condensing
Environment	IP66/IP65/NEMA4X (When panel Mounted)

HMI

Buzzer	Yes
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Features

Hierarchical Mode and Speed Control Levels	Global (All Rooms) speed and mode adjustment Room/Zone speed and mode adjustment Individual fan speed and mode adjustment
Zones	Multiple sensors per zone, up to 50 Zones
Sensors Available	Room Pressure, Filter Loading Pressure, Temperature, Humidity, Particle Count, Volatile Organic Compounds, Particulate Matter, CO2 Others upon request
I/O Specifications	Door Interlocks, Occupancy Sensors, Damper Control, Heater Control, Filter Pressure Switch, HVAC integration, Stack lights, tie-in of external alarms (fire alarm), standby switch, etc. Customizable to customer requirements
Alarm	Buzzer, Color-coded icon, and flashing screen
Date/Time	Real Time Clock

Mechanical

7072 Dimensions inch and mm (Standard Enclosure)	14.38" x 12.30" x 4.38" 365mm x 310mm x 110mm
Installation of 7072	Wall Mounting (if enclosure is specified)
Weight	7.2 kg (15.9 oz)

Power

Consumption	10.7W
Supply Power	100-240 VAC, .88A MAX, 50/60Hz

Ethernet

Ports	RJ-45 x 2, 10/100 Base – Tx
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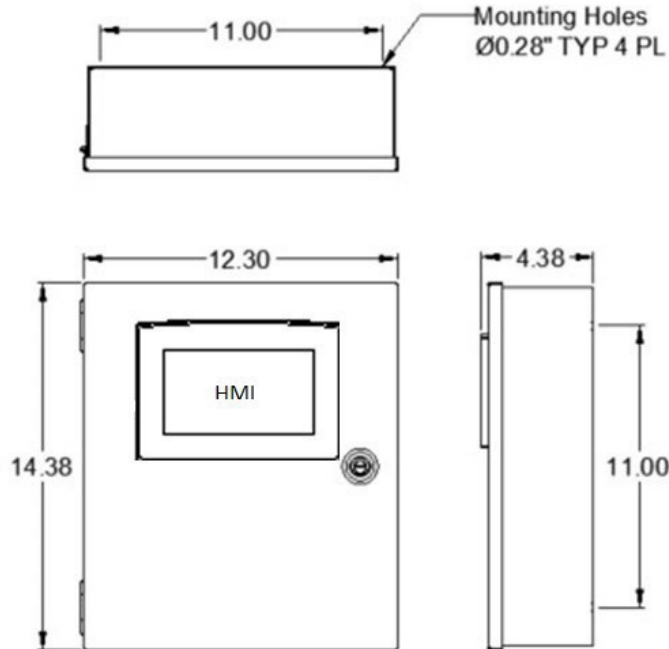
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AstroDrive 7072 Dimensions



AstroDrive 7072 Console Enclosure

- Standard console size (Medium Enclosure) shown above. Different enclosure sizes and materials may be specified at the customer's request.
- 7072 can also be specified to ship without an enclosure for customers wishing to mount the controller in their own cabinet.

AstroDrive 7072 Console

- The 7072 console makes installation a true plug and play solution with the console:
- Providing power to the sensors
- Providing communication to the console/ FFU Daisy Chain
- Providing signal or communication to the sensors
- Optional gateway for BACnet IP or MS/TP allows integration with a Building Management System (BMS).

Optional HVAC Integration

- Custom consoles can be configured to work with most analog sensors and actuators. Some examples include:
- 0-10V or 4-20mA Pressure Sensors
- 0-10V or 4-20mA Temperature & Humidity Sensors
- Control of HVAC dampers
- Control of HVAC systems (thermostat replacement)

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AstroDrive 7072 Additional Sensor Options:.

- 1) DSM2-(TRP, TR, P)
 - TRP: Temp, Humidity, and Pressure sensors
 - TR: Temperature, and Humidity sensors
 - P: Pressure sensor



- 2) Particles counters (PN: ACS2500)
 - .2 to 25um particles
- 3) Other Sensors to Customer Spec
 - VOC, CO2, PM, etc



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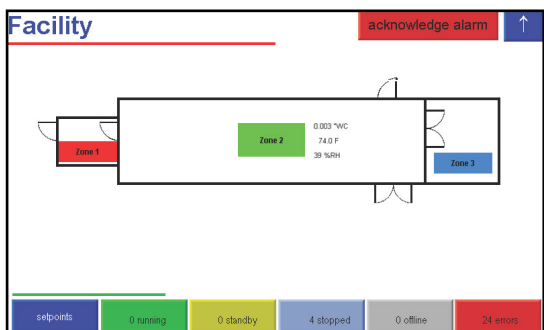
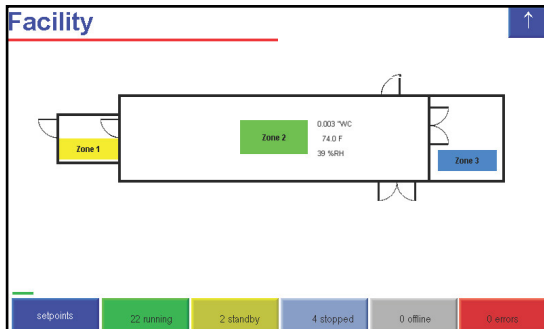


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EXAMPLE SCREENS

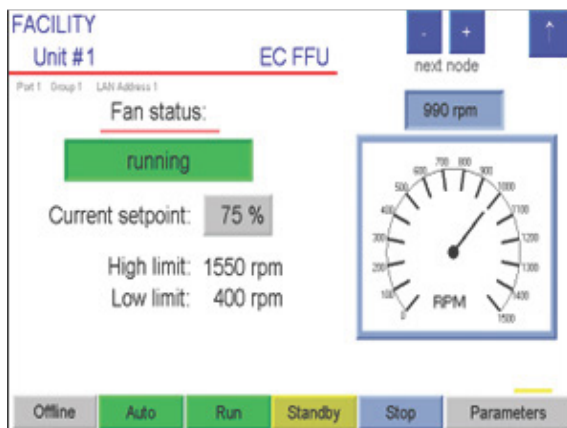
Facility Control

Status of each room is graphically displayed for each zone/room so a quick glance can provide important information on the operation of the facility.



Individual Fan Control

Status can be tracked from facility level down to each individual FFU.

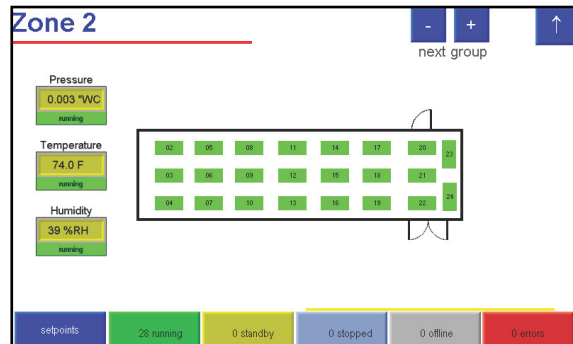


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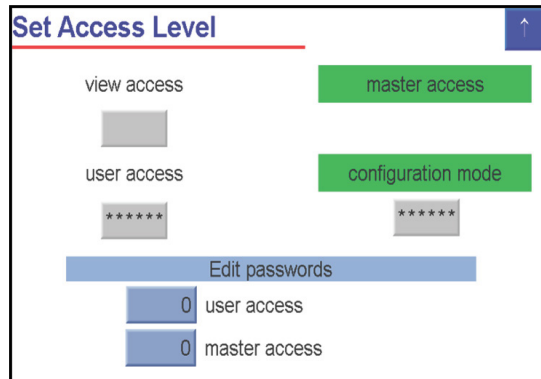
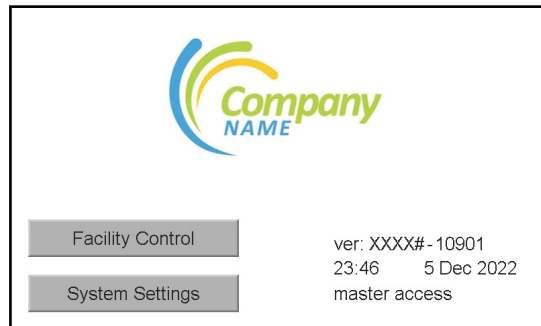
Zone Control

Each zone can be selected from the facility screen for greater detail and control. At this level the status of each FFU is shown graphically and the room layout matches each customer's requirements.



Customization and Password Access

Main menu can be customized with the customer's logo. Password levels can assist with different access for different users.



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