

Save Time • Save Money • Improve Performance

■ Introduction

ENVIRCO®'s ACC7050 Series are color, touchscreen consoles that monitor and control cleanroom environments. The consoles interface with all of the ENVIRCO interface control boards (AC-VariPhase™, and EC-Module) using a standard MODBUS RTU protocol.

Facility ceiling drawings are scanned into the console to give a facility/room/unit view through touchscreen control. Analog sensors (pressure, particle counters, etc.) can be connected for monitoring and control (ACC7052 only). PID closed-loop control can be implemented to maintain sensor settings through FFU or return-air fan auto-adjustments (ACC7052 only). Customized to your facility monitoring and control needs, this console will save time and money in your facility.

■ Main Functions/Features

- » Supports up to 200 units per port, or 400 total units
- » Supports up to 50 groups
- » Three levels of control: facility, group, unit
- » Automatically monitor, generate, and report errors (FFU errors or sensors limits)
- » Individual fan speed adjustment
- » Global speed adjustment: facility/groups
- » Global set-back speed adjustment
- » Central monitoring of fault sensors
- » Central monitoring for FFU set-point/RPM
- » Central monitoring for particle counters and pressure transducers (ACC7052 only)
- » Supports up to 24 PID control loops (ACC7052 only)
- » Menu-driven configuration options
- » Password-protected user control: View, User, Master
- » Clock/calendar feature to set Standby periods
- » I/Os for Alarm, Stop, and Standby (ACC7052 only)
- » Data logging (ACC7052 only)
- » Event log

■ Specifications

Power Supply

- » Input voltage: 24 VDC
- » Maximum current consumption: 270mA @ 24V
- » Back-up battery: 7 years typical at 25°C

Graphic Display Screen

- » LCD type: TFT, white LED backlight
- » Resolution/pixels: 320x240 QVGA
- » Viewing Area: 5.7"
- » Touchscreen: Resistive, analog

Communication

- » Two isolated RS485 serial ports (MODBUS RTU)
- » 9600 baud rate with 400+ unit support
- » RJ11 CAT 5E cable
- » OPC Client or MODBUS TCP (ACC7052 only)
- » "Remote Operator" from any PC (ACC7052 only)



■ Environment

- » Inside cabinet: IP20/NEMA1 (case)
- » Panel mounted: IP65/NEMA4X (front panel)
- » Operational temperature: 0 to 50°C (32 to 122°F)
- » Storage temperature: -20 to 60°C (-4 to 140°F)
- » Relative humidity (RH): 5% to 95% (non-condensing)

■ I/Os Analog Inputs (BMS or External Sensors) (ACC7052 Only)

- » 3 analog inputs
- » Input range: 0-10VDC, 4-20mA, 0-20mA
- » Input impedance: 150KΩ
- » Maximum input rating: 15V
- » Resolution: 10-bit (0 to 1023)
- » Conversion time: 20m/Sec
- » Precision: ± 0.9%

■ I/Os Digital Inputs (BMS or External Device) (ACC7052 Only)

- » 1 N.O. digital input for emergency stop
- » 1 N.O. digital input for standby mode
- » Input Voltage: 24VDC
 - » 0-5VDC for Logic '0'
 - » 17-28.8VDC for Logic '1'

■ I/Os Digital Outputs (BMS or External Device) (ACC7052 Only)

- » Used for Alarm activation
 - » LED light
 - » Dry contact to BMS
- » SPST-N.O.
- » Output current: 5A maximum (resistive load)
- » Rated voltage: 250VAC/30VDC
- » Minimum load: 10mA @ 5VDC
- » Life expectancy: 50k cycles at maximum load
- » Response time: 10mS (typical)
- » Contact protection: External precautions required

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Example Screens

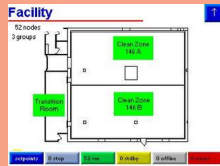
■ Main Screen

The main screen shows, in the lower right corner, the software version number, system time and date, and the current access level. Customer logo can be inserted.



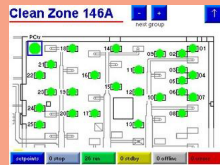
■ Facility Control

This screen shows the total number of nodes and groups defined in the system. It also shows the number of fans found with error, offline, stopped, running, and in standby.



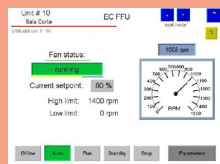
■ Group Control

This screen shows the total number of fans for each group. It shows the number of fans found with an error, offline, stopped, running, and in standby, respectively, for that group.



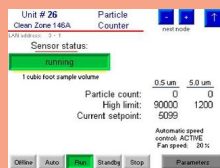
■ Fan/Unit Control

The Fan/Unit Control screen shows the status of the fan identified by the fan number and group name. The fan's current speed setting and RPM value are shown, along with high/low limits. The fan's running speed can be adjusted by pressing the button. The AC FFU screen is the same without the RPM monitor.



■ Particle Counter Node Display (ACC7052 Only)

This is an example of an external sensor - particle counter's current values, setpoint, and limits can be viewed here. Its state can be changed.



Mechanical Dimensions

