

## Distributed Sensor Modules (DSM\*)

### Overview

AirCare Automation's **Distributed Sensor Module – DSM\*** is a network accessible (*MODBUS RTU*) module that can connect to the AirCare Monitoring Consoles and provide environment monitoring for cleanroom system without the complicated Centralized panel box builds provided today. Designed to integrate seamlessly into AirCare FFU Control Console Systems, the DSM family provides access to multiple sensor features on standard assembly platforms.

- DSMP – Differential Pressure Sensor (+/- 50 PA)
- DSMTR – Temp (0-122F) RH Sensor – room mount
- DSMTRP – Diff. Pressure, Temp & RH
- \*\*NIST Certificated sensors available upon request\*\**



### Power Supply

- Input Voltage: 24 VDC
- Max Current Consumption: 200mA@24V.

### Communication

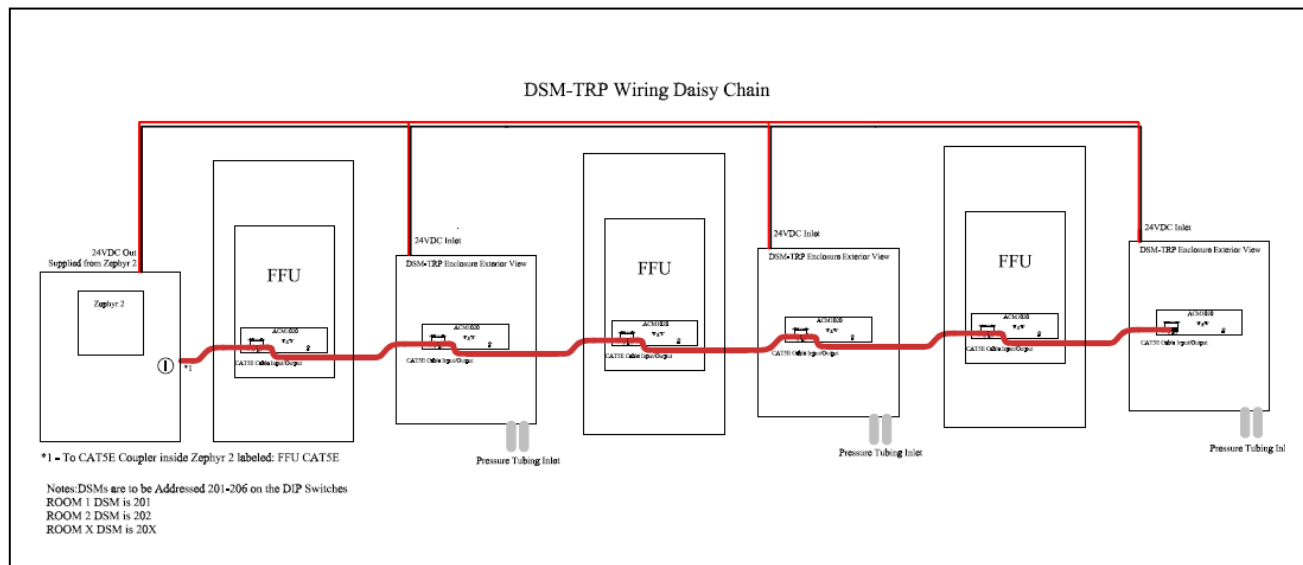
- Two RJ45 MODBUS RTU connectors
- Voltage limits -7 to +12VDC differential maximum
- Baud rate: 9600
- Cable type: Twisted pair (cat5e)

### Functions/ Features

- Monitor Diff. Pressure, Temp, RH
- MODBUS RTU Daisy-chain compatible
- 24V operation by remote DC power source.
- CAT5e cable RJ45 connectors

### Environment

- Polycarbonate Panel box (8 x 8 x 4 inch)
- 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)



## Distributed Sensor Modules (DSM\*)

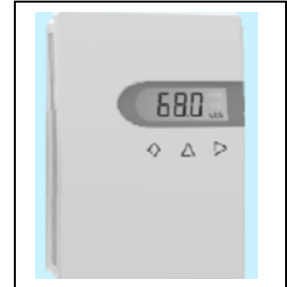
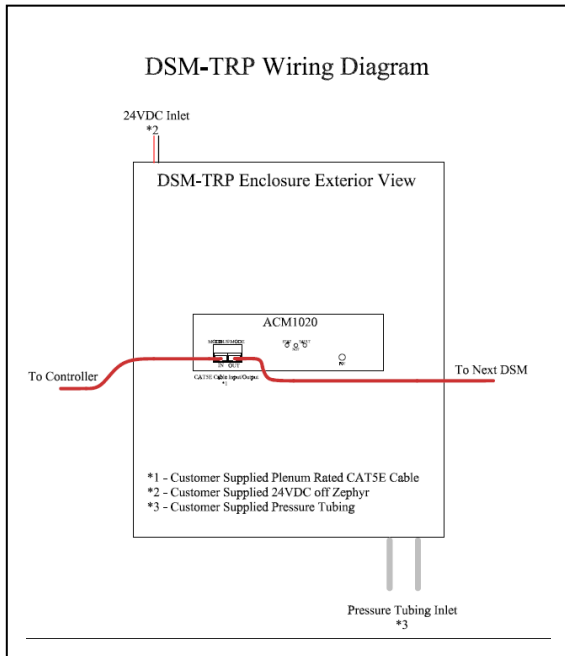
### DSM Network connection

CAT5e cables are recommended with RJ45 connectors provided. 24 Volt DC power is provided by Console Panel box or associated 24V service and the pressure transducer is provided with tubing ports for box mounting – if desired

### SENSORS

Pressure Sensor are mounted in the DSM box and tubing provided for connection to bulkhead fittings and placement in cleanroom.

Temp/RH sensor is mounted in room with twisted pair connection wiring to the DSM box.



### INTERNAL DSM WIRING

The interface card that contains the MODBUS RTU communications is wired to the power source and terminal strip of sensor node connections. On-site mounting of the DSM, running of Pressure tubing and twisted pair for T/RH connection are provided as well as easy interconnect of 24V power

