

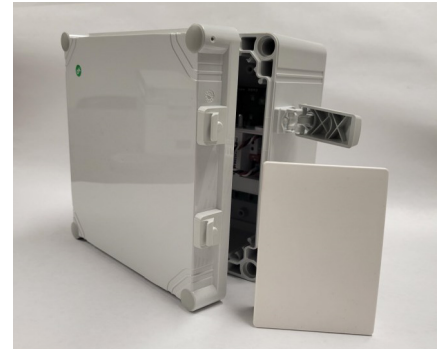
# Distributed Sensor Module (DSM2)

## Overview

Our Distributed Sensor Module – DSM2 is a monitoring module that can include: Differential Pressure, Temperature, and Humidity sensors. The DSM box connects to the AstroDrive Monitoring Consoles and provides environmental monitoring for cleanroom system without the complicated centralized panel box builds provided today. Designed to integrate seamlessly into AstroFan™ EC FFU Control Console Systems through CAT5E network as (MODBUS RTU) Protocol.

## Functions / Features

- Monitor Differential Pressure, Temperature, and Humidity
- MODBUS RTU daisy-chain via CAT5E cable RJ45 connectors
- 24V operation by remote DC power source
- External Temp/Humidity connections
- Dip switch addressable for MODBUS communication



## DSM [TR<sub>1</sub>] [P<sub>1</sub>] — [NIST<sub>2</sub>]

*Example part number: DSMTRP-NIST; Standard Model, Temperature and Humidity Sensor, Pressure Sensor, NIST Certification*

**[1]**

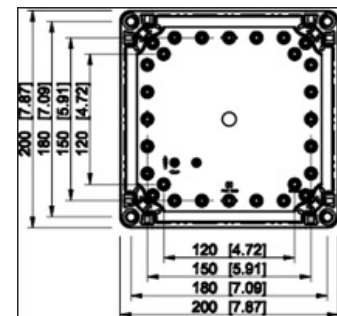
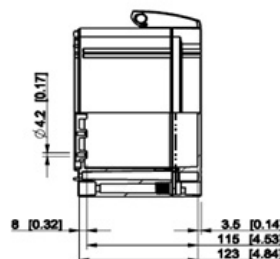
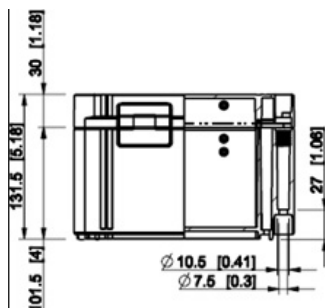
Sensors for <b>Standard</b> Model		
TR	Temperature	32 to 122°F / 0 to 50°C
	Humidity	0 to 100%
	Part #ACS2423-TR	
P	Pressure	-0.2" to .02" WC
	Part #ACS2412-B050V	-50 to 50 Pa

**[2]**

NIST Certification	
NIST	NIST certified
Temperature and Humidity	
Pressure	

\* Contact support for other non standard output/ pressure range requests

## Dimensions



# Distributed Sensor Module (DSM2)

## Environmental

Polycarbonate panel box size	8 x 8 x 4 Inches
Operational Temperature	0 ~ 50°C   32 ~ 122°F
Storage Temperature	-20 ~ 60°C   -4 ~ 140°F
Relative Humidity (RH)	5 ~ 90% RH (Non-condensing)

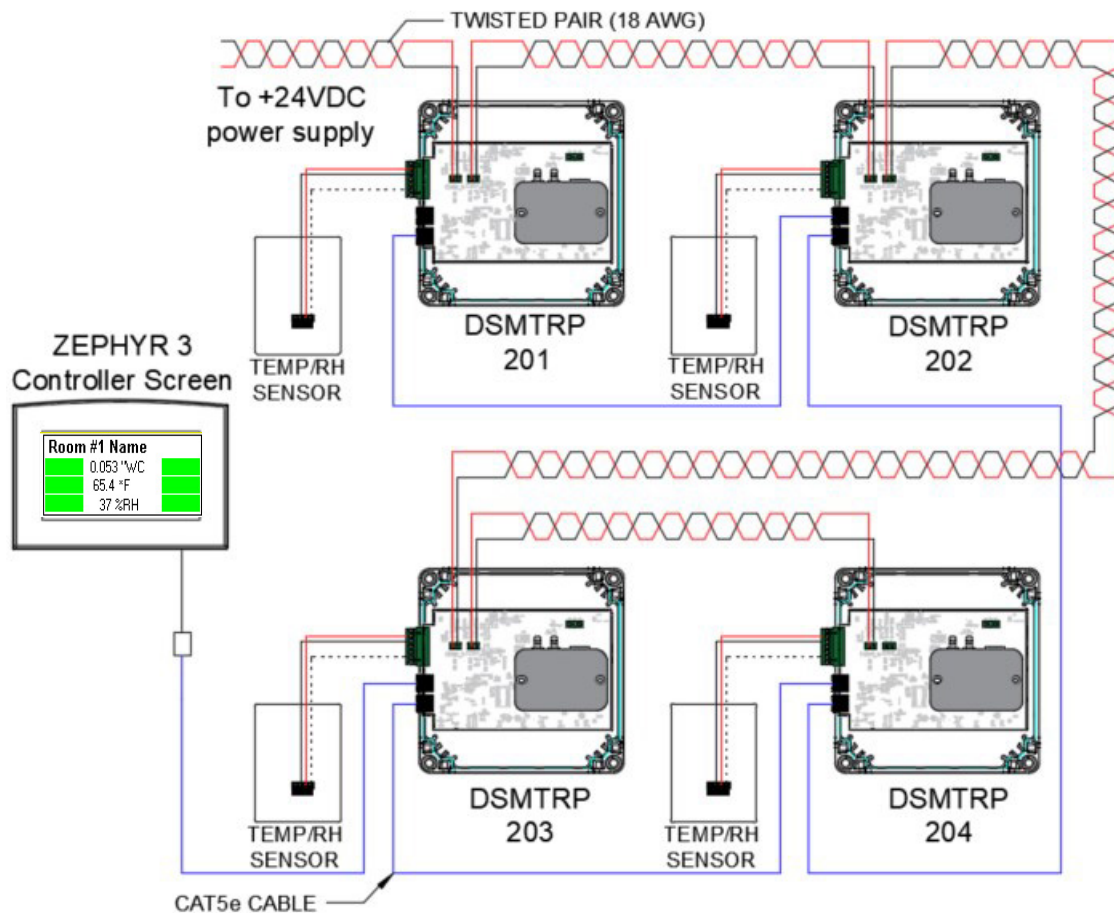
## Power

Input Voltage	+24 VDC
Max Current Consumption	200mA

## Communication

Connectors	2 RJ45 MODBUS RTU
Baud rate	9600
Cable type	Twisted pair (CAT5E)

DSMTRP System Wiring Diagram



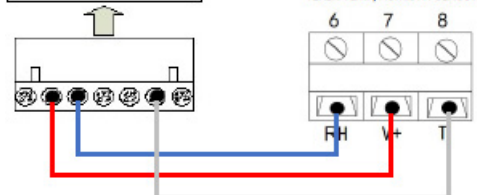
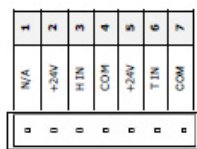
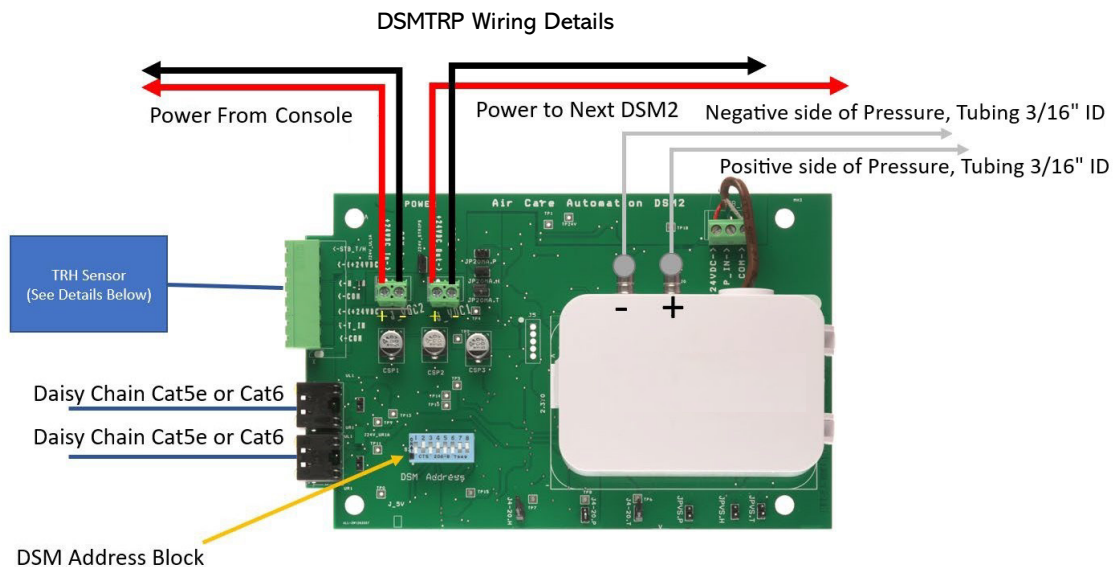
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## Accessories

An optional accessory kit containing the necessary equipment to install the sensors is available. The pressure sensor inside the DSM box typically gets mounted remotely and the provided tubes are used for connection from the reference to the two referenced spaces. Temp/RH sensor is mounted in the room with connection wiring to the DSM box.

### Accessory Kit:

- 50ft sensor connection wires (for connecting Temp/RH to DSM)
- 50ft pressure tubing
- 2 wall-mount pressure ports



3 conductor 18-22AWG twisted pair, copper conductors to wire the sensor to the labeled terminal blocks on the outside the DSM enclosure.

