

# DSM-4000DUS SERIES

## 8-pt. digital setpoint monitors

### ■ MODELS

**DSM-4688DUS:** 8 analog voltage points  
ModBus RTU communications

**DSM-4689DUS:** 8 analog voltage points plus  
Tach/overspeed/hourmeter  
ModBus RTU communications

### ■ Universal features

- Programmable high/low setpoints
- Displays faults in sequence
- Solid-state form C output switch

### ■ RS-485 serial port

### ■ Rugged powder-coated aluminum case

### ■ Universal application:

- Compressor process pressures/temperatures
- Engine water and oil pressures/temperatures
- Cylinder exhaust temperatures
- Turbocharger inlet/outlet temperatures
- Catalytic converter inlet/outlet temperatures
- Critical points on heavy-duty machinery

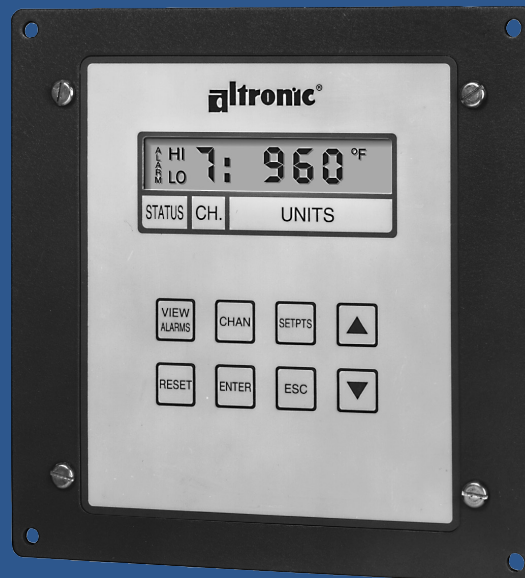
The Altronic DSM-4000DUS series digital setpoint monitors are microprocessor-based instruments designed to monitor critical process variables, usually pressures, temperatures and speed. Power is from any 12 or 24 volt DC source capable of supplying 10 watts.

- DSM-4688DUS: Accepts eight (8) analog voltage inputs individually user-selectable for 0-5Vdc, 1-5Vdc, or 0.5-4.5Vdc. ModBus RTU communications.
- DSM-4689DUS: Same as DSM-4688DUS, plus a tachometer/overspeed/hourmeter function. One additional input is provided for connection to a C.D. ignition system. ModBus RTU communications.

The LCD display indicates both the channel number and the monitored variable. The front panel sealed membrane keypad provides easy selection and adjustment of the units, range, setpoints and other configuration data. High and low setpoints are set individually for each of the eight standard channels from the front of the device using the keypad and the display. Any fault trips a form C, solid-state output switch; fault information by sequence of occurrence is available on the display and via the serial port. The integral RS-485 port allows the monitored values and status of all channels to be communicated to a PC, PLC or other suitable device.

The DSM devices are housed in a gasketed, powder-coated aluminum case and assembled using stainless steel hardware, making them ideal for oilfied or other demanding environmental applications.

For the DSM-4688/4689, Altronic solid-state pressure transducers are available in six ranges from 0-100 to 0-5000psi (0-680Kpa to 0-340bar). In addition, unique, solid state temperature transducers are available in two ranges: +5°F. to 300°F. (15°C. to 150°C.) and 40°F. to 450°F. (40°C. to 230°C.).



## Specifications

### DSM Series Monitors:

**Power Requirement** ..... 12-30VDC, 50mA max.  
**Instrument Display** ..... 5-digit LCD, 0.5" backlit  
**Display Update Rate** ..... 1/sec. (RPM 2/sec.)  
**Instrument Range** ..... 0-9999, setable decimal point  
**Instrument Accuracy** ..... ±1% of reading, ±3 units

### Input Signal

DSM-4688/4689DUS ..... (8) 0-5Vdc, 1-5Vdc, 0.5-4.5Vdc  
 DSM-4689DUS only ..... (1) C.D. ign., 100-350V., neg. grnd

**Hazardous Area Classification** ..... Class I, Div. 2, Group D

### Intrinsically safe option for Class I, Div. 1, Group D

Use a CSA-certified zener barrier rated at 30 volts max., 120 ohms min., such as Stahl part no. 9001/01-280-165-10

**Ambient Temperature Range** ..... -40°C to 80°C (-40°F to 175°F)

### Pressure and Temperature Transducers:

#### Power Requirement

691201 Series ..... 5Vdc, 20mA max.  
 691202/691203 ..... 5Vdc, 1mA max.  
 691212/691213 ..... 5Vdc, 5mA max.

#### Accuracy

691201 Series, 0°F. to 180°F. .... ±1% of full scale  
 181°F. to 221°F. .... ±4% of full scale  
 691202/691203 ..... ±3°F. / ±2°C.  
 691212/691213 ..... ±6°F. / ±4°C.

**Ambient Temperature Range** ..... -40°C to 105°C (-40°F to 221°F)

## Ordering Information

### Digital Setpoint Monitor

8 pts, analog voltage input ..... DSM-4688DUS  
 8 pts, analog voltage input ..... DSM-4689DUS  
 with Tach/Overspeed/Hourmeter function

### Pressure Transducers

0-100psi/0-680KPa ..... 691201-100  
 0-300psi/0-2040KPa ..... 691201-300  
 0-500psi/0-3400KPa ..... 691201-500  
 0-1000psi/0-6800KPa ..... 691201-1000  
 0-2000psi/0-136bar ..... 691201-2000  
 0-5000psi/0-340bar ..... 691201-5000

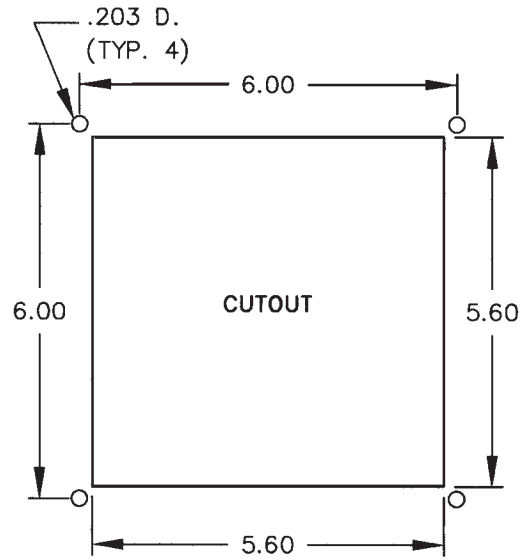
### Temperature Transducers

Range: ±5°F. to 300°F. / -15°C. to 150°C.  
 1.75" length ..... 691202-300  
 5.75" length ..... 691203-300  
 Range: -40°F. to 450°F. / -40°C. to 230°C.  
 1.75" length ..... 691212-450  
 5.75" length ..... 691213-450

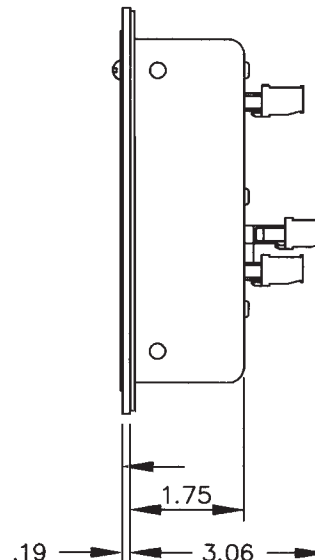
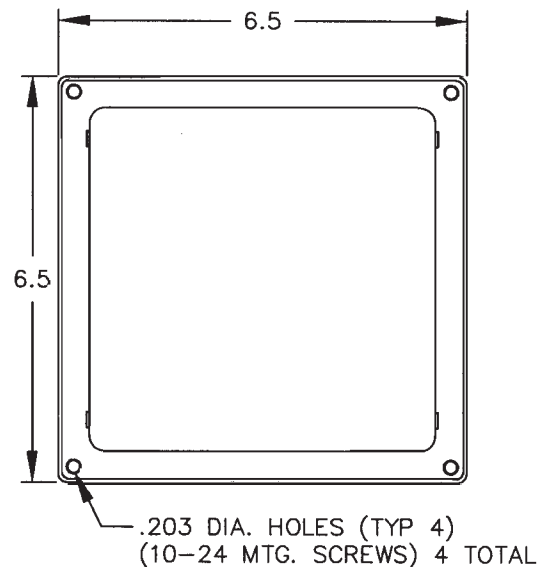
### Transducers Cables

5' length ..... 693008-5  
 25' length ..... 693008-25  
 50' length ..... 693008-50

## Display Module Dimensions



### Recessed Mounting



**altronic**

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