Non-contact Distance Measuring System

model 5DMS

Mainframe Dimensions 19 x 8 x 1.75 inches
(483 x 203 x 44.5 mm)

FEATURES

- Retro-reflective Fiberoptic Displacement Sensor Technology
- Modular Rack for Customized Building Block Solutions
- Analog Output for 5 Analog Sensors with Digital Control
- Digital Output via USB or RS232 for 5 Digital Sensors
- Choice of 25 Sensor Models, Philtec D and RC Types
- Rackmount or Bench Top Stackable with Additional Racks
- Operating Software Included

PHILTEC®

www.philtec.com

Fiberoptic Sensors for the Measurement of Distance, Displacement and Vibration

Description

The **model 5DMS** is a 19" rack mount enclosure for powering and controlling 5 sensor channels as follows:

- 5 digital output sensors, or
- 5 analog output sensors with digital control

NOTE: Analog and digital sensors cannot be combined in the same rack.

Each rack is equipped with two serial ports and one USB port. The sensors are addressable via their unique serial number. The rack can be operated individually or connected to additional racks thereby allowing communication to a larger matrix of sensors.

DIGITAL SENSORS
DMS Control Software is used to setup the sensor controls and save data to files.
- Digital sensors have a maximum data rate of 5,000 samples/second.

ANALOG SENSORS
DMS Control Software is used to setup the sensor controls. Analog outputs on BNC type connectors become active when the DMS Control Software is closed.
- Analog RC type Sensors have a maximum bandwidth of 350 KHz
- Analog D type sensors have a maximum bandwidth of 1 MHz

5DMS GENERAL SPECIFICATIONS		
Width	19" (482.4 mm)	
Depth	8" (203 mm)	
Height	1.75" (44.5 mm)	
Weight	4 lb unloaded (1.8 kg)	11.5 lb loaded with 5 sensors
Input Voltage	100 to 260 VAC, 50/60 Hz	
Input Current Usage	40 mv/channel at 120 VAC	20 mv/channel at 240 VAC
Operating Temperature	0°C to 50°C	
Outputs	RS232, 19.2 kb default	USB 3.0

Operation

1. ***Install sensors*** into rack channels by engaging the D-sub floating connector inside the rack and then by tightening the captive fasteners.

2. ***Apply power*** to the rack and turn on the front panel power switch.

3. ***Load into PC & Execute*** the DMS Operating Software provided.   The sensors will first go thru an initialization routine. During this process, in addition to many other checks, the software reads and copies all of the calibration tables from the sensors into the PC.

4. ***Allow the sensors time to reach thermal equilibrium,*** app. 15 minutes. For example, in a factory environment, where the air temperature has been around 24 C, the sensor temperatures rise to about 32 C. Therefore, the heater controls should be set to 2-3° C higher in each sensor. They are very stable at this set point.

The sensors are now ready to make measurements.

DMS Control Software

The DMS Setup and Control software opens at the **Com Port tab.**

1. At the **"10DMS Rack"** subtab select a com port from the drop down list.

2. At "Number of Channels, enter the number of sensors to open.

3. Enter the sensor serial numbers or enter only the first serial number and click on Auto Fill Serial Numbers

4. Click Open Com Port. As each sensor successfully communicates with the PC its status light changes from Red to Green.

All of the functional tabs of the DMS Control Software will become active after all requested sensor channels have been successfully opened.