

# MPS 32

## Druck Multi Pressure Scanner



### Features

- MPS 32 small size with possibility to make 32 pressure measurements in 2 pps sample data rate.
- Accuracy  $\pm 0,1\%$  FS, allows applications in aerodynamic and engine performances.
- Operating temperature:  $-55^{\circ}\text{C}$  to  $90^{\circ}\text{C}$
- Purging mode activated by electrical motor drive (no need to have a pressure source)
- Fully qualified for flight test application on civil and military aircraft, and ATEX approval
- If requested: possibility to use RS 485 and to increase sampling rate to 32 pps (TBC)

The GE MPS 32 Multi-Pressure System measures 32 differential pneumatic pressures and converts measurement into digital data. It transmits the data in ARINC 429 format (High Speed).



## Introduction

The unit is contained in a metal case, which protects against temperature, vibration and EMC. Lugs at each end of the Multi-Pressure System provide attachment of the unit.

It automatically measures and processes the data and performs continuous self-checking.

An electrical connector provides for the connection of the RS232 and Arinc 429 data systems, the power supply and self-checking status signals. Special microbore pipes from the aircraft systems fit over the protruding pressure connectors.

The MPS 32 comprises a printed circuit Board, pressure scanner unit with motorized valve and heaters assembled in an enclosure. Flanges on the base plate provide, through four drilled holes, attachment points for the unit. Three holes drilled in the front plate receive the two pneumatic connectors and the electrical connector.

### Operating modes

The unit receives 3 input signals that change the mode of the unit.

- Blowing mode: It consists of blowing dry air through the 32 Pressure ports to clean the pressure circuits.
- Measure Mode: This mode connects the 32 pressure ports to the corresponding pressure sensor. The analogue measures are then digitalized and send through the ARINC 429 bus.
- Calibration mode: It consists of measuring the zero of each transducer and storing the result in the memory.

## MPS 32 Specifications

### Pressure Range

- 1 bar diff (15 psi diff)
- 500 mbar diff (7.5 psi diff)
- 350 mbar diff (5 psi diff)
- 170 mbar diff (2.5 psi diff)
- 70 mbar diff (1 psi diff)
- 20 mbar diff (10 water inch diff)

### Temperature Range

-55°C to +90°C

### Accuracy

- Range  $\geq$  350 mbar:  $\pm 0.1\%$  FS (typically  $\pm 0.05\%$  FS) (including Non-Linearity, Hysteresis, Repeatability and Temp effects)
- Range  $\leq$  170 mbar:  $\pm 0.125\%$  FS (typically  $\pm 0.1\%$  FS) (including Non-Linearity, Hysteresis, Repeatability and Temp effects)

### Supply Voltage

18 to 36 Vdc

### Output

Arinc 429 or RS 485

### Shock and Acceleration

D0160 section 7 category E

### Vibrations

MIL-STD 810F method 514

### EMC

D0160 E section 8 category R

### Safety

ATEX : D0160 D chap. 9 Cat E environment II

### Size x Weight

160 mm x 90 mm X 50 mm  
1.5 kg

### Electrical Connector

Souriau – 13 Pins ref. 8D-D38999

### Pneumatic Connector

P1 and P2 :  
48 Pressure Inlets norm 80857  
P3 : Swagelock ref. 1/8 inch OD



[www.ge-mcs.com](http://www.ge-mcs.com)

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