



DP Series

Differential Pressure Sensor

Installation and Operating Manual

For assistance with the operation of this product,

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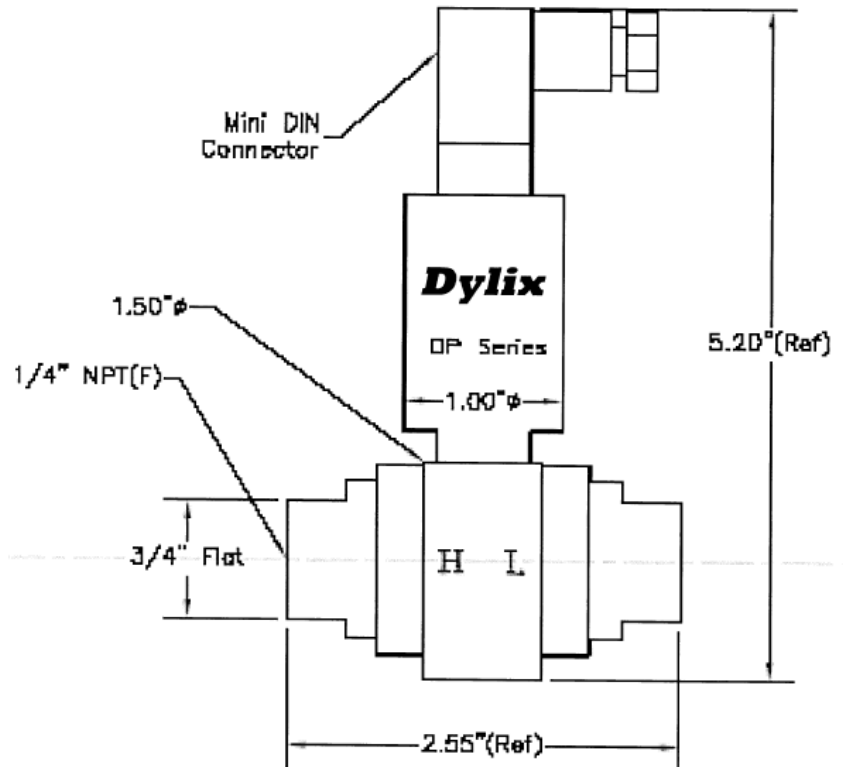
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1.0 Introduction

Dylix DP Series Differential Pressure Sensors are designed for general pressure applications within the range and environmental conditions as specified within the Model DP Series data sheet. This information is provided as a general guide for the installation and use of this series. For non standard options or features the factory may be contacted directly.

2.0 Description

This series is manufactured with 316 SS and its use is suitable for medias compatible with that material. The sensor element is designed around a central diaphragm with a silicon oil fill transferring pressure from the passive high (H) and low (L) side diaphragms. Standard pressure port connections are ¼" NPT (F). The electronics are contained within the housing section located under the electrical termination. The sensor is self contained and not designed for field repair or service.



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3.0 Installation

3.1 Mechanical

For best performance locate the sensor so that the lengths of tubing to both sides high (H) and low (L) are equal and on the same level. If there is a potential of condensate collecting against the diaphragm it is suggested to mount the sensor above the pressure source so that the condensate drains back to the source. The sensor can be supported by connection to a rigid metal tubing. Thread $\frac{1}{4}$ " (M) threaded connection into both ports taking care to wrench on the Male connection while holding the sensor in place. Do not over torque so as to avoid damage

to the threads. Do not introduce foreign objects into the ports as this may cause damage. Install high (H) side to upstream or high line pressure and low (L) side to downstream or low line pressure.

3.2 Electrical

Units must “see” the proper excitation to perform within specifications, insufficient power may prevent the unit from providing the full rated output at the full rated pressure. Standard excitation for the DP Series is as follows: DP1 - 2 to 15 Vdc (regulated), DP2 & DP3 – 8 to 38 Vdc (unregulated).

Electrical connections as per below:

Model	DP1	DP2	DP3
Output	mV/Vdc 4 wire	0-5(10)Vdc 3 wire	4-20 mAdc 2 wire
+ Power/excit	Red, Pin1, Pin A	Red, Pin1, Pin A	Red, Pin1, Pin A
- Power/excit	Black, Pin2, Pin B	Black, Pin2, Pin B	
+ Signal	Green, Pin3 PinC	Green, Pin3 PinC	Black, Pin2, Pin B
- Signal	White, Pin4 Pin D	Common w/black (- Power)	

Note that electronics can be damaged by electric surges. Surge arresters are suggested for applications where surges are possible. Unit may also need to be mechanically isolated. Electronics should not be exposed to temperatures above 250 deg F. Electrical terminations should be made in a NEMA 4 (or better) enclosure. Care must be taken to prevent migration of fluid into the cable jacket.

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4.0 Operation

After proper electrical and mechanical connections have been made check for proper output prior to applying pressure. When output is verified apply pressure to both sides slowly to avoid pressure spikes or exceeding the 3x FSO pressure rating of the unit. Output will increase with increase in differential pressure from high (H) side to low (L) side with the output proportional to that differential. Refer to calibration sheet provided with the unit for specific values. For units with Zero and Span adjustments field adjustments can be made. Remove zero and span cover screws, adjust zero as needed, against a known pressure source adjust span as needed, verify zero and span re-adjusting as needed, replace cover screws.

5.0 Calibration

To verify performance sensor should be periodically calibrated against a known source. Pressure can be applied either via a pressure regulated supply or a dead weight tester. Calibration cycles are left to the users quality system requirements. Annual calibration cycles are common but may need to be adjusted depending on servility of application frequency of use or non standard occurrences such as being exposed to out of range conditions (ex over pressure, temperature or mechanical impact).

6.0 Maintenance

All Dylix pressure sensors are engineered to be maintenance free. To ensure performance contact the factory for any non-conforming condition. Do not attempt to open the unit in the field.



7.0 Return

Contact the factory for a Return Authorization Number prior to sending the units in for calibration or repair.