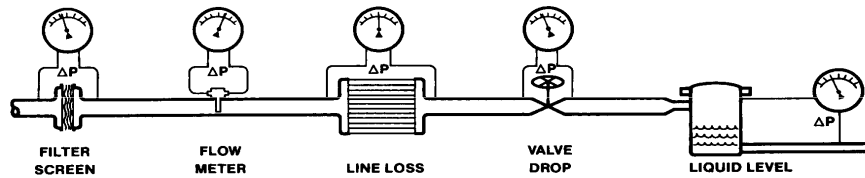


# Mid-West<sup>®</sup> Instrument



## MODEL 522-0004: Installation and Operating Instructions

### INSPECTION

Before installation check the receiving paperwork and the intended application for correct part number, materials of construction, working pressure, dial range, etc. If equipped with switches, check electrical rating. Inspect for shipping damage and, if damaged, report it immediately.

**NOTE - Before attempting repairs contact your local Mid-West Representative or our factory. Failure to do so will void any warranty.**

### INSTALLATION

The model 522 Indicating Differential Pressure switch is calibrated and tested prior to shipment and is ready for immediate installation. Use of the following installation procedures should eliminate potential damage and provide optimum trouble-free operation.

#### 1. PROCESS CONNECTIONS

1/4" FNPT are provided as standard but check paperwork for connections ordered. There are two connections on the body identified as "hi" and "lo" for high pressure and low pressure. Be sure these get plumbed to the proper connections on your system. Improper connection will not damage the instrument, but it will not function properly.

#### 2. INSTRUMENT LOCATION

On liquid service the instrument should be mounted **below** the process connections to facilitate self-bleeding. On gas service it should be located **above** the process connections to promote self-draining. If the process contains particulates, a "pigtail" loop or drop leg (manometer "U-tube" configuration) in the tubing will minimize the possibility of it migrating into the instrument.

### MATERIALS:

**Elastomers:** Buna-N

**Body:** Anodized Aluminum

**Internals:** Acetal, Ceramic, & SS

**Switch:** Flame Retardant ABS

### ELECTRICAL



**WARNING: ELECTRICAL CONNECTIONS SHOULD BE PERFORMED BY QUALIFIED PERSONNEL AND MEET REPRESENTATIVE NATIONAL ELECTRICAL CODE.**

**CAUTION: THIS DEVICE DOES NOT REQUIRE POWER TO OPERATE. CONNECTION DIRECTLY ACROSS A MAINS POWER SOURCE MAY DAMAGE THE SWITCH.**

The SPST (Single Pole Single Throw) switch is intended for on / off control or status input to devices that have load characteristics within the ratings of 60 Watts max, 3 A max., 240 VAC / VDC maximum. **The product of the switching voltage and current shall not exceed 60 W.**

The adjustable switch supplied with your order is set to close at  $1.5 \pm 0.2$  PSID on increasing differential pressure. The switch can be re-adjusted by loosening the two adjustment screws and sliding the switch assembly. Sliding the switch to the left when facing the gauge with the high port to the left will decrease the set point. Re-tighten the switch adjust locking screws while applying light pressure to assembly to keep it from rotating or shifting.

### Interface:

PVC Jacketed Cable, .20" OD, 105<sup>o</sup> C Temp Rating, 22 Awg, UL / CSA Listed, FT4 Flame Test

**PROOF PRESSURE:** 1000 PSI (69 bar)

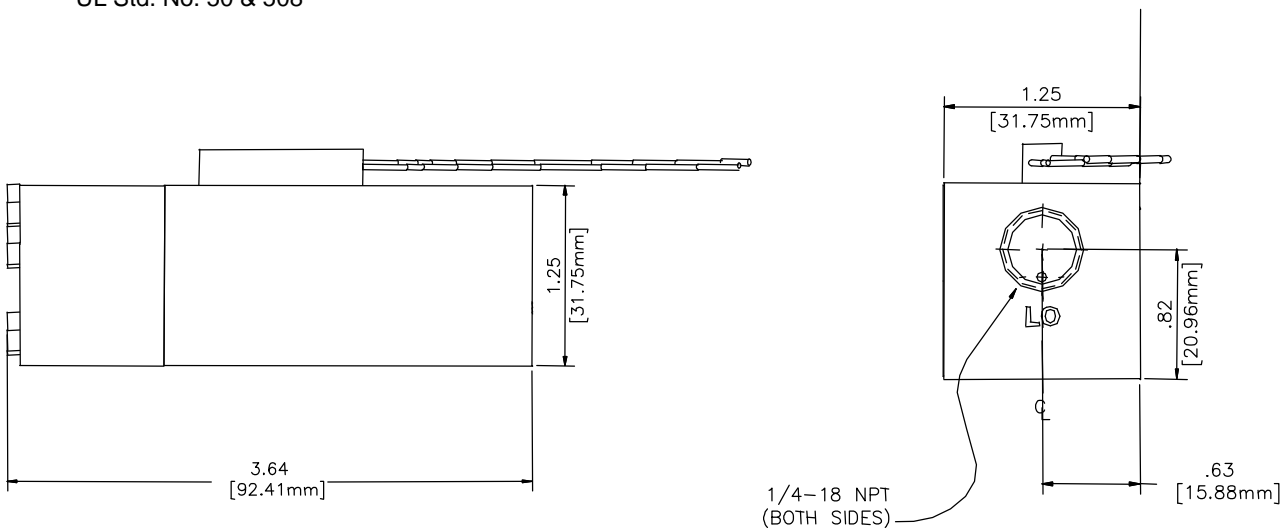
**MAX. DIFFERENTIAL PRESSURE:** 200 PSID (13.8 bar)

**ACCURACY:**  $\pm 5\%$  of Full Scale

**TEMPERATURE LIMITS:**  $-40^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$ ) to  $200^{\circ}\text{F}$  ( $93^{\circ}\text{C}$ ). These limits are based on the entire instrument being saturated to these temperatures. System (process) temperatures may exceed these limitations with proper installation. Contact our customer service representative for details.

**STANDARDS:** All Model 522 Series differential pressure gauges either conform to and/or are designed to the requirements of the following standards:

ASME B1.20.1            NACE MR0175  
ASME B40.1            NEMA Std. 250  
UL Std. No. 50 & 508



# Mid-West<sup>®</sup>

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