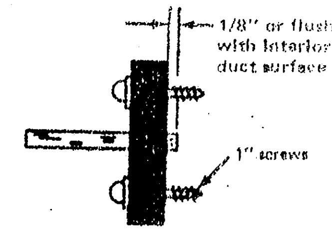
Items 7 & 10 Are obsolete

PRODUCT NUMBER			54L829P1		54L829P2	
NO.	DESCRIPTION	DRWG. NO.	PART NO.	QTY	PART NO.	QTY
1	ALARM CIRCUIT BOARD	B-19705	19705	1	19705	1
2	KNOCKOUT BOX	A-48785	48785	1	48785	1
3	RECEPTACLE	A-49380	49468	1	49468	1
4	POWER ADAPTER	B-49982	49982	1	49982	1
5	OPERATING INST. PL-391	NONE	56064	1	56064	1
6	COVER	A-59406	59406	1	59406	1
7	FLUSH PLATE, PRESSURE	B-59407	59409	1	59409	1
8	TUBING	A-328863	328863	1	328865	1
9	SWITCH ASSEMBLY	C-347299	349024	1	347969	1
10	MOUNTING ASSEMBLY	A-349023	349023	1	349023	1
11	SENSOR BAG ASM	A-349026	349026	1	349026	1
12	PFHSMS #4 X .50	NONE	1140408	4	1140408	4
13	PPHSMS #10 X .50	NONE	3941008	2	3941008	2
PRESSURE SWITCH RANGE (IN.W.G.)			0.07"-0.15"		0.15"-0.50"	

item 11



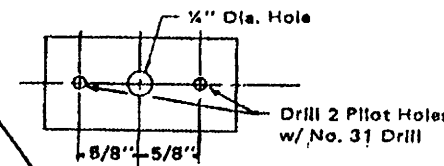
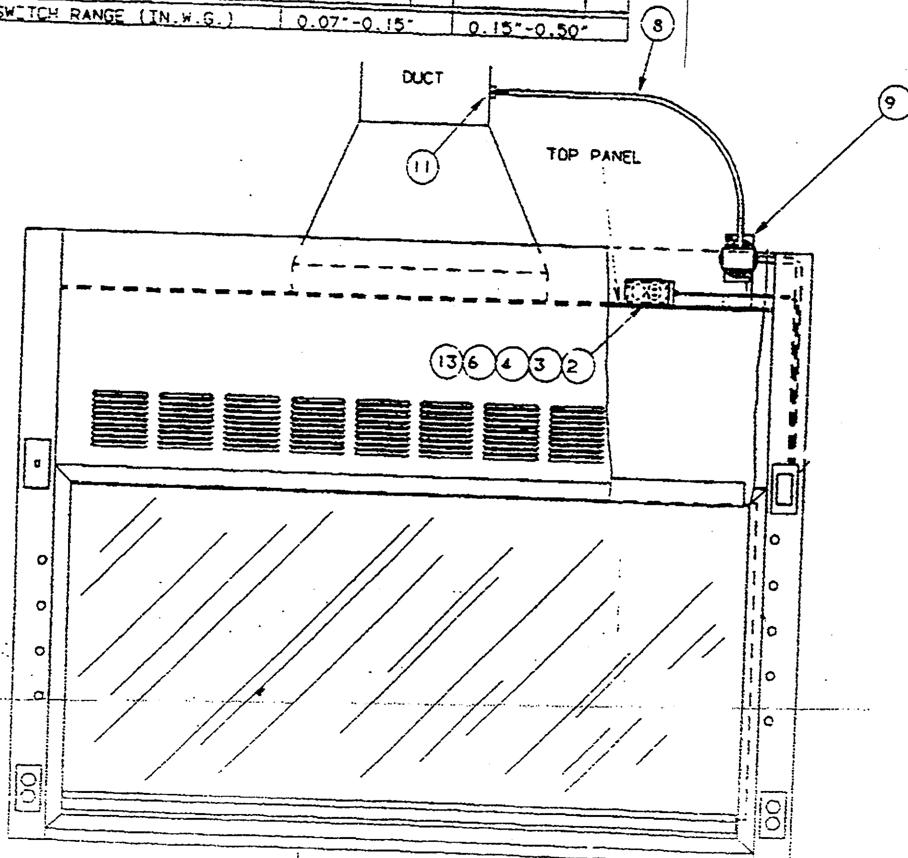


FIGURE C



REFER TO DRAWING A-36L001-51 FOR DETAIL OF PANEL CUTOUT

item 8 = 328863 - tubing

11 = 349026 - sensor connection To Duct

FACTORY INSP. 31

MAY 8 1989

APR. 25.'89

NOTE: 54L829P1 IS SHOWN

REVISED TO MATCH VENDOR BOARD LAYOUT

RELEASED ON ECN L1306?

MATERIAL

SPECIFICATION

DIMENSION TOLERANCE UNLESS OTHERWISE SPECIFIED

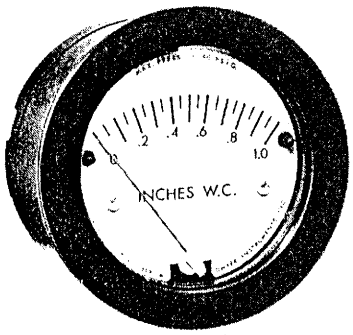
APPROVED

5431210 to 1"

INSTALLATION AND OPERATING INSTRUCTIONS

5431310 to 3"

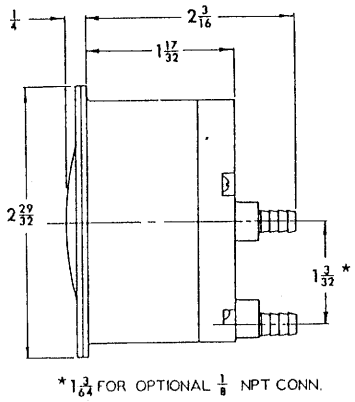
Minihelic II Differential Pressure Gage

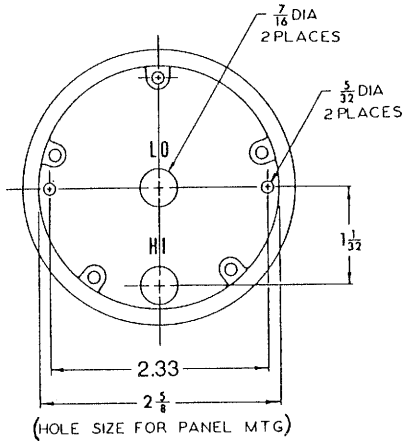


PHYSICAL DATA — SPECIFICATIONS

Dimensions: $2\frac{29}{32}$" x $2\frac{7}{16}$"
Weight: 6 oz.
Rated Total Pressure: 50 PSIG surge, 30 PSIG continuous to either pressure connection.
Ambient Temperature Range: 20°F to 120°F
Finish: Black
Accuracy: ±5% of full scale at 70°F
Housing: filled nylon case; high impact acrylic lens
Connections: standard; barbed for $\frac{3}{16}$" I.D. tubing, optional; $\frac{1}{8}$ NPT male
Standard Accessories: (2) 4-40 x $1\frac{5}{8}$" mounting studs, (2) 4-40 hex nuts, (1) .050" hex allen wrench, (1) panel mounting bracket.
Caution: Use with air or compatible, non-corrosive gases only.

DIMENSIONS — MOUNTING HOLE SIZES AND LOCATIONS



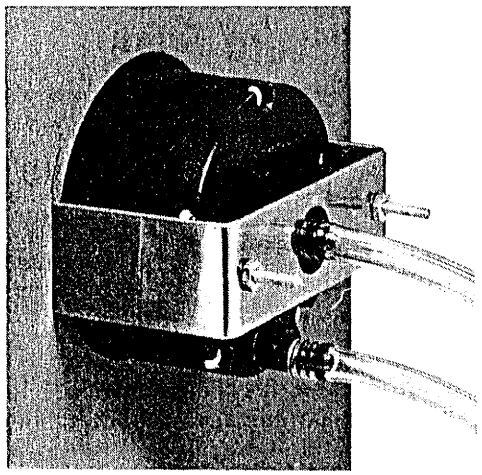


INSTALLATION

1. Select a location free from excessive vibration and where the ambient temperature will be between 20-120°F. Sensing lines may be any length necessary without affecting accuracy. However, long runs of tubing will dampen readings slightly and cause a minor increase in response time. If pulsing pressure or vibration cause excessive pointer oscillation, contact factory for ways to provide additional damping.
2. The gage is calibrated and zeroed in the vertical position at the factory. If the gage is used in any other position, it must be rezeroed each time the position is changed. Gages with ranges under 5 in. w.c. or equivalent should be used only in the vertical position unless special calibration was specified when ordering.

Continued

DWYER INSTRUMENTS, INC.
P.O. BOX 373 • MICHIGAN CITY, INDIANA 46360, U.S.A.
Telephone 219/879-8000
Fax 219/872-9057 Telex 25916



PANEL MOUNTED INSTALLATION

3. To surface mount gage, drill two 5/32" holes on a horizontal line, 2.33" apart for mounting screws. Next drill two 7/16" holes 1 1/32" apart on a vertical line for pressure connections. Install mounting studs in back of gage, insert through holes in panel and secure with hex nuts provided. Be careful not to block the slotted hole near the right hand mounting hole. This provides a path for pressure relief in the event of overpressurization.
4. To panel mount gage, cut a 2 5/8" dia. hole. Install mounting studs in back of gage, position gage in panel and place bracket over studs. Thread hex nuts over studs and tighten.
5. After installation, the gage may need to be zeroed before placing in operation. If re-zeroing is required, firmly hold case of gage with one hand and unscrew front cover with the palm of the other hand in a counterclockwise direction. If difficult to loosen, place a small sheet of rubber between the cover and the palm of the hand. Zero adjust screw is located behind the scale at the point marked "zero". Use hex allen wrench supplied and adjust until pointer is on zero. This must be done with both pressure connections vented to atmosphere and the gage oriented in the final mounting position. Replace cover.
6. To measure positive pressure, connect tubing to port marked "HI" and vent "LO" port to atmosphere. For negative pressure (vacuum) connect to port marked "LO" and vent "HI" port to atmosphere. For differential pressure connect higher pressure to port marked "HI" and lower to "LO" port. If gage is supplied with 1/8" NPT connections, be careful not to overtighten fittings to avoid damage to the gage.

CALIBRATION CHECK

Select a second gage or manometer of known accuracy and in an appropriate range. Use short lengths of rubber or vinyl tubing to connect the high pressure side of the Minihelic gage and the test gage to two legs of a tee. Very slowly apply pressure through the third leg. Allow enough time for pressure to equalize throughout the system and for fluid to drain if a manometer is being used. Compare readings. If gage being tested exceeds rated accuracy, it should be returned to the factory for recalibration.

MAINTENANCE

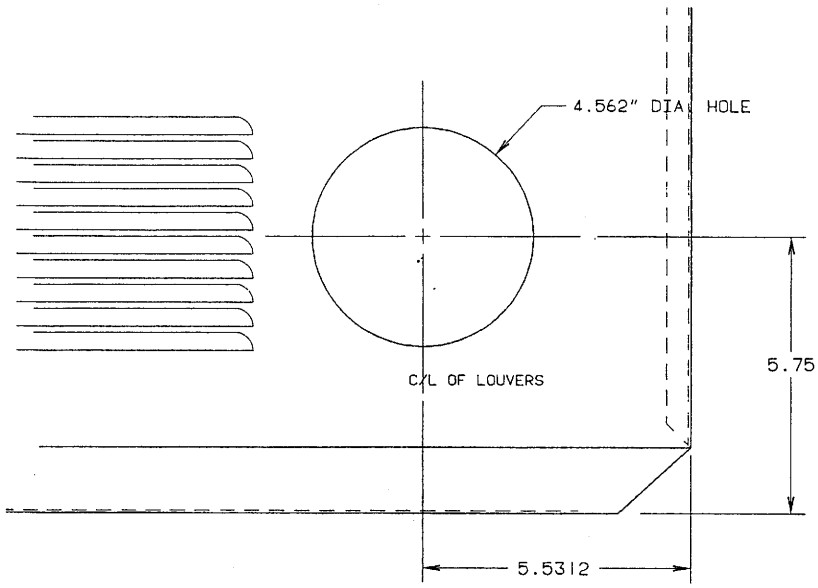
No lubrication or periodic servicing is required. Keep case exterior and cover clean. Occasionally disconnect pressure lines to vent both sides of gage to atmosphere and re-zero per paragraph 5.

Litho in U.S.A. 11/89

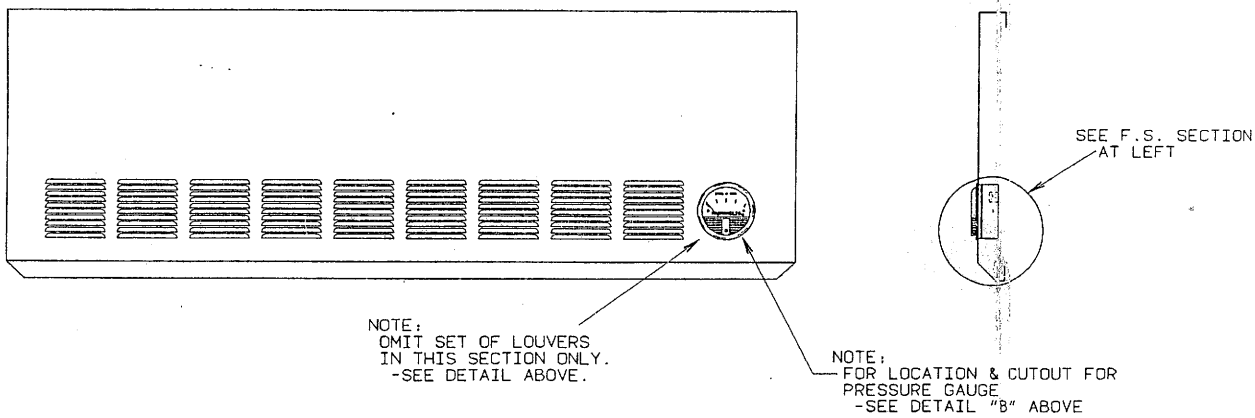
FR. NO. 14-440434-00

Dwyer

DWYER INSTRUMENTS, INC.
P.O. Box 373, Michigan City, Ind. 46360
Telephone 219/879-8000 Fax 219/872-9057 Telex 25916

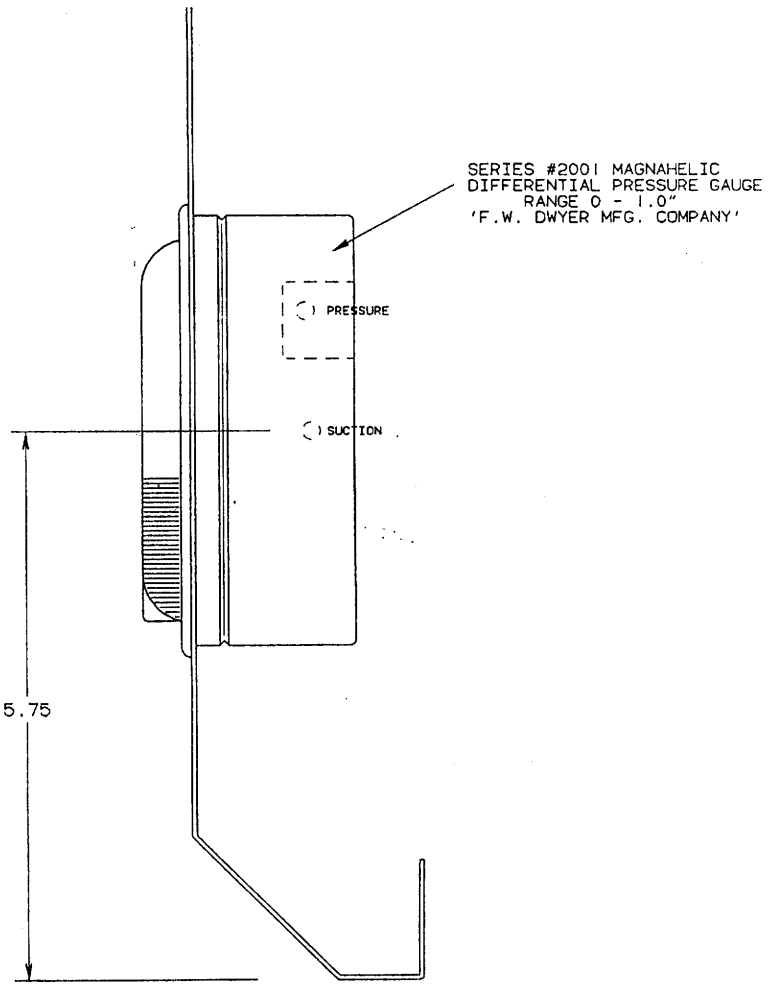


H.S. DETAIL "B"



DETAIL OF FRONT LOUVER PANEL
SHOWING LOCATION 54L306 MAGNAHELIC PRESSURE GAUGE

Magnehelic shown
Minihelic mounts
in a similar manner
w/ smaller cut out



F.S. SECTION THRU LOUVER PANEL
SHOWING PRESSURE GAUGE

INSP. 31
SEP 7 1989

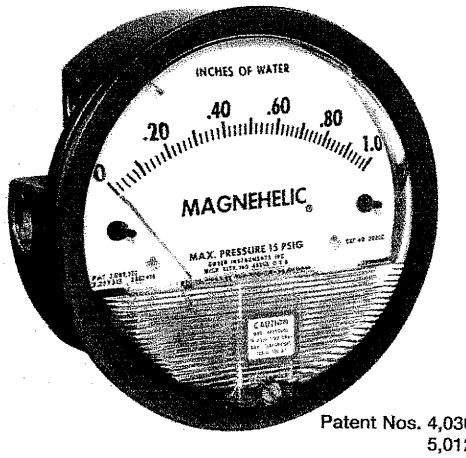
HAMILTON INDUSTRIES
TWO RIVERS, WI 54241 / 414-793-1121

Press

Dwyer®

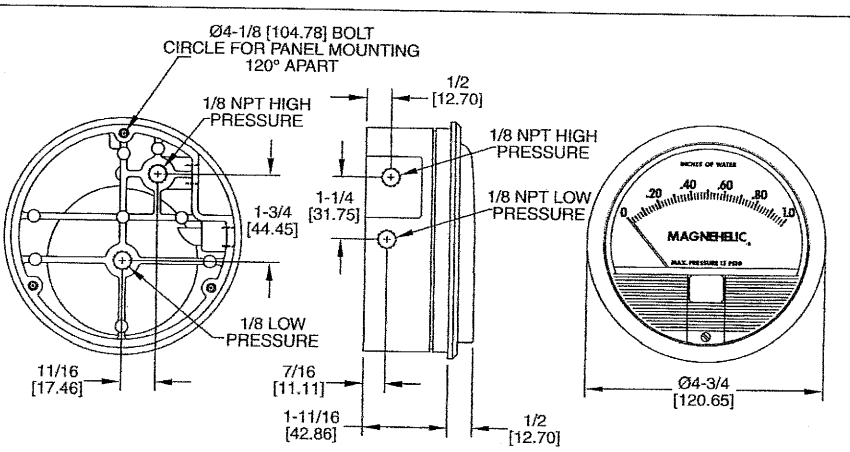
Series 2000 Magnehelic® Differential Pressure Gages

Indicate positive, negative or differential. Accurate within 2%.



Patent Nos. 4,030,365
5,012,678

Standard Magnehelic® Pressure Gage has a large, easy-to-read 4" dial.

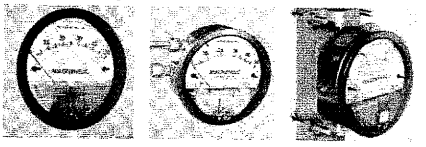


Dimensions, Standard Series 2000 Magnehelic® Pressure Gages. (Slightly different on medium and high pressure models)

Select the Dwyer Magnehelic® gage for high accuracy – guaranteed within 2% of full scale – and for the wide choice of 81 models available to suit your needs precisely. Using Dwyer's simple, frictionless Magnehelic® movement, it quickly indicates low air or non-corrosive gas pressures – either positive, negative (vacuum) or differential. The design resists shock, vibration and over-pressures. No manometer fluid to evaporate, freeze or cause toxic or leveling problems. It's inexpensive, too.

The Magnehelic® is the industry standard to measure fan and blower pressures, filter resistance, air velocity, furnace draft, pressure drop across orifice plates, liquid levels with bubbler systems and pressures in fluid amplifier or fluidic systems. It also checks gas-air ratio controls and automatic valves, and monitors blood and respiratory pressures in medical care equipment.

NOTE: Do Not use with Hydrogen gas. Dangerous reactions will occur.



Flush ...Surface...or Pipe Mounted

MOUNTING. A single case size is used for most models of Magnehelic® gages. They can be flush or surface mounted with standard hardware supplied. With the optional A-610 Pipe Mounting Kit they may be conveniently installed on horizontal or vertical 1¼" - 2" pipe. Although calibrated for vertical position, many ranges above 1" may be used at any angle by simply re-zeroing. However, for maximum accuracy, they must be calibrated in the same position in which they are used. These characteristics make Magnehelic® gages ideal for both stationary and portable applications. A 4⅜" hole is required for flush panel mounting. Complete mounting and connection fittings plus instructions are furnished with each instrument.

VENT VALVES

In applications where pressure is continuous and the Magnehelic® gage is connected by metal or plastic tubing which cannot be easily removed, we suggest using Dwyer A-310A vent valves to connect gage. Pressure can then be removed to check or re-zero the gage.

HIGH AND MEDIUM PRESSURE MODELS

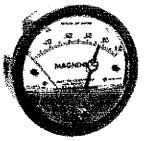
Installation is similar to standard gages except that a 4⅛" hole is needed for flush mounting. The medium pressure construction is rated for internal pressures up to 35 psig and the high pressure up to 80 psig. Available for all models. Because of larger case, the medium pressure and high pressure models will not fit in a portable case size. Weight 1 lb., 10 oz. Installation of the A-321 safety relief valve on standard Magnehelic® gages often provides adequate protection against infrequent overpressure.

SPECIFICATIONS

Temperature Limits: 20° to 140°F* (–7° to 60°C).
Pressure Limits: –20" Hg. to 15 psig† (–68 kPa to 103 kPa).
Overpressure: Relief plug opens at approximately 25 psig (172 kPa).
Connections: ⅛" female NPT high and low pressure taps, duplicated – one pair side and one pair back.
Housing: Exterior finish is coated gray to withstand 168 hour salt spray corrosion test. Die cast aluminum. Case and aluminum parts iridite-dipped.
Accuracy: Plus or minus 2% of full scale (3% on -0 and 4% on -00 ranges), throughout range at 70°F (21°C).
Standard Accessories: Two ⅛" NPT plugs for duplicate pressure taps, two ⅛" pipe thread to rubber tubing adapters and three flush mounting adapters with screws. (Mounting ring and snap ring retainer substituted for 3 adapters in MP & HP gage accessories.)
Weight: 1 lb. 2 oz. (460 g)

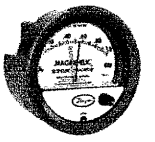
*Low temperature models available as special option.
†For applications with high cycle rate within gage total pressure rating, next higher rating is recommended. See Medium and High pressure options at lower left.

OPTIONS AND ACCESSORIES



Transparent overlays
Furnished in red and green to highlight and emphasize critical pressures. ..... **$12.50 net**

Adjustable signal flag
Integral with plastic gage cover. Available for most models except those with medium or high pressure construction. Can be ordered with gage or separate. **.14.25**



LED Setpoint Indicator
Bright red LED on right of scale shows when setpoint is reached. Field adjustable from gage face, unit operates on 12-24 VDC. Requires MP or HP style cover and bezel. **62.50**

Portable units
Combine carrying case with any Magnehelic® gage of standard range,except high pressure connection. Includes 9 ft. (2.7 m) of 5/16" I.D. rubber tubing, standhang bracket and terminal tube with holder. **24.50**

Air filter gage accessory package
Adapts any standard Magnehelic® for use as an air filter gage. Includes aluminum surface mounting bracket with screws, two 5 ft. (1.5 m) lengths of ¼" aluminum tubing two static pressure tips and two molded plastic vent valves, integral compression fittings on both tips and valves. **23.75**

Dwyer Instruments, Inc./P.O. Box 373/Michigan City, Indiana 46361/Phone 219 879-8000/Fax 219 872-9057 • U.K. Phone (01494)-461707 • Australia Phone (02) 9756-5355