

# Model GC31

## Ultra-Compact Digital Pressure Sensor



ACTUAL SIZE



### FEATURES:

- Ultra-compact design (30 mm x 30 mm)
- Combined three-in-one digital pressure gauge, switch and transducer
- Simple "Push-Button" configurability allows user to adjust switch settings, analog scaling
- Numerous standard ranges available

### APPLICATIONS:

- Hydraulic presses, stamping equipment, lifts
- Tire press vulcanization, pressure monitoring
- Water, refrigerant or ammonia based cooling systems
- Pressure monitoring on lubrication systems



### PRODUCT SPECIFICATIONS

#### Analog Output (1-5 VDC):

**Accuracy:**  $\pm 1,0$  % F.S. (accuracy includes effects of linearity, hysteresis and repeatability)

**Response time:** 50 ms

**Output resolution:** 25 mV

**Analog scaling:** User may configure analog output scaling to any range within full scale of sensor range

#### Pressure Switch Output:

**Type:** NPN or PNP open collector up to 30 VDC/80 mA

**Setting Accuracy:**  $\pm 1,0$  % F.S.

**Number of contacts:** 2

**Time delay:** 5 ms – 2,0 s (by user)

**Hysteresis:** Variable (by user)

**Switch setting:** User may adjust switch actuation and deadband to any points within full scale sensor range

### Display:

**Type:** 3 ½ digit, 10 mm LED

**Accuracy:**  $\pm 1,0$  % F.S.  $\pm$  last digit

**Display setting:** User may re-configure display scaling, set to capture MIN or MAX value, and adjust display update rate.

### Metric Ranges in MPa:

1 2 3,5 5 10 20 35 50

### Metric Compound Ranges in MPa:

-0,1/1 -0,1/2

### Standard Ranges (Gauge) in psi:

50 100 150 300 500 1000 1500

### Standard Ranges (Compound) in psi:

-15/15 -15/75 -15/150 -15/300

### ENVIRONMENTAL SPECIFICATIONS

#### Temperature Limits:

Storage:  $-30$  to  $60$  °C ( $-22$  to  $140$  °F)

Operating:  $-20$  to  $60$  °C ( $-4$  to  $140$  °F)

Compensated:  $-10$  to  $50$  °C ( $14$  to  $122$  °F)

#### Temperature Effects:

Zero/Span: (from  $23$  °C ( $73$  °F) reference temperature)

$\pm 0,05$  % / K ( $\pm 0,03$  % / °F)

**Humidity:** 0-85 % RH (Non-Condensing)

### FUNCTIONAL SPECIFICATIONS

#### Proof pressure:

200 % for ranges  $\leq 3,5$  MPa (500 psi)

150 % for ranges  $\geq 5$  MPa (1000 psi)

**Burst pressure:** 800 % F.S.

#### CE Compliance:

EN 61326-1 2006, EN 61326-2-3 2006

### ELECTRICAL SPECIFICATIONS

#### Power Supply Requirements:

Supply voltage: 11-27 VDC

Current consumption: 30 mA (max.)

#### Switch Contacts:

(2) NPN or PNP open collector outputs

NPN Type: 30 VDC/80 mA (max.)

PNP Type: voltage drop 1 VDC (max) / 80 mA (max.)

### MECHANICAL SPECIFICATIONS

#### Pressure Connection:

G ¼ B male according EN 837-1, ¼ NPT male according ANSI/ASME B1.20.1/EN 837-1

**Enclosure:** ABS, polycarbonate, aluminum

**Rating:** IP40

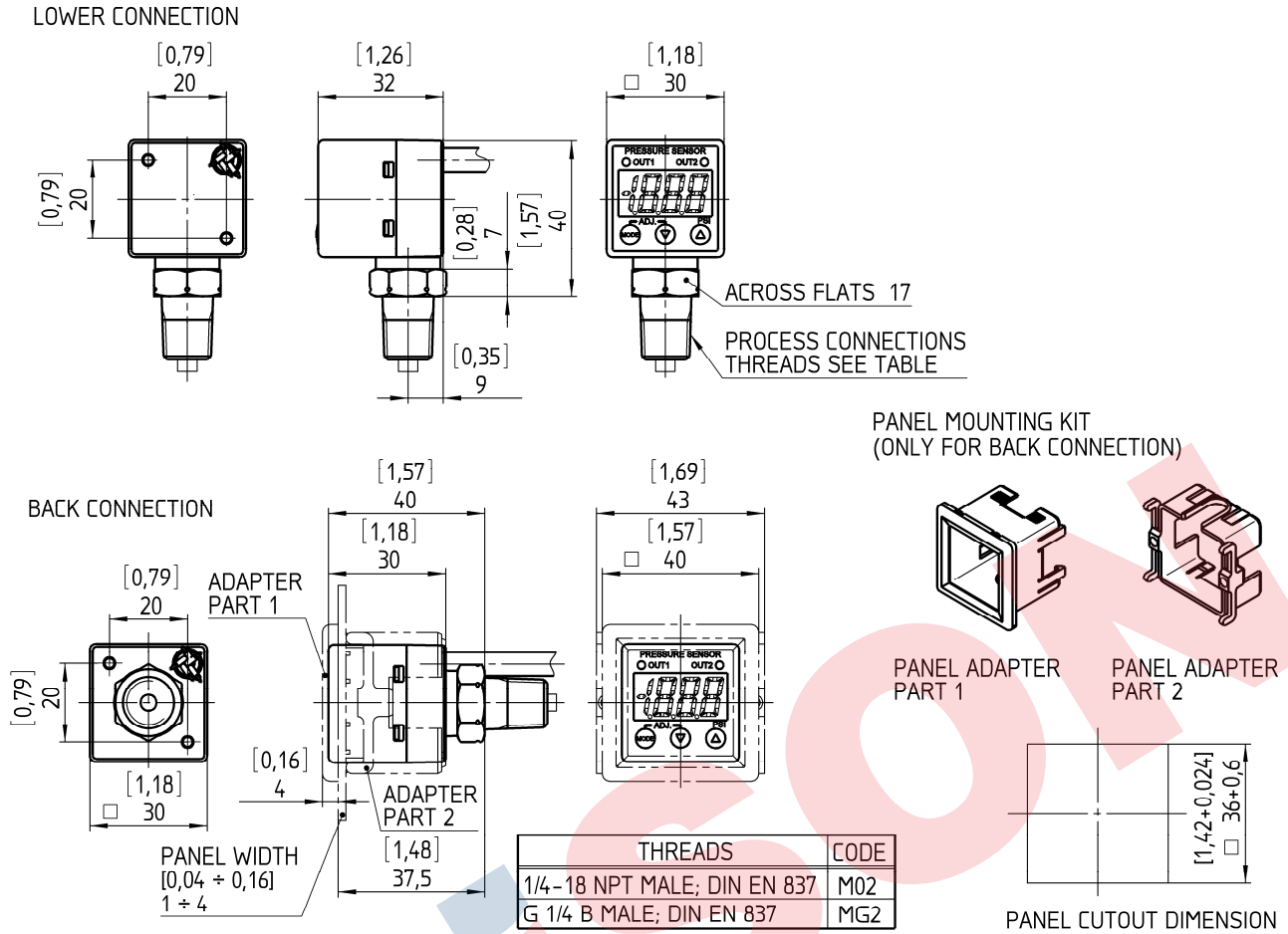
**Electrical Connection:** 2 m (6 ft) cable pigtail

**Weight:** Approx. 110 g

**Mounting:** Panel mounting bracket included (back connect only)

**Media:** Fluids and gases compatible with stainless steel 304 (1.4301) (sensor housing) and stainless steel 17-4 pH (1.4542/1.4548) (sensor diaphragm)

## General dimensions in mm [inch]



## Order information

| Type                             | Accuracy                        | Process connection               | Output signal                              | Electrical connection | Range            | Eng. unit | Options            |     |
|----------------------------------|---------------------------------|----------------------------------|--|-----------------------|------------------|-----------|--------------------|-----|
| GC31                             | (7) 1,0 %                       | (M02L) ¼ NPT male, lower connect | (1N) 1-5 VDC analog w/2x NPN type switches | (F4) 2 m (6') cable   | <b>Compound:</b> |           | (NH) Tagging wired |     |
|                                  |                                 |                                  |  |                       | 15#&V            | -15/15    |                    | psi |
|                                  |                                 |                                  |  |                       | 75#&V            | -15/75    |                    |     |
|                                  |                                 |                                  |  |                       | 150#&V           | -15/150   |                    |     |
|                                  |                                 |                                  |  |                       | 300#&V           | -15/300   |                    |     |
|                                  |                                 | 1MP&V                            | -0,1/1                                     |                       | MPa              |           |                    |     |
|                                  |                                 | 2MP&V                            | -0,1/2                                     |                       |                  |           |                    |     |
|                                  |                                 | (M02B) ¼ NPT male, back connect  | (1P) 1-5 VDC analog w/2x PNP type switches |                       | <b>Gauge:</b>    |           | psi                |     |
|                                  |                                 |                                  |  |                       | 50#G             | 50        |                    |     |
|                                  |                                 |                                  |  |                       | 100#G            | 100       |                    |     |
| 150#G                            | 150                             |                                  |  |                       |                  |           |                    |     |
| 300#G                            | 300                             |                                  |  |                       |                  |           |                    |     |
| (MG2L) G ¼ B male, lower connect | (MG2B) G ¼ B male, back connect | 1MPG                             | 1  | MPa                   |                  |           |                    |     |
|                                  |                                 | 2MPG                             | 2  |                       |                  |           |                    |     |
|                                  |                                 | 3.5MPG                           | 3,5  |                       |                  |           |                    |     |
|                                  |                                 | 5MPG                             | 5  |                       |                  |           |                    |     |
|                                  |                                 | 10MPG                            | 10   |                       |                  |           |                    |     |
|                                  |                                 | 20MPG                            | 20   |                       |                  |           |                    |     |
|                                  |                                 | 35MPG                            | 35   |                       |                  |           |                    |     |
|                                  |                                 | 50MPG                            | 50   |                       |                  |           |                    |     |

## Order example

| Type | Accuracy | Process connection | Output signal | Electrical connection | Range | Engineering unit | Options |
|------|----------|--------------------|---------------|-----------------------|-------|------------------|---------|
| GC31 | 7        | MG2L               | 1P            | F4                    | 1     | MPG              | RH      |

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