

OEM Pressure transducer model G2

Affordable performance in a durable, compact package
Accuracy 1 % Total Error Band (TEB)

Features

- Broad temperature capability
- All-welded pressure connection
- High EMI/RFI rating
- Housing IP67 rated
- Excellent long term stability
- Diagnostic rails

Ranges

-1 ... 2 bar up to 0 ... 1400 bar
-30 in. Hg ... 30 psi up to 0 ... 20.000 psi

Applications

- Off-road equipment
- Construction machinery
- Compressor control
- HVAC and refrigeration
- Agricultural implements
- Process automation and control
- Hydraulic and pneumatic sensing
- Pump monitoring

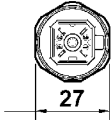


| Technical specification | G2 |
|--|---|
| Measuring principle | Polysilicon thin film sensor, electron beam welded to pressure fitting, signal conditioning by high performance ASIC and modern digital compensation techniques |
| Range in psi | 30 45 60 100 150 200 300 500 750 1000 1500 2000 3000 |
| Overpressure limit in psi | 90 90 120 200 300 400 600 1000 1500 2000 3000 4000 6000 |
| Burst pressure in psi | 450 450 600 1000 1500 2000 3000 5000 7500 7500 7500 10000 15000 |
| Range in (in Hg)/psi | 5000 7500 10000 20000 -30/30 -30/45 -30/60 -30/85 -30/100 -30/150 -30/200 -30/300 |
| Overpressure limit in psi | 7500 9000 12000 24000 90 90 120 200 200 300 400 600 |
| Burst pressure in psi | 25000 37500 24000 48000 450 450 600 1000 1000 1500 2000 3000 |
| Pressure type | Gauge, compound |
| Process connection | G 1/4 B male according EN 837-1, 1/4" BSP straight 1/8 NPT male, 1/4 NPT male according ANSI/ASME B1.20.1/EN 837-1 7/16-20 SAE male |
| Material | Process connection Sensor Case |
| Power supply | 9 ... 36 VDC (14 ... 36 VDC for output 0 ... 10 VDC), reverse polarity and miswire protected |
| Output signal | 4 ... 20 mA, 2-wire 0,5 ... 4,5 VDC ratiometric, 3-wire 0 ... 5/10 VDC, 1 ... 5/6 VDC, 3-wire |
| Maximum loop resistance for 4 ... 20 mA | $\leq (U_B - 9 V) / 0,022 A$ |
| Isolation between case and electrical connection | > 100 MΩ at 100 VDC |
| Isolation voltage | 100 VAC |
| Supply current | 5 mA for output 0 ... 5/10 VDC, 4 mA for output 1 ... 5/6 VDC, 3,5 mA for output 0,5 ... 4,5 VDC |
| Accuracy | 1 % F.S., including non-linearity, hysteresis, non-repeatability and temperature error from -20 ... 85 °C |
| Total Error Band (TEB) | 1,5 % F.S., incl. non-linearity, hysteresis, non-repeatability and temp. error from -40 ... -20 °C / 85 ... 125 °C |
| Non-linearity (BFSL) | $\leq \pm 0,1$ % F.S. typical |
| Non-repeatability | $\leq \pm 0,03$ % F.S. typical |
| Hysteresis | $\leq \pm 0,01$ % F.S. typical |
| Stability | $\leq \pm 0,25$ % F.S. / year |
| Response time (10 ... 90 %) | ≤ 1 ms |
| Warm-up time | ≤ 500 ms |
| Permissible | Operation temperature Medium temperature Storage temperature Humidity |
| Durability | Tested to $5 \cdot 10^7$ cycles |
| Vibration | Random vibration (20 g) over temperature range -40 ... 125 °C, exceeds typical MIL.STD. requirements |
| Shock resistance | 100 g / 6 ms |
| Drop test | Withstands 1 meter on concrete, 3 axis |
| Position effect | $\leq \pm 0,01$ % F.S. typical |
| CE-mark/EMC | Per EN 61326 (1997) + A1 (1998) + A2 (2001), Annex A (Heavy Industrial) |
| Electrical connection | Hirschmann G series acc. DIN EN 61984, Metri-Pack 150 Series connector, shield cable, flying leads |
| Protection according EN 60 529/IEC 529 | IP65, NEMA 4X, optional IP67 |
| Weight in kg | 0,1 |
| Accessories, options | Diaphragm seals, valves, digital indicator |

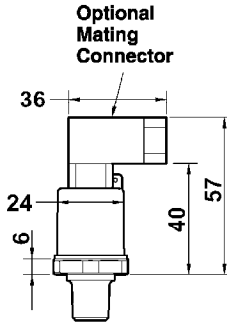
All specifications are subject to change without notice.

General dimensions in mm

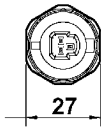
MINI HIRSCHMANN**



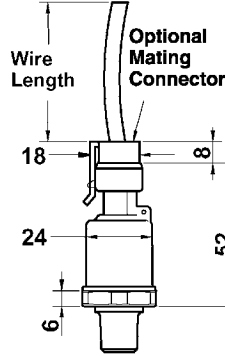
Mates to Hirschmann G4W1F connector or similar



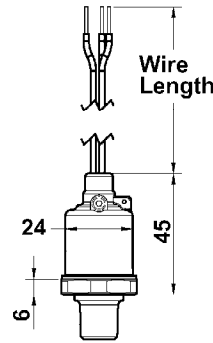
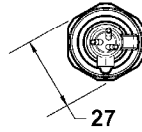
3-PIN METRI-PACK*



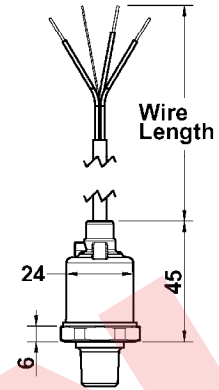
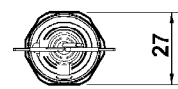
Mates to Metri-Pack Connector Body 12065286



FLYING LEADS
1 Meter, 18 AWG

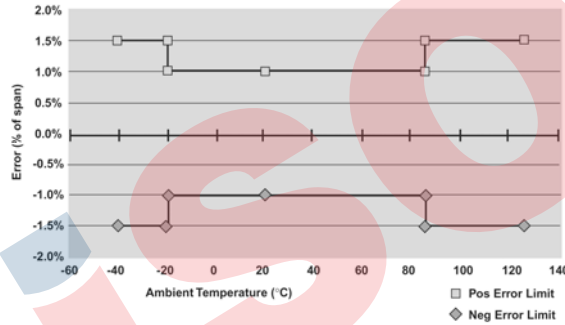


SHIELDED CABLES
1 Meter, PVC Jacket, 24 AWG

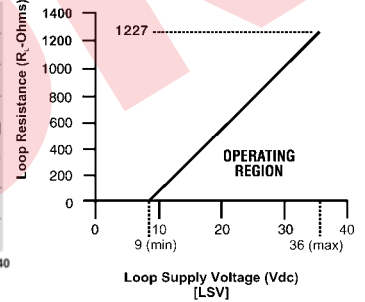


A 1 % Total Error Band accuracy is accomplished by marrying a high performance ASIC to a very stable, field proven polysilicon thin film pressure sensor. The sensor is electron beam welded to a pressure fitting of stainless steel, which provides excellent overpressure capability and outstanding durability in the presence of shock and vibration. The integrity of the G2 is further enhanced by circuitry which is held securely within an internal cage and housed in a durable enclosure of reinforced Nylon.

TOTAL ERROR BAND (TEB)
Error limits of all points (0-100% of range)



Power Supply Voltage vs. Loop Resistance
(4-20mA ONLY)



Order information

| Type | Accuracy | Process connection | Output signal | Electrical connection | Range | Engineering units | Pressure type | Options |
|-----------------------|---|---------------------------------------|---|---|---------|---------------------------|---------------|--------------------|
| G2 | (7) 1 % TEB (-20...85 °C) 1,5 % TEB (-40...20 °C, 85...125 °C) | (M01) 1/8 NPT male | (05) 0/5 VDC | Metri-Pack | 0/ 30 | PSI | (G) gauge | (NH) Tagging wired |
| | | (M02) 1/4 NPT male | (10) 0/10 VDC | (GN) No mating connection | 0/ 45 | | | |
| | | | (15) 1/5 VDC | (G2) Mating connector with 1 m cable | 0/ 60 | | | |
| | | (MEK) 7/16-20 SAE male | (16) 1/6 VDC | (G1) Mating connector with customer specified cable ¹⁾ | 0/ 100 | | | |
| | | (MG2) G 1/4 B male | (42) 4/20 mA | Hirschmann G series | 0/ 150 | | | |
| (MS2) 1/4-19 BSP male | others on request | | (RM) 0,5/4,5 VDC ratio metric to 5 VDC supply | (HM) No mating connection | 0/ 200 | bar and others on request | | |
| | | | | (M1) Mating connector with no cable | 0/ 300 | | | |
| | | | | (M2) Mating connector with 1 m cable | 0/ 500 | | | |
| | | | | (P9) Mating connector with customer specified cable ¹⁾ | 0/ 750 | | | |
| | | | | | 0/ 1000 | | | |
| | 0/ 1500 | | | | | | | |
| | 0/ 2000 | | | | | | | |
| | 0/ 3000 | | | | | | | |
| | 0/ 5000 | | | | | | | |
| | 0/ 7500 | | | | | | | |
| | 0/ 10000 | | | | | | | |
| | 0/ 20000 | | | | | | | |
| | 30&VAC | Flying Leads | | | | | | |
| | 45&VAC | (W2) 1 m flying leads | | | | | | |
| | 60&VAC | (W9) Customer specified ¹⁾ | | | | | | |
| | 85&VAC | Shielded Cable | | | | | | |
| | 100&VAC | (F2) 1 m shielded cable | | | | | | |
| | 150&VAC | (P1) Customer specified ¹⁾ | | | | | | |
| | 200&VAC | | | | | | | |
| | 300&VAC | | | | | | | |
| | | | ¹⁾ specify cable lengths in m | | | | | |

Order example

| Type | Accuracy | Process connection | Output signal | Electrical connection | Range | Engineering unit | Pressure type | Option |
|------|----------|--------------------|---------------|-----------------------|-------|------------------|---------------|--------|
| G2 | 7 | MG2 | 42 | M1 | 0/100 | PSI | G | NH |

Ashcroft Instruments GmbH

Germany
Max-Planck-Str. 1, D-52499 Baesweiler
P.O. Box 11 20, D-52490 Baesweiler
Tel.: +49 (0) 2401 808-0, Fax: +49 (0) 2401 808-125

France
„206“ ZA Le Mandinet, 1/3 Rue des Campanules
F-77185 Lognes
Tel.: +33 (0) 1 60 37 25 30, Fax: +33 (0) 1 60 37 25 39

Website: www.ashcroft.eu

United Kingdom
Unit 5 William James House
Cowley Road, Cambridge CB4 0WX
Tel.: +44 (0) 12 23 39 55 00, Fax: +44 (0) 12 23 39 55 01

e-Mail: sales@ashcroft.com