

Data Sheet

G2 Pressure Transducer

FEATURES

- All-welded stainless steel sensor and pressure connection
- Highly configurable; wide selection of pressure connections and electrical terminations
- Field proven polysilicon thin film pressure sensor
- Ranges 30 psi - 20,000 psi

TYPICAL USES

- Off road vehicles
- Construction machinery
- Hydraulic and pneumatic sensing
- Performance racing
- Railroad/transportation
- Agriculture implements
- Compressor control
- HVAC/R
- Process automation and control
- Pump monitoring



G2
Transducer



Certified to
NSF/ANSI/CAN 61



SPECIFICATIONS

Reference Temperature: 72 °F ±2 °F (21 °C ±1 °C)

Accuracy Class (BFSL): ± 0.25% of span

Total Error Band Accuracy (TEB):
±1% of Span: From -20 to 85 °C (-4 to 185 °F)
±1.5% of Span: From -40 to -20 °C (-40 to -4 °F)
±1.5% of Span: From 85 to 125 °C (185 to 257 °F)
 Includes the combined effects of non-linearity (Terminal Point Method), hysteresis, non-repeatability, temperature and zero offset and span setting errors

Stability: ≤ ±0.25% of span/year

Durability: 50 million cycles

Approvals: NSF-61, CE /UKCA, UL (UL 61010-1), (CSA 222 6101-1) **UL** Recognized component per UL-610101, and CSA 22.2 6101-1, Electrical Equipment for Measurement, Control and Laboratory use

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:
 Storage: -40 °F to 257 °F (-40 °C to 125 °C)
 Operating: -40 °F to 257 °F (-40 °C to 125 °C)
 Compensated: -40 °F to 257 °F (-40 °C to 125 °C)

Humidity Effects: 0 to 100% R.H., no effect

FUNCTIONAL SPECIFICATIONS

Vibration Effects: Random vibration (20 g) over temperature range (-40 °C to 125 °C)

Shock Effects: 100 gs, 6 ms

Drop Test: Withstands 1 meter on concrete

KEY BENEFITS

- Broad temperature capability
- High EMI/RFI immunity ratings
- IP67 Ingress rating
- High performance ASIC based electronics

FUNCTIONAL SPECIFICATIONS

Response Time: < 1 msec

Warm-up Time: < 500 msec

Position Effect: < ±0.01% span

Overpressure (F.S):	Proof	Burst
≤750 psi	2X Range	10X Range
≥1,000 to ≤4,000 psi	2X Range	5X Range
≥5,000 to ≤7,500 psi	1.5X Range	5X Range
≥10,000 to ≤20,000 psi	1.2X Range	2.4X Range

ELECTRICAL SPECIFICATIONS

Reverse Polarity & Miswired Protected: Yes

Insulation Breakdown Voltage: 100 Vac

Insulation Resistance: >100 Mh @ 100 Vdc

Circuit Protection: Reverse polarity and miswire protection

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OUTPUT SIGNALS AVAILABLE

Voltage Output	Excitation	Supply Current
0-5 Vdc, 3 wire	9-36 Vdc	5 mA
0-10 Vdc, 3 wire	14-36 Vdc	5 mA
1-5 Vdc, 3 wire	9-36 Vdc	4 mA
1-6 Vdc, 3 wire	9-36 Vdc	4 mA
0.5-4.5 Vdc, 3 wire	9-36 Vdc	4 mA
Ratiometric Output		
0.5-4.5 Vdc, 3 wire	5 Vdc \pm 0.5 Vdc	3.5 mA
Current Output		
4-20 mA, 2 wire	9-36 Vdc	

ENVIRONMENTAL RATING

Rating	Electrical Connections
IP67, NEMA 4X	Metri-Pack®, Shielded cable, Flying leads Deutsch® DT & DTM, AMP® Superseal® and M12
IP65, NEMA 4X	Hirschmann® G, EN 175301-803 Form A & C (DIN 43650 A & C)

WETTED COMPONENTS

Diaphragm	17-4 PH® Stainless steel
Process Connection	304 Stainless steel

NON-WETTED COMPONENTS

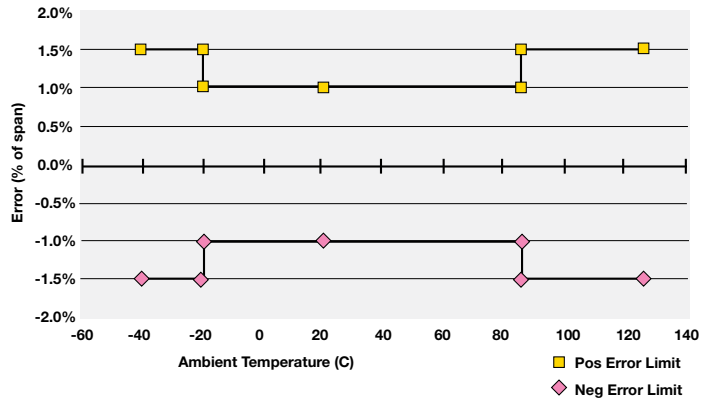
Housing	20% Glass reinforced nylon, Fire retardant to UL94 V1
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OPTIONAL FEATURES

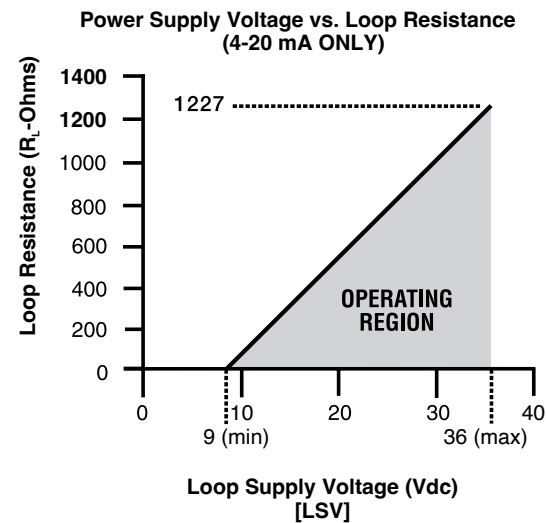
Electrical Termination:	See ordering code
Process Connection Location:	See ordering code
Consult Factory For:	Pressure range options, process connection locations, approval descriptions

TOTAL ERROR BAND (TEB)

Error limits of all points (0-100% of range)



POWER SUPPLY & LOAD RESISTANCE



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ORDERING CODE	Example:	G27	M01	42	M2	60#	G	-	XTU
Model									
G27 - G2 Series, 1.0% Total Error Band -20 °C to 85 °C; 1.5 % Total Error Band -40 °C to -20 °C & 85 °C to 125 °C		G27							
Pressure Connection Size									
M01 - 1/8 NPT - Male			M01						
M02 - 1/4 NPT - Male									
MEK - 3/16 20 SAE #4 - Male, not UL recognized over 10,000 psi range									
MEV - 3/16-18 SAE #6 Male w/Buna-N O-ring, not UL recognized over 10,000 psi range									
MS2 - 1/4-19 BSP - Male, not UL recognized over 10,000 psi range									
MG2 - G 1/4 B - Male									
M38 - 3/8-24 SAE #3 Male w/Buna-N O-ring									
M33 - 3/8-24 UNJF3A (w/37° cone seat)									
M76 - 7/16-20 UNJF3A (w/37° cone seat)									
Output Signal									
05 - 0-5 Vdc									
10 - 0-10 Vdc									
15 - 1-5 Vdc									
16 - 1-6 Vdc									
42 - 4-20 mA				42					
RM - 0.5-4.5 Vdc ratiometric to 5 Vdc supply									
45 - 0.5 - 4.5 Vdc ratiometric to 9-36 Vdc supply									
Electrical Termination									
EN 175301-803 Form C (DIN 43650, Form C)									
DC - No mating connector									
N1 - Mating connector, no cable									
N2 - Mating connector, 1 meter (3 feet) of cable									
N3 - Mating connector, 3 meter (10 feet) of cable									
N9 - Mating connector with customer specified length									
M12 - Mates to Hirschmann® 933 172-100 or similar									
EW - No mating connector									
E0 - W/mating connector, no cable									
E2 - W/mating connector, 1 meter (3 feet) of shielded cable									
E4 - W/mating connector, 3 meter (10 feet) of shielded cable									
E1 - W/mating connector & customer defined cable length									
Pigtail - Shielded cable with PVC jacket and 24 AWG leads									
F2 - W/1 meter (3 feet) cable length									
F3 - W/3 meter (10 feet) of cable length									
P1 - Customer specified length									
Metri-Pack®									
GN - No mating connection									
G2 - Mating connection with 1 meter (3 feet) of cable									
G3 - Mating connection with 3 meter (10 feet) of cable									
G1 - Mating connector with customer specified length									
Hirschmann® G Series									
HM - No mating connection									
M1 - W/mating connector, no cable									
M2 - Mating connection with 1 meter (3 feet) of cable					M2				
P9 - Mating connector with customer specified length									
Flying Leads									
W2 - 1 meter (3 feet) of flying leads									
W9 - Customer specified length									
Deutsch® DT Series DT04-3P									
DT - Without mating connector									
T2 - W/1 meter (3 feet) of cable									
T3 - W/3 meter (10 feet) of cable									
T1 - W/mating connector, customer specified length									
Deutsch® DT Series DTM04-3P									
DS - Without mating connector									
S2 - W/1 meter (3 feet) of cable									
S3 - W/3 meter (10 feet) of cable									
S1 - W/mating connector, customer specified length									
AMP® Superseal®									
AP - Without mating connector									
A2 - W/1 meter (3 feet) of cable									
A3 - W/3 meter (10 feet) of cable									
A1 - W/mating connector, customer specified length									
Pressure Ranges (see range table on page 4)									
60# - 60 psi						60#			
Measurement Type									
G - Gauge							G		
Option (if including an option(s) must include an "X")									
TU - Throttle Plug									X TU
6B - Clean for Oxygen Service (unit is cleaned, bagged and labeled for use in O2 service)									

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G2 RANGE TABLE

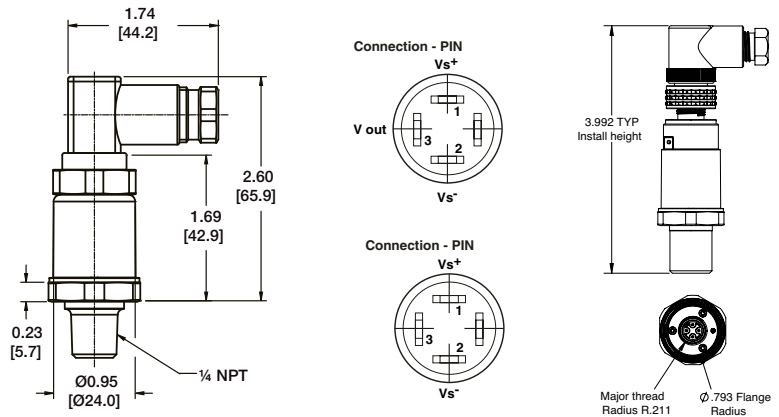
	Range	Code
Compound	30 psi/-14.7 psi	30#&vac
	45 psi/-14.7 psi	45#&vac
	60 psi/-14.7 psi	60#&vac
	85 psi/-14.7 psi	85#&vac
	100 psi/-14.7 psi	100#&vac
	150 psi/-14.7 psi	150#&vac
	200 psi/-14.7 psi	200#&vac
	300 psi/-14.7 psi	300#&vac
	500 psi/-14.7 psi	500#&vac
Positive Pressure	30 psi	30#
	50 psi	50#
	60 psi	60#
	100 psi	100#
	150 psi	150#
	200 psi	200#
	250 psi	250#
	300 psi	300#
	400 psi	400#
	500 psi	500#
	650 psi	650#
	750 psi	750#
	1,000 psi	1000#
	1,500 psi	1500#
	2,000 psi	2000#
	2,500 psi	2500#
	3,000 psi	3000#
	4,000 psi	4000#
	5,000 psi	5000#
	6,000 psi	6000#
7,500 psi	7500#	
10,000 psi	10000#	
15,000 psi ¹	15000#	
20,000 psi ¹	20000#	

bar, kPa, and mPa ranges also available

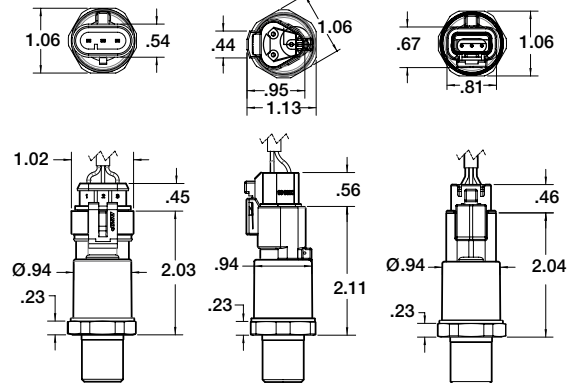
¹ Only available with M01, M02, MG2, M76, M03 & M33 process connections

DIMENSIONS in [] are millimeters

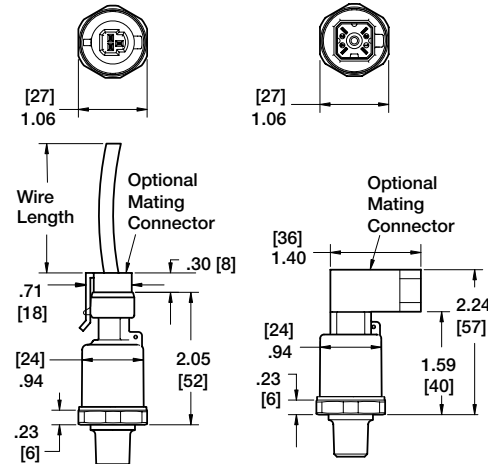
For reference only, consult Ashcroft for specific dimensional drawings



AMP® SUPERSEAL® DEUTSCH® DT04-3P DEUTSCH® DTM04-3P



3-PIN METRI-PACK® MINI HIRSCHMANN®****



*Mates to Metri-Pack® Connector Body 12065286

**Mates to Hirschmann® G4W11 Connector or Similar