

## Data Sheet

# G3 Pressure Transducer

### FEATURES

- All-welded 316L SS sensor and pressure connection
- Highly configurable; wide selection of pressure connections and electrical terminations
- Ranges vacuum to 5000 psi

### TYPICAL USES

- Performance vehicle racing
- Railroad/transportation
- Agriculture implements
- Compressor control
- HVAC and refrigeration
- Process automation and control
- Pump monitoring



G3  
Transducer



### SPECIFICATIONS

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

Accuracy Class (BFSL): ± 0.50% of span

Accuracy (TEB):  
**±1.5% of Span:** From -20 to 85°C (-4 to 185°F)  
**±2.0% of Span:** From -40 to -20°C (-40 to -4°F)  
**±2.0% of Span:** From 85 to 125°C (185 to 257°F)  
 Total Error Band Accuracy: 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: > 10 million cycles

Approvals: CE, UL (UL 61010-1), (CSA 222 6101-1)  
 UL Recognized component per UL-61010-1,  
 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: 100gs, 6 ms

Drop Test: Withstands 1 meter on concrete

Response Time: <2ms

### KEY BENEFITS

- Broad temperature capability
- High EMI/RFI immunity ratings
- IP 67 Ingress rating
- High performance ASIC based electronics

### FUNCTIONAL SPECIFICATIONS

Pressure Ranges: Vacuum, compound, gauge 5 to 5000 psig and absolute 15 to 500 psia

Warm-up Time: > 500 msec

Position Effect: < ±0.01% span

Overpressure:  
 ≤200 psi: Proof 2 X Range, Burst 5 X Range  
 300 to 5000 psi: Proof 1.5 X Range, Burst 3 X 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

# Data Sheet

## G3 Pressure Transducer

### OUTPUT SIGNALS AVAILABLE

Voltage Output	Excitation	Supply Current
0-5 Vdc, 3 wire	9-36 Vdc	5mA
0-10 Vdc, 3 wire	14-36 Vdc	5mA
1-5 Vdc, 3 wire	9-36 Vdc	4mA
1-6 Vdc, 3 wire	9-36 Vdc	4mA
0.5-4.5 Vdc 3 wire	9-36 Vdc	4mA
Ratiometric Output		
0.5-4.5 Vdc, 3 wire	5.0 Vdc +/- 0.5Vdc	3.5mA
Current Output		
4-20mA, 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 C (DIN 43650 C)

### WETTED COMPONENTS

Diaphragm	316L Stainless Steel
Process Connection	316L Stainless Steel

### NON-WETTED COMPONENTS

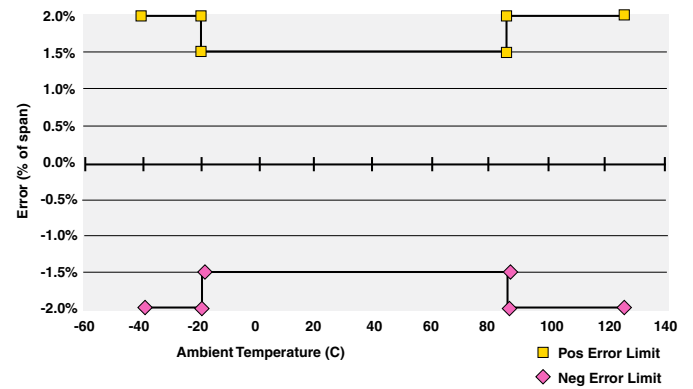
Housing	20% Glass Reinforced Nylon, Fire retardant to UL94 V1
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### OPTIONAL FEATURES

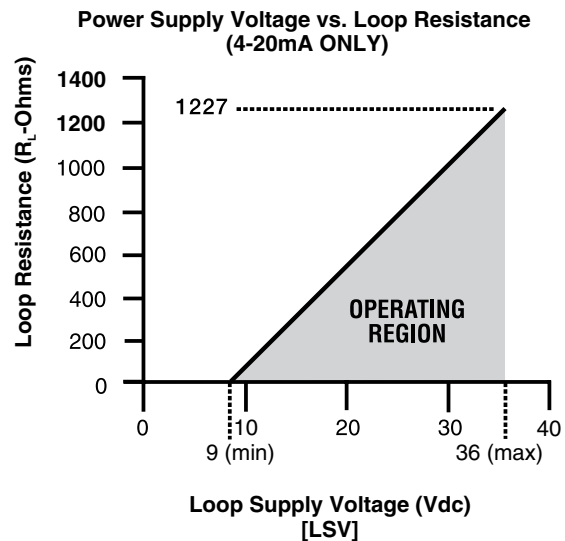
Electrical Termination:	See Ordering Code
Process Connection Location:	See Ordering Code
Consult Factory For:	Pressure range options, Process connection locations, Approval descriptions

### TOTAL ERROR BAND (TEB)

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



### POWER SUPPLY & LOAD RESISTANCE



# Data Sheet

## G3 Pressure Transducer

ORDERING CODE	Example:	G3	M01	42	M2	60#	G	-	XTU
<b>Model</b>									
G37 - G3 Series, 1.5% Total Error Band -20°C/85°C, 2.0% Total Error Band -40°C/-20°C, 85°C/125°C									
<b>Pressure Connection Size</b>									
M01 - 1/8 NPT - Male			M01						
M02 - 1/4 NPT - Male									
MEK - 7/16 20 SAE #4 - Male, not UL recognized over 10,000 psi range									
MEV - 3/8-18 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)									
<b>Output Signal</b>									
5 - 0-5 Vdc									
10 - 0-10 Vdc									
15 - 1-5 Vdc									
16 - 1-6 Vdc									
42 - 4-20mA			42						
RM - 0.5-4.5 Vdc Ratio metric to 5Vdc supply									
45 - 0.5 - 4.5Vdc Ratio metric to 9-36 Vdc supply									
<b>Electrical Termination</b>									
<b>EN 175301-803 Form C (DIN 43650, Form C)</b>									
DC - No mating connector									
N1 - Mating connector, no cable									
N2 - Mating connector, 3 feet of cable									
N3 - Mating connector, 10 feet of cable									
N9 - Mating connector with customer specified length									
<b>M12 - Mates to Hirschmann® 933 172-100 or similar</b>									
EW - No mating connector									
E0 - W/mating connector, no cable									
E2 - W/mating connector, 3 feet of shielded cable									
E1 - W/mating connector & customer defined cable length									
<b>Pigtail - Shielded cable with PVC jacket and 24 AWG leads</b>									
F2 - W/3 Feet cable length									
F3 - W/10 Feet of cable length									
P1 - Customer specified length									
<b>Metri-Pack®</b>									
GN - No mating connection									
G2 - Mating connection with 3 feet of cable									
G3 - Mating connection with 10 feet of cable									
G1 - Mating connector with customer specified length									
<b>Hirschmann® G Series</b>									
HM - No mating connection									
M1 - W/mating connector, no cable									
M2 - Mating connection with 3 feet of cable									
P9 - Mating connector with customer specified length									
<b>Flying Leads</b>									
W2 - 3 Feet of flying leads									
W9 - Customer specified length									
<b>Deutsch DT Series DT04-3P</b>									
DT - Without mating connector									
T2 - W/1m, 3 feet of cable									
T3 - W/3m, 10 feet of cable									
T1 - W/mating connector, customer specified length									
<b>Deutsch DT Series DTM04-3P</b>									
DS - Without mating connector									
S2 - W/1m, 3 feet of cable									
S3 - W/3m, 10 feet of cable									
S1 - W/mating connector, customer specified length									
<b>AMP Superseal®</b>									
AP - Without mating connector									
A2 - W/1m, 3 feet of cable									
A3 - W/3m, 10 feet of cable									
A1 - W/mating connector, customer specified length									
<b>Pressure Ranges (see range table on page 4)</b>									
60# - 60 psi						60#			
<b>Measurement Type</b>									
G - Gauge								G	
A - Absolute									
<b>Option (if including an option(s) must include an "X")</b>									
TU - Throttle Plug									X _ _ TU

# Data Sheet

## G3 Pressure Transducer

### G3 RANGE TABLE

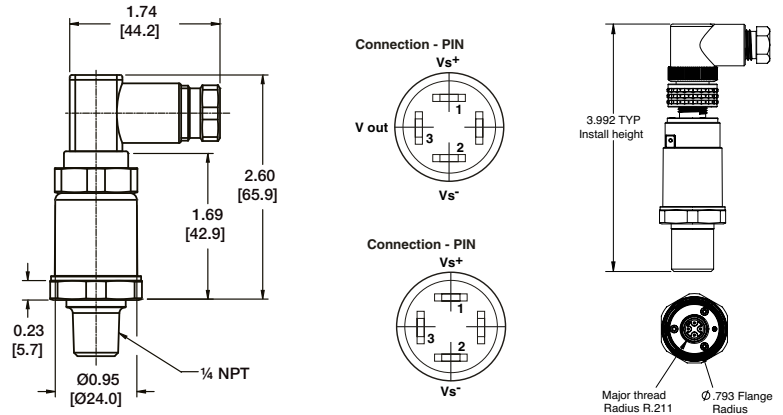
	Range	Code
* Compound	0 psi/-14.7 psi	0#&vac
	15 psi/-14.7 psi	15#&vac
	30 psi/-14.7 psi	30#&vac
	60 psi/-14.7 psi	60#&vac
	100 psi/-14.7 psi	100#&vac
	150 psi/-14.7 psi	150#&vac
	300 psi/-14.7 psi	300#&vac
Positive Pressure	5 psi	*5#
	15 psi	15#
	30 psi	30#
	50 psi	50#
	60 psi	60#
	100 psi	100#
	150 psi	150#
	250 psi	250#
	300 psi	300#
	500 psi	500#
	750 psi	750#
	1,000 psi	1000#
	1,500 psi	1500#
2,000 psi	2000#	
3,000 psi	3000#	
5,000 psi	5000#	

bar, kPa, and mPa ranges also available

\*Not available in absolute pressure

### DIMENSIONS are identified in inches and [millimeters]

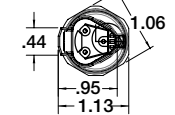
For reference only, consult Ashcroft for specific dimensional drawings.



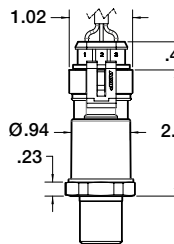
AMP SUPERSEAL



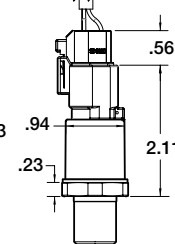
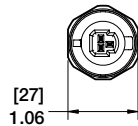
DEUTSCH DT04-3P



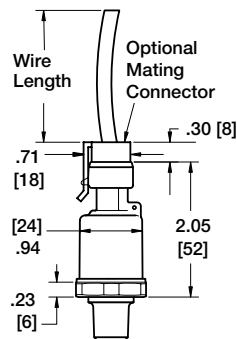
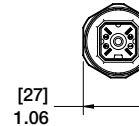
DEUTSCH DTM04-3P



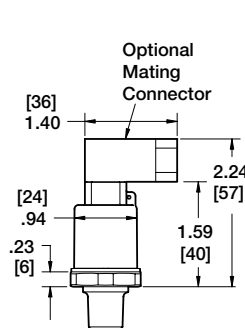
3-PIN METRI-PACK\*



MINI HIRSCHMANN\*\*



Mates to Metri-Pack Connector Body 12065286



Mates to Hirschmann G4W11 Connector or Similar