

Data Sheet

GV Pressure Transducer

FEATURES

- All-welded sensor and pressure connection
- Highly configurable; wide selection of pressure connections and electrical terminations
- Field proven polysilicon thin film pressure sensor
- High withstand voltage designs available
- Tested to 26 g random vibration

TYPICAL USES

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



GV
Transducer



SPECIFICATIONS

Reference Temperature:	72 °F ±2 °F (21 °C ±1 °C)
Accuracy Class (BFSL):	± 0.25% of Span
Accuracy (TEB):	± 1.0% of span from -4 to 185 °F (-20 to 85 °C) ± 1.5% of span from -40 to -4 °F (-40 to -20 °C) & 185 to 257 °F (85 to 125 °C) 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:	50 million cycles

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:	Storage:	-40 °F to 257 °F (-40 °C to +125 °C)
	Process:	-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 (26 g) over temperature range (-40 °C to 125 °C)
Shock Effects:	100 gs, 6 ms
Drop Test:	Withstands 1 meter on concrete

KEY BENEFITS

- High vibration capability
- Broad temperature capability
- 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):	500 psi	200% of span
	2,000 to 5,000 psi	200% of span
	6,000 to 7,500 psi	120% of span
	Proof	Burst
	200% of span	1,000% of span
	200% of span	500% of span
	120% of span	500% of span

ELECTRICAL SPECIFICATIONS

Reverse Polarity & Miswired Protected:	Yes
Insulation Breakdown Voltage:	100 Vac
Insulation Resistance:	> 100 megohms at 100 V DC

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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
IP65, NEMA 4X	EN 175301-803 Form C (DIN 43650 C)

WETTED MATERIAL

Models	Diaphragm	Process Connection
GV	17-4 PH® SS	304 SS

NON-WETTED

Models	Housing
GV	20% Glass Reinforced Nylon, Fire retardant to UL94 V1

APPROVALS

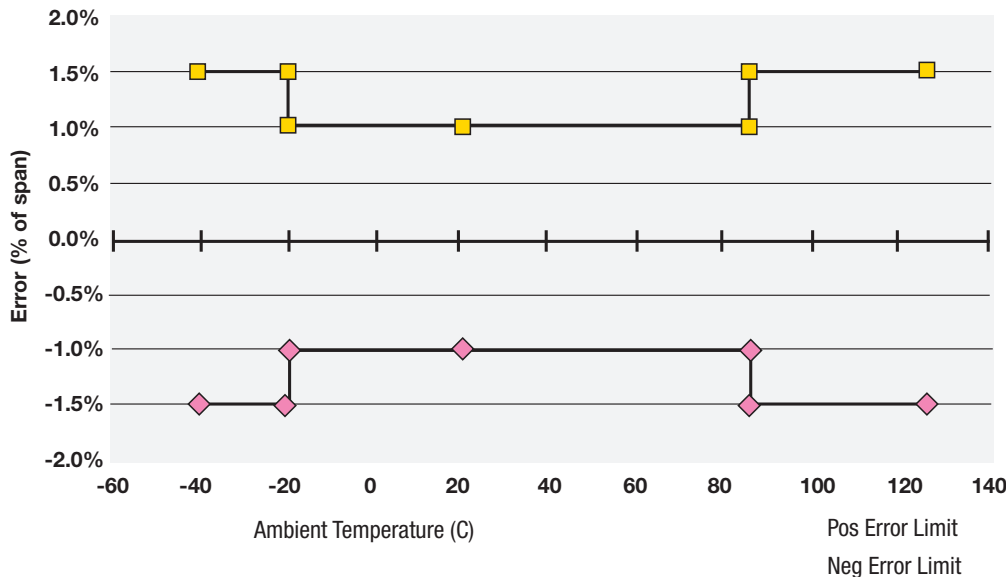
UL Recognized component per UL-61010-1, CSA 22.2 6101-1 Electrical Equipment for Measurement, Control and Laboratory use.

GV RANGE TABLE

Range	Code
500 psi	500#
2,000 psi	2000#
3,000 psi	3000#
5,000 psi	5000#
6,000 psi	6000#
7,500 psi	7500#

TOTAL ERROR BAND (TEB)

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



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ORDERING CODE	Example:	GV7	M01	42	DT	6000#	G	XTU
Model								
GV7 - GV Series, 1.0% Total Error Band -20 °C/85 °C, 1.5% Total Error Band -40 °C/ -20 °C, 85 °C/125 °C		GV7						
Pressure Connection Size								
M01 - 1/8 NPT - Male			M01					
M02 - 1/4 NPT - Male								
MEK - 7/16 20 SAE #4 - Male								
MEV - 9/16-18 SAE #6 Male w/Buna-N O-ring								
MS2 - 1/4-19 BSP - Male								
MG2 - G 1/4 B - Male								
M03 - 3/8 NPT Male								
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 Ratio metric to 5 Vdc supply								
45 - 0.5-4.5 Vdc 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								
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								
Flying Leads								
W2 - 1 meter (3 feet) of flying leads								
W9 - Customer specified length								
Deutsch® DT Series DT04-3P								
DT - Without mating connector					DT			
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								
Pressure Ranges (see range table on page 2)								
6000# - 6,000 psi						6000#		
Measurement Type								
G - Gauge							G	
Option (if including an option(s) must include an "X")								
XTU								XTU

Note: Consult factory for pressure range options, process connection locations, approval descriptions

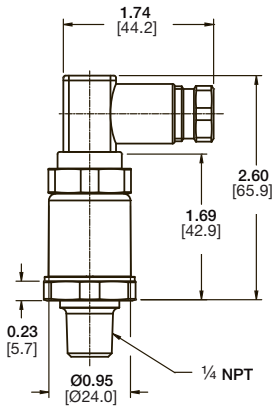
Data Sheet

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DIMENSIONS in [] are millimeters

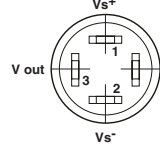
For reference only, consult Ashcroft for specific dimensional drawings

EN 175301-803 Form C
(DIN 43650, Form C)



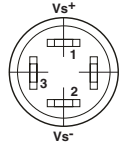
Voltage Output

Connection - PIN

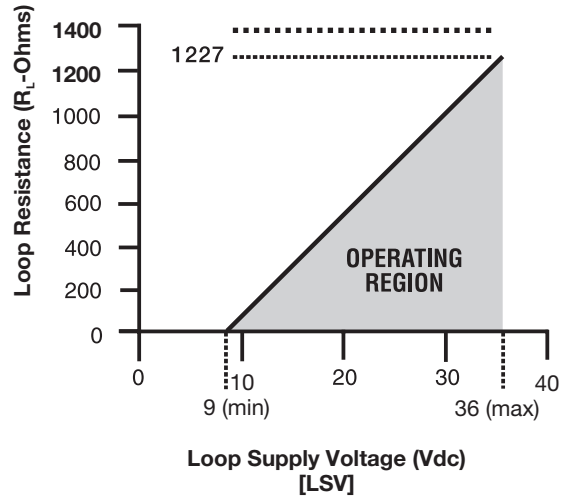


4-20 mA Output

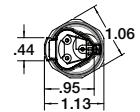
Connection - PIN



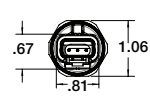
POWER SUPPLY & LOAD RESISTANCE



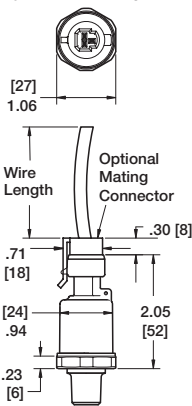
DEUTSCH® DT04-3P



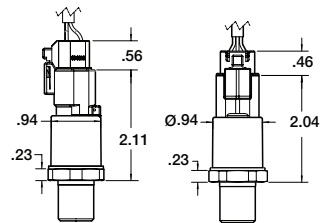
DEUTSCH® DTM04-3P



3-PIN METRI-PACK®



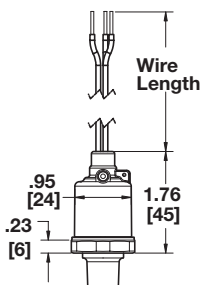
*Mates to Metri-Pack® Connector Body 12065286



Flying Leads 18 AWG

Wire Color	Voltage Output	4-20 mA Output
Red	V +	V +
Black Common	V -	V -
White	Output	

IP67 Ingress Rating



Shielded Cable PVC Jacket, 24 AWG Leads, Termination (F2), (P1)

Wire Color	Voltage Output	4-20 mA Output
Red	V +	V +
White	Output	
Black	V -	V -
Green	Case Grid	Case Grid
Bare	Drain Wire	Drain Wire

IP65 Ingress Rating

