

IMP01 Industrial Range of Pressure Instruments

- Compact and rugged construction
- Stable, repeatable and reliable output
- Compensated ceramic technology
- Accuracies to $\pm 0.05\%$
- All process outputs available
- Cost effective for OEMs and end users
- High shock & vibration resistance
- Specials available on request



The IMP01 ranges of pressure transducers and transmitters have been designed to meet the needs of both OEM and End-Users in the competitive pressure measurement markets. The instruments design is based upon a standardised stainless steel housing, a range of electrical connections and outputs as options available when making product selection. Electrical connections include DIN, cable gland and Amphenol variants and electrical outputs include the popular passive and active mV, volts and mAs. Pressure ranges from 250mB through to 700Bar are available as standard in both absolute and gauge versions.

The use of ASIC based technology allows accuracies ranging from the standard 0.25% through to an exceptional 0.05% and a range of thermal specifications to suit both OEM users and End-Users.

The simple design, range of performance and selection of electrical connections allows both cost effective solutions for OEMs and high performance instruments for demanding industrial applications.

Typical Applications Include:

- Pneumatic & Hydraulic Control
- Machine tools / presses
- Tank Level Measurement
- Process Control
- Medical equipment
- Compressors / pumping
- Laboratory / calibration references
- Heating and ventilation

Accessories Available:



PA430 Display



Remote Display



Field Housing

Options for this product include: Pressure Range, Electrical Connection, Mechanical Connection, Output, Accuracy, Thermal Performance

Dont forget...IMPress Sensors & Systems supply a full range of the following products:

Pressure — Temperature — Flow — Gas — Level — Control — Indication — Logging

Detailed Specification

Pressure Specification

Pressure Ranges	0.25, 0.5, 0.75, 1, 1.6, 2, 5, 10, 16, 20, 35, 50, 100, 200, 250, 400, 600, 700
Pressure Datum	Gauge, Sealed Gauge or Absolute
Burst Pressures	> x 3 rated calibrated range (for 600 & 700 bar ranges Contact Sales)
Overpressure	x 1.5 rated calibrated range (for 600 & 700 bar ranges Contact Sales)
Pressure Media	Liquids and Gases compatible with Stainless Steel, Alumina Al ₂ O ₃ & seal of choice

Input Specification

Electrical Excitation	millivolt 100/200mV 4 - 20mA 1 - 5V 0 - 10V 0.5 to 4.5V	2 - 32V dc 10 - 32V dc 10 - 32V dc 10 - 32V dc 13 - 32V dc 5V dc	Supply Voltage Effects	millivolt 100/200mV 4 - 20mA 1 - 5V 0 - 10V 0.5 to 4.5V	ratiometric <0.001% span <0.001% span <0.001% span <0.001% span ratiometric
Input Current	millivolt voltage	<3mA <4mA	Input Resistance	millivolt —	11k Ω —
Reverse Polarity Protection	—	yes	Insulation Resistance	—	>500MΩ@50V dc

Output Specification

Zero Output	millivolt 100/200mV 4 - 20mA 1 - 5V 0 - 10V 0.5 to 4.5V	0mV ± 0.2mV/V 0mV ± 1% 4mA ± 1% span 1V ± 1% span 0V ± 1% span 0.5V ± 1% span	Span Output	millivolt 100/200mV 4 - 20mA 1 - 5V 0 - 10V 0.5 to 4.5V	see table A (page 3) 100/200mV ± 1% 16mA ± 1% 4V ± 1% 10V ± 1% 4V ± 1%
Accuracy (includes non-linearity, hysteresis, repeatability at ambient temperatures)	option 1 option 2 option 3	<±0.25% span BFSL <±0.10% span BFSL <±0.05% span BFSL	Output Resistance	millivolt voltage —	<11k Ω <500 Ω —

Environmental Specification

Operating Temperature	—	-20°C to +135°C	Compensated Temperature	+20°C to +80°C
Max. Process Temperature	—	+150°C (for short periods)	Storage Temperature	-40°C to +140°C
Thermal Zero Shift (TZS)	option 1 option 2 option 3	<±0.04%/span/°C <±0.02%/span/°C ¹⁾ <±0.01%/span/°C ¹⁾	Thermal Span Shift (TSS)	<±0.015%/°C
Shock	—	100 g / 11ms	Vibration	10 g RMS (20 - 2000 Hz)

Miscellaneous Specification

Weight	100 g
Response time	Millivolt: <1mS, Amplified: <10mS
EMC Immunity	EN 50082-1 (<±2% errors)

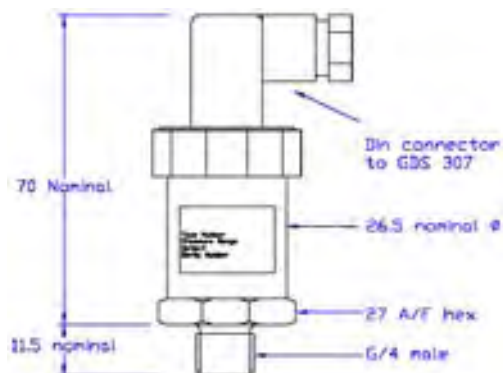
¹⁾ Not available for ranges <1 Bar or down ranged capsules, consult sales if this is a requirement for options

Dont forget...IMPress Sensors & Systems supply a full range of the following products:

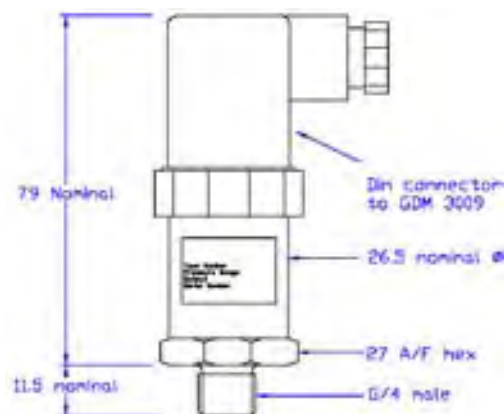
Pressure — Temperature — Flow — Gas — Level — Control — Indication — Logging

Dimensions & Connections

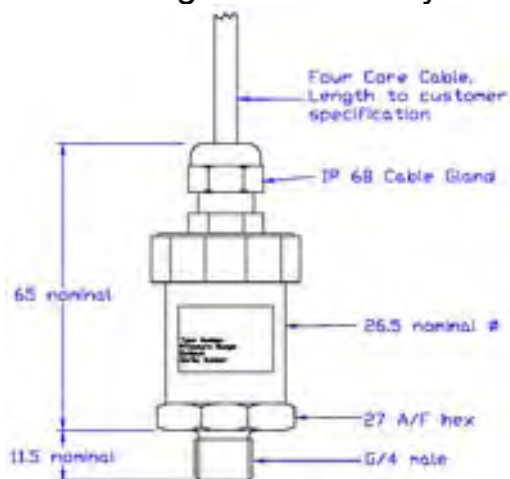
GDS 307 DIN 43650 Plug & Socket



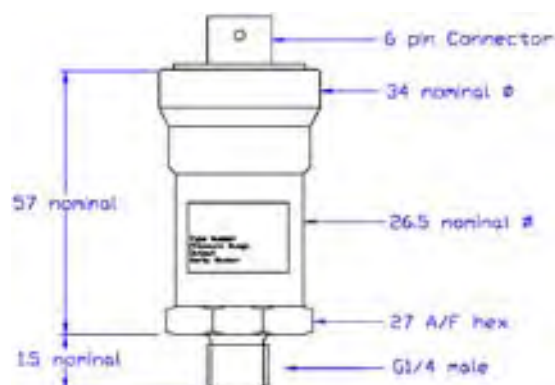
GDM 3009 DIN 43650 Plug & Socket



IP65 Cable gland Assembly



IP67* Amphenol Connector



* IP54 on gauge versions

Connection Details

Output Type	Connection	GDS 307	GDM 3009	Cable	Amphenol
mV	+ve Supply	1	1	Red	1
	+ve Output	2	2	Green	2
	-ve Supply	3	3	Blue	3
	-ve Output	earth	earth	Yellow	4
4 - 20mA	+ve Supply	1	1	Red	1
	-ve Supply	2	2	Blue	2
	earth	earth	earth	Yellow	earth
Volts	+ve Supply	1	1	Red	1
	-ve Supply	2	2	Blue	2
	Output	3	3	Green	3

Table A - mV output/pressure range

Pressure capsule range (bar)	1	2	5	10	20	50	100	250	400	600
Output - passive (mV/V)	2.7 ± 30%	3.0 ± 30%	3.4 ± 30%	4.8 ± 30%	3.2 ± 30%	5.2 ± 30%	3.9 ± 30%	3.9 ± 30%	3.9 ± 30%	3.9 ± 30%
Output - rationalised (mV/V)	2 ± 1%	2 ± 1%	2 ± 1%	2 ± 1%	2 ± 1%	2 ± 1%	2 ± 1%	2 ± 1%	2 ± 1%	2 ± 1%
Output - low amplification (mV/V)	10 ± 1%	10 ± 1%	10 ± 1%	10 ± 1%	10 ± 1%	10 ± 1%	10 ± 1%	10 ± 1%	10 ± 1%	10 ± 1%

Dont forget...IMPress Sensors & Systems supply a full range of the following products:

Pressure — Temperature — Flow — Gas — Level — Control — Indication — Logging

	IMP	-	X	X	X	X	X	-	X	X	X	-	X	X	X	
Datum	Absolute		A													
Gauge			G													
Sealed Gauge			S													
Pressure Range (bar)																
0.25							0250									
0.5							0500									
0.75							0750									
1							1000									
1.6							1600									
2							2000									
5							5000									
10							10002									
16							16002									
20							20002									
35							35002									
50							50002									
100							10003									
200							20003									
250							25003									
400							40003									
600							60003									
700							70003									
-1...0							M102									
Customer							XXXXX									
Output	mV/V / 4-wire								1							
2mV/V / 4-wire									2							
10mV/V / 4-wire									3							
0 - 100/200mV / 4-wire									4							
4 - 20mA / 2-wire									5							
0 - 5V / 3-wire									6							
0 - 10V / 3-wire									7							
RS 485 - Direct PC link									R							
Customer									X							
Accuracy (Combined NLH)	<±0.25%								A							
<±0.1%									B							
<±0.05%									C							
Customer									X							
Accuracy (TC-0 thermal zero shift)	<±0.04								4							
<±0.02 t _i)									2							
<±0.01 t _j)									1							
Customer									X							
Electrical Connection	Mini GDS 307 43650 Plug & Socket												A			
Large GDM 3009 43650 Plug & Socket													B			
Cable via IP66 gland (2 mtr of cable)													C			
Amphenol 6 Pin Bayonet connector													D			
Cable via IP68 gland (2 mtr of cable)													E			
Customer													X			
Mechanical Connection	G 1/4" male DIN 3852															

¹⁾ Not available for ranges <1 Bar or down ranged capsules, consult sales if this is a requirement for options

Dont forget...IMPress Sensors & Systems supply a full range of the following products:

Pressure — Temperature — Flow — Gas — Level — Control — Indication — Logging