Additel 161, 161Ex
Intelligent Digital Pressure Modules

Metrology Made Simple

- **Pressure ranges to 60,000 psi (4,200 bar)**
- **Precision accuracy to 0.01% RD**
- Intrinsically Safe (Ex) models available
- Fully temperature compensated accuracy
- Advanced temperature compensation
- ISO 17025 accredited calibration and data included



Gauge pressure Differential pressure

OVERVIEW

With advanced microprocessor technology and state-of-the-art silicon pressure sensors, Additel's 161 and 161Ex series Digital Pressure Modules provide an accurate, reliable, and economic solution for wide range of pressure applications. Our intrinsically safe (Ex) models are up to the task of providing the best possible results, even in hazardous environments. In order to reach the best performance, every silicon pressure sensor in the module has been specially aged, tested and screened before assembly. Designed as external pressure modules for Additel's 760 automatic handheld pressure calibrator, the ADT761A automated pressure calibrator, ADT226/227 series handheld process calibrator and Additel's flagship 783 pressure controller, the Additel 161 is unmatched in performance and reliability. If intrinsic safety is a critical requirement for your workload, we have you covered when you combine our model ADT226Ex/227Ex process calibrator with any of our ADT161Ex pressure modules.

PRESSURE RANGE

Gauge Pressure[1]					
P/N	Pressure Range		Media[2]	Accuracy(%FS)[4]	Burst Pressure
	(psi)	(bar)			
V15	-15	-1.0	G, L[3]	0.01, 0.02, 0.05	2×
GP2	2	0.16	G	0.01, 0.02, 0.05	2×
GP5	5	0.35	G, L[3]	0.01, 0.02, 0.05	2×
GP10	10	0.7	G, L[3]	0.01, 0.02,0.05	2×
GP15	15	1.0	G, L[3]	0.01, 0.02,0.05	2×
GP30	30	2.0	G, L	0.01, 0.02	2×
GP50	50	3.5	G, L	0.01, 0.02	2×
GP100	100	7.0	G, L	0.01, 0.02	2×
GP150	150	10	G, L	0.01, 0.02	1.3×
GP300	300	20	G, L	0.01, 0.02	2×
GP500	500	35	G, L	0.01, 0.02	2×
GP600	600	40	G, L	0.01, 0.02	2×
GP1K	1,000	70	G, L	0.01, 0.02	2×
GP1.5K	1,500	100	G, L	0.01, 0.02	2×
GP2K	2,000	140	G, L	0.01, 0.02	2×
GP3K	3,000	200	G, L	0.01, 0.02	2×
GP5K	5,000	350	G, L	0.01, 0.02	2×
GP10K	10,000	700	G, L	0.01, 0.02	2×
GP15K	15,000	1,000	G, L	0.01, 0.02	1.3x
GP20K	20,000	1,400	G, L	0.05	1.3x
GP25K	25,000	1,600	G, L	0.05	1.2x
GP30K	30,000	2,000	G, L	0.05	1.5x
GP36K	36,000	2,500	G, L	0.05	1.5x
GP40K	40,000	2,800	G, L	0.05	1.35x
GP50K	50,000	3,500	G, L	0.1	1.2x
GP60K	60,000	4,200	G, L	0.1	1.1x

[1] Sealed gauge pressure for above 1000 psi
[2] G=Gas, L=Liquid
[3] 0.01%FS for gas media only,0.02%FS ,0.05%FS for gas and Liquid media
[4] Accuracy includes calibration uncertainty, linearity and long-term stability.
Note: 0.01%FS accuracy sensors cannot be configured as Ex models and cannot be read by Ex devices.

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PRESSURE RANGE

Compound Pressure					
P/N	Pressure Range		Media	Accuracy(%FS)[2]	Burst Pressure
	psig	bar.g			
CP2	±2	±0.16	G	0.01, 0.02, 0.05	2x
CP5	±5	±0.35	G, L[1]	0.01, 0.02, 0.05	2x
CP10	±10	±0.7	G, L[1]	0.01, 0.02, 0.05	2x
CP15	±15	±1.0	G, L[1]	0.01, 0.02, 0.05	2x
CP30	-15 to 30	-1 to 2.0	G, L	0.01, 0.02	2x
CP100	-15 to 100	-1 to 7.0	G, L	0.01, 0.02	2x
CP150	-15 to 150	-1 to 10	G, L	0.01, 0.02	1.3x
CP300	-15 to 300	-1 to 20	G, L	0.01, 0.02	2x
CP500	-15 to 500	-1 to 35	G, L	0.01, 0.02	2x
CP600	-15 to 600	-1 to 40	G, L	0.01, 0.02	2x
CP1K	-15 to 1,000	-1 to 70	G, L	0.01, 0.02	2x
CP2K	-15 to 2,000	-1 to 140	G, L	0.01, 0.02	2x
CP3K	-15 to 3,000	-1 to 200	G, L	0.01, 0.02	2x
CP5K	-15 to 5,000	-1 to 350	G, L	0.01, 0.02	2x
CP10K	-15 to 10,000	-1 to 700	G, L	0.01, 0.02	2x
CP15K	-15 to 15,000	-1 to 1000	G, L	0.01, 0.02	1.3x

[1] 0.01%FS for gas media only,0.02%FS ,0.05%FS for gas and Liquid media.
[2] Accuracy includes calibration uncertainty, linearity and long-term stability.
Note: 0.01%FS accuracy sensors cannot be configured as Ex models and cannot be read by Ex devices.

Precision Sensors[1]					
P/N	Pressure Range		Media	Accuracy[2]	Burst Pressure
	psi	bar			
AP15R	0 to 15	0 to 1	G	0.01% FS	2x
CP5M	-5 to 5	-0.35 to 0.35	G	0.01% rdg or 0.005% FS whichever is greater	3x
CP10M	-10 to 10	-0.7 to 0.7	G	0.01% rdg or 0.005% FS whichever is greater	3x
CP15M	-15 to 15	-1 to 1.0	G	0.01% rdg or 0.005% FS whichever is greater	3x
CP30M	-15 to 30	-1 to 2.0	G, L	0.01% rdg or 0.005% FS whichever is greater	3x
CP50M	-15 to 50	-1 to 3.5	G, L	0.01% rdg or 0.005% FS whichever is greater	3x
CP100M	-15 to 100	-1 to 7.0	G, L	0.01% rdg or 0.005% FS whichever is greater	3x
CP300M	-15 to 300	-1 to 20	G, L	0.01% rdg or 0.005% FS whichever is greater	3x
CP500M	-15 to 500	-1 to 35	G, L	0.01% rdg or 0.005% FS whichever is greater	3x
CP1KM	-15 to 1,000	-1 to 70	G, L	0.01% rdg or 0.005% FS whichever is greater	3x
CP3KM	-15 to 3,000	-1 to 200	G, L	0.01% rdg or 0.005% FS whichever is greater	3x
CP5KM	-15 to 5,000	-1 to 350	G, L	0.01% rdg or 0.005% FS whichever is greater	3x
CP10KM	-15 to 10,000	-1 to 700	G, L	0.01% rdg or 0.005% FS whichever is greater	1.5x
CP15KM	-15 to 15,000	1 to 1,000	G, L	0.01% rdg or 0.005% FS whichever is greater	1.5x

[1] Contact Additel for other range options.
[2] Accuracy includes calibration uncertainty, linearity and long-term stability.
Note: Precision Sensors (CPXM) cannot be configured as Ex models and cannot be read by Ex devices.

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PRESSURE RANGE

Differential Pressure						
P/N	Pressure Range		Media	Accuracy[1] (%FS)	Burst Pressure	Static Pressure Range
	(inH_20)	(mbar)				
DP1	±1	±2.5	G	0.05[2]	100×	±10 psi
DP2	±2	±5.0	G	0.05[2]	100×	±10 psi
DP5	±5	±10	G	0.05[2]	50×	±10 psi
DP10	±10	±25	G	0.05[2]	20×	±10 psi
DP20	±20	±50	G	0.05[2]	20×	±10 psi
DP30	±30	±75	G	0.05[2]	20×	±10 psi
DP50	±50	±160	G	0.05[2]	3×	±10 psi
DP100	±100	±250	G	0.02	3×	±15 psi
DP150	±150	±350	G	0.02	3×	50 psi
DP300	±300	±700	G	0.02	3×	50 psi

[1] FS specification applies to the span of the range. Accuracy includes 1 year stability.
[2] 0.05%FS accuracy (incl 6 months stability). One year accuracy is 0.05%FS calibration accuracy combined with 0.05%FS one year stability.

Barometric Pressure					
P/N	Pressure Range		Media	Accuracy	Burst Pressure
	Low	High			
BP	60 kPa	110 kPa	G	55 Pa	3×
BPH	60 kPa	110 kPa	G	10 Pa	3×

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ORDERING INFORMATION

Model Number

ADT161 — 01 — GP300 — PSI — N

Model:
ADT161
ADT161Ex

Accuracy:
01 - 0.01% FS
(non-Ex models only)
02 - 0.02% of full span
05 - 0.05% of full span
10 - 0.1% of full span
01RD - See precision sensor table
(non-Ex models only)

Pressure range P/N:
See pressure range table

Range type:
PSI - range by psi
BAR - range by bar

Pressure port type:
N - 1/4NPT male
N2 - 1/2NPT male
B - 1/4BSP male
B2 - 1/2BSP male
M - M20 X 1.5 male
AF - Autoclave F-250-C female
AM - Autoclave M-250-C male

Accessories included

Silicone tube -1 meter each (2 pcs for DP models only)
ISO 17025 accredited Calibration Certificate

Optional Accessories

Model number	Description	Picture
9060	Pressure module connection cable	
9064	Pressure modulelemo connection to USB for high-speed connection of ADT161 to PC	



Additel 226Ex with ADT161Ex Pressure Module

SPECIFICATIONS

Model	ADT161 Modules
Operating temperature	-10°C to 50°C (14°F to 122°F)
Storage temperature	-30°C to 70°C (-22°F to 158°F)
Relative humidity	95% RH
Pressure connections (for external use only)	1/4NPT, 1/2NPT, 1/4BSP, 1/2BPS, M20 x1.5
Enclosure (for external use only)	SS enclosure
Intrinisic Safety (ADT161Ex models only)	ATEX certified intrinsically safe II 1G EX ia IIC T4 Ga (ADT161Ex modules only work together with ADT226Ex or ADT227Ex to conform to the ATEX certificate.)
Dimensions (Dia x H)	33 mm x 123 mm (1.3” x 4.84”)
Weight	0.4 kg (0.99 lb)
Warranty	1 Year

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