



Additel 160A

Intelligent Digital Pressure Modules

- Precision accuracy to 0.005%RD + 0.005%FS
- Pressure measurement accuracy of 0.02% FS
- Pressure ranges to 40,000 psi (2,800 bar)
- Fully temperature compensated accuracy



Gauge pressure Differential pressure

OVERVIEW

With advanced microprocessor technology and state-of-the-art silicon pressure sensors, the Additel 160A series Intelligent Digital Pressure Module (IDPM) provides an accurate, reliable, and economic solution for wide range of pressure applications. It is loaded with functionality and remarkably easy to use. 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 module for Additel 760 automatic handheld pressure calibrator, Additel 761 automated pressure calibrator and Additel 222A, Additel 223A and Additel 780 calibrators, the Additel 160A IDPM is unmatched in performance and reliability.

FEATURES

- Precision sensor measurement accuracy to 0.005%RD + 0.005%FS
- Gauge pressure measurement accuracy of 0.02% FS
- Absolute Pressure measurement accuracy of 0.1% FS
- Pressure ranges to 40,000 psi (2,800 bar)
- Advanced temperature compensation
- NIST traceable calibration and data included

SPECIFICATIONS

- Gauge types

Gauge pressure	Differential pressure
Compound pressure	Absolute pressure
Barometric pressure	

■ Pressure Ranges and Accuracy

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

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

Note:

[1]. Sealed gauge pressure for above 1000 psi

[2]. G=Gas, L=Liquid



SPECIFICATIONS

Precision Quartz Sensors ^[1] - Absolute Pressure						
P/N	Pressure Range		Media	Accuracy	Pressure Rating	
	psia	bar.a			Burst	Over Pressure
AP45Q	0 to 45	3.0	G	0.005% rdg + 0.005% FS	3x	1.2x
AP100Q	0 to 100	7.0	G	0.005% rdg + 0.005% FS	3x	1.2x
AP300Q	0 to 300	20	G	0.005% rdg + 0.005% FS	3x	1.2x
AP400Q	0 to 400	28	G	0.005% rdg + 0.005% FS	3x	1.2x
AP500Q	0 to 500	35	G	0.005% rdg + 0.005% FS	3x	1.03x
AP1KQ	0 to 1,000	70	G	0.005% rdg + 0.005% FS	3x	1.1x
AP2KQ	0 to 2,000	140	G	0.005% rdg + 0.005% FS	3x	1.1x
AP3KQ	0 to 3,000	200	G	0.005% rdg + 0.005% FS	3x	1.1x
AP6KQ	0 to 6,000	400	G,L	0.01% FS	3x	1.2x
AP10KQ	0 to 10,000	700	G,L	0.01% FS	2x	1.2x
AP15KQ	0 to 15,000	1,000	G,L	0.01% FS	2x	1.2x
AP20KQ	0 to 20,000	1,400	G,L	0.01% FS	2x	1.2x
AP30KQ	0 to 30,000	2,000	G,L	0.02% FS	1.5x	1.1x
AP40KQ	0 to 40,000	2,800	G,L	0.02% FS	1.5x	1.1x

[1] Contact Additel for other range options.

Compound Pressure						
P/N	Pressure Range		Media	Accuracy	Pressure Rating	
	psig	bar.g			Burst	Over Pressure
CP2	±2	±0.16	G	0.05% FS	3x	1.2x
CP5	±5	±0.35	G	0.02% FS	3x	1.2x
CP10	±10	±0.7	G	0.02% FS	3x	1.2x
CP15	±15	±1.0	G	0.02% FS	3x	1.2x
CP30	-15 to 30	-1 to 2.0	G	0.02% FS	3x	1.2x
CP50	-15 to 50	-1 to 3.5	G	0.02% FS	3x	1.2x
CP100	-15 to 100	-1 to 7.0	G,L	0.02% FS	3x	1.2x
CP300	-15 to 300	-1 to 20	G,L	0.02% FS	3x	1.2x
CP500	-15 to 500	-1 to 35	G,L	0.02% FS	3x	1.2x
CP600	-15 to 600	-1 to 40	G,L	0.02% FS	3x	1.2x
CP1K	-15 to 1,000	-1 to 70	G,L	0.02% FS	3x	1.2x
CP2K	-15 to 2,000	-1 to 140	G,L	0.02% FS	3x	1.2x
CP3K	-15 to 3,000	-1 to 200	G,L	0.02% FS	3x	1.2x
CP5K	-15 to 5,000	-1 to 350	G,L	0.02% FS	3x	1.2x
CP10K	-15 to 10,000	-1 to 700	G,L	0.02% FS	2x	1.2x

Absolute Pressure

P/N	Pressure Range		Media	Accuracy(%FS)	Burst Pressure
	(psi)	(bar)			
AP5	5	0.35	G	0.1	3×
AP10	10	0.7	G	0.1	3×
AP15	15	1.0	G	0.1	3×
AP30	30	2.0	G	0.1	3×
AP50	50	3.5	G	0.1	3×
AP100	100	7.0	G , L	0.05 (0.1)	3×
AP300	300	20	G , L	0.05 (0.1)	3×
AP500	500	35	G , L	0.05 (0.1)	3×
AP1K	1,000	70	G , L	0.05 (0.1)	3×
AP3K	3,000	200	G , L	0.05 (0.1)	3×
AP5K	5,000	350	G , L	0.05 (0.1)	3×

Barometric Pressure

P/N	Pressure Range		Media	Accuracy	Burst Pressure
	Low	High			
BP	60 kPa	110 kPa	G	40 Pa	3×



Additel 223A with ADT160A Pressure Module

ORDERING INFORMATION■ **Model Number**

ADT160A — 02 — GP300 — PSI — N

Model

Accuracy:
 01-0.005%rdg+0.005%
 of full scale
 02-0.02% of full scale
 05-0.05% of full scale
 10-0.1% of full scale

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

■ **Accessories included**

NIST Traceable Calibration Certificate

■ **Optional Accessories**

Model number	Description	Picture
9060	Pressure module connection cable	

SPECIFICATIONS

	Standard Accuracy			Precision Accuracy	
	CPXXX	DPXXX	GPXXX	AP3KQ AP1KQ	AP100Q
Temperature compensation	-10°C to 50°C (14°F to 122°F)			0°C to 50°C (32°F to 122°F)	
Operating temperature	-10°C to 50°C (14°F to 122°F)			0°C to 50°C (32°F to 122°F)	
Storage temperature	-20°C to 70°C (-4°F to 158°F)			-20°C to 70°C (-4°F to 158°F)	
Relative humidity	95% RH			95% RH	
Pressure connections (for external use only)	1/4NPT, 1/2NPT, 1/4BSP, 1/2BPS, M20x15			1/4NPT, 1/2NPT, 1/4BSP, 1/2BSP, M20x15	
Enclosure (for external use only)	SS enclosure			SS enclosure	
Dimensions (Dia x H)	33 mm x 123 mm (1.3" x 4.84")			44 mm x 220mm (1.7" x 8.7")	60 mm x 190 mm (2.4" x 7.5")
Weight	0.4 kg (0.99 lb)			0.8 kg (1.8 lb)	1.2 kg (2.6 lb)
Warranty	1 Year			1 Year	1 Year