Metrology Made Simple

Additel 151
Digital Pressure Modules

- **Pressure ranges to 15,000 psi (1,035 bar)**
- **Accuracy of 0.02%FS, 0.01%FS or 0.01%RD**
- Fully temperature compensated accuracy
- Two pressure ranges per module
- Advanced temperature compensation
- ISO 17025 accredited calibration and data included
- Optional calibration fixture with software

ADT151 Module

OVERVIEW

Additel's 151 pressure modules have been designed with flexibility and efficiency in mind and can easily be swapped out as needed to meet changing needs and workloads. Higher pressure ADT151 modules cover two separate pressure ranges and come with individual calibrations for each range. This allows for each module to accuracy cover a wide range or pressure workloads. Also, each ADT151 is available in (3) different accuracy levels (0.02% FS, 0.01% FS and 0.01% of reading) to meet the demanding needs of our customers. Additel's 151 pressure modules provide users with the flexibility and dependability end users have come to expect.

PRESSURE RANGE

The following tables mainly describes the range, accuracy, and precision of the ADT151 pressure modules. For pressure modules of gauge pressure (GP) and differential pressure (DP) and compound pressure (CP), the zero drift can be eliminated by regular zeroing of the device.The specifications are valid at ambient temperatures from -10°C~50°C. We recommend that these pressure models be calibration annually. ADT151 module provides single-range and dual-range, users can choose according to needs.
Precision: The error components include linearity, hysteresis, repeatability, resolution and temperature effects.
Accuracy: The error components include linearity, hysteresis, repeatability, resolution, reference standard measurement uncertainty, annual drift, temperature effects, K=2.

BAROMETRIC MEASUREMENT SPECIFICATIONS

Model[1]	Absolute Pressure Range	Accuracy
ADT151-BP	(60~110) kPa	±22 Pa
ADT151-BPH	(60~110) kPa	±10 Pa

[1] A barometric pressure module is optional for ADT773/ADT783/ADT793. After inserting the barometric pressure module, the controller can be toggled to and from gauge and absolute pressure units.

GP Pressure Module with Calibration Fixture

BP Pressure Module with Calibration Fixture

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SPECIFICATIONS

Model / Range	Compound Gauge pressure		Media	Precision[3] (%FS)	Accuracy[1] [4] (%FS)	Burst Pressure	Suggested Controller Compatibility
	1st range	2nd range					
GP15K	(0~15000) psi (0~1035) bar	(0~6000) psi (0~420) bar	G,L	0.004 (0.007)	0.01 (0.02)	1.3x	ADT793
GP10K	(0~10000) psi (0~700) bar	(0~5000) psi (0~350) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT793
CP6K	(-14.5~6000) psi (-1~420) bar	(-14.5~3000) psi (-1~200) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT793 ADT783-6K
CP5K	(-14.5~5000) psi (-1~350) bar	(-14.5~3000) psi (-1~200) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT793 ADT783-6K
CP3.6K	(-14.5~3600) psi (-1~250) bar	(-14.5~1500) psi (-1~100) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-3.6K ADT783-6K
CP3K	(-14.5~3000) psi (-1~200) bar	(-14.5~1500) psi (-1~100) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-3.6K ADT783-6K
CP2K	(-14.5~2000) psi (-1~140) bar	(-14.5~1000) psi (-1~70) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-3.6K ADT783-6K
CP1K	(-14.5~1000) psi (-1~70) bar	(-14.5~500) psi (-1~35) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-1K ADT783-3.6K ADT783-6K
CP500	(-14.5~500) psi (-1~35) bar	(-14.5~300) psi (-1~20) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-1K ADT783-3.6K ADT783-6K
CP300	(-14.5~300) psi (-1~20) bar	(-14.5~200) psi (-1~14) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-1K ADT783-3.6K ADT783-6K
CP150	(-14.5~150) psi (-1~10) bar	(-14.5~60) psi (-1~4) bar	G,L	0.004 (0.007)	0.01 (0.02)	1.3x	ADT783-1K ADT783-3.6K ADT783-6K
CP100	(-14.5~100) psi (-1~7) bar	(-14.5~50) psi (-1~3.5) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-1K
CP50	(-14.5~50) psi (-1~3.5) bar	(-14.5~30) psi (-1~2) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-1K
CP35	(-14.5~35) psi (-1~2.5) bar	(-14.5~20) psi (-1~1.4) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-1K
CP30	(-14.5~30) psi (-1~2) bar	(-14.5~20) psi (-1~1.4) bar	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-1K
CP15	(-14.5~15) psi (-1~1) bar	(-10~10) psi (-0.7~0.7) bar[2]	G,L	0.004 (0.007)	0.01 (0.02)	2x	ADT783-1K

[1] For the full-scale accuracy, FS refers to the upper limit of the range - the lower limit of the range.
[2]The second range (-10~10)psi accuracy is 0.02%FS, the precision is 0.01%FS.
[3] Precision: the error components include linearity, hysteresis, repeatability, resolution, and temperature effects.
[4] Accuracy: the error components include linearity, hysteresis, repeatability, resolution, reference standard measurement uncertainty, annual drift, temperature effects, K=2.

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Model	Differential Pressure		Measurement Type	Pressure Medium	Precision[3] (%FS)	Accuracy[1] [4] (%FS)	Burst Pressure	Static Pressure Range	Suggested Controller Compatibility
	1st range	2nd range							
DP2.8K	(-400~2800) inH2O (-1000~7000) mbar	(-400~1500) inH2O (-1000~3500) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	10000 mbar	10000 mbar	ADT773-D
DP2K	(-400~2000) inH2O (-1000~5000) mbar	(-400~1500) inH2O (-1000~3500) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	10000 mbar	10000 mbar	ADT773-D
DP1K	(-400~1000) inH2O (-1000~2500) mbar	(-400~400) inH2O (-1000~1000) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	10000 mbar	10000 mbar	ADT783-D ADT773-D
DP800	(-400~800) inH2O (-1000~2000) mbar	(-400~400) inH2O (-1000~1000) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	10000 mbar	10000 mbar	ADT783-D ADT773-D
DP400	(-400~400) inH2O (-1000~1000) mbar	(-200~200) inH2O (-500~500) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	4000 mbar	10000 mbar	ADT783-D ADT773-D ADT773-LLP
DP300	(-300~300) inH2O (-700~700) mbar	(-150~150) inH2O (-350~350) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	4000 mbar	4000 mbar	ADT783-D ADT773-D ADT773-LLP
DP200	(-200~200) inH2O (-500~500) mbar	(-150~150) inH2O (-350~350) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	4000 mbar	4000 mbar	ADT783-D ADT773-D ADT773-LLP
DP150	(-150~150) inH2O (-350~350) mbar	(-100~100) inH2O (-250~250) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	4000 mbar	4000 mbar	ADT783-D ADT773-D ADT773-LLP
DP100	(-100~100) inH2O (-250~250) mbar	(-60~60) inH2O (-150~150) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	1000 mbar	1000 mbar	ADT783-D ADT773-D ADT773-LLP
DP40	(-40~40) inH2O (-100~100) mbar	(-30~30) inH2O (-75~75) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	1000 mbar	1000 mbar	ADT783-D ADT773-LLP
DP30	(-30~30) inH2O (-75~75) mbar	(-20~20) inH2O (-50~50) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	1000 mbar	1000 mbar	ADT783-D ADT773-LLP
DP20[2]	(-20~20) inH2O (-50~50) mbar	(-10~10) inH2O (-25~25) mbar	DP	G	0.004 (0.007)	0.01 (0.02)	100 mbar	600 mbar	ADT783-D ADT773-LLP
DP10[2]	(-10~10) inH2O (-25~25) mbar	N/A	DP	G	0.01	0.02	100 mbar	600 mbar	ADT773-LLP
DP5[2]	(-5~5) inH2O (-10~10) mbar	N/A	DP	G	0.02	0.05	100 mbar	600 mbar	ADT773-LLP
DP2[2]	(-2~2) inH2O (-5~5) mbar	N/A	DP	G	0.02	0.05	100 mbar	600 mbar	ADT773-LLP
DP1[2]	(-1~1) inH2O (-2.5~2.5) mbar	N/A	DP	G	0.05	0.05	100 mbar	600 mbar	ADT773-LLP

[1] FS means upper range - lower range.
[2] Recommended calibration cycle 180 days.
[3] Precision: the error components include linearity, hysteresis, repeatability, resolution, and temperature effects.
[4] Accuracy: the error components include linearity, hysteresis, repeatability, resolution, reference standard measurement uncertainty, annual drift, temperature effects, K=2.

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High-precision Gauge Pressure Module Specifications							
Model	Gauge pressure range	Absolute Pressure Range [1]	Media	Precision[3][4]	Accuracy[2][5]	Burst Pressure	Suggested Controller Compatibility
GP15KM	(0~15000) psi (0~1035) bar	(15~15015) psi (0~1036) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	1.3x	ADT793
GP10KM	(0~10000) psi (0~700) bar	(15~10015) psi (1~701) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT793
CP6KM	(-14.5~6000) psi (-1~420) bar	(0~6015) psi (0~421) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT793 ADT783-6K
CP5KM	(-14.5~5000) psi (-1~350) bar	(0~5015) psi (0~351) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT793 ADT783-6K
CP3.6KM	(-14.5~3600) psi (-1~250) bar	(0~3615) psi (0~251) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT793 ADT783-3.6K ADT783-6K
CP3KM	(-14.5~3000) psi (-1~200) bar	(0~3015) psi (0~201) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT793 ADT783-3.6K ADT783-6K
CP2KM	(-14.5~2000) psi (-1~140) bar	(0~2015) psi (0~141) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT783-3.6K ADT783-6K
CP1.5KM	(-14.5~1500) psi (-1~100) bar	(0~1515) psi (0~101) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	1.3x	ADT783-3.6K ADT783-6K
CP1KM	(-14.5~1000) psi (-1~70) bar	(0~1015) psi (0~71) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT783-1K ADT783-3.6K ADT783-6K
CP500M	(-14.5~500) psi (-1~35) bar	(0~515) psi (0~36) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT783-1K ADT783-3.6K ADT783-6K
CP300M	(-14.5~300) psi (-1~20) bar	(0~315) psi (0~21) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT783-1K ADT783-3.6K ADT783-6K
CP150M	(-14.5~150) psi (-1~10) bar	(0~165) psi (0~11) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	1.3x	ADT783-1K ADT783-3.6K ADT783-6K
CP100M	(-14.5~100) psi (-1~7) bar	(0~115) psi (0~8) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT783-1K
CP50M	(-14.5~50) psi (-1~3.5) bar	(0~65) psi (0~4.5) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT783-1K
CP35M	(-14.5~35) psi (-1~2.5) bar	(0~50) psi (0~3.5) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT783-1K
CP30M	(-14.5~30) psi (-1~2) bar	(0~45) psi (0~3) bar	G,L	0.008% rdg or 0.004% FS whichever is greater	0.01% rdg or 0.005% FS whichever is greater	2x	ADT783-1K

[1] Absolute pressure is achieved through the synthesis of the basic gauge pressure module and the optional atmospheric pressure module.
[2] The accuracy of the negative pressure part is equal to the accuracy of the positive pressure part, such as the maximum error of -14.5 psi is equal to the maximum allowable error of 14.5 psi.
[3] FS refers to the positive range, and the accuracy of the negative pressure part is equal to that of the positive pressure part.
[4] Precision: the error components include linearity, hysteresis, repeatability, resolution, and temperature effects.
[5] Accuracy: the error components include linearity, hysteresis, repeatability, resolution, reference standard measurement uncertainty, annual drift, temperature effects, K=2.

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GENERAL SPECIFICATIONS

	Standard presicion			High-precision
Model	**CPXX**	**DPXX**	**GPXX**	**CPXM**
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	10% to 95% RH,non-condensing			
Pressure connection (for external use only)	6 mm (O-ring,3*1.5-NBR70)			
Enclosure (for external use only)	Aluminum			
Dimensions (Dia x H)	30 mm x 80 mm x 91mm(1.18” x 3.15” x 3.58”)			
Weight	0.5 kg (1.1 lb)			
Warranty	1 Year			

ORDERING INFORMATION

Model Number

ADT151 — 01 — GP15K — PSI

Accuracy:
01 - 0.01% of full span
02 - 0.02% of full span
05 - 0.05% of full span
01RD - See high-precision pressure module

Pressure range P/N:
See pressure range table

Range type:
PSI - range by psi
BAR - range by bar
H_2O - range by inH_2O

Accessories included

ISO 17025 accredited Calibration Certificate

Optional Accessories

Model number	Description	Picture
9054	**Calibration fixture for ADT151 (Including adapter base w/ 1/4BSP male fitting, RS232/power supply cable, 9V adapter, calibration software)**	

Additel 783 with ADT151 Pressure Modules

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