

APM CPF Series

Advanced Pressure Module







Now Measure Pressure!

HE CRYSTAL APM CPF SERIES pressure module, with integrated CPF * female connection, offers the functionality and flexibility to perform pressure calibrations with a multifunction signal calibrator. In addition, when connected to a hand-held pressure calibrator, the APM can

The APM is engineered to deliver the same high level of accuracy whether in the lab or in the field. Combined with calibrators and pump systems, the Crystal APM is a powerful calibration tool.

Key Features

► Accuracies to 0.025% of Reading. Performance to meet almost any calibration and measurement task.

► Seven Ranges Available.

Full coverage from vacuum to 15 000 psi /1000 bar.

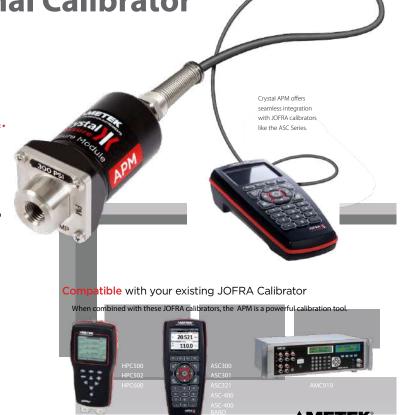
▶ Rugged Construction.

Machined aluminum housing. Engineered for rough field use $-\,$

► Self-Contained, Intelligent Module.

Calibration data is stored in the module, so any module can be combined with any compatible JOFRA indicator. No need to "calibrate" the $\,$

U.S. Patent No. 8,794,677



Lab Accuracy in the Field



Active Temperature Compensation

Count on the same accuracy at any temperature, between -20 and 50°C.

Calibrate with Confidence Anywhere



Take measurements with up to 0.025% of reading accuracy. Crystal Engineering calibration facilities are A2LA accredited, (#2601.01) which is internationally recognized by ILAC.

Pressure Calibration with a Signal Calibrator



The Crystal APM converts a JOFRA ASC400 multifunction signal calibrator to a full-featured pressure calibrator. Seamlessly integrated with $\underline{\mathsf{AMETEK}}$ pump systems, an APM combined with an ASC-400 provides the benefits of a host of features like leak-test, pressure-switch calibration, scaling, % error calculation, and more!

FITTINGS FOR LIFE



Crystal Pressure Fittings are machined in high-strength 316 Stainless Steel to operate to 10 000 psi / 700 bar.

- Purpose designed for testing.
- Self-venting weep hole alerts you before you disconnect from a pressurized system.
- Seamless connection to pneumatic and hydraulic pump systems.



Specifications



Accuracy

30, 100 and 300 psi 3, 10 and 30 bar 300 kPa, 1 and 3 MPa 0 to 30% of Range $\dots\dots\pm$ (0.0075% of Full Scale)

30 to 110% of Range ±(0.025% of Reading) Vacuum.....For 100 psi/10 bar/1 MPa and lower: ±(0.06% of Full Scale*)

> For 300 psi/30 bar/3 MPa: ±(0.06% of Full Scale*) ±1 LSD

* Full Scale = -14.5 psi /-1.0 bar /-100.0 kPa

1000, 3000, 10 000, and 15 000 psi 100, 300, 700, and 1000 bar 10, 30, 70, and 100 MPa

0 to 30% of Range±(0.015% of Full Scale) 30 to 110% of Range....±(0.05% of Reading)

Includes all effects of linearity, hysteresis, repeatability, temperature,

All models indicate vacuum, but vacuum specification applies only where

Not recommended for continuous use at high vacuum. Refer to XP2i-DP

Sensor

Wetted Materials.....(WRENCH TIGHT) 316 stainless steel

(FINGER TIGHT) 316 stainless steel and Viton® (internal o-ring)

Diaphragm Seal Fluid ... Silicone Oil

Connection Crystal CPF Female

1/4" male NPT adapter is included unless BSP, M20 or 15KPSI is specified.

Series, Autoclave Engr SF250CX Male and Female Series.

Output

Pressure Resolution up to 6 digits Display Updateup to 10 per second

Pressure resolution is the maximum resolution available. The resolution of your JOFRA device may be different.

Communication

Serial9600 baud, 8 data, no parity, 1 stop

Protocol ASCII command language

Pressure Overload

Overload Alarm......"+OL" in display at 110% F.S.

Operating Temperature

Temperature Range.....-20 to 50° C (-4 to 122° F)

< 95% RH, non-condensing. No change in accuracy over operating temperature range. Gauge must be zeroed to achieve rated specification.

Storage Temperature

Temperature Range.....-40 to 75° C (-40 to 167° F)

Enclosure

Dimensions..... 1.4 x 1.4 x 3.0 in (35.5 x 35.5 x 76.2 mm)



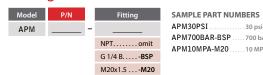


Accuracies, Ranges, and Resolutions

	psi	bar	kPa/MPa	Overpressure	psi	kg/cm2	inHg	inH20	mmHg	mmH20	kPa	bar	mbar	MPa
0.025% of Reading modules	30PSI			3.0 x	0.001	0.0001	0.001	0.01	0.01	1	0.01	0.0001	0.1	
		3BAR		3.0 x	0.001	0.0001	0.001	0.01	0.01	1	0.01	0.0001	0.1	
			300KPA	3.0 x							0.01	0.0001	0.1	
	100PSI			2.0 x	0.001	0.0001	0.01	0.1	0.1	1	0.01	0.0001	0.1	0.00001
		10BAR		2.0 x	0.001	0.0001	0.01	0.1	0.1	1	0.01	0.0001	0.1	0.00001
			1MPA	2.0 x							0.01	0.0001	0.1	0.00001
	300PSI			2.0 x	0.01	0.001	0.01	0.1	0.1		0.1	0.001	1	0.0001
		30BAR		2.0 x	0.01	0.001	0.01	0.1	0.1		0.1	0.001	1	0.0001
			3MPA	2.0 x							0.1	0.001	1	0.0001
0.05% of Reading modules	1KPSI			2.0 x	0.1	0.001	0.1				0.1	0.001		0.0001
		100BAR		2.0 x	0.1	0.001	0.1				0.1	0.001		0.0001
			10MPA	2.0 x							0.1	0.001		0.0001
	3KPSI			1.5 x	0.1	0.01	0.1				1	0.01		0.001
		300BAR		1.5 x	0.1	0.01	0.1				1	0.01		0.001
			30MPA	1.5 x							1	0.01		0.001
	10KPSI			1.5 x	1	0.01					1	0.01		0.001
		700BAR		1.5 x	1	0.01					1	0.01		0.001
			70MPA	1.5 x							1	0.01		0.001
	15KPSI*			1.3 x	1	0.01					1	0.01		0.001
		1000BAR*		1.3 x	1	0.01					1	0.01		0.001
			100MPA*	1.3 x							1	0.01		0.001

Resolutions shown are the maximum resolutions available. The resolution of your JOFRA device may be different.

Ordering Information



APM30PSI 30 psi APM with a 1/4" NPT pressure fitting. APM700BAR-BSP 700 bar APM with a 1/4" BSP pressure fitting. APM10MPA-M20 10 MPa APM with an M20x1.5 pressure fitting.



^{*} CPF adaptor fitting is not included. 1/4" medium pressure tube system is compatible with HIP LM4 and LF4 Series, Autoclave Engr SF250CX Male and Female Series. See our CPF data sheet for additional adapter fittings.



