

Ranges and Resolution

See table below for standard ranges and units Resolution is fixed for each engineering unit

Accuracy

Accuracy includes linearity, hysteresis, repeatability Pressure and absolute ranges

±0.1% full scale, ±1 least significant digit

Vacuum, compound, bipolar ranges ±0.25% full scale ±1 least significant digit

Sensor hysteresis: $\pm 0.015\%$ FS, included in accuracy Sensor repeatability: $\pm 0.01\%$ FS, included in accuracy

Display

3 readings per second nominal display update rate 4 digit LCD, 0.5"H and 5 character 0.25"H alphanumeric White LED backlight active with center button keypress (user configurable)

Batteries, Battery Life, Low Battery Indication

2 AA alkaline included

Approx. 150-1500 hours depending on backlight usage Low battery symbol on display

Controls and Functions

Three button keypad: Zero/clear/up, on/off, memory/down On/off button activates backlight

Passcode protected calibration, engineering unit selection, auto shutoff time, min/max setup.

Min/Max Memory

3PSIG

6INHGG

50ZING

85INH20G

210GCMG

150MMHGG

150TORRG

200MBARG

200CMH20G

7FTH20

20KPAG

5PSIG

10INHGG

80ZING

350GCMG

260MMHGG

260TORRG

350MRARG

350CMH20G

12FTH20

35KPAG

15PSIA

30INHGA

240ZINA

400INH20A

1000GCMA

760MMHGA

760TORRA

100KPAA

0.1MPAA

1KGCMA

15PSIVAC

30INHGVAC

240ZINVAC

400INH20VAC

1000GCMVAC

760MMHGVAC

1000MBARVAC

1000CMH20VAC

760TORRVAC

15 psig vac

1ATMA

1BARA

1000MBARA

1000CMH20A

3500MMH20G

15 p

140INH20G

2000MMH20G

5 psiç

Minimum and/or maximum readings stored in memory, readings cleared or stored at shutoff. User configurable.

001 100KPAVAC

0.1MPAVAC

1BARVAC

1KGCMVAC

1ATMVAC

15PSIG

30INHGG

240ZING

1000GCMG

760TORRG

35FTH20

100KPAG

0.1MPAG

1BARG

1KGCMG

±15PSIG

±30INHGG

±240ZING

±400INH20G

±1000GCMG

±760MMHGG

±760TORRG

±1000MBAR

±100KPAG

±0.1MPAG

±1BARG

±1KGCMG

±1ATMG

30PSIA

60INHGA

480ZINA

850INH20A

2100GCMA

1600MMHGA

1600TORRA

2000MBARA

2100CMH20A

200KPAA

0.2MPAA

2BARA

±1000CMH20G

±15 p

-30INHG/15PSIG

1ATMG

760MMHGG

1000MBARG

1000CMH20G

400INH20G

15 psig vac

15 psig

Sensor Ranges and Engineering Units

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Res

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Calibration

Zero button for gauge reference ranges

Non-interactive zero, span, and linearity, ±10% of range

Auto Shutoff

User selectable 1 minute to 8 hours or front button on/off

Weight

Gauge: 9 ounces (approximately) Shipping: 1 pound (approximately)

Housing Materials

Epoxy powder coated aluminum case and bezel, front and rear rubber gaskets, polycarbonate label, rubber boot

Connection and Material

1/4" NPT male fitting

All wetted parts are 316L stainless steel

Overpressure, Burst, Vacuum Service

3000 psig sensor: 5000 psig overpressure 7500 psig overpressure

All others: 2 X pressure range overpressure
Burst pressure: 4 X sensor pressure rating, or 10,000

psi, whichever is less

Vacuum service: 15 psig, ±15 psig, 100 psig, 200 psig,

15 psia, 30 psia, 100 psia

Consult factory for special units

300 psig 300PSIG

610INHGG

4800ZING

700FTH20

2000KPAG

2MPAG

20RARG

20ATMG

500PSIG

20KGCMG

500 ps

1020INHGG

1150FTH20

3500KPAG

3.5MPAG

35BARG

35KGCMG

35ATMG

1000PSIG

2040INHGG

2300FTH20

7000KPAG

7MPAG

70ATMG

2000PSIG

4070INHGG

4600FTH20

14MPAG

140BARG

140KGCMG

3000 psig

140ATMG

3000PSIG

6100INHGG

6900FTH20

20MPAG

200BARG

200KGCMG

200ATMG

5000PSIG

35MPAG

350BARG

350KGCMG

340ATMG

5000 psig

2000 psig

.0001 **70BARG**

.001

001

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.001 70KGCMG

1000 psig

Res

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Environmental Temperatures

Storage: -40 to 203°F (-40 to 95°C)
Operating: -4 to 185°F (-20 to 85°C)
Compensated range: 32 to 158°F (0 to 70°C)

Dimensions

Res

Res

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30 psia

30 psid

2KGCMA

30PSIG

60INHGG

480ZING

2100GCMG

1600MMHGG

1600TORRG

2000MBARG

70FTH20

200KPAG

0.2MPAG

2KGCMG

60PSIG

120INHGG

960ZING

4200GCMG

3100MMHGG

3100TORRG

4100MBARG

140FTH20

400KPAG

0.4MPAG

4KGCMG

100PSIA

200INHGA

1600ZINA

7000GCMA

5200MMHGA

5200TORRA

7000MBARA

700KPAA

0.7MPAA

7BARA

.0001 **7ATMA**

7KGCMA

7000CMH20A

2770INH20A

100 psia

4BARG

.0001 4ATMG

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Res

4200CMH20G

1660INH20G

60 r

2BARG

2100CMH20G

850INH20G

.0001 2ATMA

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Λ1

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Res

.0001 **2ATMG**

3.67"W x 3.19"H x 2"D with boot, not including fitting

_15V100psig *

-30INHG/100PSIG

400V2770INH20G

-760V5200MMHGG

-760V5200TORRG

100 psic

-100V700KPAG

-0.1V0.7MPAG

-1V7BARG

-1V7KGCMG

-1V7ATMG

2770INH20G

1600ZING

Res 5200MMHGG

7000GCMG

5200TORRG

7000MRARG

7000CMH20G

230FTH20

700KPAG

0.7MPAG

7BARG

7KGCMG

7ATMG

-15V20

-15V200PSIG

-30V400INHGG

-240V3200ZING

-0.1V1.4MPAG

-400V5500INH20G

0001 -30INHG/200PSIG

Res -100V1400KPAG

-1V14BARG

-1V14KGCMG

-1V 14ATMG

200PSIG

400INHGG

3200ZING

480FTH20

1400KPAG

1.4MPAG

14BARG

14KGCMG

14ATMG

5500INH20G

200 psi

100PSIG

0001 **200INHGG**

-30V200INHGG

-240V1600ZING

.001 **-15V100PSIG**

- ±0.1% Test Gauge Accuracy in Most Ranges
- Ultra-Ruggedized Design
- 316L Stainless Steel Wetted Parts
- Keypad Selectable Units and Auto Shutoff Times
- White LED Display Backlight
- Min/Max Memory



How to Specify	Included Features					
CTP3B range units	Red rubber boot White LED backlight All metal case Port reinforcement Coated circuit boards					

Range and Units—See table at left Select a range code for default units

Please specify if vacuum gauge requires a minus sign

psi = PSI inHg = INHG oz/in² = ZIN inH₂0 = INH20 ftH₂0 = FTH20 mmHg = MMHG torr = TORR mmH₂0 = MMH20 kg/cm² = KGCM g/cm² = GCM kPa = KPA mbar = MBAR har = BAR

 $cmH_2O = CMH2O$

atm = ATM

G gauge reference pressure
VAC gauge reference vacuum
A absolute reference

Options—add to end of model number. See price list for details.

CD Calibration data; 5 test points and date

NC NIST traceability documentation, 5 points and date

Accessories—order separately

DPG-OK2, DPG-OK3, DPG-OK6

Pelican® brand high visibility orange heavy duty waterproof cases. Models available for storing 2, 3, or 6 gauges.



CON14SS

Quick connector to install or remove gauge with out tools. 304 stainless steel, urethane seal.









Ranges and Selectable Units

Range Codes

The gauge model range code indicates the default range. Alternate default engineering units may be ordered.

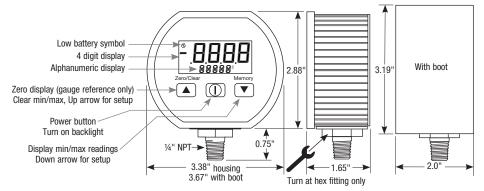
Selectable Ranges

Engineering units may be changed to any of those listed in the same row as shown in the table below.

Conversion

Engineering unit conversions are calculated from the factory default unit to the newly selected units.

Sensor Range and Units	psi	kPa	MPa	mbar	bar	atm	kg/cm²	g/cm²	mmH ₂ O	cmH ₂ O	oz/in²	ftH ₂ O	inH ₂ O	mmHg	torr	inHg
-14.7 to 15.0 psig	-14.7 to 15.0	-101.3 to 103.4	1013 to .1034	-1013 to 1034	-1.013 to 1.034	-1.000 to 1.021	-1.033 to 1.055	-1033 to 1055		-1033 to 1055	-235.1 to 240.0	-33.90 to 34.61	-407 to 415	-760 to 7767	-760 to 776	-29.92 to 30.54
-29.9 inHg to 15.0 psig	-14.7 to 15.0	-101.3 to 103.4	1013 to .1034	-1013 to 1034	-1.013 to 1.034	-1.000 to 1.021	-1.033 to 1.055	-1033 to 1055		-1033 to 1055	-235.1 to 240.0	-33.90 to 34.61	-407 to 415	-760 to 776	-760 to 776	-29.92 to 30.54
–29.9 inHg to 100.0 psig	-14.7 to 100.0	-101 to 690	101 to .690		-1.01 to 6.90	-1.00 to 6.81	-1.03 to 7.03				-235 to 1600	-33.9 to 230.7	-407 to 2767	-760 to 5171	-760 to 5171	-29.9 to 203.6
–29.9 inHg to 200.0 psig	-14.7 to 200.0	-101 to 1379	101 to 1.379		-1.01 to 13.79	-1.00 to 13.61	-1.03 to 14.06				-235 to 3200	-33.9 to 461.4	-407 to 5534			-29.9 to 407.2
0 to 3.000 psig	3.000	20.68		206.8	.2068	.2041	.2109	210.9	2109	210.9	48.00	6.921	83.0	155.1	155.1	6.108
0 to 5.000 psig	5.000	34.47		344.7	.3447	.3402	.3515	351.5	3515	351.5	80.0	11.54	138.4	258.6	258.6	10.18
15.00 to 0 psi abs	15.00 abs	103.4 abs	.1034 abs	1034 abs	1.034 abs	1.021 abs	1.055 abs	1055 abs		1055 abs	240.0 abs	34.61 abs	415.1 abs	775.7 abs	775.7 abs	30.54 abs
0 to 14.70 psig vac	14.70 vac	101.3 vac	.1013 vac	1013 vac	1.013 vac	1.000 vac	1.033 vac	1033 vac		1033 vac	235.1 vac	33.90 vac	406.8 vac	760 vac	760 vac	29.92 vac
0 to 15.00 psig	15.00	103.4	.1034	1034	1.034	1.021	1.055	1055		1055	240.0	34.61	415.1	775.7	775.7	30.54
30.00 to 0 psi abs	30.00 abs	206.8 abs	.2068 abs	2068 abs	2.068 abs	2.041 abs	2.109 abs	2109 abs		2109 abs	480.0 abs	69.21 abs	830 abs	1551 abs	1551 abs	61.08 abs
0 to 30.00 psig	30.00	206.8	.2068	2068	2.068	2.041	2.109	2109		2109	480.0	69.21	830	1551	1551	61.08
0 to 60.00 psig	60.00	413.7	.4137	4137	4.137	4.083	4.218	4218		4218	960	138.4	1660	3103	3103	122.2
100.0 to 0 psi abs	100.0 abs	689.5 abs	.6895 abs	6895 abs	6.895 abs	6.805 abs	7.031 abs	7031 abs		7031 abs	1600 abs	230.7 abs	2767 abs	5171 abs	5171 abs	203.6 abs
0 to 100.0 psig	100.0	689.5	.6895	6895	6.895	6.805	7.031	7031		7031	1600	230.7	2767	5171	5171	203.6
0 to 200.0 psig	200.0	1379	1.379		13.79	13.61	14.06				3200	461.4	5534			407.2
0 to 300.0 psig	300.0	2068	2.068		20.68	20.41	21.09				4800	692.1				610.8
0 to 500.0 psig	500.0	3447	3.447		34.47	34.02	35.15					1154				1018
0 to 1000 psig	1000	6895	6.895		68.95	68.05	70.31					2307				2036
0 to 3000 psig	3000		20.68		206.8	204.1	210.9					6921				6108
0 to 5000 psig	5000		34.47		344.7	340.2	351.5									



Installation Precautions

- Read these instructions before using the gauge. Configuration may be easier before installation. Contact the factory for assistance.
- ✓ These products do not contain user-serviceable parts, except batteries. Contact us for repairs, service, or refurbishment.
- Gauges must be operated within specified ambient temperature ranges.
- Outdoor or wash down applications require a NEMA 4X gauge or installation in a NEMA 4X housing.
- Use a pressure or vacuum range appropriate for the application.
- Use fittings appropriate for the pressure range of the gauge.
- ✓ Due to the hardness of 316 stainless steel, it is recommended that a thread sealant be used to ensure leak-free operation.
- ✓ For contaminated media use an appropriate screen or filter to keep debris out of gauge port.
- Remove system pressures before removing or installing gauge.
- ✓ Install or remove gauge using a wrench on the hex fitting only. Do not attempt to turn gauge by forcing the housing.
- ✓ Good design practice dictates that positive displacement liquid. pumps include protection devices to prevent sensor damage from pressure spikes, acceleration head, and vacuum extremes
- X Avoid permanent sensor damage! Do not apply vacuum to nonvacuum gauges or hydraulic vacuum to any gauges.
- Avoid permanent sensor damage! NEVER insert objects into gauge port or blow out with compressed air
- ▲ Gauges are not for oxygen service. Accidental rupture of sensor diaphragm may cause silicone oil inside sensor to react with oxygen.

Cecomp maintains a constant effort to upgrade and improve its products. Specifications are subject to change without notice. Consult factory for your

Your gauge is ready to use. It was calibrated just prior to shipment with batteries

Press and hold the center power button for approximately 1 second. The display is tested.

The full-scale range in the factory default units is indicated. If the units were changed by the user, then the full scale range in the selected engineering units is displayed.

The display test is briefly shown again.

The actual pressure and units are displayed. The gauge is ready for use and readings are updated approximately 3 times per second

For gauge reference models occasional flashing of the minus sign is normal and indicates the gauge is at zero pressure. Absolute gauges only display zero at full vacuum.

8888

88888

Display Backlighting

Display backlighting can be turned on by momentarily pressing the power button whenever the gauge is on. This also restarts the auto shutoff timer

The factory default on-time is 1 minute, but the setup procedure allows setting it to 1 to 255 minutes, or to 0 to disable display backlighting.

The LED display backlighting may not be apparent under bright lighting conditions.

Error or Out-of-Range Indications

Attempting to zero the gauge with pressure greater than approximately 3% of full-scale pressure or vacuum will result in an error condition. The display will alternately indicate Err D and the actual pressure. The gauge must be powered down to reset the error condition.

If excessive vacuum is applied to a pressure-only gauge, the display will indicate -Err until the vacuum is released. Applying vacuum to a pressure-only gauge can damage the pressure sensor.

If 112.5% over range pressure is applied, an out-of-range indication of 1 - - - or 1.will be displayed depending on model.







Zero the Display

This applies to gauge reference models only. Absolute reference gauges do not use the zero feature since they read atmospheric pressure under normal conditions.

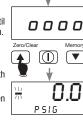
Be sure the gauge is in the normal operating mode. The gauge port must be exposed to normal atmospheric pressure with no pres-sure or vacuum applied.

Press and hold the Zero/Clear button.

Continue to press the Zero/Clear button until oooo is displayed then release the button. The gauge in now zeroed.

Occasional flashing of the minus sign with zero pressure/vacuum is normal.

The stored zero correction is erased when the gauge is shut off



P 516

The auto shutoff timer starts at power up and resets whenever any button is pressed. The default time is 5 minutes, but can be set for a variety of times. If on/off operation is selected, the gauge will stay on until manually shut off or the batteries are depleted. Turn gauge off when not in use to conserve battery life.

When an auto shutoff time is used, the display indicates *OFF* five seconds prior to shutoff. Press the power button to keep the gauge on.

To shut the gauge off manually, press and hold (about 5 seconds) the center power button until *OFF* is displayed.











Min/Max Memory

The Min/Max setup procedure in the Gauge Configuration > Min/ Max Setup section may be used to configure the gauge to capture both maximum and minimum values, the maximum value only, or the minimum value only. Only the configured values will be displayed when the memory button is pressed. The gauge also may be configured to erase or save the readings when the gauge

The Min/Max readings are captured at the rate of 3 times per second. Note that if a brief pressure deviation occurs, it may not be captured. The readings are captured any time the gauge is on and not in the configuration or calibration mode.

200.0

MRX

MIN

PSIG

Press and release the Memory button to view the maximum stored value.

The center power button may be pressed at any time to return to the normal display mode

The gauge may be left in the maximum display mode if desired. The maximum reading will be continuously displayed, stored and updated.

Press and release the Memory button to view the minimum stored value.

For many applications it may be best to bring the system up to normal pressure and then clear the minimum value.

The gauge may be left in the minimum display mode if desired. The minimum reading will be continuously displayed, stored and updated.

Press and release the center power button to return to the normal display mode.

Gauge Configuration

The gauge is designed to use a 4 digit passcode to enter the configuration modes. This is to prevent unauthorized changing of settings.

With the gauge off, press and hold the A button. Then press the Power button.



The gauge then goes through the normal power up sequence.

The display prompts for entry of the configuration passcode (CFGPC), with the first underscore blinking

Note: The gauge will automatically revert to normal operation if no buttons are pressed for approximately 15 seconds. To cancel and return to normal operation, press and release the Power button without entering any passcode characters.

Enter Configuration Passcode

Enter the passcode. 3510 is the factory default, but it is user-modifiable.

Use the ▲ or ▼ buttons to set the left-most digit to 3.



power up sequence

/TYCFGPC

Press and release the Power button to index to the next position.

The 3 will remain, and the second position will be blinking.

Use the ▲ or ▼ buttons to select 5.

Use the ▲ or ▼ buttons to select 1.

the fourth position will be blinking.

Use the ▲ or ▼ buttons to select 0

ceed with configuration procedures.

passcode entry sequence.

third position will be blinking.

Press and release the Power button to index

to the next position. 3 5 will remain, and the

Press and release the Power button to index

to the next position. 3 5 1 will remain, and

Press and release the Power button to pro-

Note: If an incorrect passcode is entered,

the gauge will return to the start of the

C/# 'G P C (\blacktriangle) 35

CFGPE

35 I

<u>CFGPC/TN</u>

35 I O

CFGPC

35 I O

CFGPC

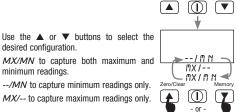
Zero/Clea

Press and release the power button to save the user configuration and move to the next setup parameter.

After the center power button is pressed when in user configuration mode, the display indicates MX/MN.

Min/Max Setup

desired configuration.



MX/MN

minimum readings. --/MN to capture minimum readings only. MX/-- to capture maximum readings only.

Press and release the power button to save the user configuration and move to the next setup parameter.



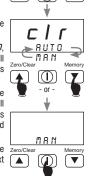
After the center power button is pressed when in user MX/MN configuration mode, the upper display indicates clr.



Use the ▲ button to select *AUTD* and the or ▼ button to select MAN.

When the lower display indicates AUTO, the maximum and/or minimum readings will be automatically cleared when the gauge is

When the lower display indicates MAN, the maximum and/or minimum readings will be retained in memory after the gauge is powered off. The readings can be cleared



Engineering Unit Selection

With the gauge in the user configuration mode, the upper display will be blank with the engineering units in the lower display.

Use the lacktriangle and lacktriangle buttons to navigate through the list of engineering units. Available engineering units depend on the sensor range.

For compound gauges the choice of CMPND (inHg/psig) or -/+EU (±Engineering Units) will apear. The gauge must be changed to -/+EU first before alternate engineering units may be selected.

When the desired units are displayed, press and release the Power button to save your selection and move to the next parameter.



85T

 (\bigcirc)

- or

RST H

PSIG

Auto Shutoff Time Selection

The auto shutoff time is displayed on the upper display. The lower display will indicate AST M if the time displayed is in minutes or AST H if it is in hours.

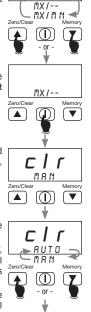
Use the lacktriangle and lacktriangle buttons to select 0 ((manual shutoff), 1, 2, 5, 10, 15, 20 or 30 minutes, or 1, 2, 4, or 8 hours.

A setting of zero disables the auto shutoff timer. This requires using the Power button to shut the gauge off. When the desired time is displayed, press

and release the Power button to save your selection.

Go to the Backlight Shutoff Time section on the next page to continue user configuration.

800-942-0315



Clear a Memory Location

Press and release the Memory button until the value to be cleared is displayed.

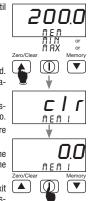
Press and hold the Zero/Clear button.

Release the button when *clr* is displayed. The reading for the indicated memory location will be cleared.

With a gauge reference models if no pressure is applied, the value will return to zero. If pressure is applied the new pressure reading will be stored in memory.

Absolute reference models will store the current atmospheric pressure reading if the gauge port is open to atmosphere.

Press and release the Power button to exit the memory mode and return to live pressure readings



Gauge Configuration—User or Factory

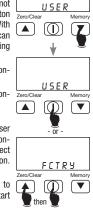
Upon successful passcode entry, the upper display will be blank, and the lower section will display USER. If User is not displayed press and release the ▼ button to change the lower display to USER. With User selected, the gauge configuration can be modified as described in the following sections.

Press and release the Power button to continue with configuration.

Go to the Min/Max Setup section to continue user configuration.

If Factory (FCTRY) is selected, the user configuration will be replaced by the configuration as it left the factory. To select Factory, press and release the **A** button. The lower display will indicate FCTRY.

Press and release the Power button to restore the factory configuration and restart the gauge.







Zero/Clea

Backlight Time Selection

The lower display will indicate BL if the display backlight is enabled or NO BL if display backlight is disabled.

Use the **\(\Lambda \)** button to enable backlighting and the ▼ button to disable backlighting. Press the power button to save the setting.

If NO BL was selected the user setup is complete and the gauge will restart and be ready for use with the new configuration.

If BL was selected the current backlight auto shutoff time is displayed in minutes. 1 minute is the factory default.

Use the ▲ and ▼ buttons to select the minutes for backlight shutoff time.

A setting of 0 disables the auto shutoff timer and the backlight will be on whenever the gauge is on.

The maximum setting is 255 minutes. The gauge auto shutoff time will override the backlight time.

When the desired time is displayed, press and release the power button to save your selection and restart the gauge.

A low battery indication will be shown in the upper lefthand corner of the display when the battery voltage falls sufficiently. The batteries should be replaced soon after the indicator comes on or unreliable readings may result.



NO BL

BLTMR

- 1. Remove the 6 Phillips screws on the back of the unit.
- 2. Lift up the battery holder.
- 3. Remove batteries by lifting up the positive end of the battery (opposite the spring) taking care not to bend the battery holder spring.
- 4. Discard old batteries properly, do not discard into fire, sources of extreme heat, or in any hazardous manner.
- 5. Always replace both batteries at the same time with high quality
- 6. Install batteries with correct orientation. Incorrect polarity will damage the gauge. The negative (flat) end of each battery should be inserted first facing the battery holder spring.
- 7. Replace battery holder and back cover, including the rubber gasket and reinstall the six screws.

Calibration

Setup and Preparation

Gauges are calibrated at the factory using equipment traceable to NIST. There is no need to calibrate the gauge before putting it into service. Calibration should only be performed by qualified individuals using appropriate calibration standards and procedures. Calibration intervals depend on your quality control program requirements, although many customers calibrate annually

The calibration system must be able to generate and measure pressure/vacuum over the full range of the gauge and should be at least four times more accurate than the gauge being calibrated.

A vacuum pump able to produce a vacuum of 100 microns (0.1 torr or 100 millitorr) or lower is required for vacuum gauges.

Allow the gauge to acclimate to ambient temperature for 20 minutes. Install fresh batteries

Entering Calibration Mode

With the gauge off, press and hold the ▼ button. Then press the Power button. Release all buttons when the display indicates *CAL*.

The display begins by indicating the full-scale positive pressure rating of the gauge in the engineering units as configured by the factory, and then shows all display.

Before the gauge enters the Calibration Mode, the display initially indicates _ _ _ with the first underscore blinking, and with CALPC (calibration passcode) on the lower display

Enter the 3510 passcode as described in the Configuration Passcode section.

Calibration Mode

The gauge enters and remains in the Calibration Mode until restarted manually or power is removed. Features not related to calibration are disabled and compound range models are set for the same engineering units for pressure and for vacuum.

The calibration may be performed in any of the available engineering units as well as percent (PCT).

For greatest accuracy, use the ▲ and ▼ buttons to select engineering units for calibration with highest resolution (highest number of display counts).

Press and release the Power button when the appropriate engineering units are displayed. Suggested units are listed below.

Sensor	Suggested units for calibration
5 PSI	5.000 PSI
15 PSI	775.7 MMHG or TORR
30 PSI	61.08 INHG
50 PSI	50.00 PSI
60 PSI	60.00 PSI
100 PSI	7.031 KG/CM2
200 PSI	407.2 INHG
300 PSI	610.8 INHG
500 PSI	3447 KPA
1000 PSI	6895 KPA
2000 PSI	4613 FTH20
3000 PSI	6920 FTH20
5000 PSI	5000 PSI

The display will then indicate the currently applied pressure in the engineering units selected for calibration.

▲ and ▼ Button Operation

Each time one of the ▲ or ▼ buttons is pressed and released quickly, a small change is made to the digitized pressure signal. It may take more than one of these small changes to result in a single digit change on the display.

To make larger changes, press and hold the appropriate button. After about one second, the display will begin to change continuously. Release the button to stop. Then make fine adjustments by pressing and quickly releasing the buttons as previously described.

Gauge Reference Pressure Gauges

Apply zero pressure by venting the gauge port to atmosphere. The character display will alternate between ZERO and CAL. Adjust for a display indication of zero using the ▲ and ▼ buttons.

Apply full-scale pressure. The character display will alternate between +SPAN and CAL. Adjust for a display indication of full-scale pressure using the ▲ and ▼ buttons.

Apply 50% full-scale pressure. The character display will alternate between +MID and CAL. Adjust for a display indication equal to 50% of full-scale pressure using the ▲ and ▼ buttons.

Gauge Reference Vacuum Gauges

Apply zero pressure by venting the gauge port to atmosphere. The character display will alternate between ZERO and CAL. Adjust for a display indication of zero using the ▲ and ▼ buttons.

Apply full-scale vacuum. The character display will alternate between +5PAN and CAL. Adjust for a display indication of full-scale vacuum using the ▲ and ▼ buttons.

Calibration—continued

Apply 50% full-scale vacuum. The character display will alternate between +MID and CAL. Adjust for a display indication equal to 50% of full-scale vacuum using the ▲ and ▼ buttons.

Absolute Reference Gauges

Apply full vacuum to the gauge. The character display will alternate between ZERO and CAL. Press the ▲ and ▼ buttons to obtain a display indication of zero.

Apply full-scale pressure. The character display will alternate between +5PAN and CAL. Press the ▲ and ▼ buttons to obtain a display indication equal to full-scale pressure.

Apply 50% of full-scale pressure. The lower display will alternate between +MID and CAL. Press the ▲ and ▼ buttons to obtain an indication equal to 50% of full-scale pressure.

Compound and Bipolar Gauges

In addition to the steps described above for pressure gauges, apply full-scale vacuum. The character display will alternate between -SPAN and CAL. Adjust for a display indication of actual applied vacuum using the ▲ and ▼ buttons.

For bipolar and -30.00 inHg/+15.00 psig compound range models only, apply 50% full-scale vacuum. The character display will alternate between -MID and CAL. Adjust for a display indication equal to 50% of full-scale vacuum using the ▲ and ▼ buttons.

Save Calibration

Press and hold the Power button until the display indicates - - - then release the button to store the calibration parameters in nonvolatile memory and restart the gauge.

Verify the pressure indications at 0%, 25%, 50%, 75% and 100% of full scale

User-Defined Passcode Configuration

The factory default passcode 3510 may be changed to a different value for configuration and/or calibration.

Configuration Passcode

With the unit off, press and hold the ▲ button to view and/or change the user configuration passcode. Then press the Power button. Release all buttons when the display indicates *CFG*.

Calibration Passcode

With the unit off, press and hold the ▼ button to view and/or change the user calibration passcode. Then press the Power button. Release all buttons when the display indicates CAL.

Change Passcode Mode

Before the unit enters the view or change passcode mode, the display initially indicates with the first underscore blinking, and with *CFGPC* or *CRLPC* on the character segments.

Note: The unit will automatically revert to normal operation if no buttons are operated for approximately 15 seconds. To cancel and return to normal operation, press and release the Power button without entering any passcode characters.

Enter access code 1220:

Use the ▲ and ▼ buttons to set the left-most digit to 1.

Press and release the Power button to index to the next position. The 1 will remain, and the second position will be blinking.

Use the ▲ and ▼ buttons to select 2.

Press and release the Power button to index to the next position. 1 2 will remain, and the third position will be blinking.

Use the ▲ and ▼ buttons to select 2.

Press and release the Power button to index to the next position. 1 2.2 will remain, and the fourth position will be blinking.

Use the ▲ and ▼ buttons to select 0.

Press and release the Power button to proceed.

Note: If an incorrect access code was entered, the gauge will return to the start of the access code entry sequence.

Change Passcode

Once the access code has been entered correctly, the display will indicate the existing user-defined passcode with CFGPC or CALPC on the character segments.

Press the ▲ or ▼ button to select the first character of the new passcode

When the correct first character is being displayed, press and release the Power button to proceed to the next passcode character. Repeat above until the entire passcode is complete.

To exit the User Defined Passcode change mode, press and hold the Power button.

Release the button when the display indicates - - - - to restart

