Ranges and Resolution
See table below for ranges and resolution
User configurable for listed engineering units
Resolution is fixed for each engineering unit

Accuracy
±0.1% full scale ±1 least significant digit
Accuracy includes linearity, hysteresis, repeatability
Sensor hysteresis: ±0.015% FS, included in accuracy
Sensor repeatability: ±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 for 1 minute with button keypress
Backlight user configurable for AUTO (1 minute), ON, or OFF

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

Min/Max Memory
Minimum and/or maximum readings stored in memory
Readings cleared or stored at shutoff
User configurable

Calibration
Zero button for gauge reference ranges
Non-interactive zero, span, and linearity, ±10% of range

Auto Shutoff
Factory default: 5 minutes
User selectable: 1 minute to 8 hours or manual on/off

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

Housing Materials
Epoxy powder coated aluminum case with case stiffener,
ABS/ polycarbonate bezel, coated circuit boards for humidity
resistance, front and rear rubber gaskets, polycarbonate label
NEMA 2 (IP51)
Includes 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
5000 psig sensor: 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 psia, ±15 psig, 15 psig, 30 psia, 100 psig, 100 psia, 200 psig sensors

Environmental Temperatures
Storage temperature: –40 to 203°F (–40 to 95°C)
Operating temperature: –4 to 185°F (–20 to 85°C)
Sensor compensated range: 32 to 158°F (0 to 70°C)

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

- ±0.1% Test Gauge Accuracy
- Ruggedized Design
- Red Rubber Boot Included
- 316L Stainless Steel Wetted Parts
- Selectable Units and Auto Shutoff Times
- White LED Display Backlight
- Min/Max Memory

MADE IN USA

Vacuum	Range/Resolution	Selectable Units
CTP3B15PSIVAC	0 to 14.70 psig vacuum	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2 cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
Vacuum/Pressure	**Range/Resolution**	**Selectable Units**
CTP3B±15PSIG	–14.70 to 15.00 psig	psi, inHg/psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B30V15PSIG	–29.92 inHg to 15.00 psig	psi, inHg/psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B15V100PSIG	–14.7 to 100.0 psig	psi, inHg/psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B30V100PSIG	–29.9 inHg to 100.0 psig	psi, inHg/psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B15V200PSIG	–14.7 to 200.0 psig	psi, inHg/psi, inHg, torr, inH2O, ftH2O, oz/in2, kg/cm2, atm, bar, MPa, kPa
CTP3B30V200PSIG	–29.9 inHg to 200.0 psig	psi, inHg/psi, inHg, torr, inH2O, ftH2O, oz/in2, kg/cm2, atm, bar, MPa, kPa
Pressure	**Range/Resolution**	**Selectable Units**
CTP3B3PSIG	0 to 3.000 psig	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, mmH2O, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, kPa
CTP3B5PSIG	0 to 5.000 psig	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, mmH2O, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, kPa
CTP3B15PSIG	0 to 15.00 psig	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B30PSIG	0 to 30.00 psig	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B60PSIG	0 to 60.00 psig	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B100PSIG	0 to 100.0 psig	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B200PSIG	0 to 200.0 psig	psi, inHg, inH2O, ftH2O, oz/in2, kg/cm2, atm, bar, MPa, kPa
CTP3B300PSIG	0 to 300.0 psig	psi, inHg, ftH2O, oz/in2, kg/cm2, atm, bar, MPa, kPa
CTP3B500PSIG	0 to 500.0 psig	psi, inHg, ftH2O, kg/cm2, atm, bar, MPa, kPa
CTP3B1000PSIG	0 to 1000 psig	psi, inHg, ftH2O, kg/cm2, atm, bar, MPa, kPa
CTP3B2000PSIG	0 to 2000 psig	psi, inHg, ftH2O, kg/cm2, atm, bar, MPa
CTP3B3000PSIG	0 to 3000 psig	psi, inHg, ftH2O, kg/cm2, atm, bar, MPa
CTP3B5000PSIG	0 to 5000 psig	psi, kg/cm2, atm, bar, MPa
Absolute Reference	**Range/Resolution**	**Selectable Units**
CTP3B15PSIA	15.00 to 0 psi absolute	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B30PSIA	30.00 to 0 psi absolute	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa
CTP3B100PSIA	100.0 to 0 psi absolute	psi, inHg, torr, mmHg, inH2O, ftH2O, oz/in2, cmH2O, g/cm2, kg/cm2, atm, bar, mbar, MPa, kPa

Calibration Documentation Option—add to end of model number	
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 without tools. 304 stainless steel, urethane seal.

SCR14SS
Filter screen fitting keeps debris out of gauge sensor. For food vacuum packaging applications. 303SS body, 100 micron 304SS screen.

Types of Gauges

Gauge reference sensors always read zero with an open gauge port. Ranges 1000 psi and higher use a 14.7 psi sealed reference sensor. They are functionally similar to gauge reference sensors.

Bipolar sensors read positive pressure and vacuum in the same units, and zero with the gauge port open.

Compound ranges read inHg for vacuum and psig for pressure.

Absolute reference gauges read zero at full vacuum. With an open gauge port, their readings will vary due to continuously changing barometric pressure.

psi	Compound	inHg	torr	mmHg	inH$_2$O	ftH$_2$O	oz/in²	mmH$_2$O	cmH$_2$O	g/cm²	kg/cm²	atm	mbar	bar	kPa	MPa
0 to 14.70 psig vac	n/a	29.92 vac	760.0 vac	760.0 vac	406.8 vac	33.90 vac	235.1 vac	n/a	1033 vac	1033 vac	1.033 vac	1.000 vac	1013 vac	1.013 vac	101.3 vac	.1013 vac
−14.70 to 15.00 psig	−29.92 inHg to 15.00 psi	−29.92 to 30.54	−760.0 to 775.7	−760.0 to 775.7	−406.8 to 415.2	−33.90 to 34.61	−235.1 to 240.0	n/a	−1033 to 1055	−1033 to 1055	−1.033 to 1.055	−1.000 to 1.021	−1013 to 1034	−1.013 to 1.034	−101.3 to 103.4	−.1013 to .1034
−14.7 to 100.0 psig	−29.9 inHg to 100.0 psi	−29.9 to 203.6	−760 to 5171	−760 to 5171	−407 to 2768	−33.9 to 230.7	−235 to 1600	n/a	−1033 to 7031	−1033 to 7031	−1.033 to 7.031	−1.000 to 6.805	−1013 to 6895	−1.013 to 6.895	−101.3 to 689.5	−.1013 to .6895
−14.7 to 200.0 psig	−29.9 inHg to 200.0 psi	−29.9 to 407.2	n/a	n/a	−407 to 5536	−33.9 to 461.4	−235 to 3200	n/a	n/a	n/a	−1.03 to 14.06	−1.00 to 13.61	n/a	−1.01 to 13.79	−101 to 1379	−.101 to 1.379
0 to 3.000 psig	n/a	6.108	155.1	155.1	83.0	6.921	48.00	2109	210.9	210.9	.2109	.2041	206.8	.2068	20.68	n/a
0 to 5.000 psig	n/a	10.18	258.6	258.6	138.4	11.54	80.0	3515	351.5	351.5	.3515	.3402	344.7	.3447	34.47	n/a
0 to 15.00 psig	n/a	30.54	775.7	775.7	415.2	34.61	240.0	n/a	1055	1055	1.055	1.021	1034	1.034	103.4	.1034
0 to 30.00 psig	n/a	61.08	1552	1552	830	69.21	480.0	n/a	2109	2109	2.109	2.041	2068	2.068	206.8	.2068
0 to 60.00 psig	n/a	122.2	3103	3103	1661	138.4	960	n/a	4218	4218	4.218	4.083	4137	4.137	413.7	.4137
0 to 100.0 psig	n/a	203.6	5171	5171	2768	230.7	1600	n/a	7031	7031	7.031	6.805	6895	6.895	689.5	.6895
0 to 200.0 psig	n/a	407.2	n/a	n/a	5536	461.3	3200	n/a	n/a	n/a	14.06	13.61	n/a	13.79	1379	1.379
0 to 300.0 psig	n/a	610.8	n/a	n/a	n/a	692.0	4800	n/a	n/a	n/a	21.09	20.41	n/a	20.68	2068	2.068
0 to 500.0 psig	n/a	1018	n/a	n/a	n/a	1153	n/a	n/a	n/a	n/a	35.15	34.02	n/a	34.47	3447	3.447
0 to 1000 psig	n/a	2036	n/a	n/a	n/a	2307	n/a	n/a	n/a	n/a	70.31	68.05	n/a	68.95	6895	6.895
0 to 2000 psig	n/a	4072	n/a	n/a	n/a	4614	n/a	n/a	n/a	n/a	140.6	136.1	n/a	137.9	n/a	13.79
0 to 3000 psig	n/a	6108	n/a	n/a	n/a	6921	n/a	n/a	n/a	n/a	210.9	204.1	n/a	206.8	n/a	20.68
0 to 5000 psig	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	351.5	340.2	n/a	344.7	n/a	34.47
15.00 to 0 psi abs	n/a	30.54 abs	775.7 abs	775.7 abs	415.1 abs	34.61 abs	240.0 abs	n/a	1055 abs	1055 abs	1.055 abs	1.021 abs	1034 abs	1.034 abs	103.4 abs	.1034 abs
30.00 to 0 psi abs	n/a	61.08 abs	1552 abs	1552 abs	830 abs	69.21 abs	480.0 abs	n/a	2109 abs	2109 abs	2.109 abs	2.041 abs	2068 abs	2.068 abs	206.8 abs	.2068 abs
100.0 to 0 psi abs	n/a	203.6 abs	5172 abs	5172 abs	2767 abs	230.7 abs	1600 abs	n/a	7031 abs	7031 abs	7.031 abs	6.805 abs	6895 abs	6.895 abs	689.5 abs	.6895 abs

Precautions

✔ Read and understand all instruction sheet information. Contact us for help, instructions, or repairs.

✔ Batteries should be replaced when the low battery indicator comes to prevent unreliable readings. If gauge is used infrequently, remove batteries to prevent damage from leaky batteries. Inspect batteries at least annually.

✔ Gauges are not intended for permanent outdoor use. Protect from weather and excessive humidity. NEMA 4X models are suitable for temporary outdoor use and wash down areas.

✔ Install gauge so it is protected from impact damage.

✔ Media temperature and gauge ambient temperature must be within specified ranges.

✔ Use a screen or filter to avoid clogging gauge port when measuring contaminated media.

✔ Use thread sealant to ensure leak-free operation.

✔ Media being measured must be compatible with 316L SS.

✔ Avoid sensor damage! Sensor diaphragm is thin 316L SS foil. Never insert objects into the gauge port or blow out with compressed air.

✔ Avoid sensor damage! Hydraulic or liquid pumping systems must include a shock suppressor to protect gauge sensor from damaging pressure spikes or water hammer.

✔ Avoid sensor damage! Do not apply vacuum to non-vacuum gauges or hydraulic vacuum to any gauge.

⚠ Do not exceed pressure range indicated on gauge label.

⚠ Remove system pressure before removing or installing gauge.

⚠ Use fittings appropriate for the pressure range of the gauge.

⚠ Gauges are not for oxygen service. Accidental rupture of sensor diaphragm may cause silicone oil inside sensor to react with oxygen.

⚠ Only gauges marked as Intrinsically Safe can be used in hazardous locations or in the presence of flammable or explosive substances, or atmospheres.

Do not force housing! Use a wrench on hex fitting to install or remove.

Cecomp maintains a constant effort to upgrade and improve its products. Specifications are subject to change without notice. See cecomp.com for latest product information. Consult factory for your specific requirements.

Low battery symbol
4 digit display
Alphanumeric display
Zero display (gauge reference only)
Clear min/max, Up arrow for setup
Power button
Turn on backlight
Display min/max readings
Down arrow for setup

Zero/Clear   Memory

¼" NPT

2.88"   3.19"   With boot

0.75"

3.38" housing
3.67" with boot

Turn at hex fitting only   1.65"   2.0"
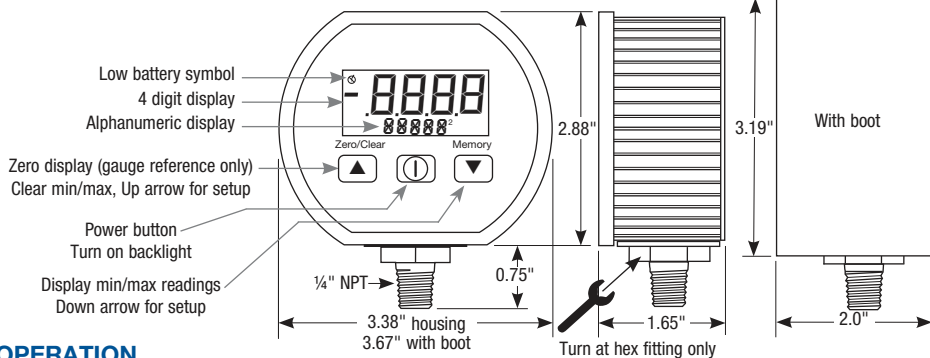
OPERATION

Power-Up

Your gauge is ready for use. Batteries are installed and it has been calibrated on NIST traceable equipment.

Press and hold the power button for approx. 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, the full scale range in the selected units is then 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.

Display Backlighting

Display backlighting, if enabled, will turn on for 1 minute when the gauge is powered up. The display backlighting may not be apparent under bright lighting.

It can be turned on at any time by momentarily pressing any button whenever the gauge is on. This also restarts the auto shutoff timer.

In user configuration, the backlight can be set for

AUTO: On for 1 minute (factory default)

ON: On whenever the gauge is on

OFF: Disabled, to increase battery life

200.0 PSIG FULL SCALE

0.0 PSIG

Zero the Display (Gauge Reference Only)

Absolute reference gauges do not use the zero feature.

Be sure the gauge is in the normal operating mode. The gauge port must be open to normal atmospheric pressure with no pressure 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 shuts off.

If *Err 0* occurs make sure all pressure is removed and press the power button to reset the error.

*0.1 PSIG*   *oooo*   *0.0 PSIG*

Shutoff

The auto shutoff timer starts at power up and restarts whenever any button is pressed. The default time is 5 minutes but can be user configured for a variety of times.

If on/off operation is selected, the gauge will stay on until manually shut off or when the batteries are depleted. Turn gauge off when not in use.

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 and restart the timer.

To shut the gauge off manually, press and hold the center power button (about 3 seconds) until OFF is displayed and then release the button. The gauge shuts off.

OFF
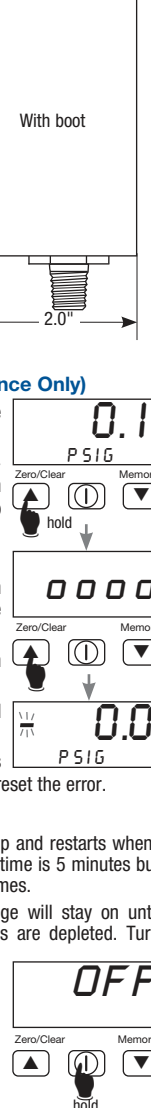
Min/Max Memory

The Min/Max readings are captured at the rate of 3 times per second. If a brief pressure deviation occurs, it may not be captured. The readings are captured any time the gauge is on, but not while in the configuration or calibration mode.
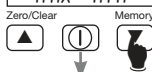
The gauge can be configured to capture and display:
- Both maximum and minimum values (factory default)
- The maximum value only
- The minimum value only
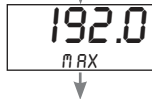- Saved Min/Max values when the gauge powers down

Press and release the Memory button until Max or Min is displayed.

Depending on your configuration the gauge may save both Max and Min, or either Max or Min.

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

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

Clear a Memory Location

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

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

Press and hold the Zero/Clear button.
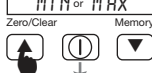
Release the button when *clr* is displayed. The reading for the indicated memory location will be cleared.

With a gauge reference models if no pressure is applied, the value will return to zero.
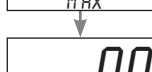
If pressure is applied the new pressure reading will be stored in memory.
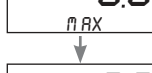
Absolute reference models will store the current atmospheric pressure reading if the gauge port is open to atmosphere.

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

ERROR INDICATIONS

Zero Error

Attempting to zero gauge reference models with more than approx. 3% of full-scale pressure or vacuum applied will result in an error zero condition. The display will indicate *Err O*.

If your intent was to zero the gauge, make sure to remove all pressure from the gauge port.

Press the power button to reset the error.

Excessive Vacuum

Excessive vacuum applied to a pressure-only gauge will display as *-Err* until the vacuum is released. Note: A pressure-only gauge will be damaged by excessive vacuum.

Excessive Pressure

If 112.5% over range pressure is applied, an out-of-range indication of *1 − − −* or *1.−.−.−* will be displayed depending on model. Use gauge within the appropriate pressure range to prevent damage.
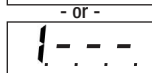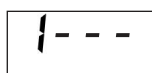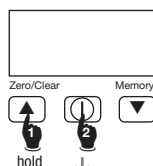
GAUGE CONFIGURATION

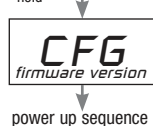### Enter Configuration Mode

The gauge uses a 4 digit passcode to enter the configuration mode. This is to prevent unauthorized changing of settings.
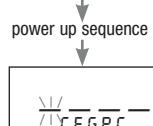
With the gauge off, press and hold the ▲ button.

Then press the center power button.

Release all buttons when the display indicates **CFG**. The gauge firmware version is also displayed.

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.
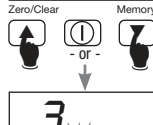
Enter Configuration Passcode

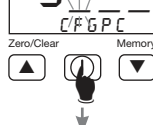Enter the passcode. 3510 is the factory default, but it is user-modifiable.
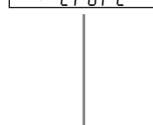
Use the ▲ or ▼ buttons to set the leftmost digit to 3.
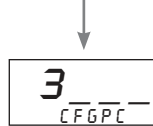
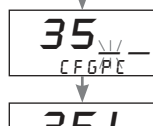Press and release the Power button to index to the next position.

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

Use the ▲ or ▼ buttons to select 5.

Press and release the Power button to index to the next position. 3 5 will remain, and the third position will be blinking.
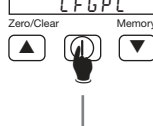
Use the ▲ or ▼ buttons to select 1.

Press and release the Power button to index to the next position. 3 5 1 will remain, and the fourth position will be blinking.

Use the ▲ or ▼ buttons to select 0.

Press and release the Power button to proceed with configuration.
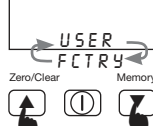
Note: If an incorrect passcode is entered, the gauge will return to the start of the passcode entry sequence.
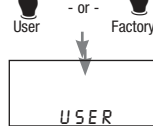
Gauge Configuration—User or Factory

Upon successful passcode entry, the lower display will indicate USER.

To reset the configuration to factory defaults, press and release the ▲ button. The lower display will indicate FCTRY.

Press and release the Power button to restore the factory configuration and restart the gauge. This does not affect calibration.

For User configuration press and release the ▼ button to change the lower display to USER. This allows you to configure the gauge as described in the following sections.

Press and release the center power button to continue with configuration.

Continued >>

Min/Max Setup

The lower display will indicate the current MX/MN configuration.

Press the power button to keep it, or use the ▲ or ▼ buttons to select the desired configuration.

MX/MN Capture both maximum and minimum readings

--/MN Capture minimum readings only

MX/-- Capture maximum readings only

Press and release the power button to save your selection and move to the next parameter.

Min/Max Memory Retention

The upper display indicates *clr* and the lower display will indicate the current setting for min/max memory. Press:

Power button: Keep setting

▲ button: Select AUTO and automatically clear the maximum and/or minimum readings when the gauge is shuts off.

▼ button: Select MAN and retain the maximum and/or minimum readings in memory after the gauge is shut off. The readings can be cleared manually.

Press and release the power button to save your selection and move to the next parameter.

Engineering Unit Selection

Note: For vacuum/pressure gauges or compound gauges the choice of CMPND (inHg/psi) or -/+EU (±Engineering Units) will appear. Select -/+EU to change to other engineering units.

Engineering units are shown in the lower display.

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

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

Auto Shutoff Time Selection

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

Use the ▲ and ▼ 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. Use the Power button to shut the gauge off.

When the desired time is displayed press and release the Power button to save your selection and move to the next parameter.

Backlight Time Selection

The upper display will indicate *bL* to indicate display backlight setup.

Use the ▲ and ▼ buttons to select

AUTO: backlight enabled for 1 minute.

ON: backlight on when the gauge is on.

OFF: display backlight is disabled.

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

The gauge will restart and is ready to use with your new configuration.
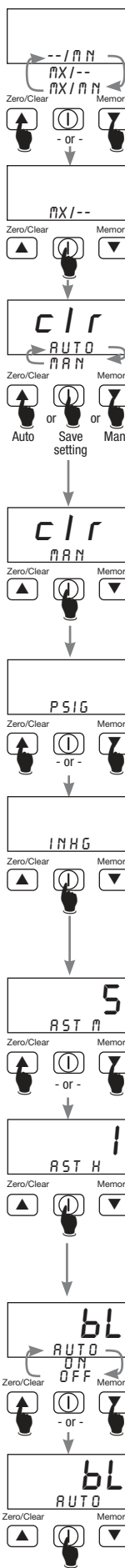
BATTERY REPLACEMENT

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

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 alkaline batteries.

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 face down being careful not to pinch the wires.

8. Replace the back cover, including the rubber gasket and reinstall the six screws.

Lift up the battery holder
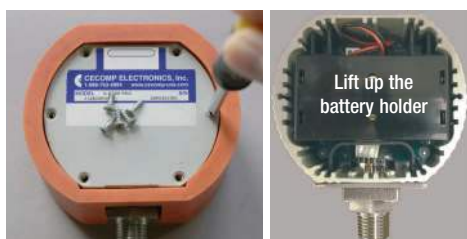
CALIBRATION

Setup and Preparation

Gauges are factory calibrated at approximately 23°C using NIST traceable calibration equipment. Calibration is not required before using the gauge. Calibration intervals depend on your quality standards, but annual re-calibration is customary. Calibration should only be performed by qualified individuals using appropriate calibration standards and procedures.

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 and absolute gauges.

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

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 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 number of display counts.

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

Continued >>

Sensor	Suggested units for calibration
3 PSI	6.920 FTH2O
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	4614 FTH2O
3000 PSI	6920 FTH2O
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 button press to make a 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. Adjust the gauge's display to match the calibrator's reading.

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.

Note: At this point you may re-zero the gauge without doing any other calibration. Press and hold the Power button until the display indicates - - - - then release the button to store the new zero in non-volatile memory and restart the gauge.

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.

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

Verify readings at 0%, 25%, 50%, 75% and 100% of full scale.

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.

Note: At this point you may re-zero the gauge without doing any other calibration. Press and hold the Power button until the display indicates - - - - then release the button to store the new zero in non-volatile memory and restart the gauge.

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

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.

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

Verify readings at 0%, 25%, 50%, 75% and 100% of full scale.

Continued >>

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.

Note: At this point you may re-zero the gauge without doing any other calibration. Press and hold the Power button until the display indicates - - - - then release the button to store the new zero in non-volatile memory and restart the gauge.

Apply full-scale pressure. The character display will alternate between +SPAN 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.

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

Verify readings at 0%, 25%, 50%, 75% and 100% of full scale.

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 –30.00inHg to 15.00psi 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.

CHANGING PASSCODES

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

With the gauge 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 gauge 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 gauge enters the view or change passcode mode, the display initially indicates _ _ _ _ with the first underscore blinking, and with CFGPC or CALPC on the character display.

The gauge 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.

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.

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

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

When the desired first character is 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 the gauge.