

INTRODUCTION

The CR87P is a precision instrument used to monitor and record pressure on a 6" circular paper chart. The CR87P may be carried as a portable instrument or mounted in a fixed location.

The CR87P offers a variety of features to meet virtually any pressure recording requirements. A combination of three pressure ranges and four chart speeds provide a high degree of flexibility. In addition, the chart rotation may be set for Single or Continuous Turn operation as required by a particular application. To protect the data being recorded the CR87P uses an automatic battery backup to maintain operation during a power outage.

CR87P FEATURES AND CONTROLS

1. The **3 DIGIT COUNT PRESSURE DISPLAY** shows pressure of the environment being monitored. When the batteries are nearly discharged, the display will alternate the display reading and "LO" to advise the operator that the batteries are not charged and the CR87P will shortly cease operation.

NOTE: The battery backup feature of the CR87P is primarily intended for use in situations where primary power is lost for short periods of up to 48 Hrs. The CR87P is not intended to be used as a battery powered instrument. If the CR87P is to be stored for an extended period of time, it is strongly advised to disconnect the battery pack and remove the batteries to avoid damage to the instrument from battery leakage.

2. The **PRESSURE RANGE SELECTOR** allows the user to choose the desired pressure range for measurement and recording.

3. The **CHART SPEED SELECTOR** allows the user to select the time of one full chart revolution. The corresponding chart has to be chosen according to the desired chart speed. Chart part numbers are listed in this manual.

4. The **PEN POSITION ADJUSTMENT KNOB** allows the user to adjust the position of the chart pen.

5. The **CHART ADVANCE BUTTON** allows the operator to set the chart to the correct time. Press and hold the chart advance button until the desired time lines up with the Time Pointer (Item 11). The chart is rotated counterclockwise only.

CAUTION: Movement of the Chart Spindle (Item 9) by hand may cause permanent damage to the chart mechanism.

6. The **PRESSURE ADJUSTMENT** feature allows the user to adjust the reading of the digital display during periodic calibration. The CR87P has been factory calibrated and requires no adjustment to meet all published specifications.

7. The **POWER ON/OFF / CONTINUOUS / SINGLE CHART SELECTOR** allows the user to supply power to the CR87P and to select Continuous or Single Turn for



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the chart rotation. When power is first applied to the CR87P, the display will show "888" to test each segment of the display, and the pen will move to the edge of the chart. The pen will then move to the correct position on the chart. In the Continuous switch position, the chart will rotate until power is removed. In the Single Turn switch position, the chart will make one complete revolution and stop. A blinking dot on the display (Item 1) will indicate that the chart has made one complete revolution and stopped. **To reset the chart for another revolution** place the switch in the Continuous switch position until the blinking dot goes out and then slide the switch back to the Single Turn position. The chart will make one complete revolution and stop.

DO NOT move the pen by hand or interrupt the pen movement. Failure to observe this will cause the pen to read incorrectly and may result in damage to the pen mechanism.

8. The **RECORDING PEN** contains special ink. The pen has a wraparound arm latch which makes the pen replacement "A SNAP!" To replace the pen, gently lift up the PEN ARM, (do not over bend pen arm) release the pen latch by pushing it down, and remove the pen; place a new pen on top of the pen arm, align the notches on the pen arm with the notches on the pen latch and close the latch by wrapping it around the pen holder until it is secured. Replace cap on the pen tip when the CR87P is not used to insure long pen life. *For pen installation see Fig. 1.*

9. The **CHART SPINDLE** holds and rotates the chart during the recording operation. **DO NOT ROTATE THE SPINDLE BY HAND AS IT MAY DAMAGE THE INTERNAL MECHANISM.**

10. The **PAPER CHART** is 6 inches in diameter. The replacement charts are available from any of Sealed Unit Parts Co., Inc. authorized distributors in a box of 60 charts each. The chart part numbers are listed on the following page.

TO INSTALL A NEW CHART, disconnect power from the CR87P by selecting OFF with the Power / Single/ Continuous Chart Selector. Place pen cap on pen point. Gently lift the pen arm and while holding it remove the old chart. Slide a new chart under the pen holder and the chart holding tabs. Align the chart with the chart spindle. Apply power to the CR87P and rotate the chart by depressing the chart advance button until the time pointer is aligned with the line on the chart representing the right time or day. Remove the pen cap. If desired, adjust the pen position according to the scale you wish to record on.

11. The **TIME POINTER** is simply a point against which the current time is being read during a chart rotation. Initially a new chart has to be rotated until the time pointer shows the right time and day when using a chart.

12. The **HANDLE** for carrying folds towards the back of the case to be out of the way when CR87P is mounted on the panel or on the wall.

13. The **KEYHOLE SLOTS** located on the back of the case are provided for wall or panel mounting.

14. The **REAR COMPARTMENT** was designed to store the battery holder for battery backup as well as the connection for the adapter box.

15. The **REMOTE PRESSURE SENSOR** is interchangeable. The pressure sensor is an electronic digital proprietary design for precision and very high interference immunity. The sensor cable may be extended with an adapter extension cable available from Sealed Unit Parts Co., Inc. or its distributors.

CAUTION: The pressure sensor is compatible with any gas or liquid that is compatible with 17-4 stainless steel. Exposure to any corrosive gas or liquid that will attack stainless steel can cause damage or failure of the pressure sensor.

DO NOT PLACE THE CR87P RECORDER DIRECTLY IN AREAS OF EXTREME PRESSURES, HIGH HUMIDITY OR HEAVY CHEMICAL CONTENTS

16. The **BATTERY HOLDER** is stored in the rear compartment for backup batteries. Use of 8 alkaline "AA" batteries is required for proper operation.

17. The **12VDC PLUG IN WALL ADAPTER** provides primary power for the CR87P. Alternate sources of 12 Volt power may also be used. This allows use of the CR87P in automotive, marine or other mobile applications.

18. **POWER CONNECTOR** is a connection point for the 12VDC wall adapter or alternate source of 12VDC power.

19. Snap on **EXTRA SUPPORT LEGS** for better stability.

CHARTS

PRESSURE RANGE	CHART SPEEDS			
	6 HRS.	24 HRS.	7 DAYS	31 DAYS
PSI				
0-500 PSI	6H500PSI	24H500PSI	7H500PSI	31H500PSI
0-150 PSI	6H150PSI	24H150PSI	7H150PSI	31H150PSI
0-50 PSI	6H50PSI	24H50PSI	7H50PSI	31H150PSI
BAR				
0-35 BAR	6H35BAR	24H35BAR	7H35BAR	31H35BAR
0-10 BAR	6H10BAR	24H10BAR	7H10BAR	31H10BAR
0-3.5 BAR	6H3.5BAR	24H3.5BAR	7H3.5BAR	31H3.5BAR

SPECIFICATIONS

Pressure Range Selectable PSI Model	0 to 500 PSI, 0 to 150 PSI, 0 to 50 PSI
Pressure Range Selectable BAR Model	0 to 35 BAR, 0 to 10 BAR, 0 to 3.5 BAR
Chart Speed Selectable	6 Hours, 24 Hours, 7 Days, 31 Days
Chart Speed Accuracy	+/-1%
Chart Diameter	6 Inches
Pressure Display	3 Digit LED 0.5"
Pressure Accuracy	Better than +/- 1% F.S.
Remote Pressure Sensor	6' Stainless steel 17-4 Pressure port ¼ NPT, Burst Pressure 2500 PSI, rated for any gas or fluid compatible with 17-4 stainless steel
Power Supply	120 VAC, 50/60Hz., (220/240 VAC 50Hz. Optional)
Battery Backup	8 Alkaline "AA" cells (Not included)
Battery Life	Continuous, 48 Hours
Operating Ambient Temperature	+32°F to +158°F (0°C to +70°C)
Relative Humidity	96% maximum
Dimensions	9 ¼" x 7 ¼" x 2 ¾"
Weight	4 lbs., 7 oz.

LIMITED WARRANTY

Sealed Unit Parts Co., Inc. hereby warrants that it will repair or replace, at its option, any part of the CR87P PRESSURE RECORDER or any of the accessories, which proves defective by reason of improper workmanship or material, free of charge for parts and labor, for a period of ONE YEAR from the date of original purchase by the buyer. This warranty does not apply if, in the sole opinion of Sealed Unit Parts Co., Inc., the CR87P PRESSURE RECORDER, or any of the accessories, have been intentionally or accidentally damaged due to misuse, neglect, or improper packing, shipping, modification or servicing, by other than Sealed Unit Parts Co. Inc., or personnel authorized by Sealed Unit Parts Co. Inc. For information on how to obtain service under this warranty contact the dealer where your CR87P was purchased or Sealed Unit Parts Co., Inc. at the address printed below:



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