



## PPS27 Permanent Monitoring System

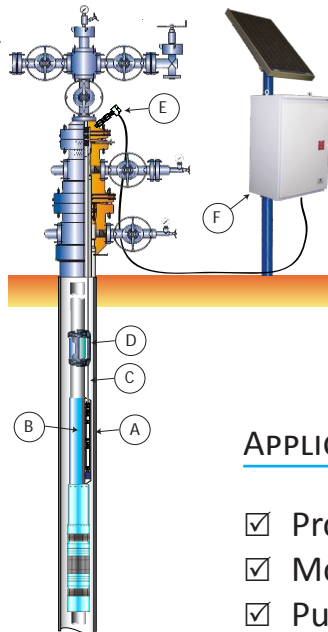
The PPS27 system has been designed to continuously monitor and optimize your wells, by measuring in real time your downhole/surface pressure and temperature values.

The system consists of one and up to four downhole sensors installed on a gauge carrier ported to the internal pressure and connected to a tubing encapsulated cable (TEC) using only metal to metal seals. The sensor is powered by our SmartWatcher acquisition surface box which offers a modular system (SCADA ready).

The sensor interface is capable of handling up to four sensors so you can have combinations of downhole and surface sensors. The data is stored on the internal memory as well as on a SD card using a simple ASCII format so you can use any text editor or Spreadsheet software to open it.

To accommodate different applications and budgets, the gauge sensor can be either silicon sapphire or quartz.

### SYSTEM COMPONENTS:



- A. Downhole pressure gauge
- B. Gauge carrier
- C. Encapsulated cable (TEC)
- D. Cable protectors
- E. Well head feedtriu
- F. Surface data acquisition system

### APPLICATIONS:

- Production optimization
- Monitoring of observation wells
- Pump systems monitoring
- Well testing
- Reservoir Management



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**“Simple Software and Smart Gauges”**



## PPS27 Specifications

| Pressure  | Silicon-Sapphire                         | Quartz                                     |
|---|--|--|
| Range   | Up to 20,000 psi                         | Up to 20,000 psi                           |
| Accuracy  | ±0.03% (full scale)                      | ±0.015% (full scale)                       |
| Resolution  | 0.0003% (full scale)                     | 0.00006% (full scale)                      |
| <b>Temperature</b>                                    |  |  |
| Range   | 125°C (257°F)                            | 150°C (302°F), 177°C (351°F), 200°C(392°F) |
| Error   | ±0.3°C                                   | ±0.2°C                                     |
| Resolution  | 0.01°C                                   | 0.01°C                                     |
| <b>Housing</b>  |  |  |
| Service   | H2S                                      | H2S  |
| Outside diameter                                      | 0.875" (22.22mm)                         | 0.875" (22.22mm)                           |
| Overall length (include cable-head)                   | 15.5" (393mm)                            | 20.15" (511.81)                            |
| Material  | Inconel 718/SS 17-4                      | Inconel 718/SS 17-4                        |
| <b>Gauge Carrier</b>                                  |  |  |
| Outside diameter                                      | base on tubing diameter                  |  |
| Overall length  | 49.5" (1257.3mm)                         |  |
| Material  | Steel 4140/                              |  |
| Service   | H2S                                      |  |
| <b>Cable Protector</b>                                |  |  |
|   | <b>Light duty</b>                        | <b>Heavy Duty</b>                          |
| Well Deviation  | <30° deviation                           | >30° deviation                             |
| <b>Cable</b>  |  |  |
| O.D.  | 1/4" or 1/8", bare or encapsultated      |  |
| Conductor   | Mono conductor                           |  |
| <b>Wellhead Feedtru (WHO)</b>                         |  |  |
| Port to the wellhead                                  | 1/2" NPT or as required                  |  |
| Seals   | Metal to Metal Seal                      |  |
| <b>Surface Data Acquisition System (SmartWatcher)</b> |  |  |
| Tool Interface  | support up to 4 sensors                  |  |
| Display unit  | LCD, can display 4 lines x 40 characters |  |
| Memory  | SD card/Permanent memory                 |  |
| Communication   | USB/RS-485 (Modbus)                      |  |
| Power   | from 8 to 30 VDC, and a 70w Solar panel  |  |



Sensor



SmartWatcher

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