Features

- Ranges 1 to 900 psi (0.75 to 600 mH₂O)
- Millivolt, voltage and current output
- High accuracy, stability and over-pressure
- All-welded, titanium wetted parts
- High integrity electrical connection
- Five-year corrosion warranty
- One to two week delivery standard
- 48 hour emergency delivery
1830 Series—The Latest Generation of Submersible Sensors

The 1830 Series is the latest generation of fully submersible sensors that incorporate the most recent technological advances in depth and level measurement.

At the heart of the 1830 Series is a high stability pressure sensing element manufactured from micro-machined silicon developed within GE’s own processing facility. The silicon sensing element is fully isolated from the media by a titanium isolation diaphragm. The use of titanium enables the sensors to be used in the most hostile of fluids where materials such as stainless steel cannot be considered.

Surface mount electronics within the all-titanium body tube assembly enable minimum sensor size with improved reliability. The purpose-designed vented electrical cable results in a depth and level sensor with the highest integrity and the lowest cost of ownership.

With a choice of millivolt or current outputs, small physical size and wide range of pressures, the 1830 Series can be used in a variety of applications from the smallest diameter bore holes to canals, rivers and reservoirs. They are ideally suited for depth/level application in the oceanographic and remediation industries. The 1830 Series depth-sensing transmitters are backed by GE’s five-year corrosion warranty.
Ground and Surface Water

One of the most efficient methods of measuring water level in wells, streams, rivers, canals and reservoirs is the submersible pressure sensor. It uses very little energy and provides an accurate long-term measuring system solution.

There are many thousands of submersible GE pressure sensors installed worldwide in a variety of applications where the high stability and reliability of the devices have clearly delivered the lowest “cost-of-ownership” of any method available.

GE’s all-welded titanium construction is backed by a five-year corrosion warranty. Its molded cable assembly ensures the user of unparalleled reliability and performance in almost every application.

The small diameter of the GE submersible sensors allow insertion into 3/4 in (19.05 mm) and 1/2 in (12.7 mm) wells, saving considerable costs in the drilling process.

**PDCR 1230/1830**
Submersible pressure transducer
- Ranges from 1 to 900 psi (7.5 to 600 mH₂O); four times over-pressure
- All-welded titanium construction with five-year corrosion warranty
- Body diameter 0.69 in (17.5 mm); millivolt output
- Accuracy ±0.25% or ±0.01% FS
- Vented polyurethane cable with Kevlar® anti-stretch construction
- UL/FM/CSA Inherently Safe Class I, Division 1, Group A,B,C&D certified

**PTX 1230/1830**
Submersible pressure transmitter
- Ranges from 1 to 900 psi (7.5 to 600 mH₂O); 0-100 mV output
- All-welded titanium construction with five-year corrosion warranty
- Body diameter 0.69 in (17.5 mm); output two-wire, 4 to 20 mA
- Accuracy ±0.25% or ±0.01% FS
- Vented polyurethane cable with Kevlar® anti-stretch construction
- Intrinsically Safe Class I, Division 1, Group A,B,C&D certified
- ATEX certified EEx ia IIC
- -40°C ≤ Tamb ≤ 80°C for cable lengths up to 948 ft (300 m)

**PDCR 35/D**
Miniature submersible pressure transmitter
- Ranges from 10 to 500 psi (689 to 34.5 bar)
- Titanium body
- Body diameter 0.39 in (10 mm); output two-wire, 4 to 20 mA
- Accuracy ±0.1% FS
- Vented polyurethane cable with Kevlar® anti-stretch construction

**RTX 1000**
For elevated water tanks where zero suppression is required
- Ranges from 1 to 15,000 psi (.069 to 1034 bar)
- 10:1 rangeability
- NAMUR-compliant alarm outputs
- Push button zero and span adjustments
- Accuracy ±0.15% FS TSL

**PDCR 1830/1830**
Submersible pressure transducer
- Ranges from 1 to 900 psi (7.5 to 600 mH₂O); 0-100 mV output
- All-welded titanium construction with five-year corrosion warranty
- Body diameter 0.69 in (17.5 mm); output two-wire, 4 to 20 mA
- Accuracy ±0.25% or ±0.01% FS
- Vented polyurethane cable with Kevlar® anti-stretch construction
- Intrinsically Safe Class I, Division 1, Group A,B,C&D certified
- ATEX certified EEx ia IIC
- -40°C ≤ Tamb ≤ 80°C for cable lengths up to 948 ft (300 m)

**SCU 220**
Terminal enclosure with signal conditioning
- Type 4X enclosure; polytetrafluoroethylene (PTFE) microfilter for venting
- Dry-can desiccant with status indicator
- Two-wire, 4 to 20 mA into electronics assembly
- ±20% zero and 3% to 100% span adjustment via potentiometers and dip-switches
- Optional 2 in (51 mm) pipe mounting bracket
- Optional lightning arrestors, two-, three- and four-wire

**LPM/LPK 8000 Series**
Submersible low pressure wet/wet differential sensor
- Ranges from ±4 in H₂O to ±150 psi (±10.34 bar)
- 316L stainless steel and Inconel construction
- Voltage or current output
- 10 ms response time
- Ideal for lube oil reservoir measurements in hydroelectric turbine installations
GE Sensing

Wastewater and Remediation

One of the most difficult applications in level measurement is sewage. Most methods suffer from clogging, high-humidity, or entanglement in the normal debris found in lift station wet wells.

GE has developed the PTX/PMP 1290 with its flush elastomeric diaphragm in order to provide an inexpensive way to ensure highly reliable level measurement. The 1290 Series sensors require almost no maintenance when properly installed. The all-welded titanium construction with five-year corrosion warranty provides additional insurance against failures due to corrosive elements normally found in wastewater applications. For example, in some applications, the wastewater is contaminated with H₂S and seawater, resulting in the eventual failure through corrosion and pitting.

In groundwater remediation applications, undocumented chemicals may be encountered that could cause corrosion in stainless steel devices. The all-welded titanium construction with five-year corrosion warranty is insurance against premature failure. High accuracy and stability ensure long term accurate measurements of hydraulic gradient, as well as pump control.

PTX/PMP 1290
Wastewater submersible pressure transmitter/transducer

- Ranges from 2.5 to 500 psi (17.2 to 34.5 bar) four times over-pressure
- All-welded titanium construction with five-year corrosion warranty
- Voltage or current output, body diameter 1.2 in (30.5 mm)
- Accuracy ±0.25% FS
- Polytetrafluoroethylene-coated elastomeric flush diaphragm
- Intrinsically Safe Class I, Division 1, Group A,B,C&D

PTX 1280/1880
Submersible depth/level pressure transmitter/transducer

- Ranges from 1 to 1000 psi (.069 to 68.9 bar) four times over-pressure
- All-welded titanium construction with five-year corrosion warranty
- Body diameter 0.69 in (175. mm)
- Accuracy ±0.1% or ±0.25% FS
- Vented fluoropolymer (chemically resistant) cable
- Intrinsically Safe Class I, Division 1, Group A,B,C&D

PDGR 2130
Submersible differential pressure transmitter

- Ranges from 5 to 500 psi (.345 to 34.5 bar)
- All-welded 316L stainless steel with Hastelloy C276 diaphragm
- Millivolt, amplified and current versions available
- Accuracy ±0.1% FS
- Molded polyurethane cable

STE 110
Sensor termination enclosure with desiccant

- Type 4X enclosure; polytetrafluoroethylene (PTFE) microfilter for venting
- Dry-can desiccant with status indicator
- Optional 2 in (51 mm) pipe mounting bracket
- Optional lightning arrestors, two-, three- or four-wire

DPI 280 Series
Digital pressure and process indicators

- Wide range of process measurements: pressure, load, strain, voltage, current and temperature
- Available interfaced and calibrated with pressure sensor
- Built-in alarms or relays
- RS232/485 and analog output options
- 17-point linearization

PTX/PMP 1200 Series
Industrial pressure transmitters

- Ranges from 2.5 to 15,000 psi (172 to 1034 bar)
- Accuracy ±0.25% FS BSL
- Choice of electrical and pressure connections
- NACE (MR-01-75) compatible Hastelloy C276/316L stainless steel wetted parts
- Intrinsically Safe Class I, Division 1, Group A,B,C&D
- Explosion-proof, Class I, Division 1, Group A,B,C&D (PTX and PMP 1240)
Marine

The titanium 1230/1830 Series submersible pressure sensors are ideally suited for marine applications where direct immersion in seawater is anticipated. In ballast tank retrofit applications in which float switches have traditionally been used, titanium submersible sensors save considerable cost and frequently use the existing wiring. In many applications, an absolute or sealed gauge device is used, with a barometric reference sensor attached to the monitoring system. This eliminates the need for use of desiccant to prevent condensate from collecting in the vent tube.

The PTX 1290 is idea for shipboard blackwater applications for measuring sewage levels.

Other available transmitters:

PTX 1235/1835
Submersible pressure transmitter
- Ranges from 1 to 900 psi (0.75 to 600 mH2O)
- All-welded titanium construction with five-year corrosion warranty
- Body diameter 0.69 in (17.5 mm); output two-wire, 4 to 20 mA
- Accuracy ±0.25% FS or ±0.1% FS
- Vented polyurethane cable with Kevlar anti-stretch construction
- Internal lightning protection to IEC level 4

PTX/PMP 1240
Industrial pressure transmitter for pump suction and discharge applications
- Ranges from 2.5 to 15,000 psi (172 to 1034 bar)
- Voltage or current output
- Accuracy ±0.25% FS
- NACE MR-01-75 compatible
- Intrinsically Safe Class I, Division 1, Group A, B, C&D; Division 2 non-incendive
- Explosion-proof Class I, Division 1, Group A, B, C&D

RPT 410
Barometric pressure sensor ideal for use as barometrics reference in non-vented cable applications
- High stability (100 ppm per annum)
- Voltage or frequency output
- Accuracy better than ±0.015% inHg
- Supply voltage 9.5 to 24 VDC
- On/off control with external trigger
- Current consumption less than 6 mA

Accessories
Cable Clamp Assembly
- 600 lb (270 kg) maximum load before shipping
- Cable diameter 0.157 in to 0.354 in (4 mm to 9 mm)
- Can be installed after cable termination
- High strength insulating material, UV-protected
- Rubber insert protects cable from damage

Lightning Arrestors
- 5 kA or 10 kA
- Two-, three- or four-wire version
- Fits into SCU 220 and STE 110

Calibration Adapters
- 1/8 in (3.175 mm) NPTM to M14 (P/N 227-167)
- 1/4 in (6.35 mm) NPTM to M14 (P/N 227-166)
- 7/16 in (11.1 mm) NPTM to M14 (P/N 227-165)

Sink Weight (for PTX/PDCR 1230, 1280, 1830 and 1880)
- 4.2 lb (1.9 kg)
- Diameter: 0.69 in (17.5 mm)
- 316L stainless steel with titanium adapter
GE is committed to producing the highest quality products. This commitment extends from initial concept and development through to manufacturing, testing and shipment.

GE is approved to the highest international quality standards, including ISO 9001, FAA and many organizations that apply their own quality standards. GE provides traceability to the National Institute of Standards and Technology and other international standards for pressure, electrical and temperature measurements.

Operating through a global network of subsidiaries and exclusive agents, GE maintains the highest standards of customer service. A fully integrated computer system ensures efficient customer support from sales inquiry to field service. Dedicated sales, product support, order processing and service teams use quality-approved procedures to ensure fast response.

This successful philosophy is continually proven through the efficient delivery of standard catalog products, custom products for specific applications and even through the management of large complex program contracts.

Product Support Items

Pressure Level Application Handbook
- Submersible sensor application guide
- Installation instruction
- Specifications of design consideration
- Avoiding causes of premature failure
- Sensor selection guide

CSI Diskette
- Word '97
- Construction specification institute format
- Specs for PDCR 35/D, 1230, 1280, 1830, 1880, PTX 1230, 1240, 1280, 1830, 1880

Portable Field Calibrators
- DPI 610 Series
- DPI 603
- UPS Series
- DPI 705 Series
- PV 411 hand pump

Quality Service, Support and Communication

Product Support Items

Pressure Level Application Handbook
- Submersible sensor application guide
- Installation instruction
- Specifications of design consideration
- Avoiding causes of premature failure
- Sensor selection guide

CSI Diskette
- Word '97
- Construction specification institute format
- Specs for PDCR 35/D, 1230, 1280, 1830, 1880, PTX 1230, 1240, 1280, 1830, 1880

Portable Field Calibrators
- DPI 610 Series
- DPI 603
- UPS Series
- DPI 705 Series
- PV 411 hand pump

www.gesensing.com