



Introduction

Precision Instruments is one of few companies that manufactures both Sensors, Transducers and Instruments.

Whenever you need high precision , Accurate, Reliable measurements in Industrial, Laboratory or hazardous environment, or Whenever your application requires a Load 1 grams to 200 tones, Pressure 10mm water column to 1000 cm², or whenever you need to measurement Torque 50 kg-mm to 2000 newton-meter, Angle 0.01° 2500°, or If your application involves an Acceleration few millimeter / second² to 1000 kilometer / second² or Temperature .01°C to 2500°C..... **Precision Instruments** can help you Accomplish your measurement goals.

Precision Instruments was formed in 1989 as an engineering Instrumentation manufacturer specializing in the science of force measurement and sensor design. Since then, We offer a full range of Load Cells, Torque Transducers, Pressure Sensors, Displacement Sensors and Instrumentation to fill all of your Force, Torque, Pressure, Displacement Measurement needs.

We have engineered force measurement solutions for many industries and applications, Here are some of the industries and applications areas where our products are used :-
Automotive, Brewing, Camical manufacturing, Camical research, Railway industries, Material testing machine manufacturing industries, Semicunductors, Textile manufacturing, Fundamental and applied research at universities and National Laboratories, Power monitoring, Pressure monitoring and control, Spring manufacturing, Food & Beverages, Medical research, Motion control, Consumer products, Coal mines, Engineering Colleges, Paper and oil mills, Tyre industries, Iron and Steel Plants, Oil pipeline & Oil well monitoring, aerospace, OEM, medical, nuclear, and textile, etc.....

Precision Instruments offer a variety of Sensors, transducers and Instruments for precision measurement. Whether it's rotary Torque or reaction Torque, we have a torque transducer to fit any your application. Shaft to shaft, flange to Shaft and flange to flange or flange to square drive styles, rotary slip ring, mV/V or high-level output, angle and speed measurement and high RPM options available.

Precision Instruments has one of the broadest product ranges for the industries testing laboratory. We design and manufactures one of the wide range and most comprehensive product range of load cells (10 gms to 200 Kgf), torque Sensor (50 kg-mm to 2000 newton-meter.), pressure sensors (10 mm of water to 10000 kg/cm²), Displacement (0.001 mm to 10 meters), Temperature (.001°C to 2500°C), Accelerometer (±1g to 1000 g) and associated Instruments.

In addition Precision Instruments manufactures a full range of sensors and Instruments ie. Rotery encoders, Linear encoders, RPM, Timing , Counting, Flow , Frequency, Efficiency, Ampears, Velocity, X,Y Plotting'

We (**Precision Instruments**) know that that the key to continuously growth and customer satisfaction. Thease products are engineered to increase your system performance, Lower your costs, Improve your computer & machine integration and maximize your development Quality.



Load & Force Measurements

- Precision "S" Type Loadcell. Model PST-B series
- Precision Rope Tension Loadcell. Model PRTL - 90
- Precision Cylindrical Double Ended Shear Beam. Model PCDE - 95
- Precision Cylindrical IN - LINE Loas Cell. Model PCIL - 97
- Precision Cylindrical IN - LINE Loas Cell. Model PCIL - L
- Precision Cylindrical IN - LINE Loas Cell. Model PCIL - M
- Precision Shear Beam Load Cell. Model PSB - XX Series
- Precision Cantilever Load Cell. Model PCL - XX Series
- Precision Universal Load cell. Model PUL - XX Series
- Precision Hollow Load Cell. Model PHL - XX Series
- Precision Low Profile Load Cell. Model PLFL - XX series
- Precision Bending Beam Loadcell. Model - PBL - XX Series
- Precision Triaxial Loadcell. Model PTL - XX Series
- Precision Compression Load Cell. Model PCL - XX Series

Torque Measurements

- Precision Reaction Torque Sensor (Flange to Flange). Model PRTS - 101
- Precision Reaction Torque Sensor (Flange to Flange). Model PRTS - 102
- Precision Reaction Torque Sensor (Flange to Flange). Model PRTS - 103
- Precision Reaction Torque Sensor (Flange to Shaft). Model PFST - 104
- Precision Reaction Torque Sensor (Shaft to Shaft). Model PFSS - 104
- Precision Ultra Low Capacity Torque Sensor. Model PULT - 89
- Precision Screw Driver Torque Sensor. Model PSDT - 20
- Precision Socket Extension Torque Sensor. Model PSET - 23
- Precision Torque Sensor (Flange to Square Drive). Model PFSD - 104
- Precision Rotary Torque Sensor (Flange to Flange Drive). Model PRT - FF -XX
- Precision Rotary Torque Sensor (Shaft to Shaft Drive). PRT - SS -XX
- Precision Torque Vrification System. Model PTVS - 01

Pressure & Vaccume Measurements

- Precision Pressure Sensor. Model PI - PS81
- Precision Female Port Pressure Sensor. Model PFP-81
- Precision Industrial Pressure Sensor. Model PIP - 82
- Precision General Pourpose Pressure Sensor. Model PGP - 83
- Precision Miniature Pressure Sensor. PMP - 84
- Precision Low Capacity Pressure Sensor. Model PLC - 84
- Precision Vaccume Sensor. Model PVS - XX
- Precision Ultra Low Capacity Vaccume Sensor. Model ULV - XX
- Precision IN - LINE Pressure/Vaccume Sensor. ILPV - XX
- Precision Pressure Varification System. Model PVR - XX
- Precision Ultra Thin High Capacity Pressure Sensor. Model UTHC - XX
- Precision Diffrencial Pressure Sensor (Wet / Wet). Model PDW - WXX
- Precision Diffrencial Pressure Sensor (Dry / Dry). Model PD - DXX



Linear Displacement Measurements

- Precision High Accuracy (AC - AC) Displacement Sensors. (LVDT) Model PHL - 79
- Precision General Purpose Displacement Sensor. (AC - AC) (LVDT) Model PGL - 72
- Precision High-Accuracy DC Output Displacement Sensor. (LVDT) Model PHDL - 73
- Precision Long Range Displacement Sensor. (1 meter) Model PLD - 74
- Precision High-Accuracy DC Output Long Range Displacement Sensor. (5 Meter) Model PHL - XX
- Precision Ultra High-Accuracy Displacement Sensor. (PLL output) Model UHLL - XX

Angular Displacement Measurements

- Precision General Purpose Angular Displacement Sensor (RVDT) Model PGAD - 41
- Precision High Accuracy Angular Displacement Sensor (RVDT) (0° to 360°) Model PHAD - 42
- Precision High Accuracy Angular Displacement Sensor (RVDT) (+/- 180°) Model PHAD - 43
- Precision Angular Displacement Sensor (RVDT) (0° to 6480°) Model PHAD - 44
- Precision Angular Displacement Sensor (RVDT) (+/- 3240°) Model PHAD - 45

Rotary Optical Encoders

- Precision Absolute Optical Rotary Encoders (8 Bit) 256 Step per Revolution. Model PRE - 8
- Precision Absolute Optical Rotary Encoders (10 Bit) 1024 Step per Revolution. Model PRE - 10
- Precision Absolute Optical Rotary Encoders (12 Bit) 4096 Step per Revolution. Model PRE - 12
- Precision Absolute Optical Rotary Encoders (14 Bit) 16384 Step per Revolution. Model PRE - 14
- Precision Absolute Optical Rotary Encoders (16 Bit) 65536 Step per Revolution. Model PRE - 16
- Precision Incremental Optical Rotary Encoders. (100PPR to 5000PPR) Model POE - XXXX
- Precision Optical Quadrature Encoder (10 PPR to 1200 PPR) Model POQE - XXXX
- Precision Quadrature Encoder Simulator (1 PPR to 10000 PPR) Model PQES - 37

Flow & Level Measurements

FLOW

- Precision AirFlow Sensor. Model Model PAFL - 80
- Precision Water Flow Sensor. Model PWFL - 81
- Precision Liquid Flow Sensor. Model PQFL - 82
- Precision High-capacity In-line Flow Sensor (Flange to Flange) Model PHIL - 84
- Precision Ultra Low Capacity In-Line Flow Sensor. Model ULFS - 85
- Precision Industrial Flow Sensor for Corrosive Applications. PICF - 87
- Precision High Accuracy Laboratory Micro Flow meters. Model PLM - 88
- Precision Submersible Pressure Transducer for Level and Depth Measurement. Model PSLD - 89

LEVEL

- Precision General Purpose Level Sensor. Model PGLS - 83
- Precision Potentiometric Level Sensor. Model PLS - XX
- Precision Ultrasonic Level Sensor. Model PULV - XX
- Precision Strain Based Level Sensor. Model PSLS - XX



Microprocessor based Instruments

Instruments For Load & Force

- Microcontroller based Simple Load Indicator.
- Microcontroller based Load indicator with PEAK-HOLD.
- Microcontroller based Load Indicator With Over-Load Protection + PEAK-HOLD.
- Microcontroller based Load Indicator with Relay Setpoint Controller.
- Smart Load Indicator for Automation & Data Acquisition System.
- Smart Load Indicator with 2 Relay Setpoint Controller.
- Smart Load Indicator with **Double Engineering Unit** Calibration Display (Lbs, N, Kg)
- Smart Load Indicator with **Yield Point PEAK** detect.
- Smart Load Indicator with 25 PEAK-HOLD memory.
- Smart Load Indicator With **Signature Calibration System**.(use upto 200 sensors)
- Smart Load Indicator with Load v/s Displacement Display.
- Smart Load Indicator with Thermal Printer. (S.NO., Date, Time, Peak-Load)

Instruments For Pressure & Vaccume

- Microcontroller based Simple Pressure Indicator.
- Microcontroller based Pressure indicator with PEAK-HOLD.
- Microcontroller based Pressure Indicator With Over-Load Protection + PEAK-HOLD.
- Microcontroller based Pressure Indicator with Relay Setpoint Controller.
- Smart Pressure Indicator for Automation & Data Acquisition System.
- Smart Pressure Indicator with 2 Relay Setpoint Controller.
- Smart Pressure Indicator with **Double Engineering Unit** Calibration Display (kg/cm², N/m², psi).
- Smart Pressure Indicator with 25 PEAK-HOLD memory.
- Smart Pressure Indicator With **Signature Calibration System**.(use upto 200 sensors)
- Smart Pressure Indicator with Pressure v/s Displacement Display.
- Smart Pressure Indicator with Thermal Printer. (S.NO., Date, Time, Pressure)

Instruments For Torque

- Microcontroller based Simple Torque Indicator.
- Microcontroller based Torque indicator with PEAK-HOLD.
- Microcontroller based Torque Indicator With Over-Load Protection + PEAK-HOLD.
- Microcontroller based Torque Indicator with Relay Setpoint Controller.
- Smart Torque Indicator for Automation & Data Acquisition System.
- Smart Torque Indicator with 2 Relay Setpoint Controller.
- Smart Torque Indicator with **Multi Engineering Unit** Calibration. (kg-m, kg-mm, N-m, lbf-in)
- Smart Torque Indicator with 25 PEAK-HOLD memory.
- Smart Torque Indicator With **Signature Calibration System**.(use upto 200 sensors)
- Smart Torque Indicator with Torque v/s Angle Display.
- Smart Torque Indicator with Thermal Printer. (S.NO., Date, Time, Torque, Angle)
- Smart Torque Indicator with Torque v/s Speed v/s Horsepower Display.



Microprocessor based Instruments

Instruments For Temperature & Humidity

- Microcontroller based Simple Temperature Indicator.
- Microcontroller based Temperature indicator with Min/Max PEAK-HOLD.
- Microcontroller based Temperature Indicator With Over-Temperature Protection.
- Microcontroller based Temperature Indicator with Relay Setpoint Controller.
- Smart Temperature Indicator for Automation & Data Acquisition System.
- Smart Temperature Indicator with 2 Relay Setpoint Controller.
- Smart Temperature Indicator with **Double Engineering Unit** Calibration Display (°C, °F)
- Smart Load Indicator with **Yield Point PEAK** detect.
- Smart Temperature v/s Humidity Indicator.
- Smart Temperature Scanner (8 / 16 Channel) with printer output, with Date & Time.
- Smart PID controller.
- Smart Temperature controller for Measurement of Oxidative Induction Times (O.I.T.)
- Smart Temperature Logger with date & Time (Data Can be download in PC)
- Smart Temperature v/s Humidity Logger with date & Time (Data Can be download in PC)
- Smart Temperature v/s Humidity Logger PC based

Instruments For Timing, Counting & RPM

- Microcontroller based count Up/down timer/Counter with controller
- Microcontroller based RTC with rs232 output
- Microcontroller based Multifunction Counter.
- Microcontroller based Multifunction Counter with 2 setpoint controller.
- Smart Tachometer Indicator for Automation & Data Acquisition System.
- Smart Tachometer with 2 Relay Setpoint Controller.
- Smart Counter Indicator with Calibration Factor for linear/Angular length measurements.
- Smart Pulse width measurements indicator for Ultrasonic / IR Length measurements.

Instruments For Shock, Vibration & Acceleration

- Microcontroller based Vibration Indicator.
- Microcontroller based Vibration indicator with PEAK-HOLD.
- Microcontroller based Vibration Indicator with Datalogger.
- Microcontroller based Acceleration Indicator with Relay Setpoint Controller.
- Smart Acceleration Indicator for Automation & Data Acquisition System.
- Smart **Acceleration** Verification System.
- Smart 3 Axis **Acceleration** measurements with Datalogging system.



Digital Conversion Kit For Material Testing Machines

conversion kit to convert old mechanical machine into Microcontroller based digital machine

- Precision Conversion kit for Tensile testing Machine.
- Precision Conversion kit for Bursting Strength Tester.
- Precision Conversion kit for Universal Testing Machine.
- Precision Conversion kit for Compression Testing Machine.
- Precision Conversion kit for Impact Testing Machine.
- Precision Conversion kit for Torsion Testing Machine.
- Precision Conversion kit for Rotary Fatigue Testing Machine.
- Precision Conversion kit for Spring Testing Machine.
- Precision Conversion kit for Direct Shear Test Apparatus.
- Precision Conversion kit for Triaxial Testing Apparatus.
- Precision Conversion kit for Vane Shear Apparatus.
- Precision Conversion kit for Valley Clay Abrasion Tester.
- Precision Conversion kit for Oxidation Test of Lubrication Oil.
- Precision Conversion kit for Oxidation Stability of Grease Apparatus.
- Precision Conversion kit for Fabric Strength Tester.
- Precision Conversion kit for Tearing Strength Tester.
- Precision Conversion kit for Pilling Tester.
- Precision Conversion kit for Yarn Friction Tester.
- Precision Conversion kit for Foam Compression Tester.
- Precision Conversion kit for Friction Tester.
- Precision Conversion kit for Button Snap Pull Tester.
- Precision Conversion kit for Double Hole Stitch Tear Test.
- Precision Conversion kit for Tear Tester.
- Precision Conversion kit for Tongue Tear Tester.
- Precision Conversion kit for Diameter Gauge Cum Sphericity Tester.
- Precision Conversion kit for Oxidative Induction Time (O.I.T.) Tester.
- Precision Conversion kit for Co-efficient of Friction Tester
- Precision Conversion kit for Automatic Bag Filling System.
- Precision Conversion kit for Automatic Tin Filling System.
- Precision Conversion kit for Automatic Drum Filling System.
- Precision Conversion kit for Shock Absorber or Damper Testing Systems.
(Measurement of Equivalent Stiffness and Damping of Shock Absorbers include software for Input and Output Time Histories, Power Spectral Densities Force vs Displacement and Force vs. Velocity Plots)
- Precision Conversion kit for cyclic creep and low-cycle fatigue tests
- Precision Conversion kit for Multi-Axial Elastomeric Testing System(3 Axis Load)
- Precision Conversion kit for Low Frequency Torsional Test Systems.
- Precision Conversion kit for Wheel and Brake Assembly Testing.
- Precision Conversion kit for Occupant Impact Testing System.
- Precision Conversion kit for Steering Gear Durability Testing Systems.
- Precision Conversion kit for Weighing machine



Calibration & Verification Instrumentation

- Precision Manual Deadweight Calibration Systems For Torque.
- Precision Manual Deadweight Calibration Systems For Loadcell.
- Precision Torque Calibration Cum Verification System.
- Precision Pressure Calibration Cum Verification System.
- Precision Very Low Pressure Verification System.
- Precision Temperature Calibrator/Verification System.
- Precision Humidity Calibrator/Verification System.
- Precision Microprocessor based Digital Prove Ring.

Data Acquisition , Automation & Controller (NC/CNC)

- Precision High Speed Data Acquisition System.
- Precision Real Time X-Y, X-T, Data Recording
- Precision Load v/s Displacement Acquisition system.
- Precision Torque v/s Angle Acquisition system.
- Precision 8 Channel Analog to Digital Conversion System.
- Precision 16 Channel Analog to Digital Conversion System.
- Precision 8 Digital Input/Output Controller.
- Precision Real Time Servo Controller for Robotics Application,
- Precision PC based 8 Servo motor Controller for Remote Application,
- Precision Real Time Servo motor Controller for Valve Control Application,
- Precision Real Time Robotics Arm for industrial sample handling.
- Precision Stepper motor controller.
- Precision Feed-Back controller for industrial Application(Stepper motor / Servo motor based)

Conditioner Card For Signal Processing Systems

- Precision Enhanced LVDT Signal Conditioner Card.
- Precision Encoder Signal Conditioner Card.
- Precision Frequency to Voltage Output Signal Conditioner.
(Input - Frequency, Speed, RPM, Flow)
- Precision Enhanced Strain Gage Signal Conditioner Card.
(Input - Force, Pressure, Strain, Torque, Weight)
- Precision Enhanced Dual Strain Gage Signal Conditioner Card.
- Precision Amplified Accelerometer Vibration Signal Conditioner Card.
- Precision One to Eight-Channel Thermocouple Signal Conditioner Card.
(Input Types B, E, J, K, R, S, and T Thermocouples)
- Precision One to Eight-Channel Platinum RTD Signal Conditioner Card.
(Input - platinum Resistance Temperature Detectors (RTD's))
- Precision One to Eight-Channel Thermistor Signal Conditioner Card.
- Precision Current to Voltage Signal Conditioner Card.

Precision Instruments

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