

Gunpowder ■ Sands ■ Hog Fuel
Crackers ■ Soda Ash ■ Cereals
Ceramic ■ Clays
Corn Starch ■ Paper
Particle Board
Wood Chips

Converted Near Infrared
Gauges for Moisture and
Composition Analysis


MCT8000 / MT400

Convert-A-Gauge NIR Transmitters

PVC Powders
Hardboard ■ Sausage Casings
Soaps ■ Citrus Pulp ■ Ka



Sugar
Nitrocellulose ■ Crumb
Synthetic Fibers ■ PVC Pow
Detergents ■ P
Photo Coatings
Fish Meal ■ Hog Fuel ■ Soaps
Sausage Casings ■ Milk Pow
Cereals ■ Soda Ash ■ S

PROCESS SENSORS CORP. 

Modernize your field proven sensors for less cost than buying new ones

Has your moisture gauge worn out? Has it become unreliable with age and use? Are you spending too much time in maintaining it?

Turn your MQ or QB into a modern, reliable "Smart Sensor".

Frequently asked questions:

What is the warranty on my Convert-a-Gauge?

All Convert-a-Gauges are covered by a 12-month warranty for parts and labor.

Will the Convert-a-Gauge be more reliable?

Yes. The PSC "Smart Sensor" electronics are significantly improved over those from the 1980's. Age dependent components such as motors, lamps and power supplies are all replaced.

What happens to my old processor or ECU?

It is no longer needed and can be thrown away.

Will my measurement accuracy be affected?

No. The Convert-a-Gauge uses the original filters and math treatment to make the measurement.

Where do I get my analog and digital signals?

All output signals, mA, volts and RS232/485 come from the sensor. No gauge port or "D" box is needed.

What kind of power is needed?

All Convert-a-Gauges run off 90-260VAC, making them suitable for any country in the world.

Who do I call if I have a problem with my conversion? Call PSC. The Convert-a-Gauge is a PSC product and you are our customer.

How do I communicate with the converted sensor?

- With a wall mountable Operator Interface/Display mounted local to the gauge.
- With a portable, hand held, Operator Interface/Display that may be detached after use.
- With a host computer running PSC software or OPC-DDE server or other commercial data acquisition software.

Benefits and Features:

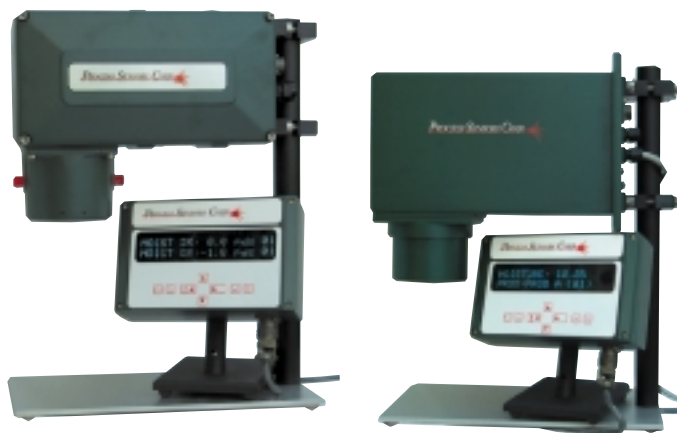
Technical innovation and economical design offers users a wide range of benefits and features:

- Reduced maintenance through elimination of processor hardware
- Improved measurement performance
- Simpler operator interface
- Lower cost
- 12 month warranty
- Re-use of existing installation points
- Multi Language Operator Display

Give a NEW LIFE to your old moisture gauges

Process Sensors' "Conversion Service" for aging NIR gauges gives a new life to obsolete or out of date instruments. By the addition of Process Sensors' "Smart Sensor" electronics, any Quad sensor may be converted into a stand alone infrared transmitter.

The converted sensor's "sensor only" design eliminates the need for the central processor and associated interconnecting cable, simplifying the installation and reducing ongoing maintenance costs. When needed, the existing interconnecting cable may be used for power and output signals.



Operator Interfaces:

The Convert-a-Gauge offers users a choice of interfaces for set-up, calibration and sensor maintenance.

Wall Mounted — A NEMA 4 wall or post mountable interface is available for use with any sensor.

This interface provides an easy to read display with a keypad for operator access to settings, calibration or internal diagnostic sensor values. Password and keypad "lock" protection is provided for security.



Hand Held — This hand held terminal may be used with an unlimited number of sensors. It uses the same keypad interface as the wall mountable version, but now enclosed in a convenient to hold hand terminal.

Conversion Process

The "Convert-a Gauge" process turns the Quadrabeam* or Micro Quad* sensor into a stand-alone moisture gauge containing all the electronics needed to make up to two process measurements, store up to ten calibrations and provide analog and digital communications, **all from within the sensor.**

The Conversion process includes the following elements:

- Replace all sensor electronics with PSC's **"Smart Sensor"** electronics.
- Install a new auto-ranging internal AC power supply.
- Install a new filter wheel motor.
- Install, as needed, new optical components including lenses, windows and filters.
- Completely test and re-calibrate the sensor and all integral electronics.
- Repaint and reseal the housing.
- Optionally, add the operator interface desired.



Computer Software:

A Windows based program is available for use with desktop or laptop computers to access the sensor's internal parameters.

Selection of Calibration, Parameter Adjustments, Diagnostics and Engineering Setup are available together with a digital display and trend graph for up to 16 sensors.

This software may be used with RS232, RS485 or Ethernet forms of communication.

Conversion Evaluations

Process sensors offers:

- Demonstration and evaluation gauges to assist in making the decision to go ahead with conversions.
- After the decision is made, owners may send in their old units and, within a few weeks, receive them back as modernized "Smart Transmitters."

Send them to Process Sensors like this...



Receive them back like this!



Convert-A-Gauge Specifications

Technical	MCT800	MCT400
Original Manufacturer:	Moisture Systems	Moisture Systems
Original Model:	MQ8000/9000*	QB475/6500*
Constituents:	2	1
NIR Wavelengths:	5	3
Calibration Channels:	10	10
Beam Sampling Area:	1 in. (25mm)	2 in. (50mm)
Sensor/Product Distance:	6–16 in. (150–400 mm)	
Operating Temp:	32–120° F (0–50° C)	
Response Time:	1–999 seconds. Three modes available: Damping, Integration and Gated.	
Power:	90–260 VAC 50/60 HZ. 85	
Outputs:	RS232/485, 4–20mA and 0–10volts (isolated and non-isolated)	
Operator Interface Cable:	Standard 10 ft. (3 m), Maximum 100 ft. (30 m)	

Application Specifications

Moisture Range:	Min. 0–0.1%, Max. 0–95%
Coatings Range:	Min. 0.1–1 gr./m, Max. 0.1–200 gr./m
	Fats / Oils Range: Min. 0–1%, Max. 0–50%
Accuracy:	(subject to application and product type)
Moisture:	+/- 0.1%
Coatings:	+/- 0.1 gm.
Fats / Oils:	+/- 0.2%
Repeatability:	+/- 0.2% of calibrated range

Options and Accessories

Materials:	Kynar Coated sensors with polymeric or sapphire windows
Environmental:	Vortec Air Coolers, Water Cooling Panels Window contamination air purges
Communications:	Ethernet Interface per sensor Ethernet Interface per group of sensors
Maintenance:	Calibration Check Standards

Software

Win 9X/NT based programs for multi sensors allowing users to view and change sensor parameters, present digital displays and trend graphs of the measured constituents. OPC-DDE Server for interface with proprietary Data Acquisition Programs ie: Wonderware, Genesis, D-Max, Fix, etc.

Warranty

All converted sensors are covered by a 12 months parts and labor warranty. Vital components such as lamps and filter wheel motors have a 24 month warranty.

*Micro Quad and Quadrabeam are trademarks of the Moisture Systems Division of Thermedics Detection, a company not associated or affiliated with Process Sensors, Corp.

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