



NOVA SERIES

MCT466-SF

**Stainless Steel NIR Moisture Gauge
for the Food Industry**

Compact, Robust, Reliable in Challenging Environments

PROCESS SENSORS
CORPORATION 

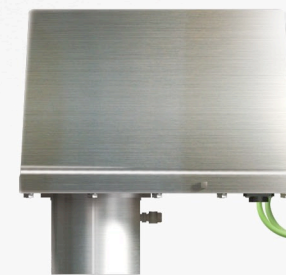
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Stainless Steel NIR Moisture Gauge for
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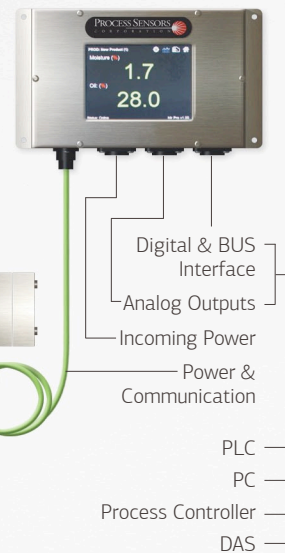
MCT466-SF Moisture Gauge System

- Gauge connects to Operator Interface with proprietary, heat resistant cable
- Gauge powered from Operator Interface
- All Analog Outputs, Digital Outputs and Bus Interfaces at Operator Interface
- Bright 5.7" high-resolution Touchscreen LCD

Operator Interface
Color Touch Screen



MCT466-SF Gauge



Stable & Accurate

Designed and configured for the demanding heat and wash down conditions in the food and snack food manufacturing industries. The MCT466-SF is simple to install and can be used in different stages of processing from fryer outlet to packaging.

Typical applications include:

- Potato Chips
- Corn Chips
- Tortillas
- Cookies
- Crackers
- Breakfast Cereals
- Milk Powders
- Popcorn
- Oil Base Flavorings
- Pork Rinds

MCT466-SF Features

- 316 Stainless Steel enclosure
- Single proprietary heat resistant cable from gauge to Operator Interface
- Stainless Steel Operator Interface with bright, 5.7" Touchscreen Display
- All current, voltage and bus connections located at Operator Interface
- New micro controller, high performance, dual core architecture. One core dedicated to NIR signal acquisition, the other programmed to manage computations and communications options
- Samples entire NIR signal train for increased measurement accuracy
- Embedded bootloader allows sensor firmware to be upgraded through USB or serial interface
- Filter wheel speed adjustment through software
- Temperature controlled PbS detector for enhanced stability
- Built in cooling panel and air purge assembly

Nova Series

A Reliable, Rugged Moisture Gauge System for the Food Industry

Each **MCT466-SF** moisture gauge system consists of a stainless steel gauge and a stainless steel Operator Interface. The gauge is normally located over a conveying system and is connected by a proprietary heat resistant cable to the Operator Interface. The Operator Interface produces 4-20mA, 0-10 vdc, RS232/485 outputs, along with bus connection such as Ethernet, Profibus, Modbus, etc.

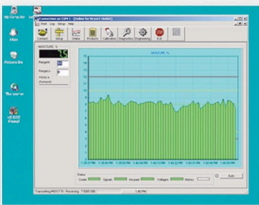
The MCT466-SF is made up of 5 basic components: a quartz halogen lamp, a filter wheel motor, multiple NIR interference filters in a rotating filter wheel assembly, a Lead Sulfide detector and a single "smart" circuit board. The MCT466-SF is fully modular – each of these components can be replaced in the field within minutes.

The Near Infrared (NIR) Operating Principle

Light from the lamp is directed through the rotating, narrow band-pass NIR filters. The filters separate the light into NIR wavelengths, selected specifically by PSC for the measurement and application being performed. The NIR light is then directed onto the product being measured, normally on a belt or vibrating conveyor.

Subsequently, the light reflected off of the product is captured by a mirror and focused onto a Lead Sulfide detector. The detector's microvolt output is then taken by the on-board "smart" circuit board and converted into percent moisture or percent oil.

Computer Software



Process Sensors Corporation (PSC) Viewer Software is a proprietary Windows-based package. It monitors all MCT466-SF functions and allows an operator to insert set-up parameters, perform or adjust calibrations, select product codes, examine internal diagnostic values and view trends of moisture and oil.



NOVA SERIES

MCT466-SF Stainless Steel NIR Moisture Gauge for the Food Industry

Applications:

Potato Chips • Corn Chips • Cookies • Crackers • Breakfast Cereals • Milk Powders • Tortillas • Popcorn

Specifications: MCT466SF 316 Stainless Steel Enclosure

Measured NIR Constituents: _____ 2
Moisture Range: _____ Min. 0.1% Max 90%
Fats/Oils: _____ Min. 0.1% Max 50%
Accuracy (subject to application):
Moisture: _____ +/- 0.1%
Fats/Oils: _____ +/- 0.2%
Product Distance: _____ 8-18 Inches (200-450 mm)
Calibration Codes: _____ 100
Response Time: _____ 1-999 seconds. Three modes available:
Damping, Integrated and Gated
Power: _____ 24v from Operator Interface
Weight/SS Gauge: _____ 17 lbs (7.7 Kg)
Operating Temperature: _____ 0 - 60°, up to 80° with cooling

Specifications: Operator Interface

Display: _____ 5.7" Bright Touchscreen LCD
Enclosure: _____ Stainless Steel
Weight: _____ 7 lbs. (3.2 Kg)
Outputs: _____ 4-20 mA or 0-10V, RS232/485
Bus Interfaces (optional): _____ ProfiNet, ProfiBus, Ethernet IP,
Modbus TCP, DeviceNet
Power: _____ 110/220/240 volts, 24vdc Optional
Interconnecting Cable: _____ 10 feet (standard)

Maintenance:

Warranty: _____ 24 months Parts/Labor
Routine Cleaning: _____ During scheduled plant maintenance
Calibration Confirmation: _____ Calibration Check Standards

CE Compliance:

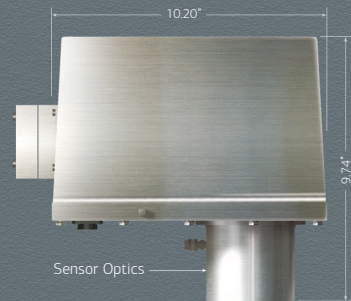
EMC Directives EN50081-1 & EN50082-2, EN61010-1
Low Voltage Directive

Databus & Software Interfaces:

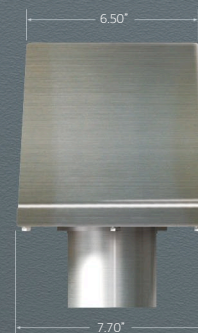
Optional Bus Interfaces: _____ ProfiNet, ProfiBus, Ethernet IP,
Modbus TCP, DeviceNet
Software: _____ Window-based Stand-alone Program
or OPC-DDE Server

MCT466-SF Gauge

Side View



Front View



Operator Interface

Front View



All Power and Interface Connections on Bottom

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