RELIABILITY, ACCURACY AND ABILITY

TO MEET CUSTOMERS NEEDS HAVE MADE LSC THE PREDOMINATE IN-LINE PROCESS REFRACTOMETER MANUFACTURER IN TODAY'S GLOBAL MARKET.

MODEL 614

Process Refractometer

LSC

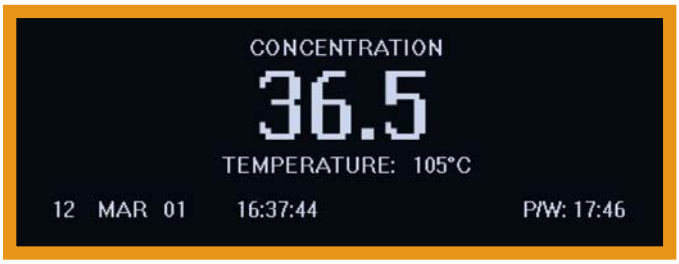
LIQUID SOLIDS CONTROL, INC.

The fully computerized LSC Model 614 In-Line Process Refractometer is a two-piece optical/electronic measurement instrument. It is available in a X1 Single Sensor or a X2 Dual Sensor configuration. The LSC Process Refractometer utilizes the "critical angle" technique, which is an interface measurement of refractive index. Our design employs the "I.R. Detection System" that provides Infinite Resolution while eliminating drift. At the interface, light is reflected and refracted off the process, at different angles, depending on the refractive index level (optical density) of the process fluid. This technique measures the dissolved solids of the process stream, and is commonly displayed in terms such as, Concentration, Brix, Refractive Index and % Solids.

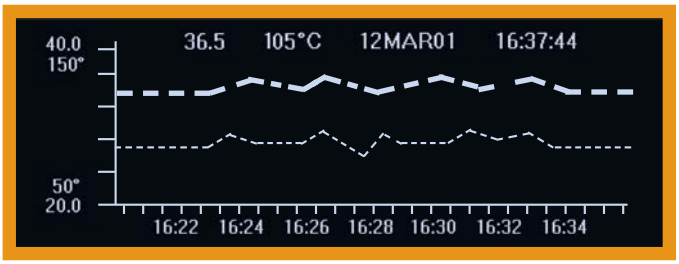
The LSC sensing heads, In-Line or Insertion Probe, are mounted in a manor so as to ensure the prism (sensing window) is in direct contact with the process. The wetting of the prism face provides the physical properties necessary for the "critical angle" measurement. Entrained air, viscosity, suspended particles and crystals, color (whether opaque or transparent), will have no effect on the accuracy of the LSC Model 614 Process Refractometer.

User Friendly Software & Features

The advanced and fully computerized processor has truly simplified all aspects of the system. All information is clearly displayed on the large vacuum fluorescent display. Stepping through the menus is straightforward and streamlined by the unique 5 button touch pad; allowing for all calibration and diagnostic information to be accessed easily. The user can select to display the "main screen" or the "continuous trend plot screen": both provide the process measurement and process temperature.



▲ *Picture of Main Screen*



▲ *Picture of Continuous Trend Plot Screen*

a) Large graphic "vacuum fluorescent" display
b) All "inputting" via 5 buttons on the front panel
c) Unique "user friendly" operating menu
d) Menu displayed in many "local" languages
e) Does not have "trimpots, dials or adjustments"
f) Simple "multi-application" programming
g) Ability to "linearize" any product characteristics
h) Shape/reverse any product characteristics
i) Automatic "smart wash" prism wash control
j) Prism Wash status displayed on screen
k) Most reliable and proven Sensing Head
l) Operate Sensing Head "Intrinsically Safe"
m) Environmentally proven NEMA 4X enclosure
n) Extensive internal "self-diagnostics"
o) Operates with standard "floppy disk"
p) Factory troubleshooting by E-mail
q) Diagnostics directly through local computer
r) Store "measurement history" internally
s) Store "measurement history" to "floppy"
t) Display stored "history" from "floppy"
u) Store all "set-up" parameters on "floppy"
v) Display "trend plot" of product
w) Display "trend plot" of process temperature
x) Current "date/time" displayed on screen
y) Process temperature displayed on screen
z) Standard LSC Five Year Warranty

RC BOX INSTALLATION

▼ *Remote Control Box*

The Model 614 has the ability to change calibration files from a remote location by incorporating the LSC 614 Remote Control Box. This control box contains its own display that provides the customer with the process measurement and temperature. It can be located up to 3 km. away, via the 2 wire RS-485 connection. The zero offset can also be changed from the remote enclosure.

Refractive Index Spectrum: 1.3000 to 1.6000
Concentration, % Solids or Brix Spectrum: 0 - 100 %
Accuracy: +/- 0.5 % of selected Span Range
+/- 0.0 % with internal computer correction
Overall Stability/Drift: No measurable drift
Interconnecting Cable: Up to 1625 ft. (500 m)
Diagnostic port: RS-232
Sensing Window (Prism): Sapphire
Process Measurement Outputs: 4 - 20 mA
0 - 10 VDC

Input Power: 85 to 260 VAC, 50/60 Hz, < 25 watts
(Automatic Sensing of Input Power)
Process Temperature Range: - 25° to 150° C
Temperature Compensation: Automatic
Process Line Pressure: Up to 1000 PSIG (68 Bar)
Dual Alarms: Out of spec and/or system malfunction
Communication: RS-485
A: Drive: 3.5" Floppy Disk Drive
Process Temperature Output: 0 - 10 VDC

"LSC Model 614's Exclusive Five Year Warranty Affirms Its Reliability"

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