



GelView Sensor

Calibration Constants and Technical Specification

6510020180

GelView Sensor Calibration Constants and Technical Specification

October, 2003

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Introduction

This manual provides typical calibration constants and repeatability characteristics for the Honeywell GelView Sensor.

Audience

This manual is intended for use by Honeywell field and factory personnel and assumes that the reader has some knowledge of the operator of a paper machine and a basic understanding of mechanical, electrical and computer software concepts.

Related Reading

The following documents contain related reading material.

Honeywell P/N	Document Title / Description
6510020176	<i>GelView Sensor Overview</i>
6510020178	<i>GelView Sensor Installation</i>
6510020179	<i>GelView Sensor Troubleshooting and Preventative Maintenance</i>
6510020180	<i>GelView Sensor Calibration Constants and Technical Specification</i>

1. Sensor Calibration Values

For a standard GelView sensor configuration with 30 meters of regular fiber optic cable and 3 meters of high temperature fiber optic cable, the calibration parameters for each sensor should be within the following constraints:

	Typical Value	Typical Range
Calibration Slope	100	80 to 120
Calibration Intercept	0	-20 to 20

With this calibration, the typical deviation from linearity (2σ , gels) should be less than 1.0. These calibration parameters also assume a measuring spot size of 6 to 7 mm.

2. Sensor Repeatability

The sensor's 2σ repeatability with a 100 gel standard ceramic tile sample for different integration times should be no worse (smaller) than presented below.

Integration time (sec)	0.05	0.25	1.00	4	16
Repeatability (2σ , gels)	0.0050	0.0025	0.0012	0.0006	0.0003

A typical result for the sensor's repeatability test is Figure 2-1 Correlation of Signal Repeatability vs Measurement Integration Time.

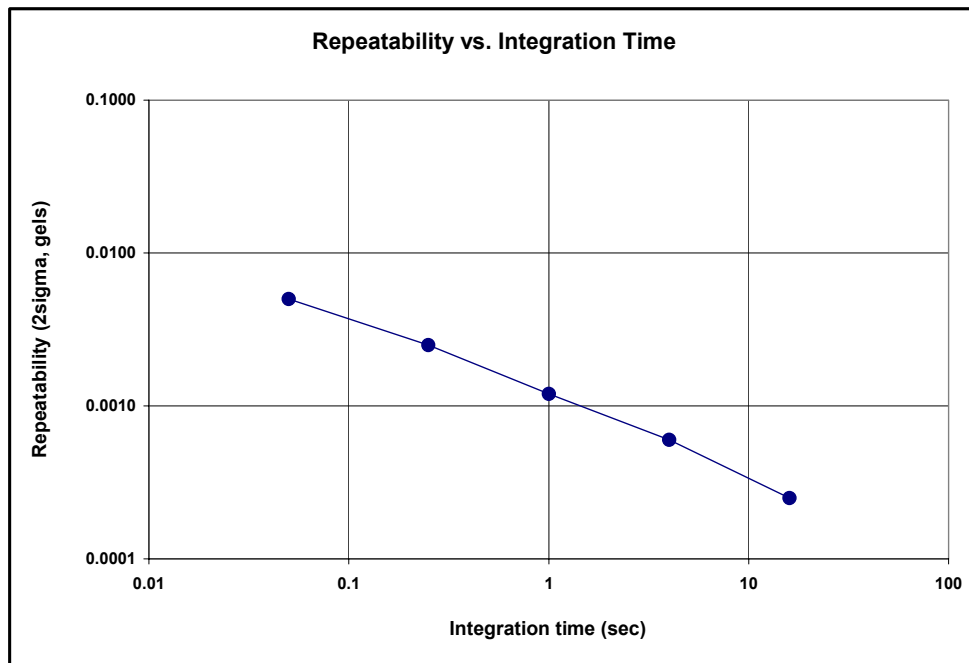


Figure 2-1 Correlation of Signal Repeatability vs Measurement Integration Time