

# Quick Check® On-Line

## SV Series Verifiers

Quick Check® Model QCOLV-SV100 Verifier is a universal system component that can analyze linear bar code print quality, check encoded data, and detect system failures. In its basic mode of operation, the QCOLV-SV100 performs bar code verification and operates in various synchronous modes.

The QCOLV-SV100 combines state-of-the-art digital signal processor (DSP) technology, a proprietary high-speed moving beam laser scanner with unique analog output capability, and flexible I/O and communications capability. This powerful architecture enables the unit to be an economical Quality Assurance tool for practically any bar code printing, application, or conveyance system.

The QCOLV-SV100 performs most accepted methods of bar code verification: ANSI method, traditional method, encoded data format checks, and laser scanning type analyses. These wide ranging analysis parameters can be used to measure bar code quality and detect failure mechanisms for any print technology. Bar code quality and encoded data information can be reported through the serial communications port for each code analyzed; therefore, accountability for all printed bar codes is possible. The QCOLV-SV100 I/O consists of five programmable output ports, two programmable display LEDs, and a sync input. The programmable ports allow the unit to be used as a controller for pausing printers, activating lights, and gating conveyors.

The recommended setup tool for the QCOLV-SV100 is QC ScanView, Windows®-based software. This program simplifies setup via menus, and offers real time monitoring of bar codes being analyzed. QC ScanView programs the QCOLV-SV100 via serial communication using a PC download language (described in the User's Guide, part #QCOLVSV/UG).



## Features

- **State-of-the Art Digital Signal Processor (DSP) Technology:** Ensures higher processing speed, faster printers, and more analysis per symbol.
- **Flexible Optical Configurations:** More adaptable optics read higher density and low contrast symbols.
- **Datamatch Compatibility:** Secures encoded data equivalence.
- **QC ScanView Windows®-based Software for System Operation:** Programmable and serial port outputs assist in setup.
- **ANSI, Traditional, Encoded Data Format, and Laser Scanning Methods:** Provide reflectance, dimensional, and format measurements.

# Quick Check® On-Line SV Series Verifiers Specifications

## Dimensions

Height:	5.2 in. (13.2 cm)
Width:	4.4 in. (11.2 cm)
Depth:	2.4 in. (6.1 cm)

## Mechanical/Electrical

Communication Port:	DB-9, male, RS-232C, programmable baud rate up to 115,200 baud
I/O Power:	DB-15, male, 5 programmable outputs, 2 sync inputs +5VDC @ 1 amp required
Mounting:	2 sets of mounting holes on 2 surfaces, or clamp for tightening to 3/8 in. (.5 mm) rod
LEDs:	5

## Environmental

Operating Temperature:	40 to 105° F (4 to 41° C)
Storage Temperature:	-4 to 140° F (-20 to 60°C)
Relative Humidity:	10 to 95% Non-condensing
Ambient Light:	Not to exceed .5 mW/sq-mm 600 nm to 700 nm (calculated at about 2% of laser light level; estimate, not verified)
MTBF:	10,000 hours (est.) (dominated by motor, then laser life)
Safety/Regulatory:	FCC Class B, CE Certified

## Scanner

Scan Rate:	400 scans/second
Laser Power:	3 mW (±.5 mW)
Wavelength:	650-670 nm
Beam Shape:	Elliptical
Analysis Rate:	100 analyses/second (min.)
Bar Code Density X Dimension:	6.6 mil (.2 mm) min. to 40 mil (1 mm) max.
Scan Width:	6 inches (15.2 cm), X Dimension: 10 mil (.25 mm) or larger; 4.5 in. (11.4 cm) - (x dimension <10 mil)
Depth of Field:	±.125 in. (3.2 mm) min. with all verification analysis enabled
Symbologies:	EAN/UPC with addenda, Code 39, Interleaved 2 of 5, Codabar, Code 128, Code 93

## Operation Modes

<b>Sync Mode Moving Bar Codes:</b>	A sync signal is used to indicate when an object or label containing a bar code has entered or exited the laser beam. Bar codes are analyzed, ports activated, and transmissions sent as the bar codes pass through the beam. The QCOLV-SV100 is programmed for the number of bar codes to expect during a sync period. Therefore, the QCOLV-SV100 detects missing or undetectable bar codes. A hardware input is the most common sync source for Sync Mode.
<b>Sync Mode Stationary Bar Codes:</b>	Bar codes are placed in the beam and held in a known position. A sync input commands the unit to turn on the laser beam, perform a programmable number of scans, report the analysis, and turn off the laser beam. RS-232 communication sync command (-SA) is the most common sync source. A rastering laser option is often used to analyze the bar code area.
<b>Non Sync Mode Free Scan Operation:</b>	A sync signal is not used and the unit scans and analyzes bar codes as they pass through the laser beam. This mode is only recommended if the QCOLV-SV100 is used as a bar code decoder, since it can't report missing or undetectable bar codes.

## Parameters Analyzed

<b>Average Bar Deviation</b> (Traditional method parameter)	<b>Global Threshold</b> (ANSI method parameter)
<b>Minimum Bar Deviation</b> (Traditional method parameter)	<b>Modulation</b> (ANSI method parameter)
<b>Maximum Bar Deviation</b> (Traditional method parameter)	<b>Overall Symbol Grade</b> (ANSI method parameter)
<b>PCS</b> (Traditional method parameter)	<b>Reference Decode</b> (ANSI method parameter)
<b>Reflectance – Light</b> (Traditional method parameter)	<b>Rmin/Rmax</b> (ANSI method parameter)
<b>Reflectance – Dark</b> (Traditional method parameter)	<b>Symbol Contrast</b> (ANSI method parameter)
<b>Ratio</b> (Traditional method parameter)	<b>Bar Code Direction</b> (scanner decoder function)
<b>Quiet Zone</b> (Traditional method parameter)	<b>Encoded Data</b> (scanner decoder function)
<b>X Dimension</b> (Traditional method parameter)	<b>Symbology Type</b> (scanner decoder function)
<b>Decodability</b> (ANSI method parameter)	<b>% Decode</b> (multiple scanning parameter)
<b>Defects</b> (ANSI method parameter)	<b>Modulo Check Digits</b> (mandatory symbology and optional application parameters)
<b>Edge Contrast</b> (ANSI method parameter)	

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QCOLVSV-SS Rev C 9/08

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