-FIXED MOUNT SCANNERS

BF Series -

FEATURES:

- Integral Decoder
- Visible Red or Infrared Models
- LED Light Source is Shock Resistant
- Elliptical viewing area enhances performance
- User Configurable
- RS-232, RS-422 or RS-485 Communications
- Polling Capability
- Reads all Common Barcodes
- Operates From Single 5 Volt Supply
- Machined Aluminum Housing



DESCRIPTION:

The BF Series of fixed beam barcode scanning products feature integral decoding circuitry and ASCII format output data. Units with both visible red and infrared light sources are available. The viewing area is elliptical rather than circular, with the long axis of the ellipse parallel to the bars, resulting in higher read rates. All major functions are user configurable using barcode menus or a serial data terminal enabling the unit to be customized to a particular application. Configuration information is held in nonvolatile EEPROM so that data is not lost when power is removed. The unit reads and decodes seven standard industrial barcode symbologies and automatically recognizes the type of code being scanned when more than one type is configured. Barcode data is output in serial ASCII format at RS-232, RS-422 or RS-485 levels. The units can be setup in a polled or multi-drop configuration in RS-422 and RS-485 operation. Application Note AN008 describes the polling protocol. All communication parameters are user configurable. The unit operates from a single five volt power supply and is contained in a machined aluminum housing which provides excellent EMI/RFI shielding.

TYPICAL APPLICATIONS:

These units are designed to read and decode barcode symbols passing the scanner in a known orientation and over a specific distance range. The model with a visible red light source is used in most scanning applications. It can read codes where the bars are printed in black or other colors, except red. Infrared units are used in high visible ambient light conditions, in photographic applications where film may be fogged by visible light or in situations where infrared transparent films are placed over the barcode for security reasons. The output can be connected directly to a host computer serial port without additional circuitry.

SPECIFICATIONS:

Flectrical

Electrical		Indicators		
Power:	+5VDC±5% @ 150mA.	Red LED:	Blinks on for	each Good Read.
	Noise and Ripple < 50mV P-P			
Optical	Communications			
Viewing Area:	elliptical spot 0.01" X 0.04"	Туре:	Serial ASCII,	RS-232, RS-422 or RS-
-	(See Dimension Drawing)		485 Levels.	Baud Rate, stop bits,
On code with 0.01" narrow bar and space:			parity and ch	aracter delay are user
Operating Range: 0.25" to 0.75" from front surface.			configurable	
Scan Speed:	6 to 60 inches/second.			
		Environmental		
Light Sources		Temperature:	Operating:	0° to 50°C
Visible Models:	Peak Output at 660nM ±2%		Storage:	-40° to 50°C

Infrared Models: Peak Output at 950nM ±2%

PM4\CSI\CSBX3SH2.PM4/A



CONFIGURATION:

The following characteristics are configurable by the user using a serial terminal or barcode menu.

Barcodes

Code Types:	Code 39 (normal or extended),
	Interleaved 2 of 5, UPC/EAN/JAN,
	Codabar, Code 93, Code 128,
	Code 11, MSI Code.
Label Length:	to 32 characters.
Check Character:	For Code 39, Code11 and Inter-
	leaved 2 of 5.
Stop/Start Char.:	Code 39, Codabar
UPC Decoding:	Enable UPC only, UPC-E expansion
-	and supplemental codes.
Communication	s:

Baud Rate:	150 to 19,200 baud
Parity:	Mark, Space, Even or Odd
Stop Bits:	1 or 2
Flow Control:	RTS/CTS Hardware Protocol
	XON/XOFF Software Protocol
	Custom Sensors Polling Protocol
Character Delay:	A delay between the transmission of
	each character, up to 150 mS., is
	user configurable
Messages:	Several messages can be transmit-
	ted with the barcode data. They
	are: Header, trailer, Scanner
	Address and No-read message.

SCANNER WIRING:

Scanner wiring is shown for the standard DB-9 connector. RS-422 and RS-485 models also have an RS-232 port that can be used for configuration.

PIN	RS-232 Output	RS-422 Output	RS=485 Output
1		TxD(+)	
2	RxD	RxD	RxD
3	TxD	TxD	TxD
4	CTS	TxD(-)	RS-485(+)
5	RTS	RxD(+)	RS-485(-)
6		RxD(-)	
7	GND	GND	GND
8			
9	+5VDC	+5VDC	+5VDC

PART NUMBERS:

The part number always consists of seven charecters. A specific part number can be constructed from the table below:



VARIATIONS:

Product variations are available on special order. Common variations include: wire type or length, connector, reverse ellipse orientation and TTL level output.

DIMENSIONS:

(All Dimensions In Inches)



