

SPECIFICATION

Customer : _____

Customer's Model No. : _____

Model No. : FS310 Series

CCD Fixed mount bar code scanner

Date : _____

Sample Serial No. : _____

Spec. Version & Revision Date: V01 2014.05.06

Received/Approved by

CHAMPTEK[®]

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Revision History

Version	Date	Context
00	2014.03.14	Golden release – MCR14
01	2014.05.06	Correct Electrical Characteristics

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A. General Description

This brand-new designed handheld CCD scanner has inherited the characteristic of “ high performance with low price” from its previous series. Aside from the principle of excellence mechanical design, it also installs with many user-friendly operations; extra-large trigger enable user to access the trigger in any scanning position, detachable cable, and 2 years product warranty; these have added-up additional values to it.

Performance : Its auto-shuttle-emulation-like smart detection, offers superior decoding performance on a reading speed up to 500 scans per second and up to 500mm reading depth for the majority of 1D bar codes and GS1 DataBar™ codes. A stand option can be ordered to facilitate hand-free “ continuous mode” reading options.

With its built-in automatically turn off reading and switch on reading as it sense a bar code moving in front of it, can extend its lifespan. its 100,000 LUX ambient light resistance, hand-on software-programming function, this FS310 is the best choice ever for various fixed mount/build in OEM bar code scanning application.



B. Physical Characteristics

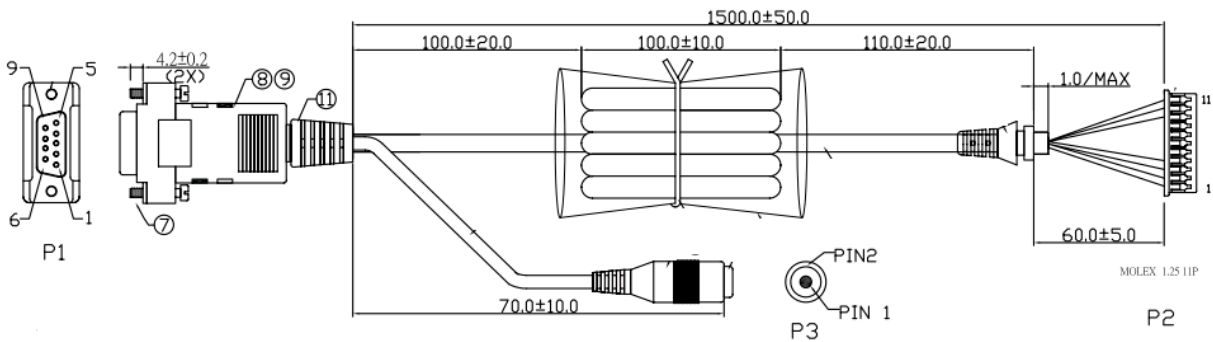
Weight	
Body weight	Approx. 3.98 oz (113 g)
Cable weight(USB)	Approx. 4.24 oz (120 g)
Material	
Cable Length	5FT. (150cm)
Dimension	
	56 mm W x 69 mm D x 28 mm H

Cable drawing

Unit : mm

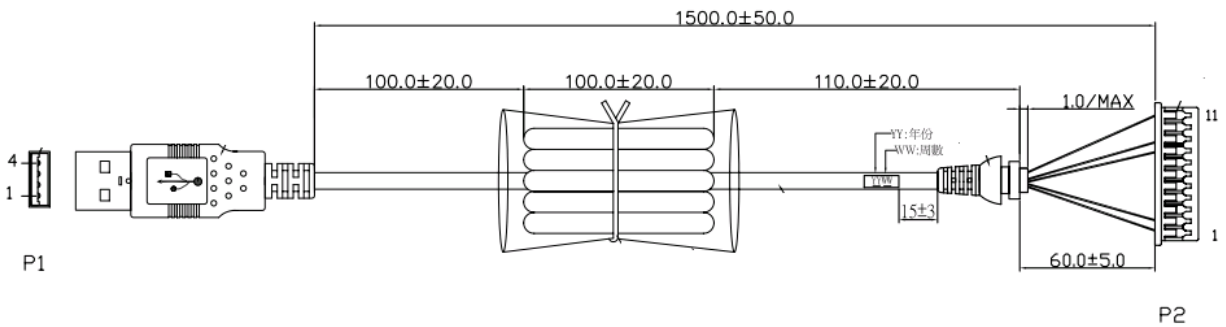
RS232 Interface :

Unit :mm

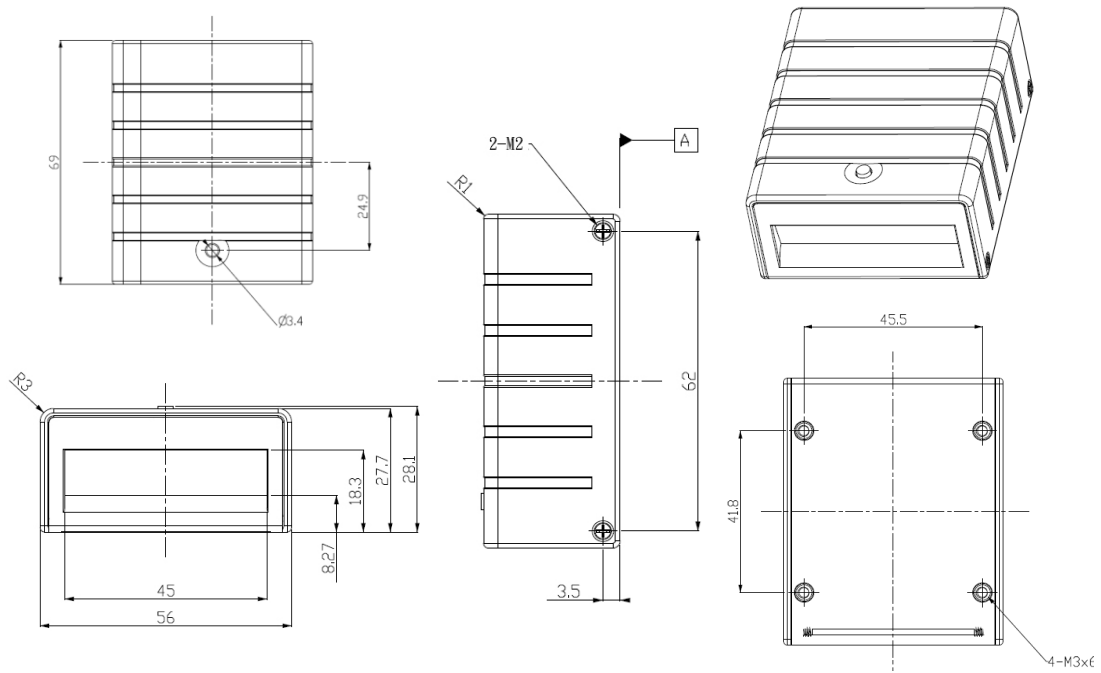


USB Interface :

Unit : mm



(a) Mechanical drawing



C. Electrical Characteristics

Interface	RS232	KB	USB
Input Voltage	DC +5V \pm 5%	DC +5V \pm 5%	DC +5V \pm 5%
Output Voltage (Typ.)	\pm 9V	+5V \pm 10%	+5V \pm 10%
Output low Voltage (Max.)	-	0.7V	0.7V
Current Draw		\pm 10%	
Power On (Typ.)	170 mA	170 mA	170 mA
Stand by (Typ.)	50 mA	50 mA	90 mA
Operation (Typ.)	150 mA	150 mA	150 mA

D. Performance

Light Source	Visible Red light 632nm LED
Sensor	Linear CCD Sensor
Processor Type	32-bit
Operating Freq.	8 MHz (Internal)
Scan Rate	Smart detection, up to 500 scans per second \pm 10%
Reading Distance	Up to 500mm@20mil/0.5mm PCS90%, Code39
Print Contrast Ratio	30%
Resolution	4mil/0.1mm@PCS90%
Reading Angle	<i>Test Conditions:Code 39, 10mil/0.25mm, PCS90%</i>
Forward & Backward	\pm 10 $^{\circ}$ ~65 $^{\circ}$ (\pm 5 $^{\circ}$)
Left & Right	\pm 60 $^{\circ}$ (\pm 5 $^{\circ}$)
Ambient Light	100,000 Lux Max. @ Direct sun light

E. Environmental

Operating Temperature	0 $^{\circ}$ C to 50 $^{\circ}$ C (32 $^{\circ}$ F to 122 $^{\circ}$ F)
Storage Temperature	-20 $^{\circ}$ C to 70 $^{\circ}$ C (-4 $^{\circ}$ F to 158 $^{\circ}$ F)
Relative Humidity	20% to 95% (Non-condensing)

F. Readable Symbologies

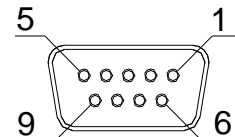
	Readable	Default Enable
All UPC/EAN/JAN	V	V
EAN128 Code	V	
Code 39	V	V
Code 39 Full ASCII	V	
Code32 / Italian Pharmacy	V	
Code 128	V	V
CODABAR/NW7	V	V
Interleave 25	V	V
Industrial 25	V	
Matrix 25	V	
MSI/PLESSEY	V	
Telepen	V	
Code 93	V	
Code 11	V	
China Postage	V	
Code 26	V	
LCD25	V	
GS1 DataBar Omnidirectional & Stacked	V	
GS1 DataBar Limited	V	
GS1 DataBar Expanded & Stacked	V	

G. Pin Assignment

1) RS232 Interface

DB9 Female with Power Lead

Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
Power Lead	Vcc (+5V)

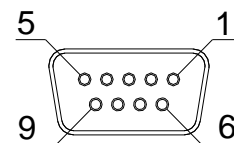


DB 9 Female



DB9 Female without Power Lead

Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
9	Vcc (+5V)

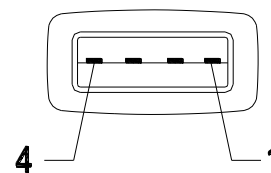


DB 9 Female

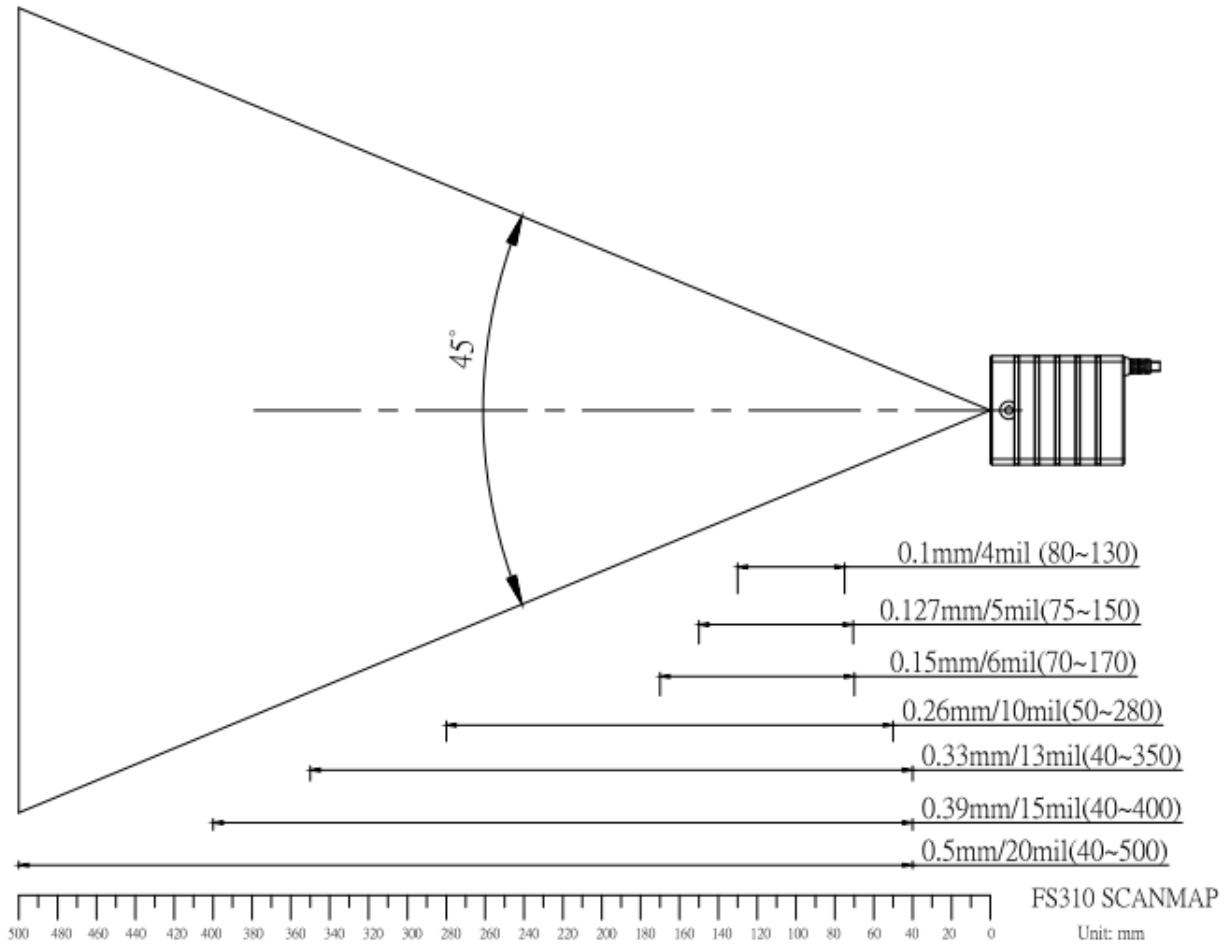
3) USB Interface

USB A TypeMale

Pin No.	Function
1	Vcc
2	D-
3	D+
4	GND



H. Scan Map



I. Reliability

Life Time

Trigger Switch	1,000,000 times
MTBF(Calculated)	50,000 hours

Thermal Shock

High Temp.	60 °C (140 °F)
Low Temp.	-20 °C (-4 °F)
Cycle time	30 minutes for high temp. , 30 minutes for low temp.
Cycles	24 cycles

Cable Bending Test 25,000 times minimum (30 times/min @ 500g/90°)

Drop 47.24 inches(120cm) drop on Concrete Surface