

# USB CONNECTORS

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## MINI USB CONNECTOR & CABLE

- [ESB3,4,5 SERIES](#)

## USB CONNECTOR & CABLE

- [ESB0 SERIES \(Connector\)](#)
- [ESB1 SERIES \(Cable\)](#)

## IEEE1394 CONNECTOR & CABLE

- [ESB6 SERIES \(Connector\)](#)
- [ESB2 SERIES \(Cable\)](#)

# Mini USB CONNECTOR & CABLE

## ESB 3,4,5 SERIES

U.S.Electronics Inc

Ph: (314) 423 7550

Fax: (314)423 0585



**PATENT NO. :** 139315  
148380  
ZL97250960.7 (CHINA)  
ZL97243965.X(CHINA)



## FEATURES

- Ultra-small size achieved universal series bus connector and cable.
- Both 4Pin type and 5Pin (One ID pin) type are 0.8mm pitch.
- 4Pin type is full compliant with current USB 1.0 specifications.
- 5Pin type is full compliant with current USB 2.0 specifications.
- Receptacle and plug housing are UL 94V-0 grade fire retardant.
- Gold plated contact ensure low contact resistance.
- To make sure your connections are perfect every time.
- EMI protection by shielding features.
- Ideal for connecting portable PCs as slim notebook PCs and handheld PCs to small, slim peripheral equipment (digital cameras, small mouse, PDA, MP3, Hub etc.).

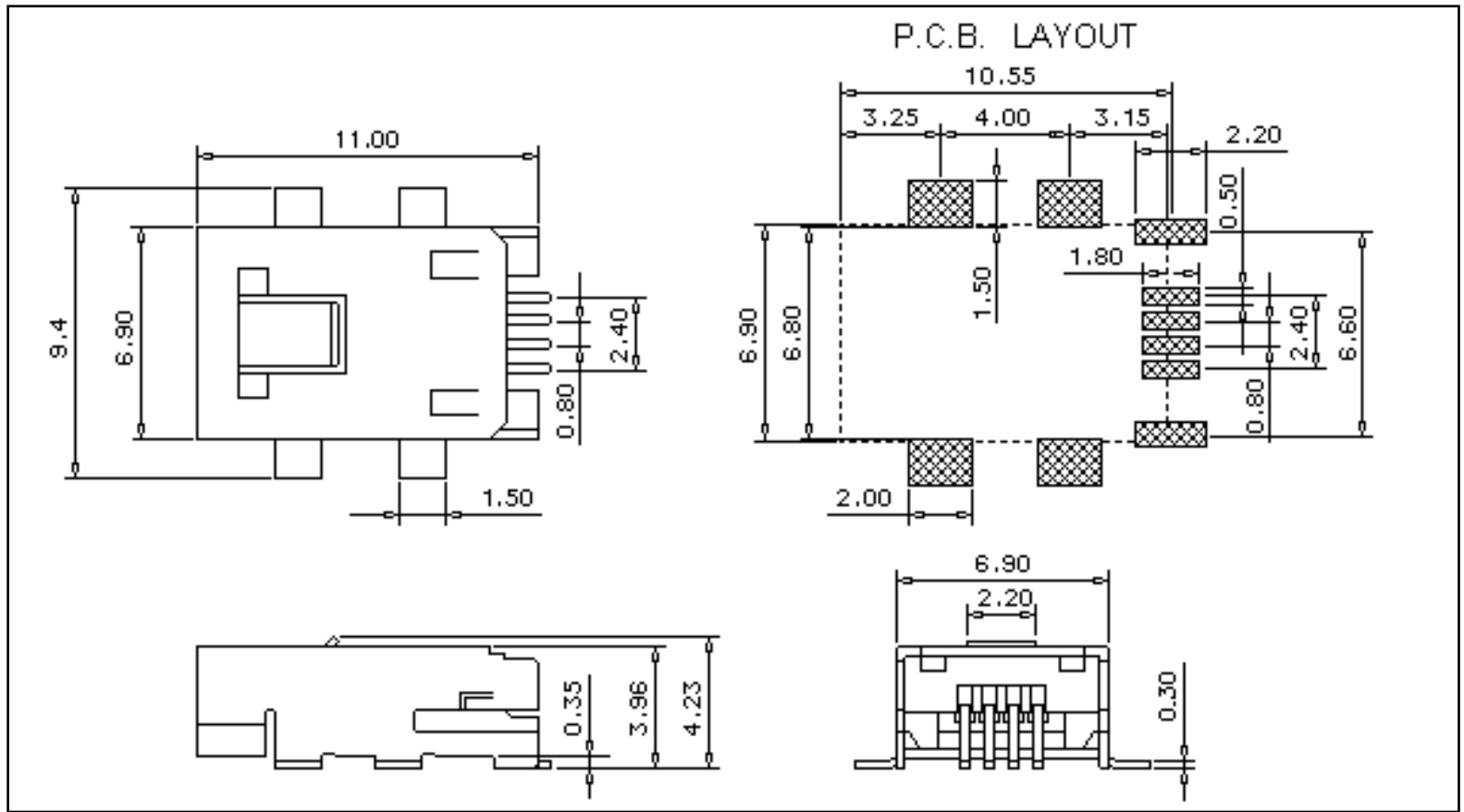
## SPECIFICATIONS

ESB3 SERIES (MINI TYPE)			
ELECTRICAL		MECHANICAL	
Voltage rating	30 VAC(rms)	Durability	1500 cycles
Current rating	1 Amp	Mating force	35N Max.
Contact resistance	50 m $\Omega$ Max.	Unmating force	2.9N Min.
Insulation resistance	100 M $\Omega$ Min.	---	---
Dielectric strength	100 VAC Min.		

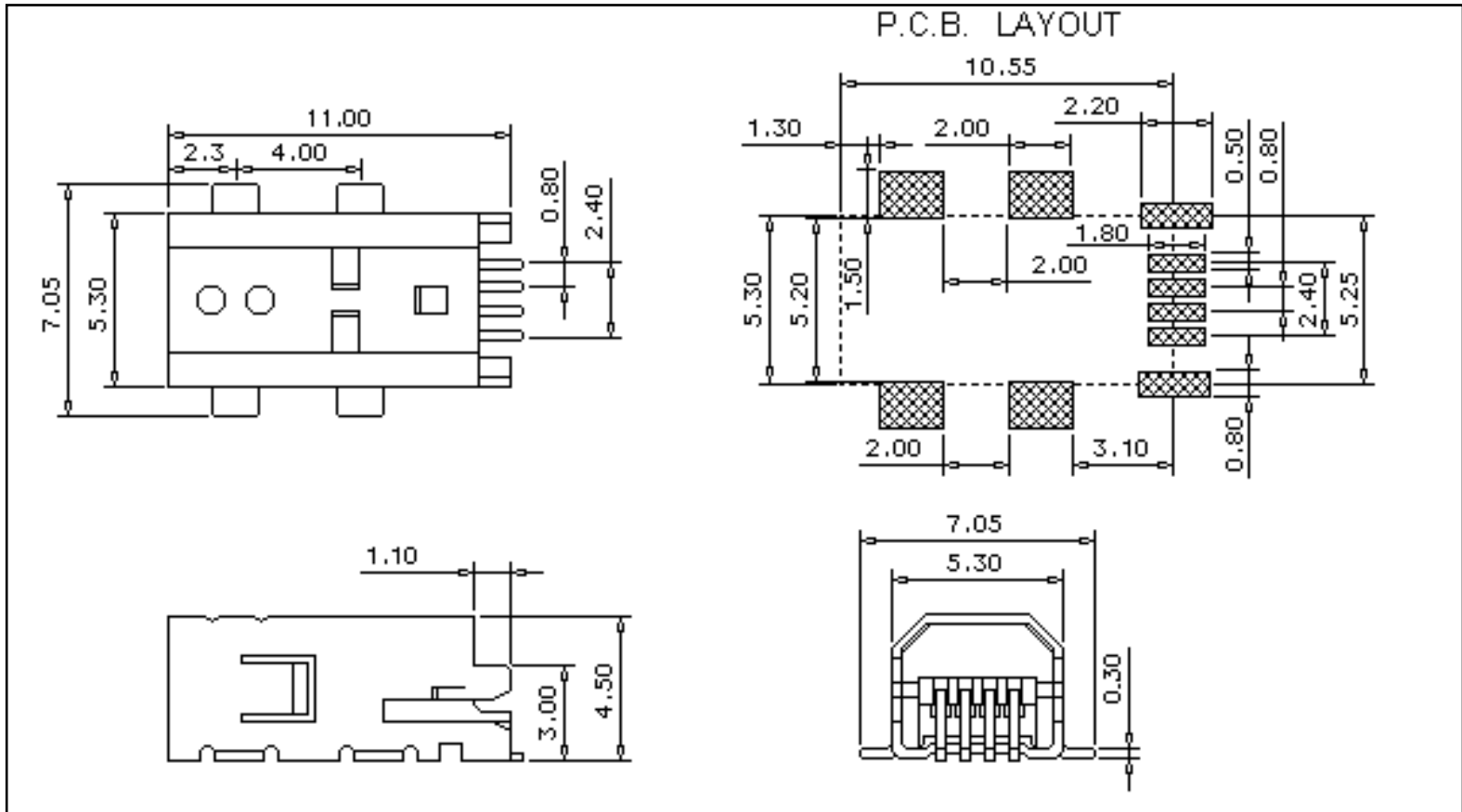


# DIMENSIONS (UNIT: mm)

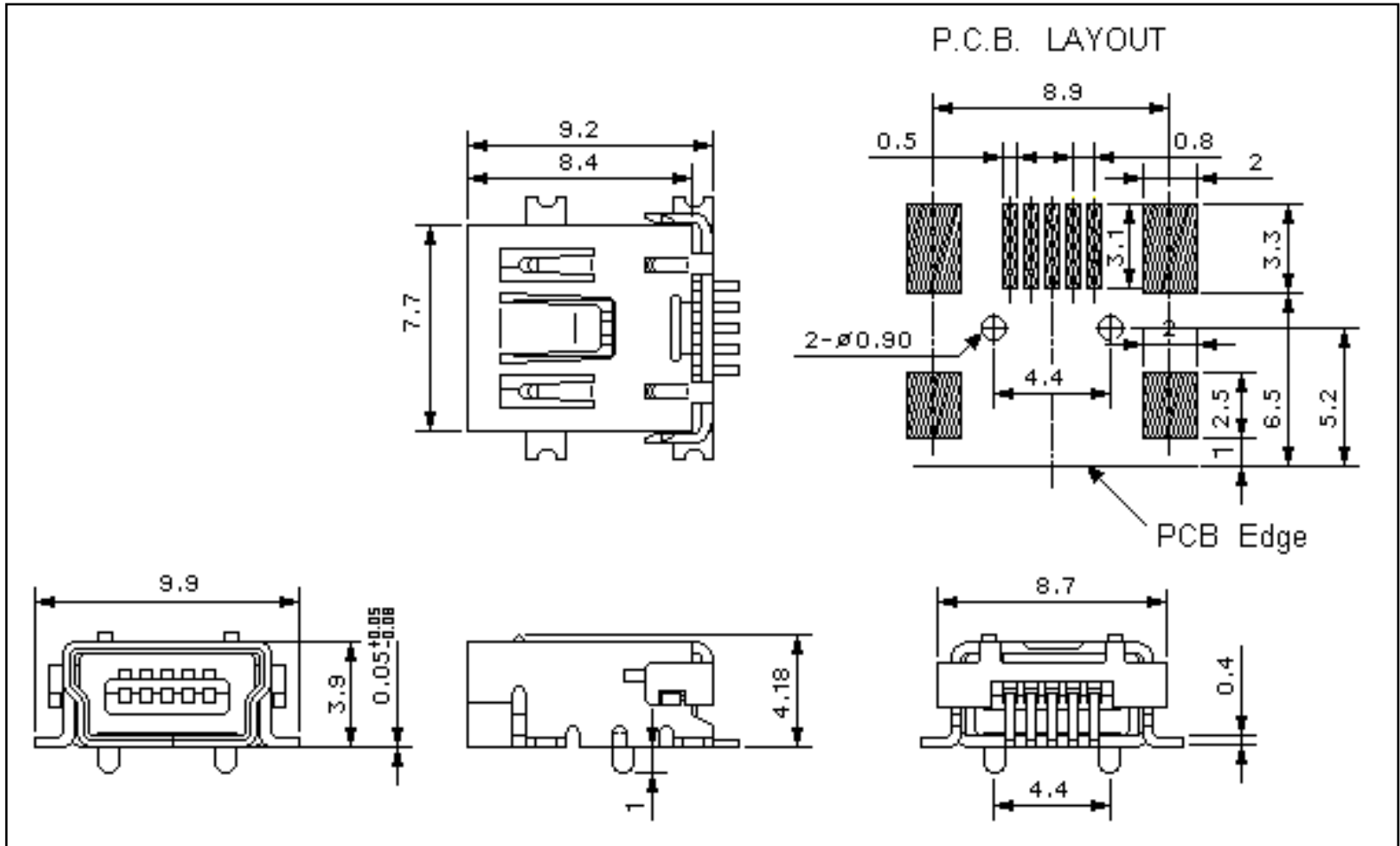
## A TYPE CONNECTOR (4PIN)



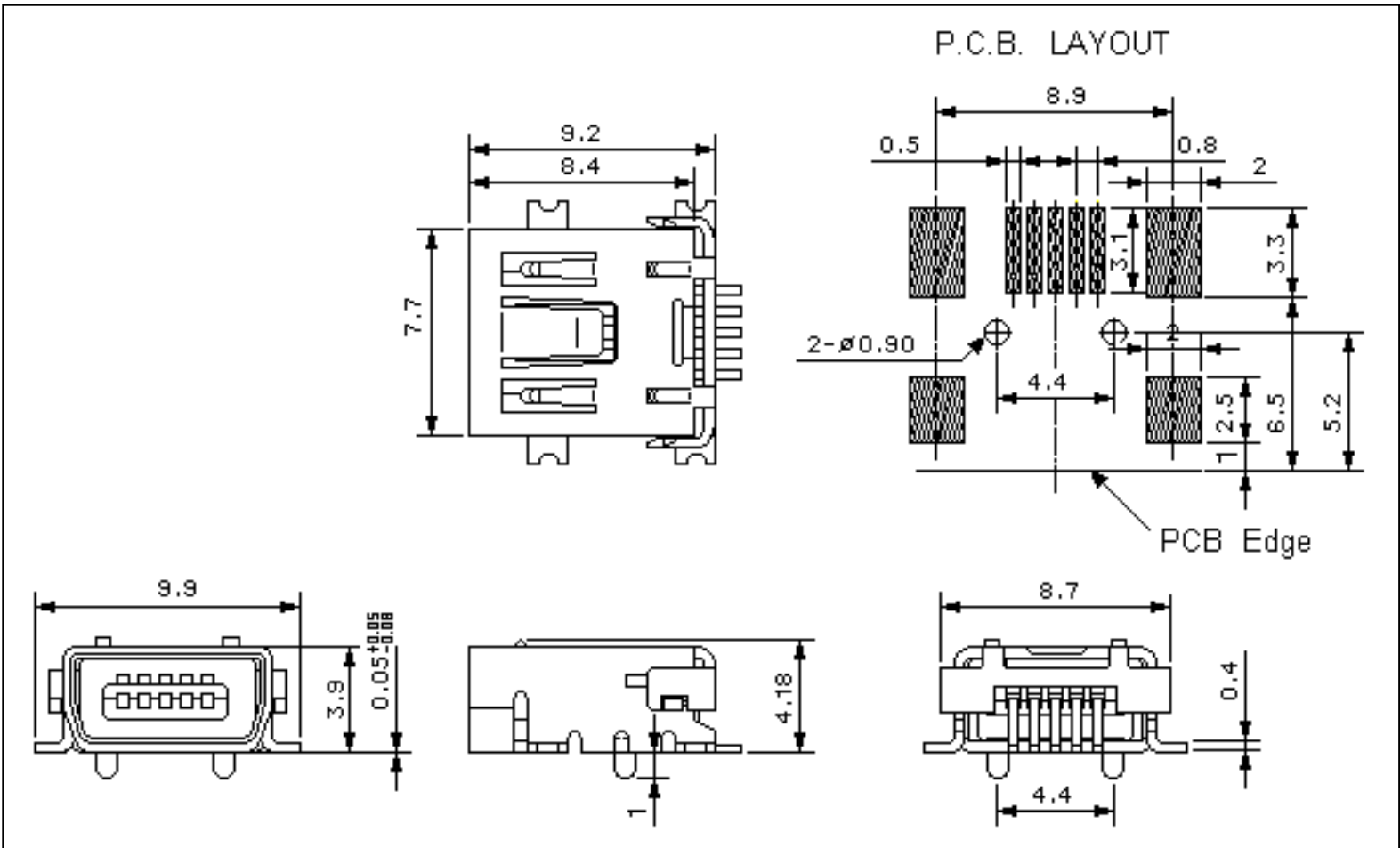
**B TYPE CONNECTOR (4PIN)**



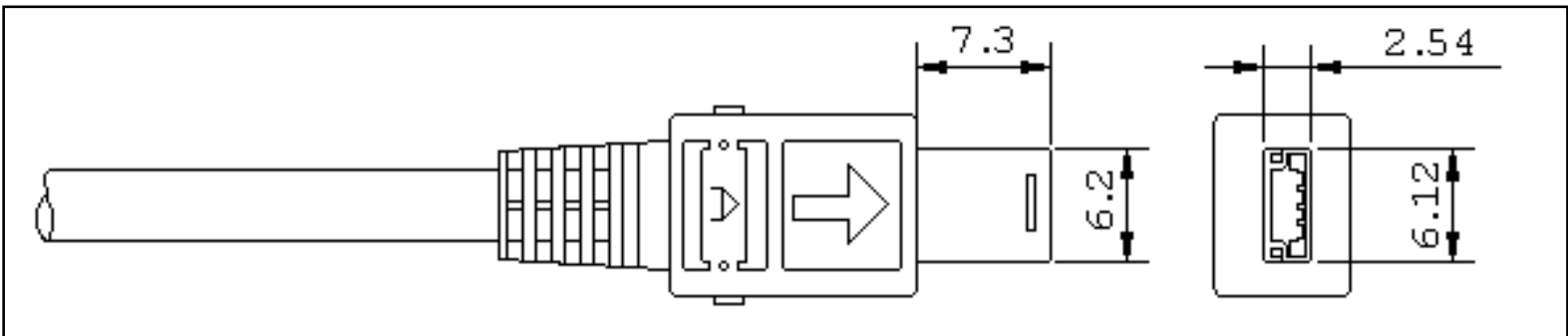
**B TYPE CONNECTOR (5PIN)**



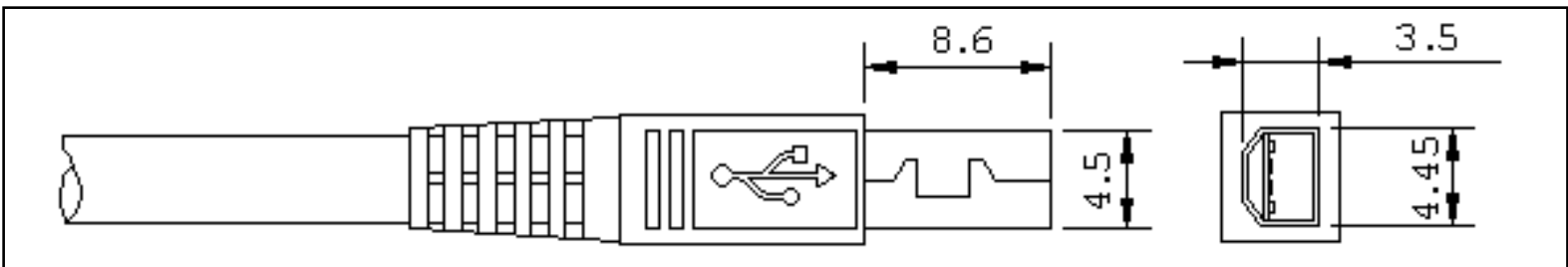
**C TYPE CONNECTOR (5PIN)**



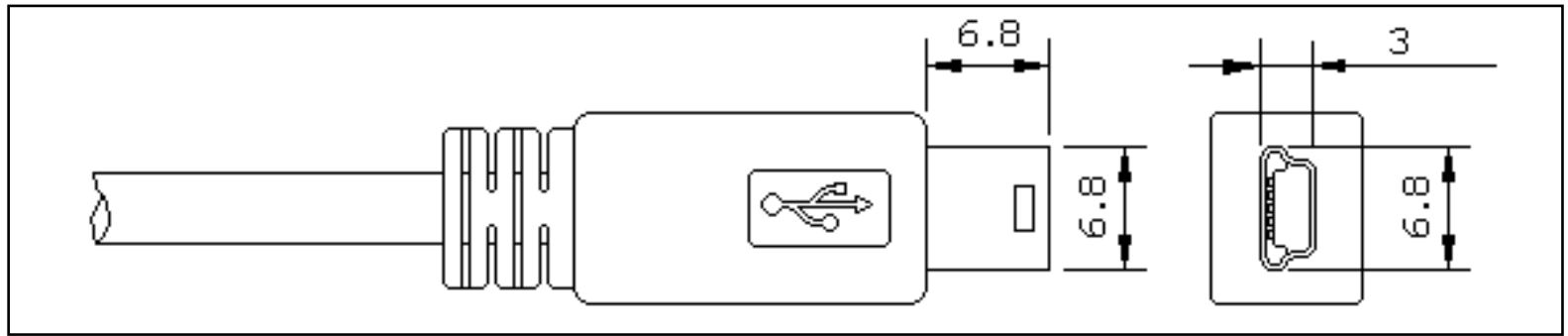
**MINI USB A TYPE CABLE (4PIN)**



**MINI USB B TYPE CABLE (4PIN)**



● MINI USB B & C TYPE CABLE (5PIN)





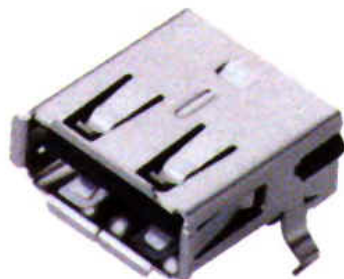
# USB CONNECTOR & CABLE

## ESB 0 SERIES (CONNECTOR)

U.S.Electronics Inc

Ph: (314) 423 7550

Fax: (314)423 0585

**PATENT NO. :139315****148380****ZL97250960.7 (CHINA)****ZL97243965.X(CHINA)**

## FEATURES

- Raised design provides easy insertion and withdrawal, and guarantee even high reliability.
- Design of three certain restraints provides robustious structure.
- Gold plated contact to ensure low contact resistance.
- All materials are UL 94V-0 grade fire retardant.
- Up to 5 meters per cable segment.
- To make sure your connections are perfect every time.


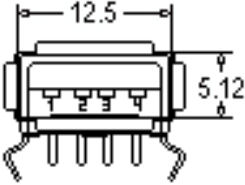
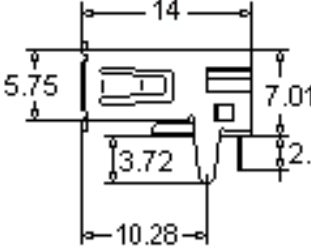
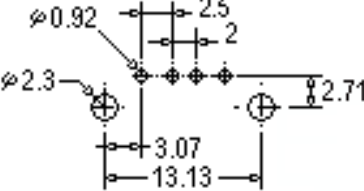

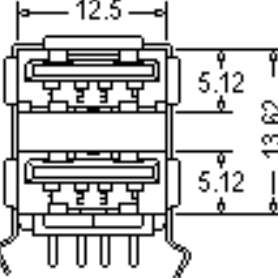
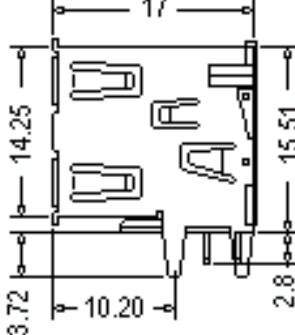
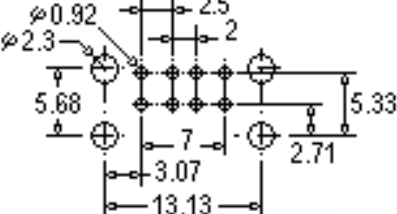
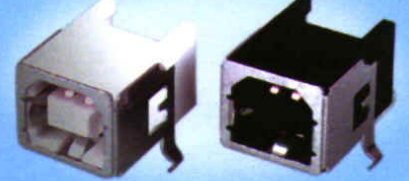
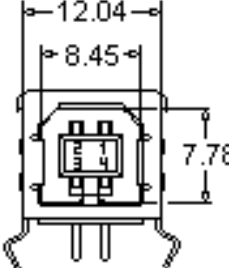
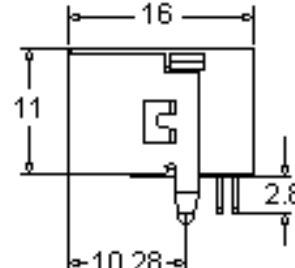
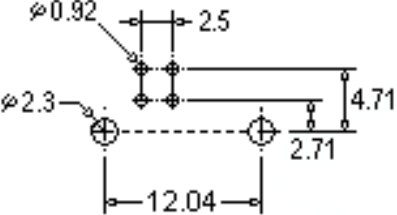
## SPECIFICATIONS

ELECTRICAL		MECHANICAL	
Voltage rating	30 VAC(rms)	Durability	1500 cycles
Current rating	1 Amp	Mating force	35N Max.
Contact resistance	30 m $\Omega$ Max.	Unmating force	2.9N Min.
Insulation resistance	1000 M $\Omega$ Min.	Temperature	storage -40°C to +60°C operating 0°C to +40°C
Dielectric strength	750 VAC Min.		

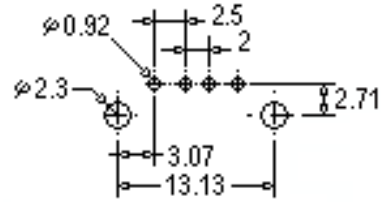
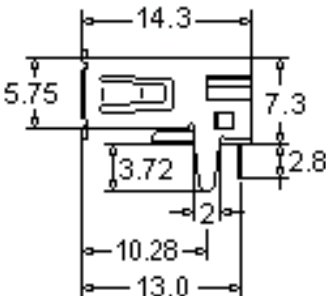
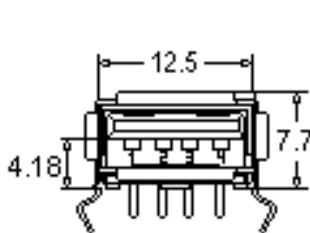


# DIMENSIONS (UNIT: mm)

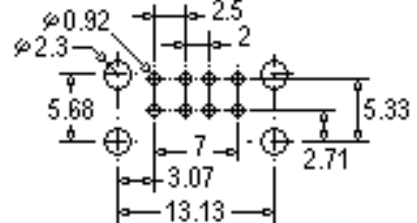
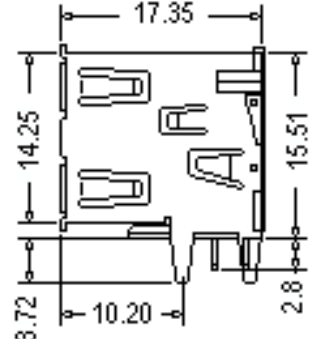
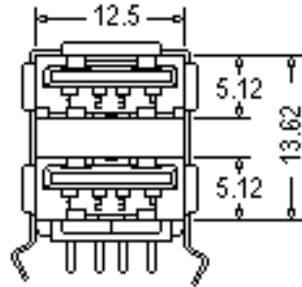
## RIGHT ANGLE TYPE

 <p><b>A TYPE Single Port</b> <b>ESB 011</b></p>			 <p>P.C.B. Layout</p>
 <p><b>A TYPE Double Port</b> <b>ESB 012</b></p>			 <p>P.C.B. Layout</p>
 <p><b>B TYPE</b> <b>ESB 021</b></p>			 <p>P.C.B. Layout</p>

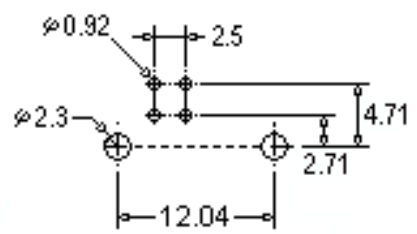
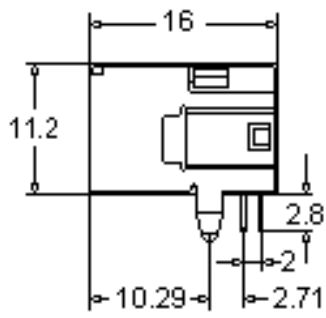
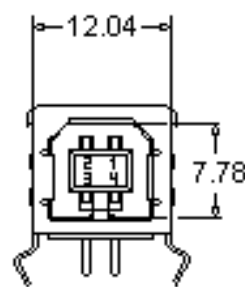
**RIGHT ANGLE TYPE / WITH SHIELD**



P.C.B. Layout

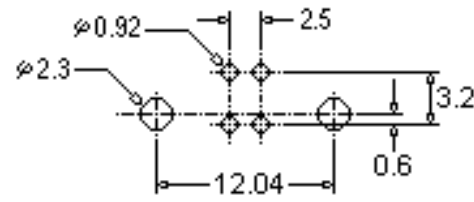
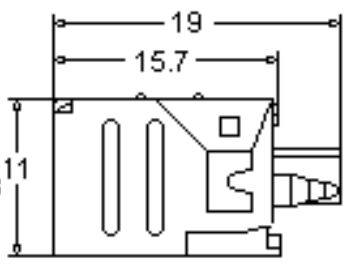
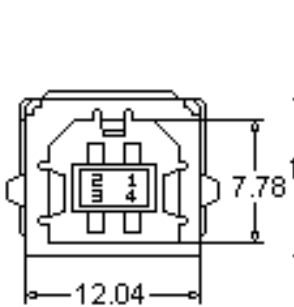


P.C.B. Layout



P.C.B. Layout

**STRAIGHT PIN TYPE**



# USB CONNECTOR & CABLE

## ESB 1 SERIES (CABLE)

U.S.Electronics Inc

Ph: (314) 423 7550

Fax: (314)423 0585

## FEATURES

- The standard USB cable will consist of one pair of 20-28 AWG wire for power distribution with another 28 AWG pair twisted, with a shield and overall jacket.
- This will be used for typical peripherals operating at the rated 12 Mbs signaling.
- An alternative cable of identical gauge but without the twisted conductors and shield can be used for 1.5 Mbs signaling.

## SPECIFICATIONS

ELECTRICAL		MECHANICAL	
Contact resistance	30 m $\Omega$ Max.	Mating force	35N Max.
Insulation resistance	1000 M $\Omega$ Min.	Unmating force	10N Min.
Dielectric strength	750 VAC Min.	Durability	1500 cycles
Capacitance	Max. 2pF (1K Hz test)	Temperature	storage -40°C to +60°C operating 0°C to +40°C
ENVIRONMENTAL		Vibration	No discontinuities of 1 $\mu$ s or longer duration.
Thermal shock	-55°C to +85°C, 5cycles.	Physical shock	No discontinuities of 1 $\mu$ s or longer duration.
Temperature life	85°C for 250 hours.		
Humidity	96 hours at 40°C with 90% to 95%RH.		

## PART NUMBERING SYSTEM

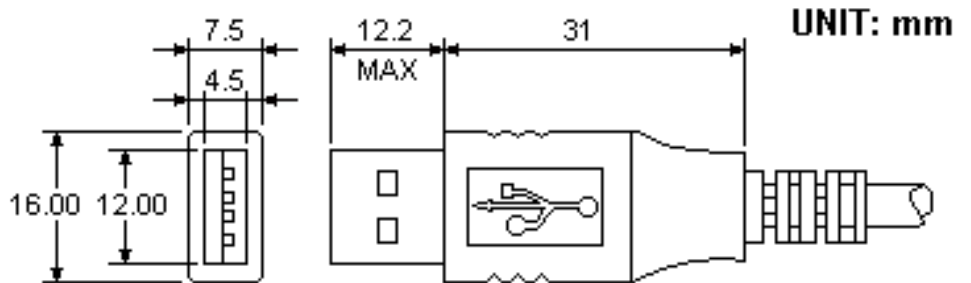
<u>ESB</u>	<u>1</u>	<u>X</u>	<u>XX</u>	<u>XX</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
									+----- Special Code
									+----- Certificate: 0:UL CM Type
									1:UL 2725
									+----- Color: 0:White Frost
									1:Gray 3:Black
									2:Ivory 4:Beige
									+----- Rating: 0:Full-Rate Channel
									1:Sub-Rate Channel
									+----- Wire Gauge: 88:AWG 28/28
									68:AWG 26/28
									48:AWG 24/28
									28:AWG 22/28
									08:AWG 20/28
									+----- Cable Length: 10:1.0M 18:1.8M
									20:2.0M 30:3.0M
									50:5.0M
									+----- Setting: 1:A+Free Type 2:B+Free Type
									3:A+B Type 4:A+A Type
									5:B+B Type 6:A+Housing
									7:B+Housing 8:Socket+housing
									9:Plug+housing
									+----- Type: 1:Cable(plug)
									+----- Model Name: ESB Series

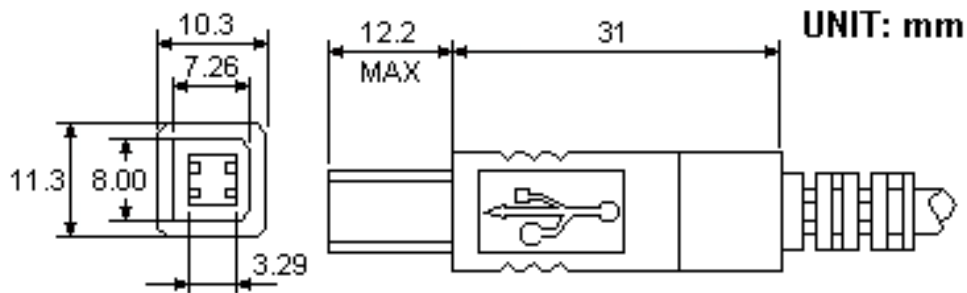
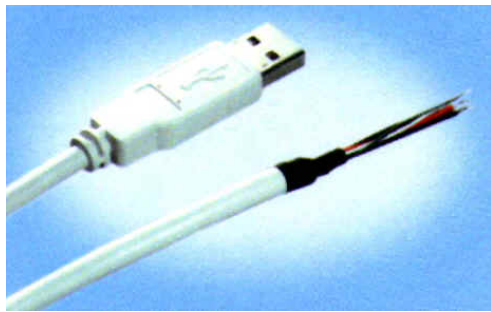
## DIMENSIONS (UNIT: mm)

### ● USB CABLE ( ESB 1 SERIES)

PAPT NUMBER

SETTING





**ESB 11XXXXXX**

**A+Free type**



**ESB 12 XXXXXX**

**B+Free type**



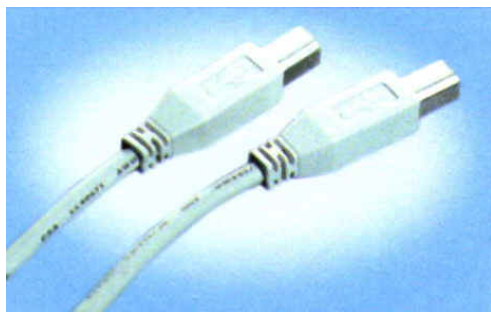
**ESB 13 XXXXXX**

**A+B type**



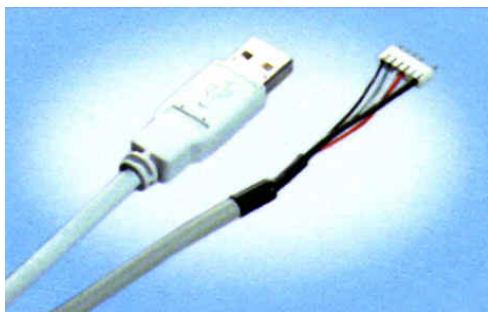
**ESB 14 XXXXXX**

**A+A type**



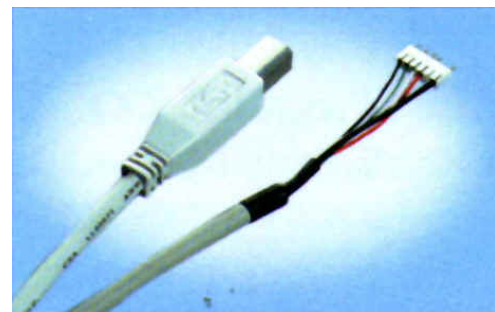
**ESB 15 XXXXXX**

**B+B type**



**ESB 16 XXXXXX**

**A+Housing  
(Housing made as require)**



**ESB 17 XXXXXX**

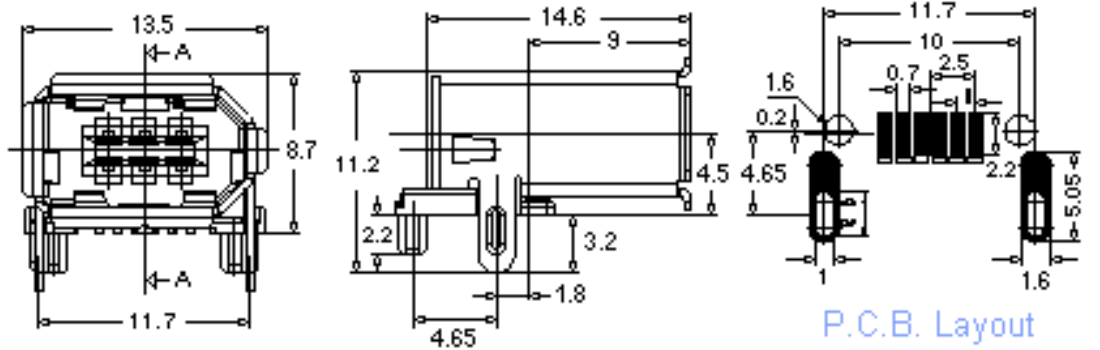
**B+Housing  
(Housing made as require)**





## DIMENSIONS (UNIT: mm)

### IEEE 1394 CONNECTOR



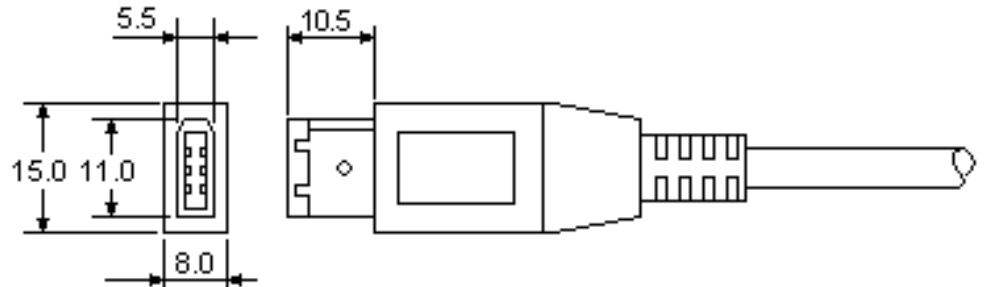


## DIMENSIONS (UNIT: mm)

### IEEE 1394 CABLE ( ESB 2 SERIES )



**6 PIN TYPE**



**4 PIN TYPE**

