

Belling-Lee

Single pole plugs and sockets
Multipole connectors
Mains connectors
Printed circuit edge connectors
Ribbon cable
Flexible circuits
Interconnection systems

Dimensions (unless otherwise stated)

Panel cut-outs minima, normal tolerance + 0.005 inch 0.13 mm.

Overall sizes and fixing centres nominal.

First dimension is design dimension.

Second is the nearest imperial or metric equivalent.

Current ratings / Temperature rise

Where stated, the temperature rise figure given
is above ambient (20 °C).

All photographs are shown
actual size unless
otherwise stated.

IMPORTANT NOTE

European Community Council Directive on low
voltage electrical equipment.

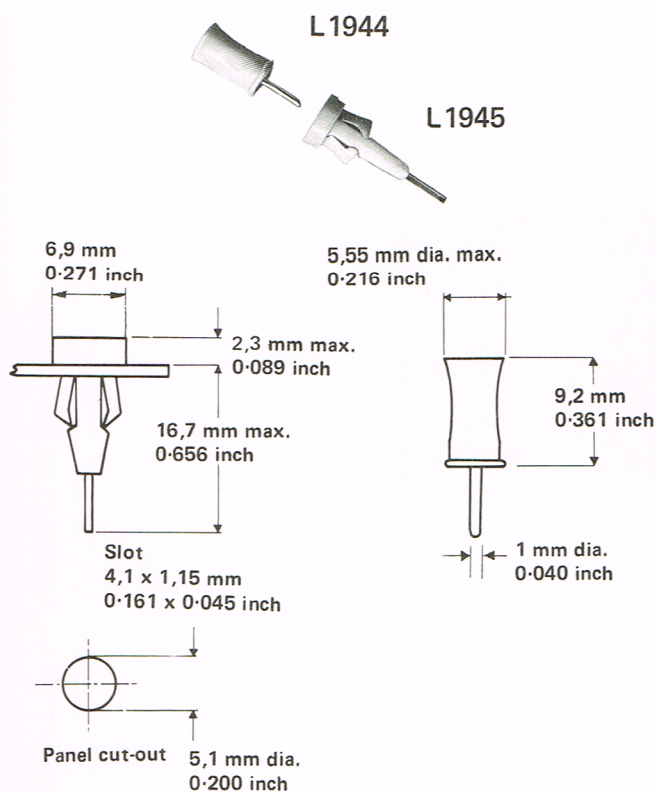
Health & Safety at Work Act October 1974.

Consumer Protection Act (The Electrical
Equipment Safety Regulation 1975 effective
1st April 1976).

If you have reason to believe your products are
covered by the above legislation please contact
our Technical Advisory Service who will be pleased
to advise you concerning the suitability of our
products in your applications.

Telephone 01-363 5393 and ask for Components
Division Technical Sales.

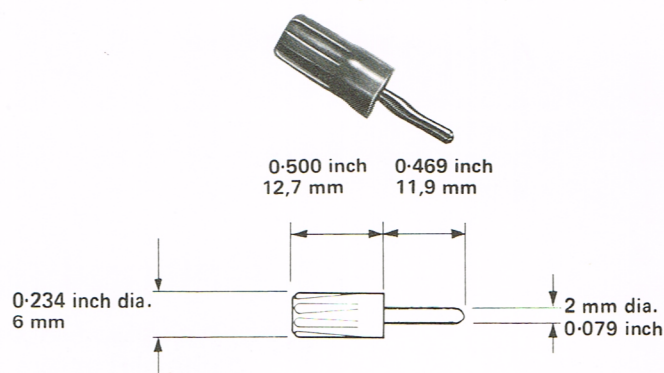
Single pole connector 1 mm L 1944/Colour, free plug L 1945/Colour, fixed socket



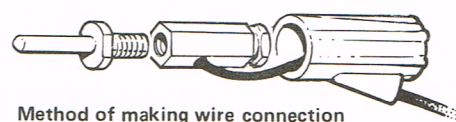
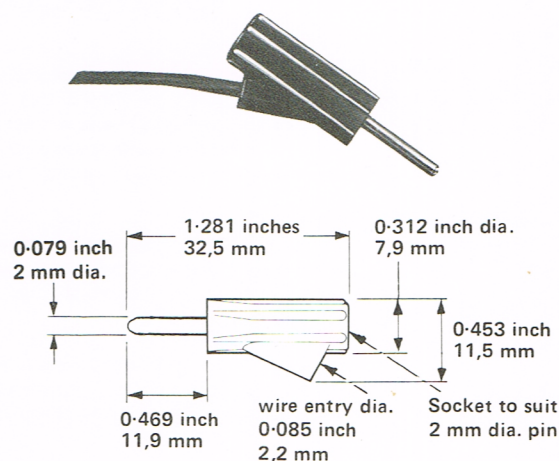
These miniature connectors combine robustness with small dimensions, and feature a unique locking device in the fixed connector body moulding. The plug latches positively into the socket to prevent accidental withdrawal. The finish is silver-plated brass.

	L 1944/Colour	L 1945/Colour
Current rating	2 A (5 A temperature rise $\leq 30^{\circ}\text{C}$)	
Contact resistance	≤ 3.5 milliohms	
Breakdown voltage (d.c.)	—	4 kV
Insulation resistance	—	100×10^3 megohms
Temperature range (Ambient)	10°C to 70°C	
Fixing force (maximum)	—	168 N 36 lbf
Insertion force (maximum)	25 N 5.6 lbf inc. locking	
Panel thickness	—	0.77 to 2.5 mm 0.030 — 0.098 inch
Wire size overall (maximum)	2.33 mm 0.092 inch	—
Wire size conductor (max.)	1.48 mm $\varnothing$ 0.058 inch	See drawing
Connection	Crimp or Solder	Solder
Insulant	Polypropylene	Polycarbonate and Polypropylene
Colours	Black, red, green, blue, white and yellow	
Weight (average)	0.29 g 0.01 oz	0.34 g 0.01 oz

Single pole connectors 2 mm L 1727/Colour, free plug, end entry, with non-resilient pin (black, red)

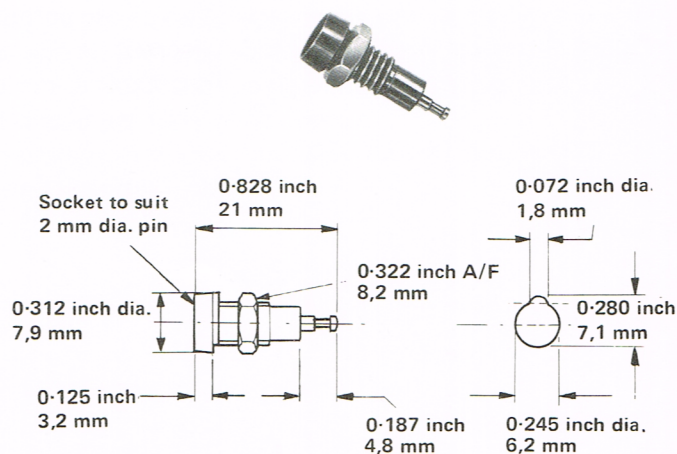


L 1736/Colour, stacking plug, free, with resilient stacking socket (black, red)



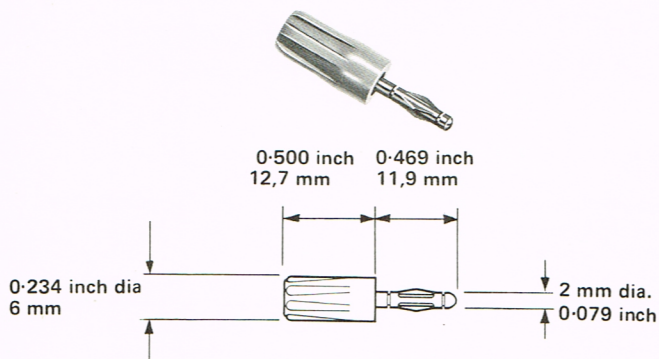
Method of making wire connection

L 1737/Colour, fixed socket, resilient (black, red)

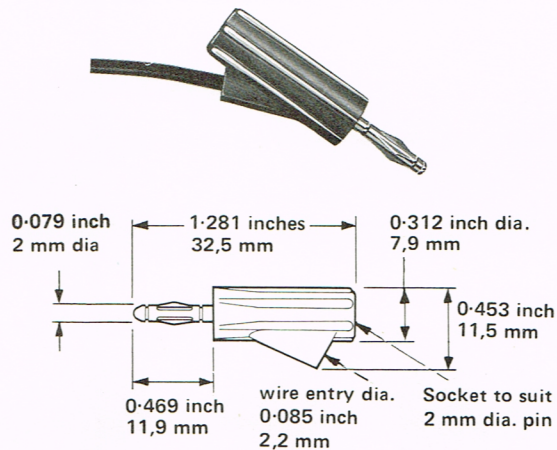


Panel cut-out

Single pole connectors 2 mm L1727A/J/Colour, free plug, end entry, resilient

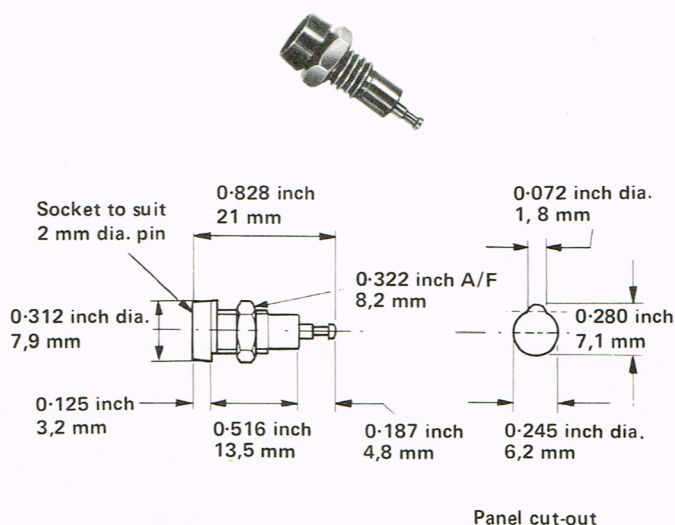


L1736A/J/Colour, stacking plug, free, with non-resilient stacking socket



Method of making wire connection same as L1736 adjacent.

L1737A/J/Colour, fixed socket, non-resilient

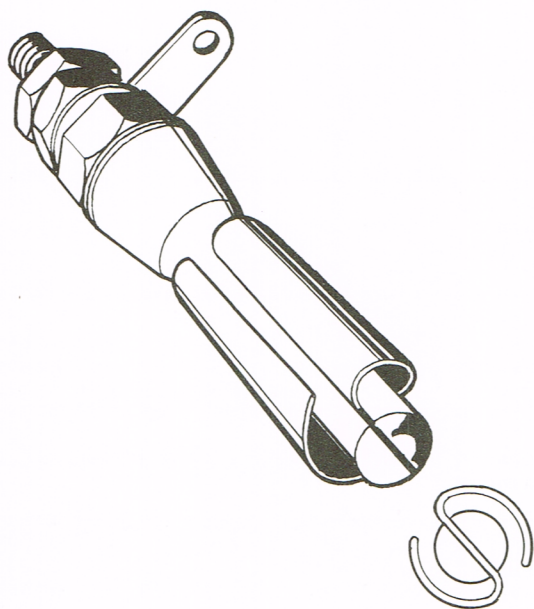


These miniature connectors are extremely robust, have a current rating of 10 amp, and are simple to load, with a choice of standard colours. The plugs are in two styles, each with a snap-on cover, one end-loading and the other having a socket in the end for a test probe or stacking a further plug. An insulated mounting socket L1737 completes the range. A complementary series of terminals, L1726 is illustrated on page 5 of the red section of this catalogue. The finish is silver-plated brass.

	L1727/Colour L1727A/J/Colour	L1736/Colour L1737A/J/Colour	L1737/Colour L1737A/J/Colour
Current rating	10 A for temperature rise $\leq 10^{\circ}\text{C}$		
Contact resistance	≤ 3 milliohm		
Breakdown voltage (d.c.)	—		> 4 kV
Insulation resistance	—		$\geq 20 \times 10^3$ megohms
Temperature range(Ambient)	-40°C to $+50^{\circ}\text{C}$ ($+65^{\circ}\text{C}$ at 5 A maximum)		
Fixing torque (maximum)	—		0,32 N m 45 ozf in
Insertion force (maximum)	15,7 N 3.5 lbf		
Panel thickness	—		0.031-0.187 inch 0,79 - 4,76 mm
Wire size, overall (maximum)	0.121 inch 3,1 mm	0.079 inch 2 mm	—
Wire size, conductor (maximum)	0.070 inch 1,8 mm	0.079 inch 2 mm	—
Connection	Crimp or solder	Non-cutting screw	Solder
Insulant	PVC	PVC	Polypropylene
Colours	L1727, L1736 & L1737 Black or Red only L1727A/J, L1736A/J, & L1737A/J Black, blue, green, red, white and yellow		
Weight (average)	0,92 g 0.03 oz	3,36 g 0.11 oz 3,5 g 0.12 oz (AJ)	1,66 g 0.06 oz 1,05 g 0.04 oz (AJ)

The O-Z principle

Devised for a particularly low resistance, heavy current contact the O-Z principle of plug design is now firmly established as a method of ensuring a multi-point contact which will not jump out under vibration. Millions of plugs employing this principle are now in service. O-Z plug pins feature a phosphor-bronze spring leaf welded into the split stem, ensuring that the contact resistance is virtually unaffected when used with wide tolerance sockets. The mating length of the pin is 0.5 inch 12.7 mm.

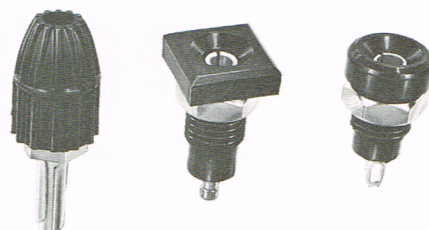


Single pole connectors 3 mm

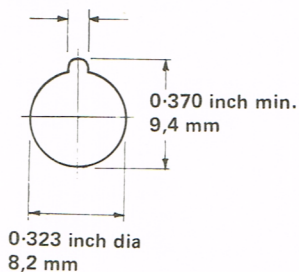
L378A/3 Colour, free connector, O-Z, clamp or solder connection
L1317/Colour, fixed connector, (square face)
L1412/Colour, fixed connector, (round face)

Current rating:	10 A (temperature rise $\leq 10^{\circ}\text{C}$)
Contact resistance:	≤ 2 milliohms
Temperature range:	-55°C to $+85^{\circ}\text{C}$ (Ambient)
Insulation resistance:	$\geq 10^3$ megohms
Voltage breakdown (fixed connectors):	≥ 5 kVd.c.
Insertion/withdrawal force:	1.5 to 4 lbf 17.8 to 6.67 N depending on type of fixed connector
Conductor size (maximum):	L378A/3 56/0.3 mm
Panel thickness (maximum):	L1412 - 0.187 inch 4.8 mm L1317 - 0.275 inch 7 mm
Fixing torque (fixed connector):	60-80 ozf inch 0.565-0.424 N m
Materials:	Contact body - brass, silver-plated Contact leaf (L378A/3) - phosphor-bronze, silver-plated Insulant - polypropylene Black, and red
Colours:	
Weights (average):	L378A/3 - 4.5 g 0.16 oz L1317 - 2.8 g 0.10 oz L1412 - 1.9 g 0.07 oz

These connectors are complementary to the 4 mm range



0.047 inch min rad.
1.2 mm

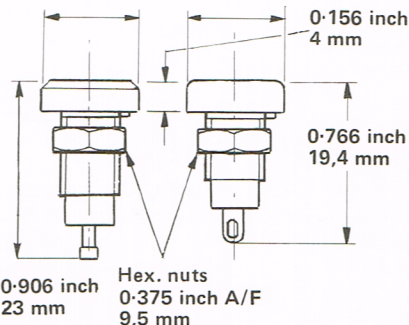
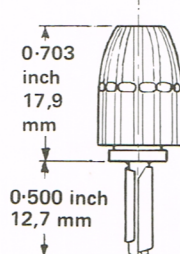
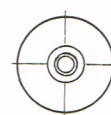
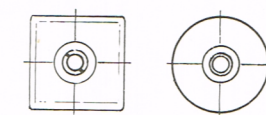
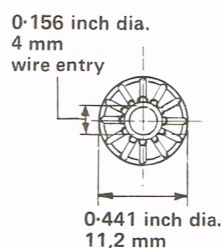


Panel cut-out for 3 mm and 4 mm sockets, (shown on pages 3, 4 & 5).

L378A/3

L1317

L1412



Single pole connectors, 4 mm

L378A/4/Colour, clamp or solder connection

L1716A/Colour, crimp or solder connection

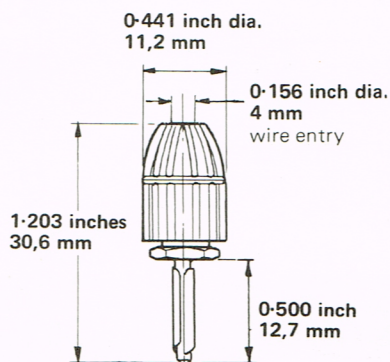
E6013/Colour, fixed connector, (round face)

continental 4 mm

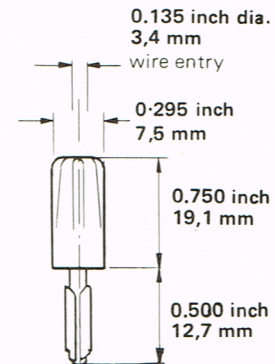
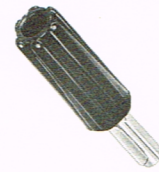
for 20 mm long mating contact

Current rating:	10 A (temperature rise $\leq 10^{\circ}\text{C}$)
Contact resistance:	≤ 2 milliohms
Insulation resistance:	$\geq 10^3$ megohms
Voltage breakdown (socket):	> 5 kVd.c.
Temperature range: (Ambient)	-55°C to $+85^{\circ}\text{C}$ (L1716A + 70°C)
Conductor sizes (maximum):	L378A/4 56/0,3 mm L1716A 32/0,2 mm
Panel thickness (maximum):	L1413 0.187 inch 4,8 mm L1318 } 0.275 inch 7 mm L1717 } L1718 }
Fixing torque (sockets):	60 - 80 ozf inch 0.565 - 0.424 N m
Materials:	Contact body — brass, silver-plated Contact leaf — phosphor-bronze, silver-plated
Insulant:	L1716A - PVC, remainder polypropylene
Colours:	L378A/4 Black, blue, green, red, white and yellow L1318 Black, blue, green, red, white, and yellow L1413 Black, blue, green, red, white, and yellow E6013 Black, blue, green, red, white and yellow L1716A Black, red, green L1717 Black, red L1718 Black, red
Weight (average):	E6013 3,1 g 0.11 oz L378A/4 5,0 g 0.17 oz L1318 2,8 g 0.10 oz L1413 1,9 g 0.07 oz L1716A 2,2 g 0.079 oz L1717 2,7 g 0.096 oz L1718 2,8 g 0.10 oz

L378A/4



L1716A

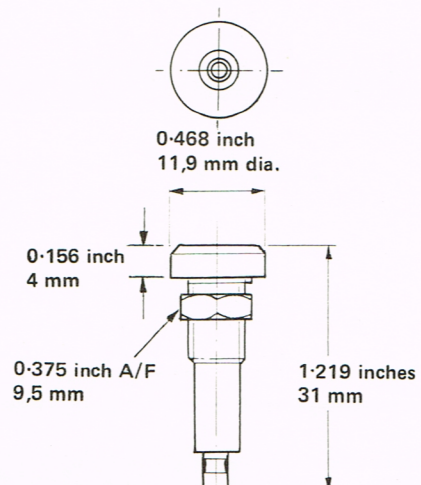


The plug type L1716A is an extremely versatile component of low cost. It is quickly loaded by crimping or soldering the wire to the plug pin, and the plastic cover then snaps into position. Its small size is of great convenience in modern miniaturised equipment and when plugged into the recessed head of the miniature or standard continental terminal the plug-pin head is fully shrouded and is not jacked out by unscrewing the head.

Crimp tool

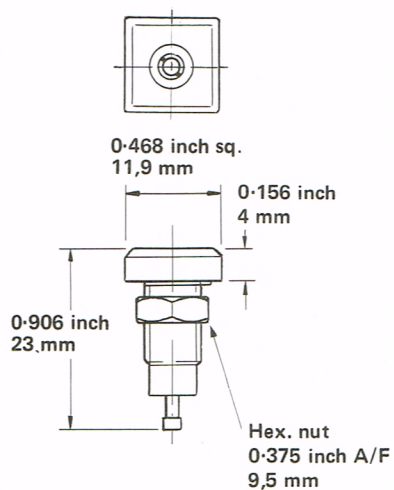
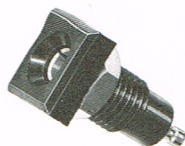
Erma Buchanan 611210 with positioner 7005545 and setting gauge 600076

E6013

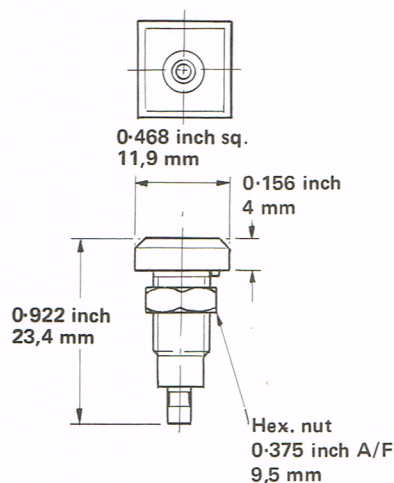
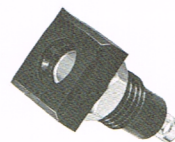


Fixed connectors, 4 mm

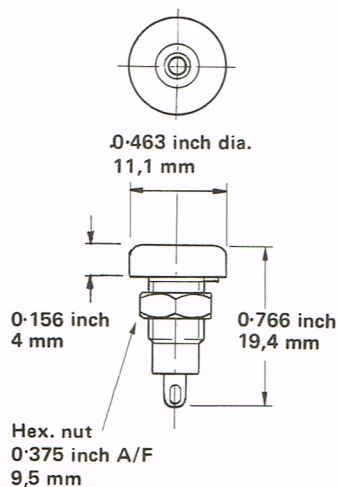
L1318/Colour, square face, resilient contact



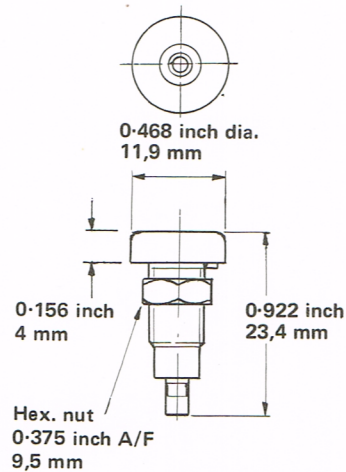
L1718/Colour, square face, non-resilient contact



L1413/Colour, round face, resilient contact



L1717/Colour, round face, non-resilient contact

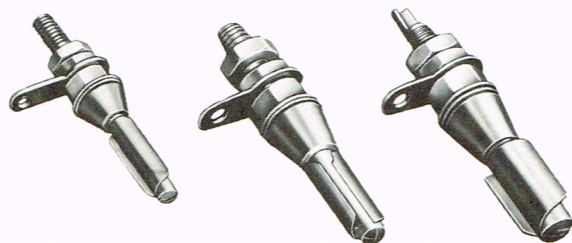


Single pole uninsulated O-Z connectors

L513 3 mm connector

L514 4 mm connector

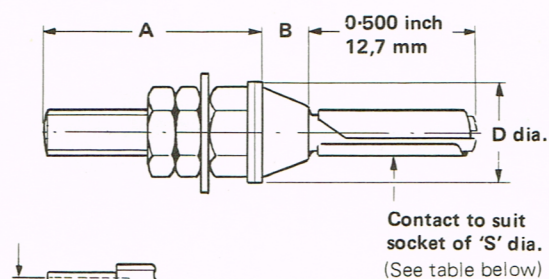
L515 5 mm connector



L513

L514

L515

0.059 inch
1.5 mm dia.

Solder spill L515 only

These connectors employ the O-Z multiple contact leaf spring, a well-known Belling-Lee feature, ensuring low contact resistance and high current rating. It also combats faulty contact and ejection under vibration.

Current ratings:

L513 10 A

L514 10 A

L515 15 A

Weights (average):

L513 2.75 g 0.097 oz

L514 5.5 g 0.194 oz

L515 6.2 g 0.215 oz

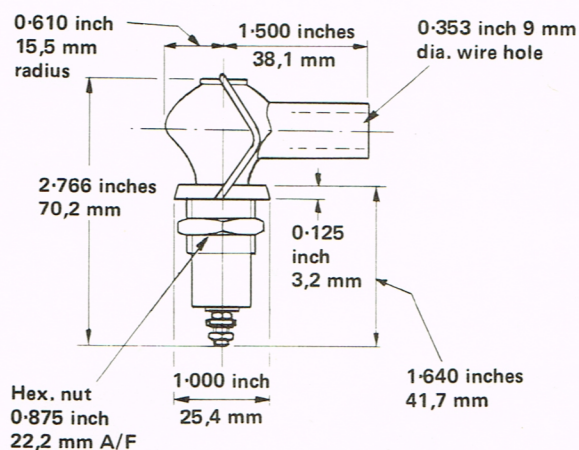
Type No.		L513	L514	L515
Stem		6 B.A.	4 B.A.	4 B.A.
A	inch mm	0.562 14,3	0.625 15,9	0.656 16,7
B	inch mm	0.125 3,2	0.218 5,6	0.250 6,4
D	inch mm	0.234 6	0.281 7,1	0.281 7,1
S	inch mm	0.125 3	0.156 4	0.204 5

3 mm Single pole high tension connector

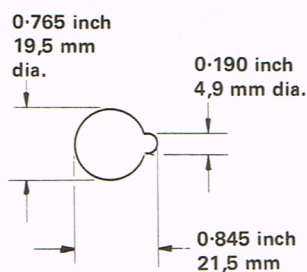
L623/P Fixed inlet

L623/S Free connector

Scale 1:2



L623/P & S mated



Panel cut-out

This connector assembly employs the O-Z contact principle, a well-known Belling-Lee feature ensuring low contact resistance and reliability when subjected to vibration.

Voltage breakdown (d.c.):

at sea level > 10 kV at
18 000 m 60 000 ft > 1.5 kV

Insulation resistance:

> 10 x 10³ megohms

Contact resistance:

6-13 milliohms

Panel thickness (maximum):

0.312 inch 7.9 mm

Fixing torque:

90-200 ozf inch 1.41-0.63 N m

Wire size:

0.35 inch 9 mm maximum diameter

Materials:

Body — phenolic resin moulding
Contacts — plug phosphor-bronze
socket brass

Finish — silver-plated

Weight (average):

L623/S 23.84 g 0.84 oz

L623/P 15.57 g 0.55 oz