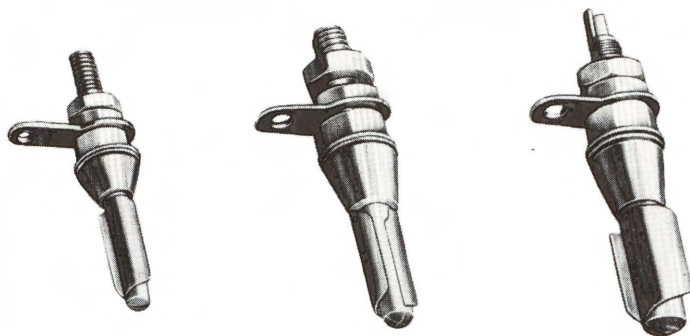
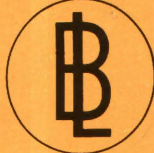


Single Pole Connectors



L513
3mm Plug, 10A

L514
4mm Plug, 10A

L515
5mm Plug, 15A,
with solder spill



L623/P & S
High Tension
Plug & Socket

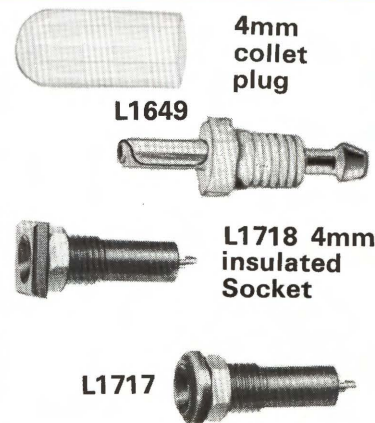


This illustration shows plug, L1716, fitting into position in Stacking plug, L1708.

L1716
4mm Plug

L1708
Single stacking plug

L1706 Twin
stacking plug



L1649
4mm
collet
plug

L1718 4mm
insulated
Socket

L1717

L623/P & S

Breakdown (d.c.):	At sea-level. > 10kV At 18000m. (60.000 ft. > 1.5 kV)
Insulation resistance:	10 ⁴ megohms
Contact resistance:	6—13 milliohms
Max. panel thickness:	(0.312 in.) 7, 9mm.
Fixing torque:	6900-13800gm.cm. (90-200 oz. in.)
Cable size:	(0.35 in.) 8, 9 mm. max. dia.
Materials:	Body—phenolic resin moulding. Contacts—silver-plated.
Weight (average):	Plug 15,57g (0.55 oz) Socket 23,84g (0.84oz)

L1706, L1708, L1716, L1717, L1718, L1649,

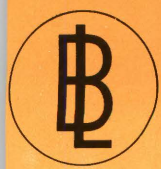
Insulation resistance:	10 ⁶ megohms
Max. panel thickness:	0.275 (7mm)

The 'O-Z' Multiple Contact Plugs & Sockets

These connectors are the first items in a new range of wander plugs and sockets combining improved performance and versatility with modern styling and maximum economy. The plug members employ the OZ multiple contact spring leaf, a well-known Belling-Lee feature which ensures low contact resistance and a high current rating over a wide range of tolerance on the mating socket diameter, and obviates any tendency for the plug to eject itself from the socket under vibration.

L1706, L1708, L1716, L1717, L1718, L1649,

Current rating:	10A (Temperature rise < 10°C)
Contact resistance:	< 2m milliohms
Temperature range:	—55° to +85°C
Materials:	Contact body—brass silver-plated Contact leaf (plugs)— phosphor-bronze, silver-plated Insulant—L1716, PVC. remainder, polypropylene
Colours:	available in six colours
Conductor sizes:	L1649 23-110/- 0076" (23-110/0.193mm) L1706, L1708 110/ 0076" (110/0.193mm) max. L1716 70/ 0076" (70/0.193) max.
Weight (average):	L1649 5.15g (0.18 oz) L1706 19.21g (0.68 oz) L1708 9.28g (0.33 oz) L1716 2.13g (0.075 oz) L1717 2.71g (0.096 oz) L1718 2.84g (0.10 oz)



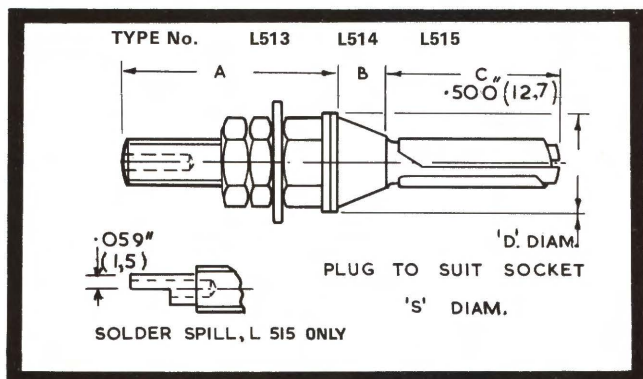
Single Pole Connectors

The Stacking Plugs are a useful innovation, and permit additional apparatus to be rapidly connected to a circuit without disturbing the existing connections. Any number can be plugged together, and they will mate with all standard 4 mm solid and resilient sockets and also with all Belling-Lee terminals that incorporate a socket in the head. Cable connection via the side port is secured by means of a grub screw located in the bottom of the socket; the end of this screw is specially shaped so as not to cut the wire.

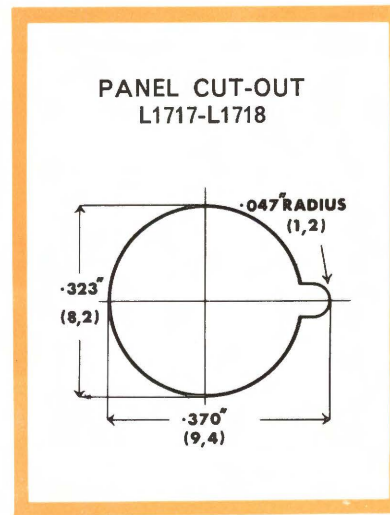
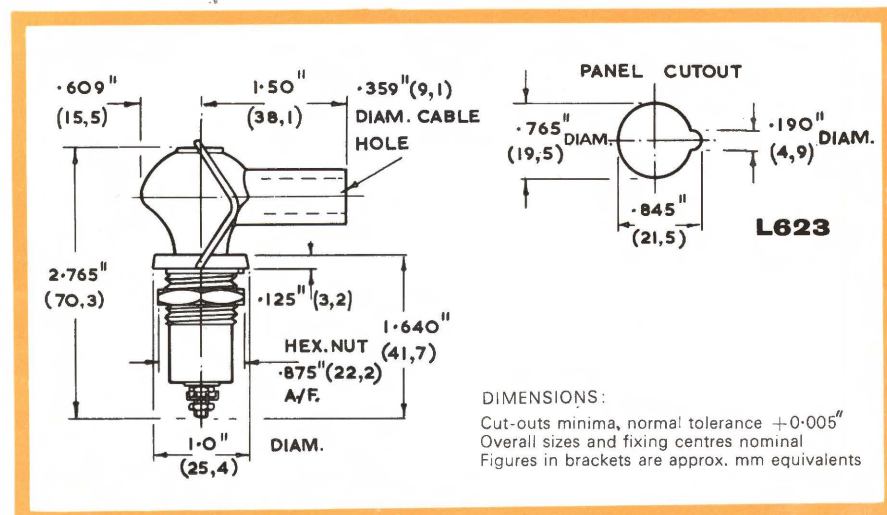
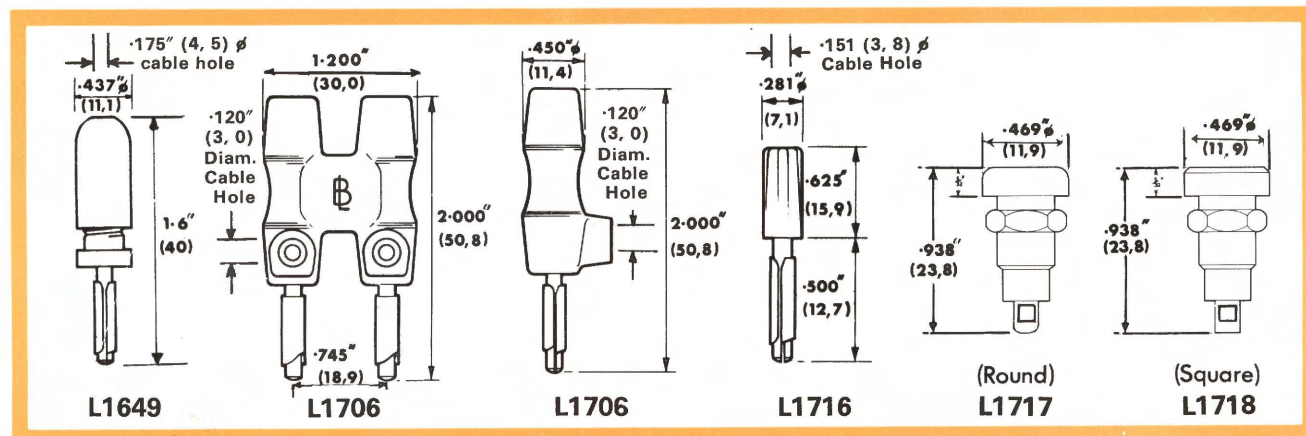
The plug, type L1716, is an extremely versatile component of low cost. It is quickly loaded by crimping or soldering the cable to the plug-pin, and the elastic

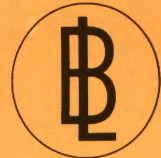
cover then snaps into position. Its small size is of great convenience in modern miniaturised equipment and, when plugged into the recessed head of the miniature "Continental" terminal, the plug-pin is fully shrouded and is not jacked out by unscrewing the head.

The alternative but larger type, L1649, is attached to the cable by means of an internal collet, which is integral with the plug-pin; its 4 jaws are closed by screwing on the cap. It is thus assembled without tools, accommodates a wide range of cable sizes having from 23 to 110/0076 in. (0.193 mm) conductors, and can be easily re-wired.



TYPE No.	L513	L514	L515
STEM	6BA	4BA	4BA
A MM	14,3	15,9	16,7
A IN	.562	.625	.656
B MM	3,2	5,6	6,4
B IN	.125	.218	.250
C MM	12,7	12,7	12,7
C IN	.500	.500	.500
D MM	6,0	7,1	7,1
D IN	.234	.281	.281
E MM	—	—	1,5
E IN	—	—	.059
S MM	3	4	5
S IN	.125	.156	.204





L1570

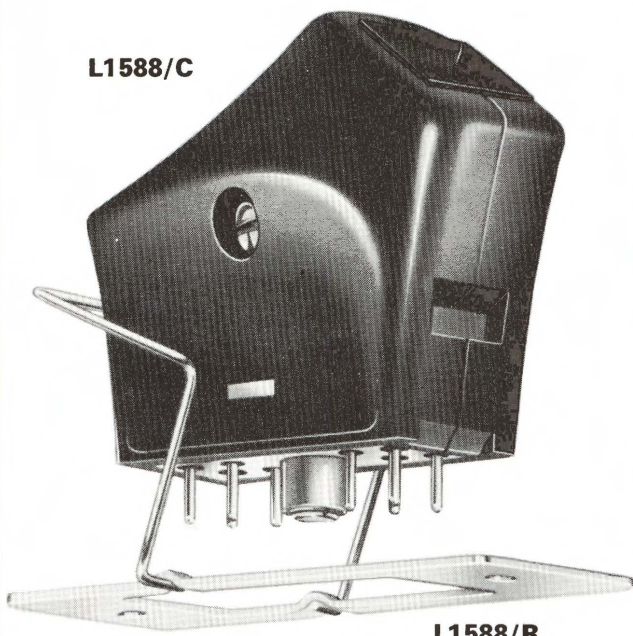


L1570/Ag or/Au Coaxial Shorting link

This coaxial shorting link is designed to plug into the socket member (L1580/S) of our miniature unitor range. Alternatively, a pair of miniature coaxial sockets, L1465/CS, may be used spaced on 0.625 in (15.88 mm) centres.

Impedance:	50 ohms nominal
Material:	Brass
Finish:	Gold (Au) or silver (Ag) plated
Weight (average):	23.1 g (0.81 oz)

L1588/C



L1588/R

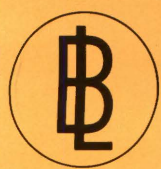
L1588/C Miniature Unitor cover

The moulded cover accommodates any member of the miniature unitor range, plug or socket, permitting cable connection to the appropriate fixed unit. The retainer is intended for use with flush mounted fixed members, and is secured between the flange of the unitor shroud and the panel, using common fixing screws.

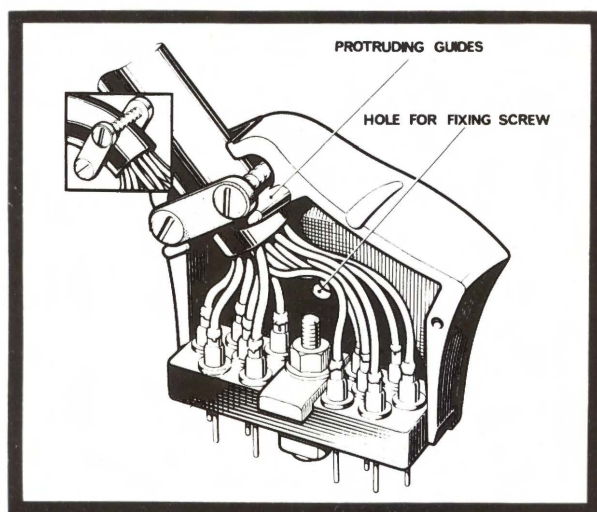
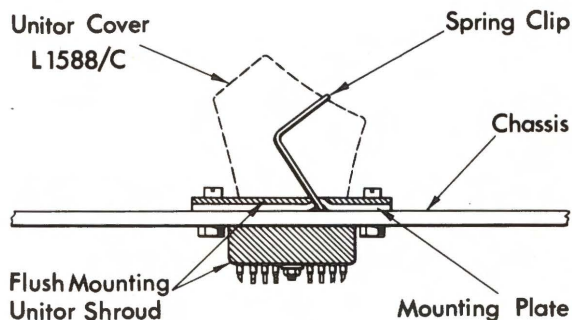
Cable entry size:	9.525 x 6.35mm (0.375 x 0.250 in.)
Material:	Butyrate
Weight (average):	9.2g (0.32 oz)

L1588/R Miniature Unitor retainer

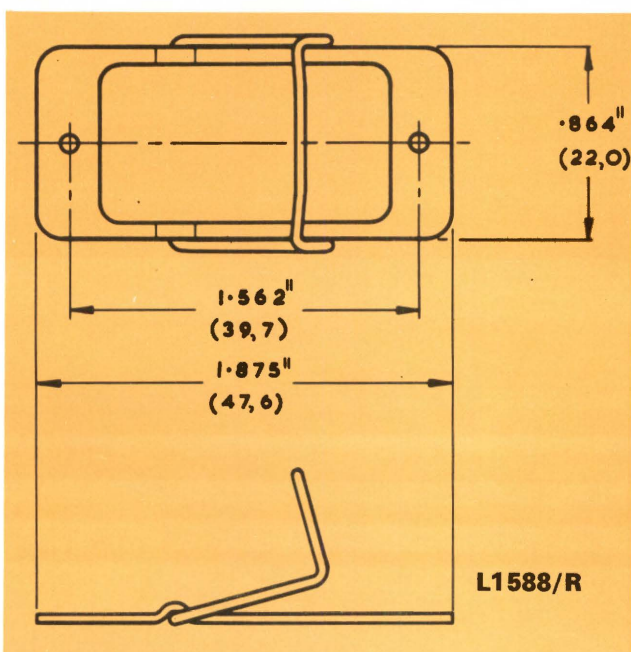
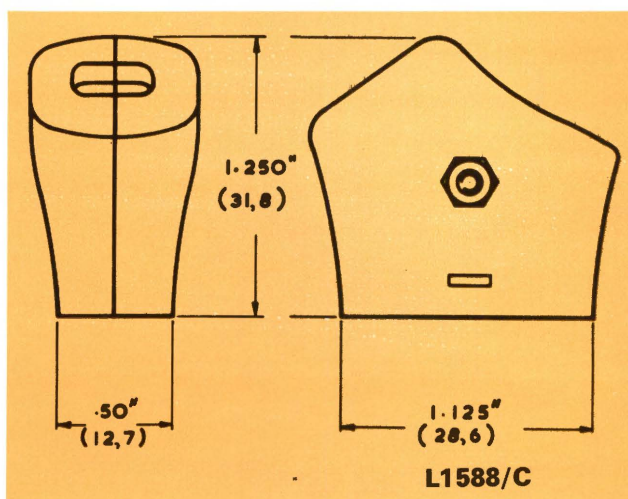
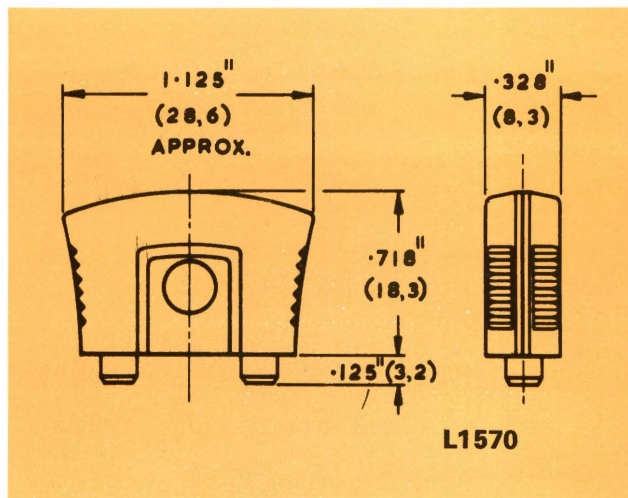
Material:	Base-plate, brass, cadmium-plated; retaining clip, spring steel
Weight (average):	5.1g (0.18 oz)

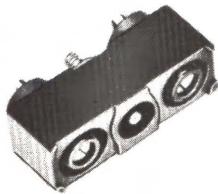


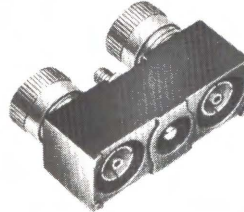
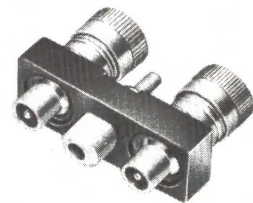
Miniature Unitors Accessories



DIMENSIONS: Cut-outs minima. normal tolerance ± 0.005
Overall sizes and fixing centres nominal
Figures in brackets are approx. mm equivalents.

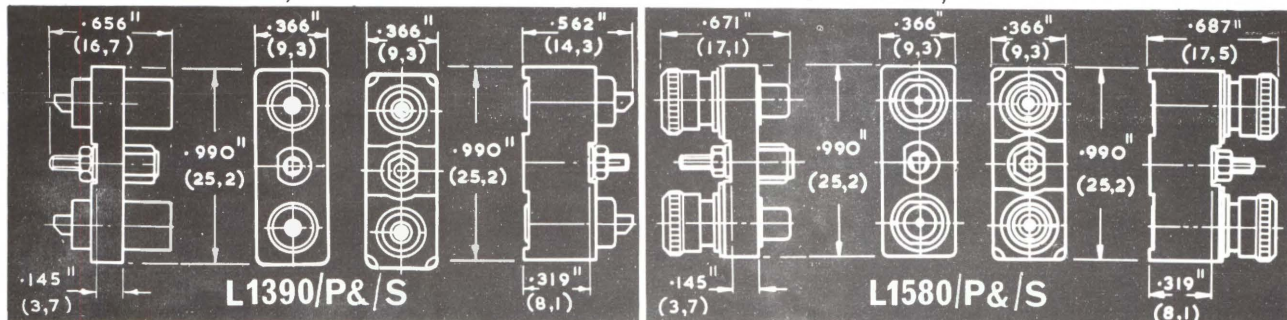



L1390/S

L1390/P

L1580 /S

L1580/P


L 1390/P/Ag Plug
L 1390/S/Ag Socket } high voltage, 2-pole

L 1580/P/Ag Plug
L 1580/S/Ag Socket } co-axial, twin



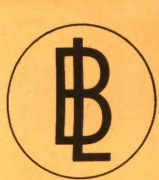
Smaller, lighter, but equal in performance to standard Unitors, this range includes r.f. and high voltage connectors, and all units are physically interchangeable.

L 1390/P & /S

Specification:	(Temperature rise < 10°C)	
Current rating:	10A	
Breakdown voltage (d.c.): pole/pole— pole/chassis—	At sea-level	At 18000m (60,000 ft)
	>10kV	>2kV
	> 6kV	>1kV
Insulation resistance:	>10 ⁴ megohms	
Contact resistance:	1 milliohm max. (Locating key >5m)	
Temperature range:	-40°C to +100°C	
Withdrawal force:	0,8—1,4kg (1.75—3lb)	
Cable size:	1,9mm (40/0076in) or 15 s.w.g.	
Panel thickness:	0.10 in (2,5mm). No limit in shrouds.	
Fixing torque:	1800g — cm (25 oz-in)	
Materials:	Body—epoxy resin. Plug pins—silver-plated brass. Sockets—silver-plated beryllium-copper.	
Weight (average):	Plug or socket 4,1g (0.14 oz)	

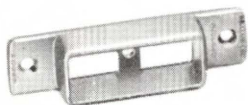
L 1580/P & /S

Impedance:	50 ohms (nominal)
Breakdown voltage (d.c.):	At sea-level >4kV. At 18000m (60,000 ft) >1kV
Insulation resistance:	>10 ⁴ megohms
Contact resistance:	5 milliohms max.
Screen continuity:	3 milliohms max.
Cable size:	Inner, 1,0 mm(0.041in) Outer, 4,5mm (0.18 in.)
Fixing torque:	1800g — cm (25 oz-in)
Materials:	Conductors—silver-plated brass. Dielectric—polyethylene. Moulding —phenolic resin.
Weight (average):	Plug or Socket, 7,6g (0.27 oz)

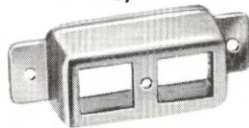


Miniature Unitors Accessories

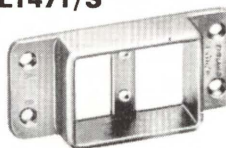
L1470/S



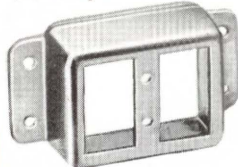
L1470/F



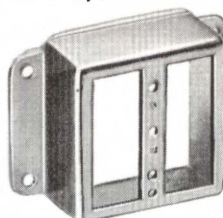
L1471/S



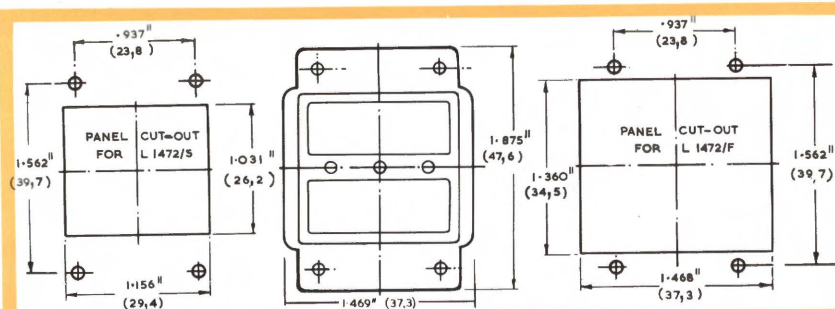
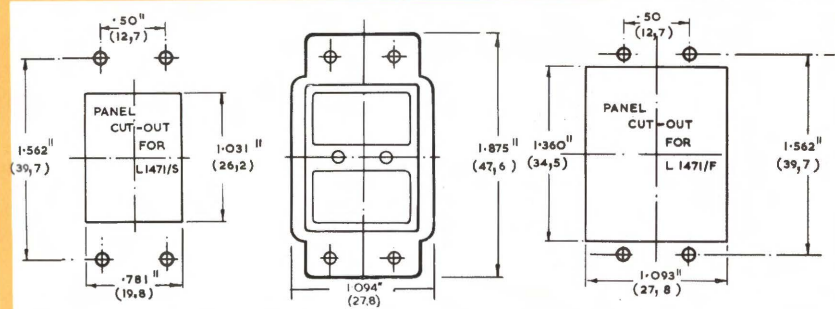
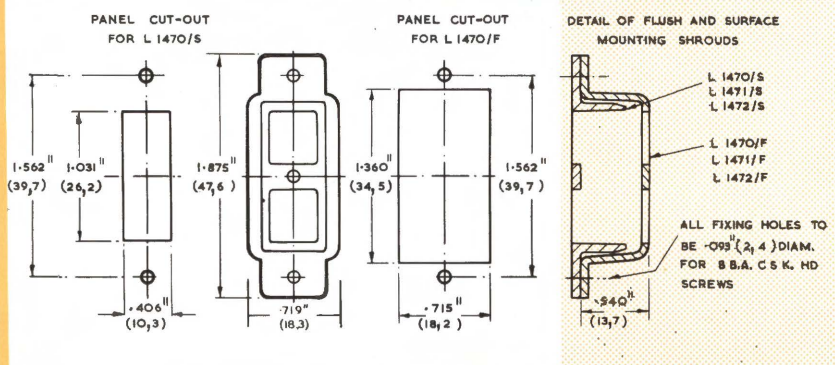
L1471/F



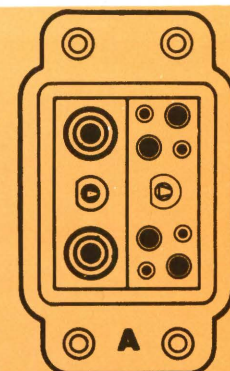
L1472/F



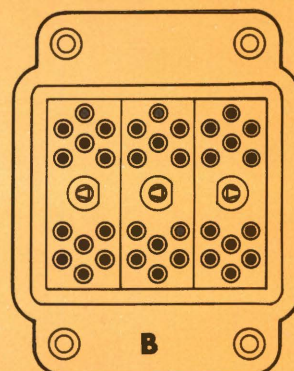
L1472/S



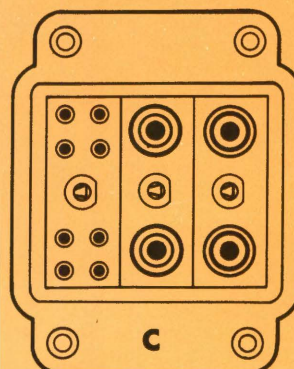
Cut-outs minima. normal tolerance ± 0.005
Overall sizes and fixing centres nominal
Figures in brackets are approx. mm equivalents.



Example A shows an L 1390 and L 1387 side-by-side in a double-way shroud.

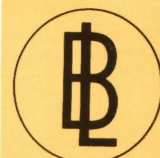


Example B shows three L 1389 Miniature Unitors giving 36 poles in an area of only 1.32 sq. inches.

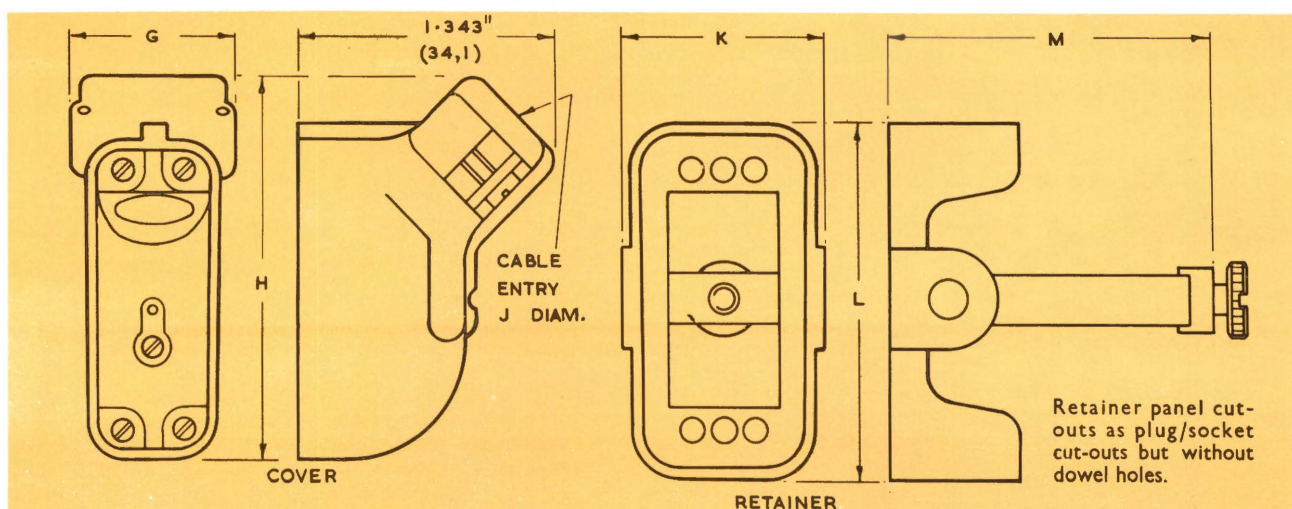
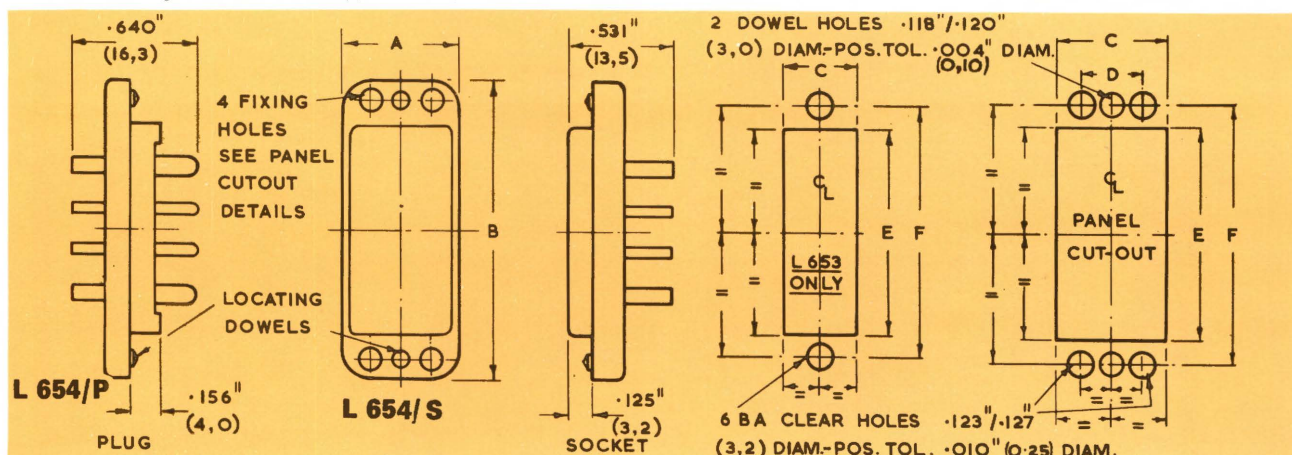


Example C shows an L 1388, L 1390, and L 1580 side-by-side, in which supply voltages and r. f. or pulse signals can be grouped together in one unit.

The miniature Unitor Shrouds can be used for mounting one, two or three units of the Miniature Unitors on a plug-in unit and on the equipment rack. Many thousands of variations are possible, including the making up of non-interchangeable multiple connectors.

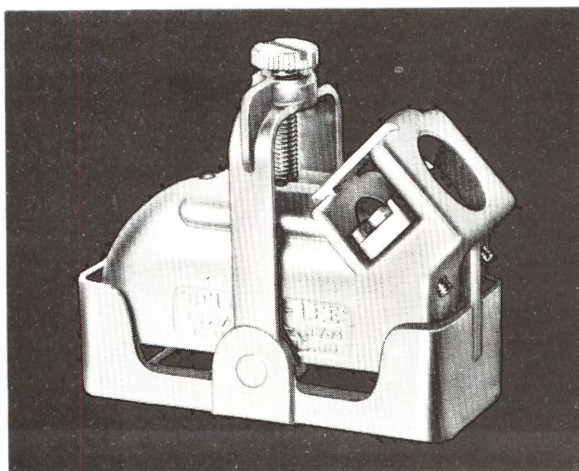


DIMENSIONS: Cut-outs minima. normal tolerance $\pm 0.010"$
Overall sizes and fixing centres nominal
Figures in brackets are approx. mm equivalents.

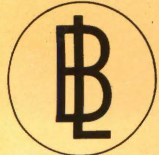


All plug and socket contacts are numbered on the face and reverse side of moulding. Plug assembly fixing flange 3.2 mm. (0.125") thick. Socket assembly fixing flange 4.0 mm. (0.156") thick.

Cover and Retainer



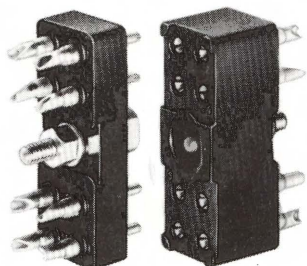
	4-POLE 2 large 2 small		8-POLE 2 large 6 small		12-POLE 2 large 10 small		18-POLE 2 large 16 small		25-POLE 2 or 4 large	
	in	mm	in	mm	in	mm	in	mm	in	mm
A	0.406	10,3	0.578	14,7	0.843	21,4	0.843	21,4	1.187	30,2
B	1.437	36,5	1.484	37,7	1.50	38,1	2.0	50,8	1.750	44,5
C	0.365	9,3	0.537	13,7	0.740	18,8	0.740	18,8	1.077	27,4
D	—	—	0.312	7,9	0.50	12,7	0.50	12,7	0.875	22,2
E	1.015	25,8	1.061	27,0	1.061	27,0	1.515	38,5	1.265	32,2
F	1.250	31,8	1.296	32,9	1.296	32,9	1.750	44,5	1.50	38,1
G	0.812	20,6	0.906	23,0	0.968	24,6	0.968	24,6	1.312	33,3
H	1.906	48,4	1.906	48,4	1.906	48,4	2.312	58,7	2.046	52,0
J	0.312	7,9	0.437	11,1	0.437	11,1	0.515	13,1	0.578	14,7
K	0.875	22,2	1.031	26,2	1.281	32,5	1.281	32,5	1.640	41,7
L	1.750	44,5	1.812	46,0	1.812	46,0	2.281	57,9	2.062	52,4
M	1.718	43,7	1.718	43,7	1.812	46,0	1.812	46,0	1.812	46,0



Miniature Unitors

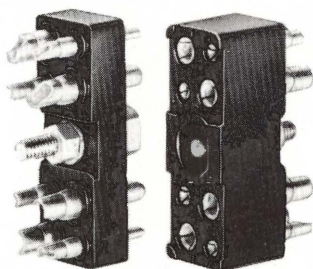
L 1387/P

L 1387/S



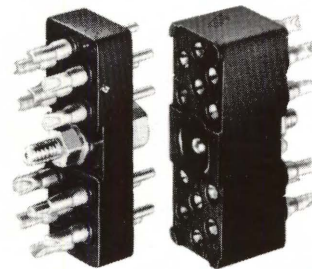
L 1388/P

L 1388/S



L 1389/P

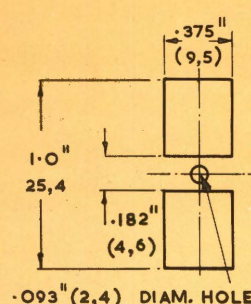
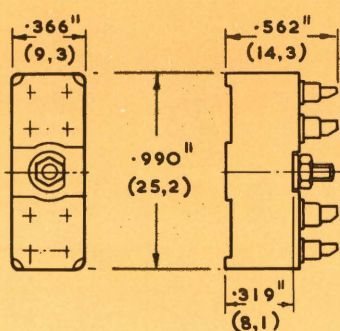
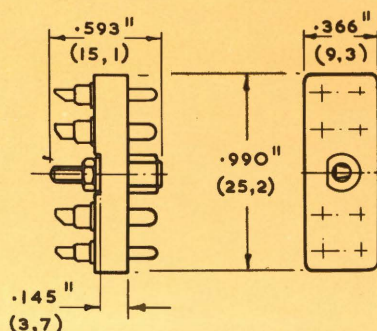
L 1389/S



L 1387/P/Ag Plug
L 1387/S/Ag Socket }
8-pole, 4 large and 4 small

L 1388/P/Ag Plug
L 1388/S/Ag Socket }
8-pole, small

L 1389/P/Ag Plug
L 1389/S/Ag Socket }
12-pole, small

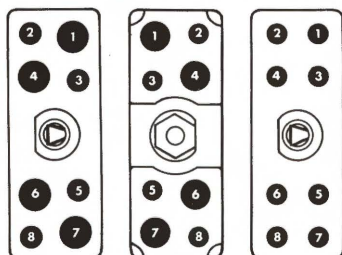


Plugs accept up to (0.125")
3.2 mm thick panel

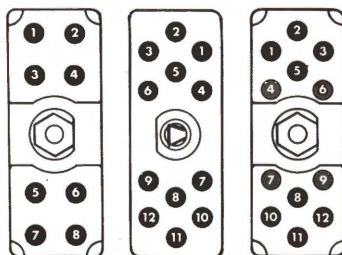
Sockets accept up to
(0.064") 1.6 mm thick panel

Smaller, lighter, but equal in performance to standard Unitors, this range includes r. f. and high voltage connectors, and all units are physically interchangeable.

POLE IDENTIFICATION



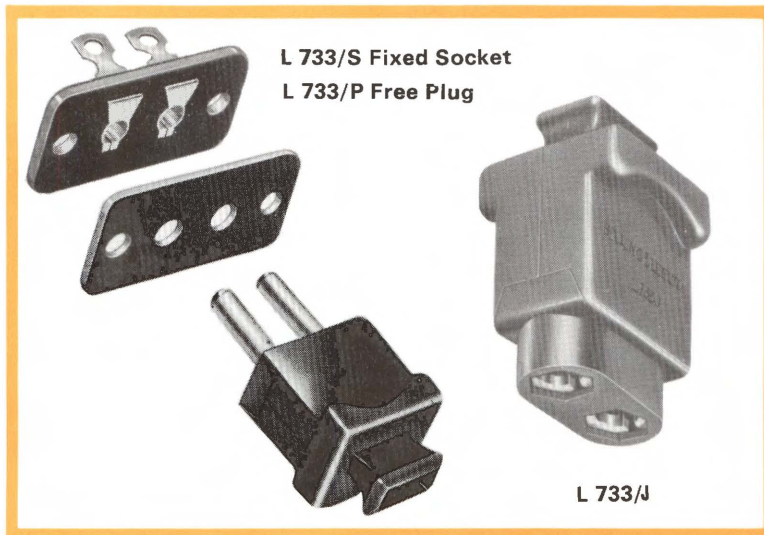
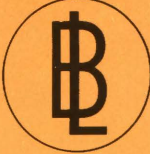
L1387/P L1387/S L1388/P



L1388/S L1389/P L1389/S

Current rating:	L 1387 Small poles, 9A	L 1388 Large poles, 10A	L 1389 Large poles, 10A
Breakdown (d.c.):	Mounted in shrouds L1470-1-2		
Between pins:			
(a) at sea-level	>2.5kV	>2.5kV	> 2kV
(b) at 20000m (68,000 ft)	1kV	1kV	700V
Pins to earth:			
(a) at sea-level	2.5kV	2.5kV	2kV
(b) at 20000m (68,000 ft)	900V	900V	600V
Contact resistance:	2 milliohms max. (small poles) 1m.ohm (large poles)		
Insulation resistance:	>10 ⁵ megohms		
Temperature range:	-40°C to +100°C (Temperature rise < 10°C)		
Humidity:	Class H ₅ (DEF 5011)		
Withdrawal force (av.):	1.8—2.7 kg (4—6 lb) per pole 8oz (230g) per pole		
Cable size:	Small poles-0.040 in. (1.0mm), 11/0076 or 19 s.w.g. Large poles-0.078 in. (2.0mm), 40/0076 or 15 s.w.g.		
Panel thickness:	Plugs 0.10 in (2.5mm), sockets 0.125 in (3.0mm) No limits in shrouds		
Fixing torque:	1800g -cm (25 oz-in)		
Materials:	Body—phenolic resin moulding Pins—brass Sockets—beryllium / copper } silver-plated		
Weight (average):	L1387 10gm (0.35 oz) mated pair L1387 8.4g (0.30 oz) L1388 7.1g (0.25 oz) L1389 8.7g (0.31 oz)		

2-Pole Connectors



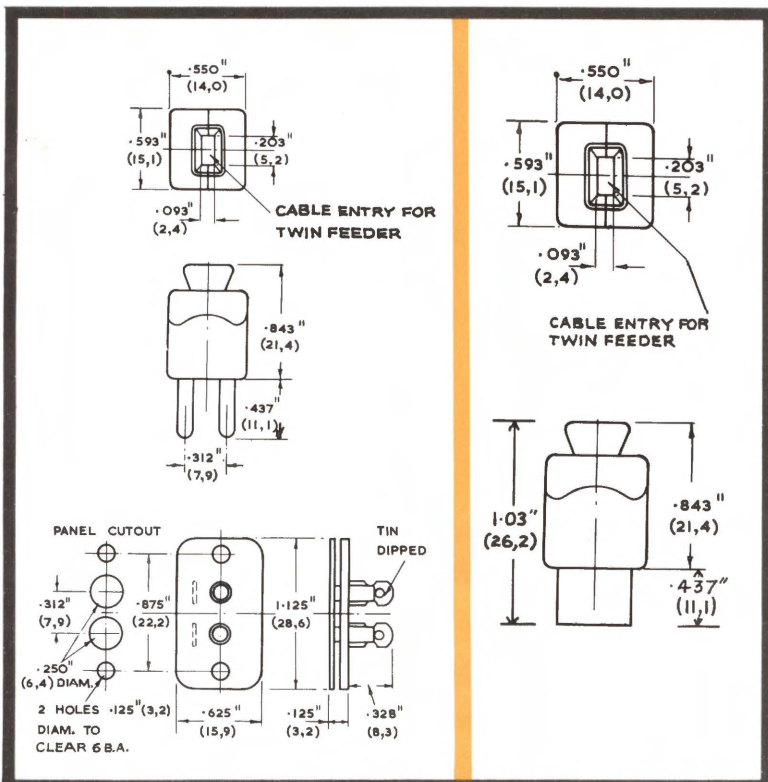
Originally designed for TV twin feeder connections, this small connector is suitable for many other low voltage signal applications, e.g. in extension loud-speaker circuits. The conductors may be crimped or soldered into the plug pins and the "butterfly" moulding is snap-fastening, making loading quick and easy.

This connector is non-reversible, having one large and one small pole. Its main function is for radio aerial connections, but it can be utilized in the connection of stereophonic loudspeaker systems.

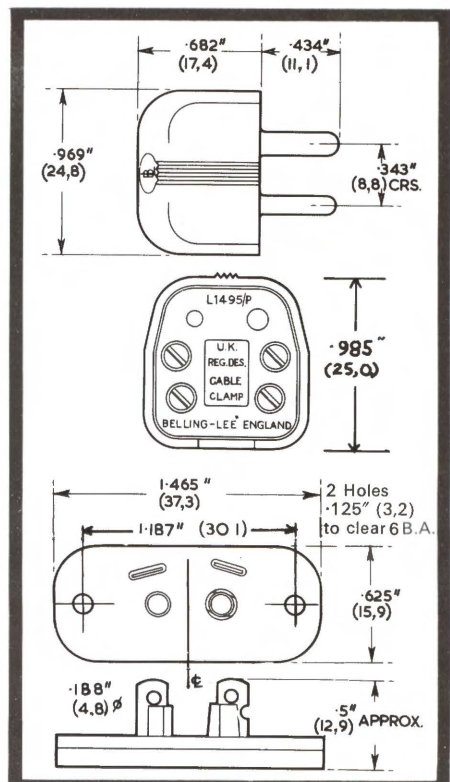
DIMENSIONS: Cut-outs minima. normal tolerance $\pm 0.005"$
 Overall sizes and fixing centres nominal
 Figures in brackets are approx. mm equivalents.

L 733/P & /S

L 733/J



L1495/P & /S



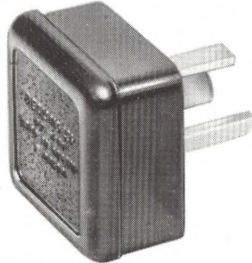


3-Pole Connectors

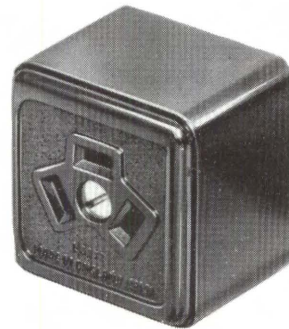
L 1326/FP Free
Plug, 3-pole

L 764/C/A
Protective
Dust Cover
not illustrated

L 1326/CS Fixed
Socket, 3-pole



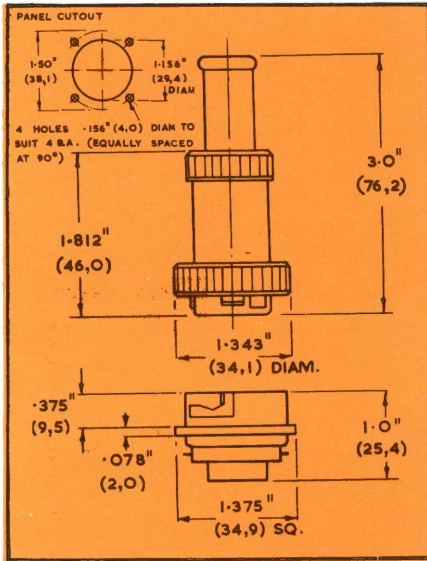
L303/P



L303/S

L 303/P Free Plug, with cord grip
L 303/S Fixed Socket, surface mounting

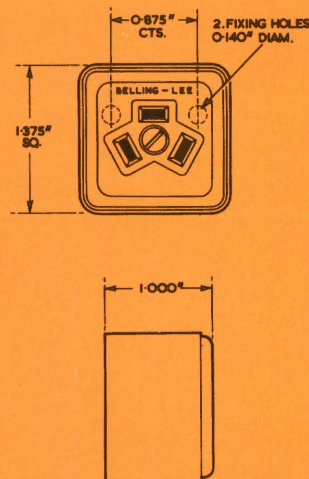
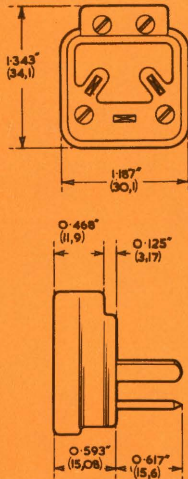
Non-interchangeable with standard mains connectors.



Cut-outs minima. normal tolerance ± 0.005
DIMENSIONS: Overall sizes and fixing centres nominal
Figures in brackets are approx. mm equivalents.

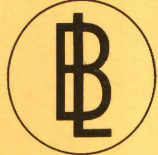
L.1326/FP L.1326/CS L.764/C/A

Current rating:	15A temp rise $\leq 30^{\circ}\text{C}$
Breakdown voltage (d.c.):	$> 3\text{kV}$
Max. recommended working volts:	250V D.C.
Insulation resistance:	$> 10^8$ megohms
Contact resistance:	4 milliohms max.
Cable conductor size:	8mm (0.315 in) max. dia.
Finish:	Alloy housing, anodised Contacts electro-tinned
Chassis cut-out	as above
Average weight:	FP 38,6g (1.36 oz) CS 23,5g (0.83 oz) Cover 13,5g (0.48 oz)



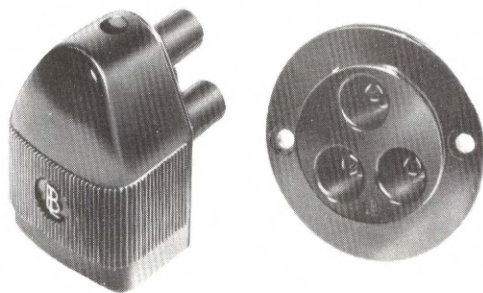
L 374 Free Plug L 303/P Free Plug
L 303/F Fixed Socket L 303/S Fixed Socket

Specification:	BS. 666
Current rating:	5A (temp rise $< 10^{\circ}\text{C}$)
Breakdown voltage (d.c.):	$> 4\text{kV}$
Insulation resistance:	$> 10^4$ megohms
Contact resistance:	7 milliohms max.
Insertion/withdrawal force:	3,2—4,1 kg (7—9lb)
Materials:	Plug pins, brass Socket contacts, phosphor-bronze. Insulant, phenolic resin. Finish, nickel-plated
Average weight:	L 374 18gm (0.6 oz) L 303/S 28,4g (1.0 oz) L 303/P 14,2g (0.5 oz)



3-Pole Connectors

L1722/P & S



This connector is a larger version of the L1436. The plug cover retaining screws fit into threaded metal inserts and the shallow depth socket can be mounted on the front or rear of an equipment panel. All poles are fully shrouded, so accidental touching of the contacts is eliminated. All metal parts are nickel-plated and the mouldings are constructed of high insulation resistance nylon (plug) and phenolic resin (socket).

Current rating:	7A d.c., 9A a.c. for 10°C temp rise to B.S. 546
Current breaking:	Satisfactory to B.S. 546 at 7A
Breakdown (d.c.):	> 9 kV
Insulation resistance:	> 10 ⁵ megohms
Contact resistance:	3 milliohm max.
Temperature range:	—25° to + 55°C
Insertion/withdrawal force: Max.	< 10 lb (4,5 kg)
Cable size max. overall:	0.375" (9,5 mm)
Weight (average):	Plug 20,5 g (0.723 oz) Socket 11,8 g (0.416 oz)
Fixing torque:	15 lb-in

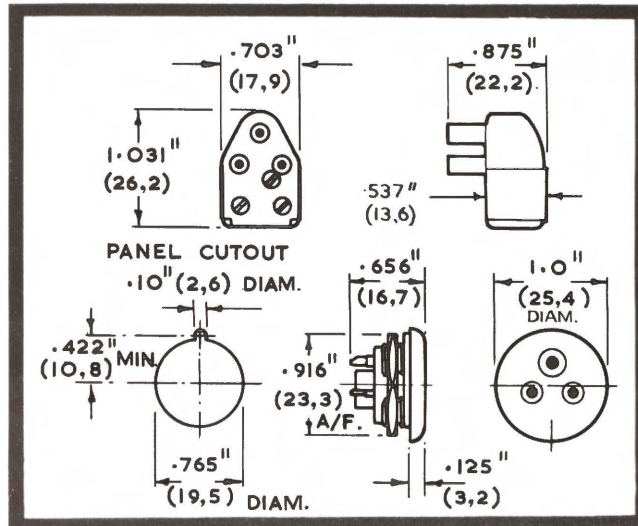
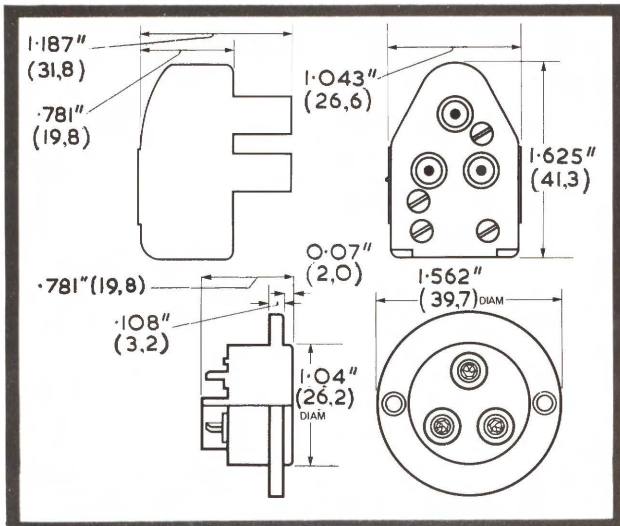
L 1436/P & S



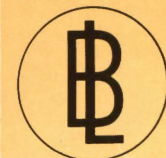
This miniature 3-pole mains connector combines modern styling and compact design with safety.

Only a single fixing hole is required to mount the socket, because this is secured with one nut; there is a spigot to prevent rotation.

Current rating:	2A d.c., 2.6A a.c. for >10°C temp. rise
Current breaking:	Satisfactory to BS. 546 at 2.6A
Breakdown (d.c.):	At sea-level > 7kV. At 18 000m (60,000 ft) > 1kV
Insulation resistance:	> 10 ⁵ megohms
Contact resistance:	3 milliohms max.
Temperature range:	55°C. max. —25° to + 55°C
Insertion/withdrawal force:	max 4lb (1,8 kg) 0.91 kg (2 lb)
Cable size Max. overall:	0.24in (6,1mm) (plug)
Fixing torque:	3600—14400 g—cm (50—200 oz in)
Materials:	Plug pins—silver-plated, brass Sockets, silver-plated, beryllium-copper. Insulant, nylon (plug), phenolic resin (socket)
Weight (average)	Plug 5,21g (0.184 oz) Socket 6,1g (0.216 oz)

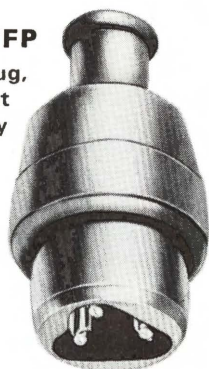


Sealed 3-Pole oz Connectors



L1349/FP

Free Plug,
straight
entry

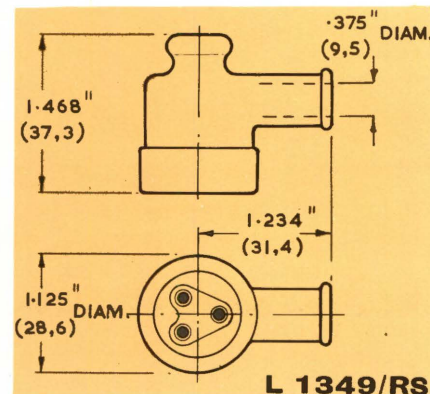
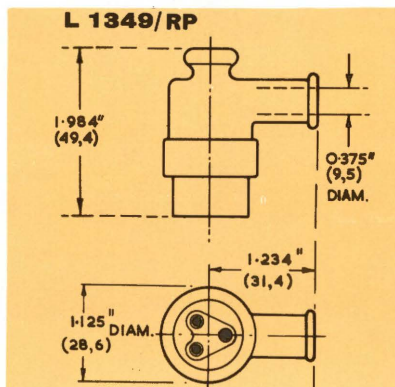
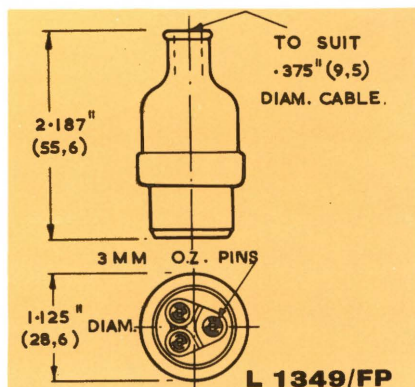


L1349/RP

Free Plug,
right-angle
entry

L1349/RS

Free Socket,
right-angle
entry



L 1349/CP

Fixed
Plug

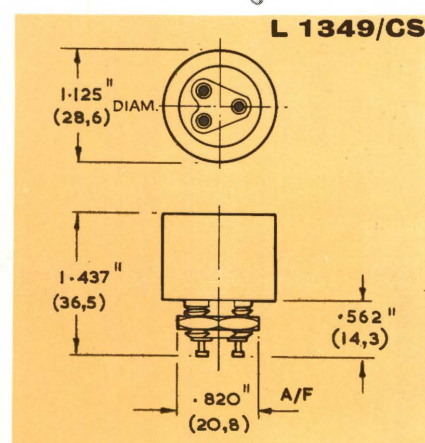
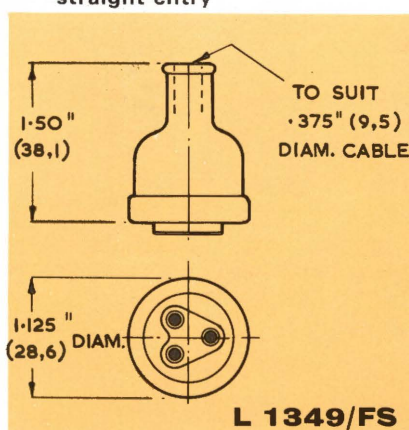
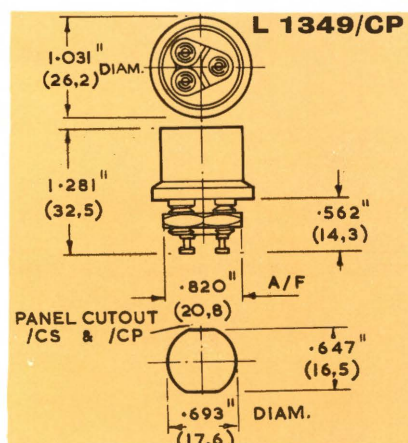


L 1349/FS

Free Socket,
straight entry

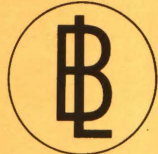
L 1349/CS

Fixed
Socket



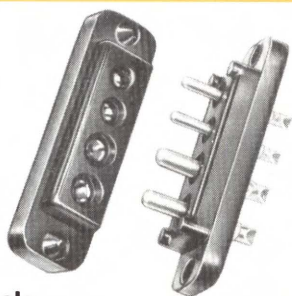
The Waterproof, vulcanised polychloroprene rubber shrouds are resistant to sunlight, mineral oils and greases. (B.S 415)

Breakdown (D.C.):	> 5kV	Insertn/withdwl force:	3-15 lb (1,36-6,8 kg)
Current rating:	7A for Temp. rise <10°C	Panel thickness:	3,2mm (0.125 in) max.
Insulation resistance:	> 5 x 10 ³ megohms	Fixing torque:	L1349/CS 8000-14000gm cm (112-200 oz-in) L1349/CP 8600-14100gm cm (120-206 oz-in)
Contact resistance:	3 milliohms max.	Finish:	Contacts silver-plated
Temperature range:	-40°C to +55°C	Average Weight:	L1349/FP 23,7g (0.84 oz) L1349/CP 18,2g (0.65 oz) L1349/FS 13,7g (0.49 oz) L1349/CS 26,1g (0.92 oz) L1349/R 18,9g (0.67 oz)
Humidity:	H6 (DEF-5011)		
Sealing:	Dry after 1 hr in 5ft water. Leakage does not exceed 1 cc/hr at 15 lb/in ²		

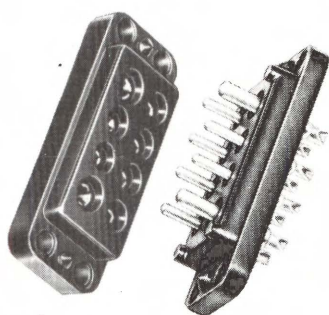


Unitors Pattern 102

Up to 50-poles available on application



4-pole
L653/P Plug L653/S Sockets
L653/C3 Cover L653/R3 Retainer



8-pole
L654/P Plug L654/S Sockets
L654/C3 Cover L654/R3 Retainer



12-pole
L655/P Plug L655/S Sockets
L655/C3 Cover L655/R3 Retainer



18-pole
L656/P Plug L656/S Sockets
L656/C3 Cover L656/R3 Retainer



25-pole
L657/P/S
L657/C3
Covers
L657/R3 Retainer

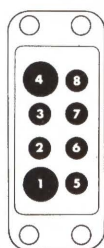


25-pole
L1328/P Plugs
L1328/S Sockets

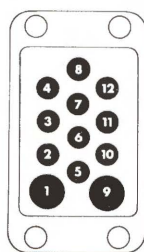
PIN IDENTIFICATION



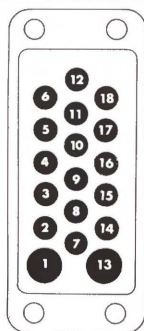
L 653/P/S



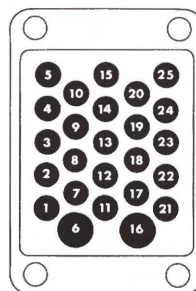
L 654/P/S



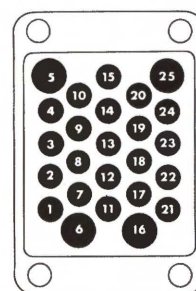
L 655/P/S



L 656/P/S



L 657/P/S

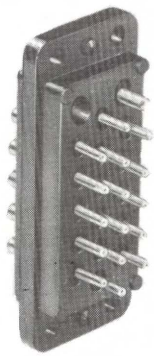


L 1328/P/S

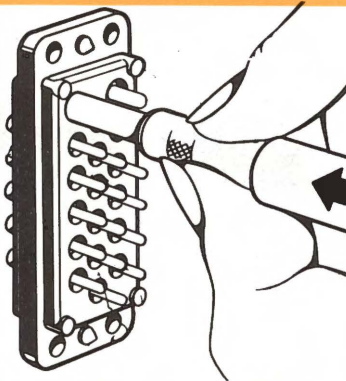
Specification:	DEF 5321 : 1958	Humidity:	Class H _s (DEF 5011)
Current rating:	Small poles: 3A. Large poles, 10A	Temperature range:	—40°C to +100°C
Max. working volts:	500V peak	Insertn/withdrwl force:	450g (<1 lb) per contact
Breakdown (D.C.):	At sea-level 3kV. At 18000m (60,000 ft) 1.4kV)	Max. wire size:	Small poles, 1mm (0.04 in. 19 s.w.g.) Large poles: 1,7mm (0.067 in. 16 s.w.g.)
Voltage proof:	2kV	Panel thickness:	Flange on wiring side of panel, 0.125 in. (3,17mm) Flange on mating side of panel, no limit
Creepage distance:	3.1mm (0.12 in.) between poles 4.2mm (0.17 in.) between any pole and chassis	Materials:	Black nylon-filled phenolic resin moulding silver-plated solid brass pins. Beryllium-copper sockets Tin-dipped solder spills
Contact resistance:	2 milliohms max. (small poles) 1.2 milliohms max. (large poles)	Average Weight:	L653 (0.3 oz) 8.4gm • L654 (0.5oz) 14.1g • L655 (0.7 oz) 19.5g • L656 (0.9oz) 25.5g • L1328 (1.3oz) 37.2g
Insulation resistance:	> 10 ⁸ megohms		
Capacitance:	4 pf (between poles) at 800 Hz		

All Unitors have two heavy current poles, but the 25-way type has four. Inter-changeable with push-home range, except for 4 large pole version.

Push Home Unitors



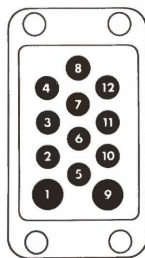
1656



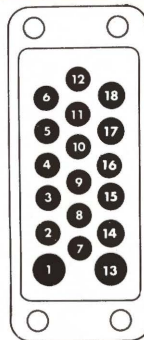
Cover and Retainer



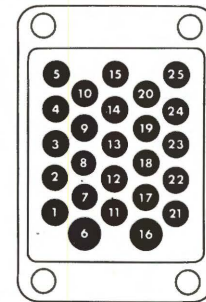
PIN IDENTIFICATION



L 1655 / P



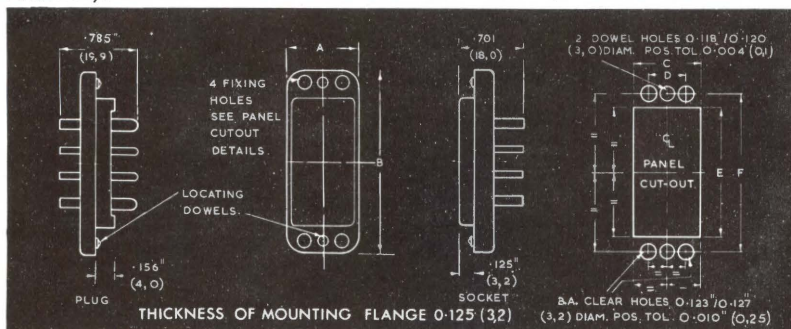
L 1656 / P



L1657 / P

FEATURES ☐ Crimped or soldered connection of cables ☐ Contacts demountable ☐ Contacts inserted without tools ☐ Increased temperature range -55°C to $+150^{\circ}\text{C}$ ☐ Closed entry sockets, not easily distorted ☐ Intermateable with Pattern 102 Unitors ☐ Fixing centres identical to Pattern 102 Unitors.

APPLICATIONS Direct inter-chassis connection. Screened cable-to-chassis connection (with cover and retainer). Screened cable-to-cable connection (with covers).



	12-POLE		18-POLE		25-POLE	
	in	mm	in	mm	in	mm
A	0.843	21,4	0.843	21,4	1.187	30,2
B	1.50	38,1	2.0	50,8	1.750	44,5
C	0.740	18,8	0.740	18,8	1.077	27,4
D	0.50	12,7	0.50	12,7	0.875	22,2
E	1.061	27,0	1.515	38,5	1.265	32,2
F	1.296	32,9	1.750	44,5	1.50	38,1

Specifications:	DEF.5011	DEF.5325
Current rating:	Small pole, 10A Large pole, 20A	
Breakdown voltage (d.c.)	Sea level, 3kV at 60,000 ft. > 1.5kV	
Contact resistance:	> 2 milliohms per pole	
Temperature range:	-55°C to $+150^{\circ}\text{C}$	
Insertion/withdrawal force:	> 0.516 (227g) per pole	
Insulation Resistance:	> 7×10^6 megohms	
Wire size (max):	Small pole, 16/0076 Large pole, 110/0076"	
Crimping tools:	Small pole, size 16 Large pole, size 12	
Panel thickness (max):	Flange on wiring side of panel 0.125 in. (3.17mm), Flange on mating side of panel no limit	
Materials:	Mouldings—Diallyl phthalate-Black Contracts—body, brass, spring leaf, beryllium-copper Normal finish—Silver-plated	
Weight (average):	L1601 1.09g (0.039 oz) L1602 0.59g (0.021 oz) L1603 1.42g (0.050 oz) L1604 0.70g (0.025 oz) L1655/P 7.22g (0.255 oz) L1655/S 9.20g (0.325 oz) L1656/P 9.91g (0.350 oz) L1656/S 12.88g (0.456 oz) L1657/P 11.73g (0.414 oz) L1657/S 15.12g (0.533 oz)	

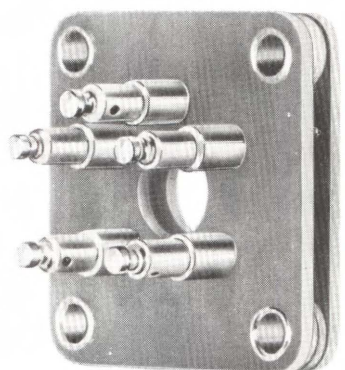
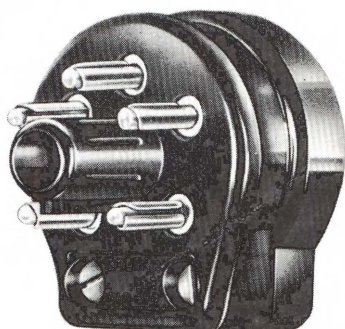
Mouldings	Plug	Socket
12-pole (2 large)	L1655/P	L1655/S
18-pole (2 large)	L1656/P	L1656/S
25-pole (2 large)	L1657/P	L1657/S
Contacts*	Pins	Sockets
Large	L1603/Ag	L1601/Ag
Small	L1604/Ag	L1602/Ag
Mouldings	Cover	Retainer
12-way (2 large)	L1655/C	L1655/R
18-way (2 large)	L1656/C	L1656/R
25-way (2 large)	L1657/C	L1657/R
Contacts*	Extractor	Wire size and IEC No.
Large	L1659	110/0076 (12)
Small	L1660	40/0076 (16)

* Ag silver-plated, standard.
Au gold-plated, to order.

Multi-pole Connectors

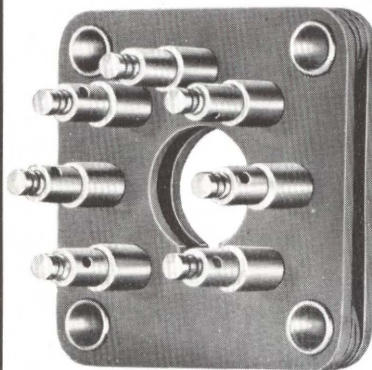
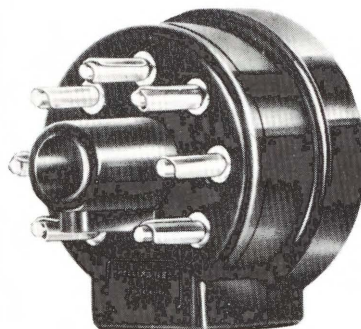


L1258



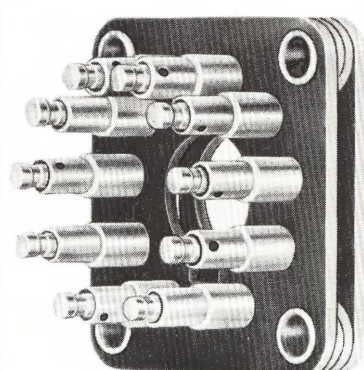
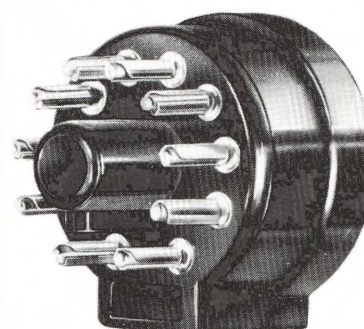
L331

L530



L726

L1244



L332

A range of robust, 'O-Z' multi-pole connectors with common fixing centres, and central locating key to ensure correct mating. Soldered connections. Plugs have right-angle cable entry and are provided with cable grip.

Breakdown (d.c):	74 kV	
Current rating:	5A	
Insulation resistance:	> 10 ⁴ megohms	
Contact resistance:	1 milliohm max.	
Temperature range:	- 40°C to + 85°C	
Insertion/withdrawal force:	0.45kg (1 lb) per pole (approximately)	
Cable size:	5-pole 11.1mm (0.437 in) 7 and 10-pole 12.7mm (0.5 in)	
Finish:	Contacts silver-plated	
Weight (average):	5-pole L1258 31.4g (1.11 oz) L331 12.3g (0.43 oz) 7-pole L530 38.0g (1.34 oz) L726 13.7g (0.49 oz) 10-pole L1244 38.7g (1.37 oz) L332 16.9g (0.6 oz)	

L1258 Free Plug }
L331 Fixed Socket } 5-pole

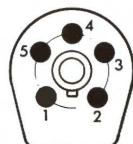
L530 Free Plug }
L726 Fixed Socket } 7-pole

L1244 Free Plug }
L332 Fixed Socket } 10-pole

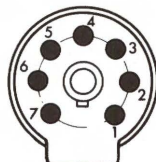


Multi-pole Connectors

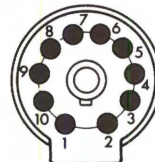
Plug Pin arrangement (wiring side)



L1258

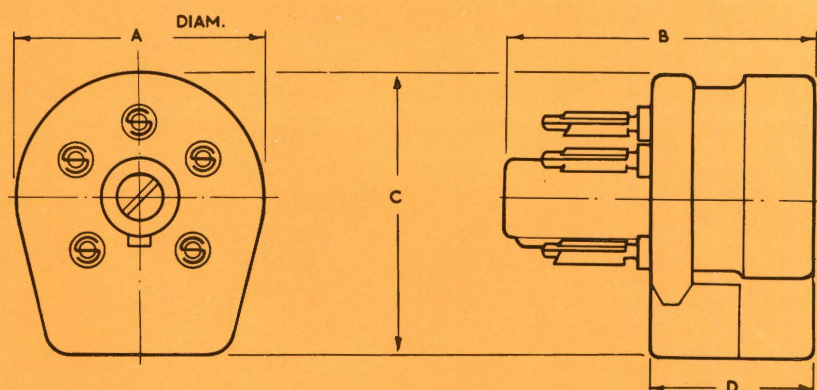


L530



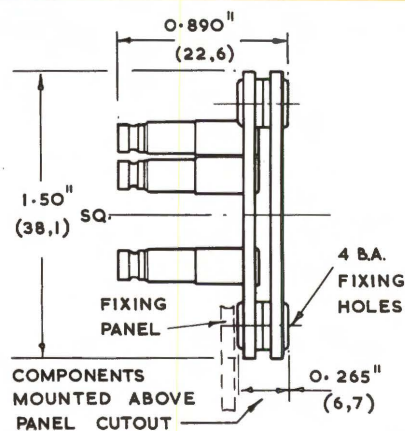
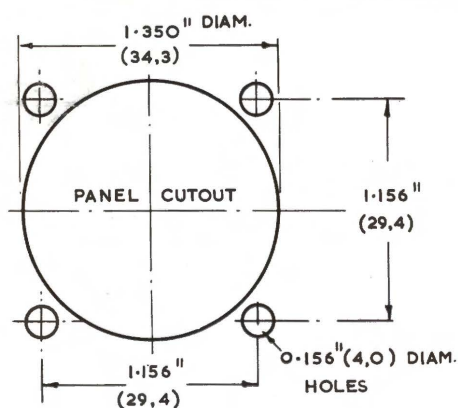
L1244

5, 7 & 10 - Pole Plug dimensions



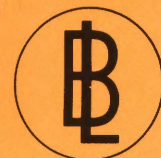
TYPE	A		B		C		D	
	in	mm	in	mm	in	mm	in	mm
L1258	1.312	33,3	1.640	41,7	1.468	37,3	0.875	22,2
L530, L1244	1.562	39,7	1.625	41,3	1.656	42,1	0.937	23,8

Socket Dimensions & Fixing

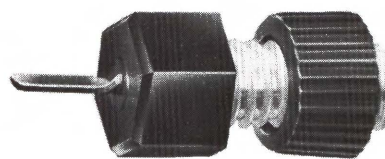


DIMENSIONS: Cut-outs minima. normal tolerance $\pm 0.005"$
Overall sizes and fixing centres nominal
Figures in brackets are approx. mm equivalents

Miniature Single Pole Connectors



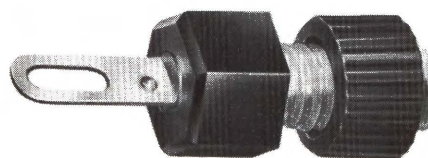
L1527/Ag or Au/Colour. Stacking plug



L1530/Colour. Fixed socket, printed circuit*



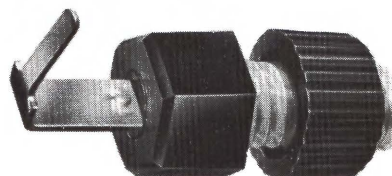
L1526/Colour. Fixed socket, self-supporting*



L1529/Ag or Au/Colour. Fixed socket



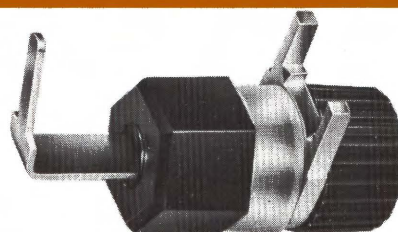
L1528/Ag or Au/Colour. Free plug, top entry



L1531/Colour. Fixed socket, right-angle tag*



L1642/Ag or Au/Colour Free socket



**L1569/Colour. Fixed socket, right-angle tag*
and mounting stirrup**

*These items are ideal for printed circuit applications

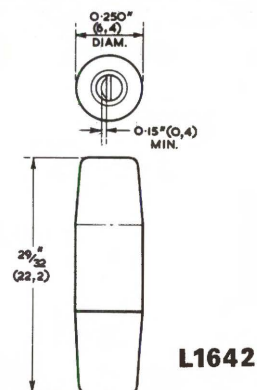
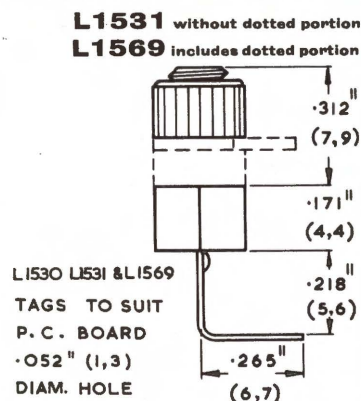
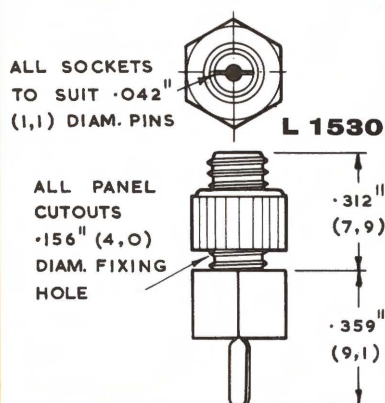
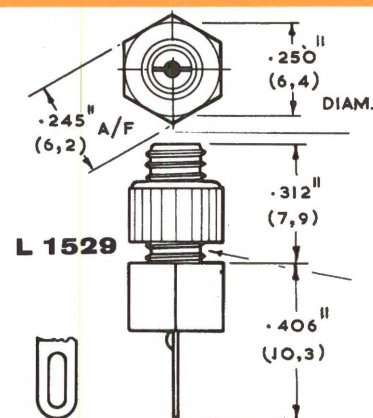
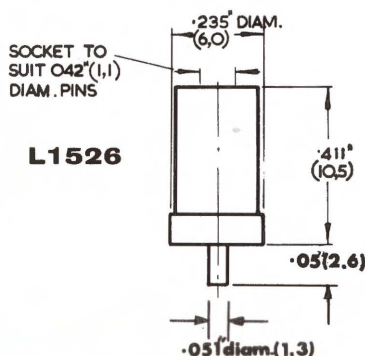
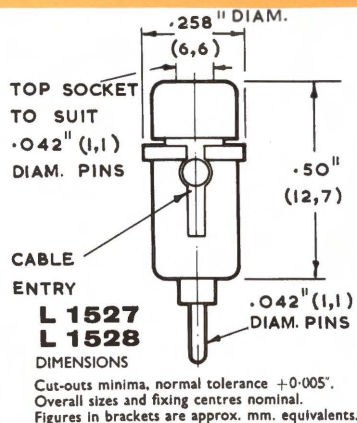
Where there is no alternative finish given, the normal finish is gold-plated (Au)

These diminutive connectors, about the thickness of a diary pencil and the heaviest of them weighing only 8.5 gram, meet all requirements of designers of modern electronic equipment and instruments, combining robustness with small dimensions. They have been developed from our earlier range by incorporating two major improvements in the construction of the sockets, the contacts of which are considerably more efficient, and are now fully shrouded at the mouth, with support for the plug.

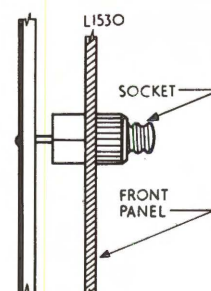
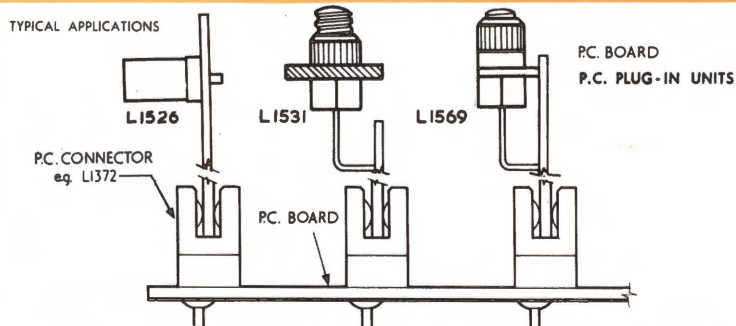
L1532 Through terminal (see Page 1 Section D)



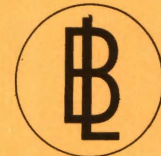
Miniature Single Pole Connectors



	L1526	L1527	L1528	L1529	L1530	L1531	L1569	L1642
Breakdown voltage:								
At sea-level	7kV	—	—	9kV	10kV	10kV	3kV	3.3kV
At 18000m (60,000ft)	1.5kV	—	—	2kV	2kV	2kV	0.8kV	0.8kV
Withdrawal force min (mated with L1528)	(156 g) 5½ oz	(71 g) 2½ oz		(269 g) 9½ oz	(269 g) 9½ oz	(269 g) 9½ oz		(269 g) C9½ oz
Weight (average):	0.43g 0.015oz	0.76g 0.026oz	0.85g 0.03oz	0.36g 0.013oz	0.35g 0.012oz	0.42g 0.015oz	0.69g 0.025oz	0.71g 0.025oz
Current rating:	5 amp.							
Insulation resistance:	> 10 ⁸ megohms							
Contact resistance:	< 3.5 milliohms							
Creepage distance:	5mm (0.197") L1642 2.2mm (0.086in)							
Fixing torque:	44,88 g-cm (4.8 oz in)							
Panel thickness:	0.5mm.-3.2mm (0.020-0.125in)							
Materials:	Nylon mouldings, inserts, L1526 beryllium-copper, remainder brass; all gold-plated L1527, L1528, L1529 L1642, also available silver-plated. L1526 beryllium copper. L1529, L1530, L1531 Hi dural "5"							
Colours:	Black, blue, green, natural (white), red and yellow.							



Modular Printed Circuit Edge Connectors



TYPE: — L1760/- Open ended

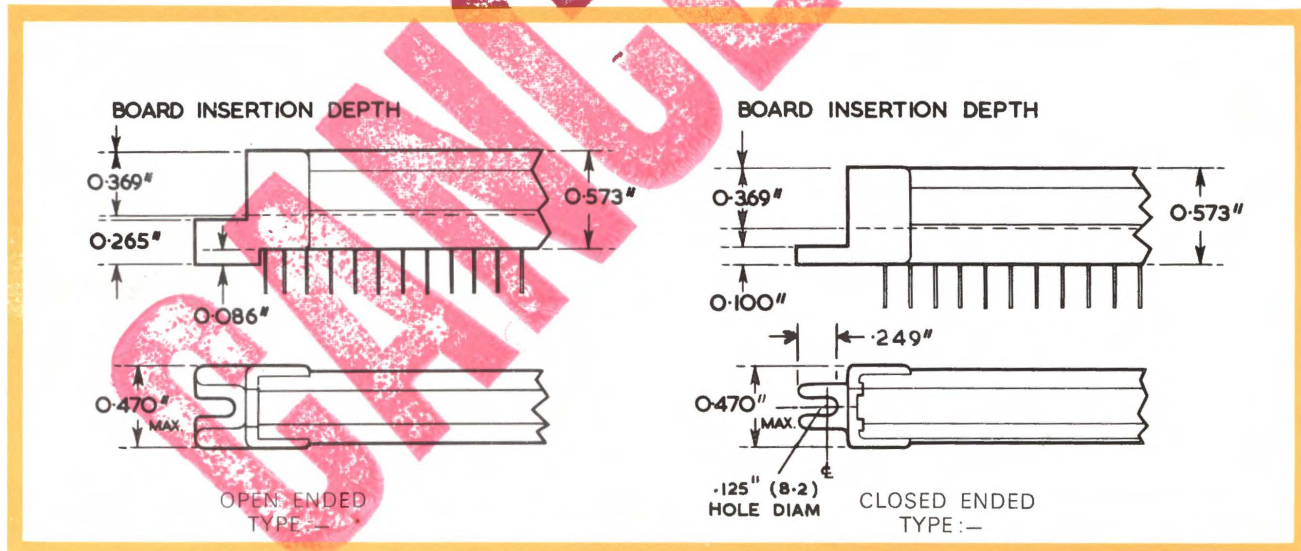
TYPE: — L1765/- Closed ended



MODULES AVAILABLE:—

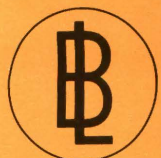
0.1 in. (2,54mm) 0.15 in. (3,81mm) 0.20 in. (5,08mm)

ANY NUMBER OF WAYS FROM 4 to 60



FEATURES INCLUDED:—

- Suitable for single or double sided printed circuit boards
- Open or closed ends
- Contacts removable for locating polarising key
- Narrow width of contacts reduce mismatching
- Gold or silver plated contacts with number identification
- Solder termination to contacts
- Fixing lugs to suit all systems



Tape Cable Connectors and Printed Circuit Accessories

Tape Cable is a flat, flexible insulating ribbon carrying a number of parallel, copper foil strip conductors. The conductors may either lie exposed on the surface of the tape, or may be covered with a layer of insulation. This cable has numerous applications where space is limited, or where there is a need for a multi-conductor cable to withstand frequent flexing, but its chief function is the interconnection of printed or solid state circuitry. These new connectors utilise the conductors in the cable itself for the contacts in the male members. The sockets are standard Belling-Lee printed circuit connectors, the domed beryllium-copper contacts ensuring gentle and consistent mating with minimum wear and low electrical resistance. The connector is self-locking by virtue of two snap-action spring retainers incorporated in the male portion.

Reg'd Designs Patents Applied For Nos. 925110-9 U.K. Pat. App. No. 6771/66

Typical performance data for 18-way Tape Cable Connector using standard "Olibol" tape & L1372/Au

Average Insertion Force without retaining clips —8½ lb (3,86kg)

Average Withdrawal Force without retaining clips —4¾ lb (2,25kg)

Temperature rise at contacts, with stated current flowing at all contacts:—

Current	Temperature rise to stability		
	Min.	Max.	Average
	°C	°C	°C
3 amp	10.0	13.7	11.9
2.5 amp	9.2	11.5	10.3

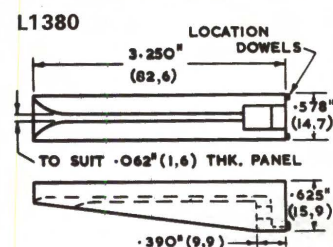
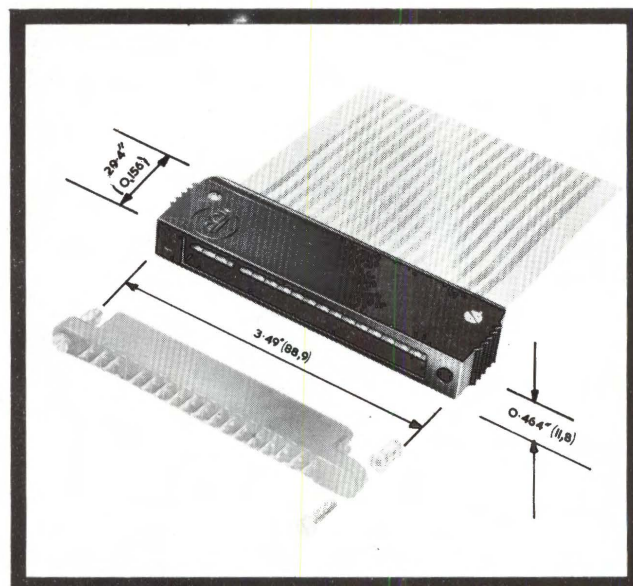
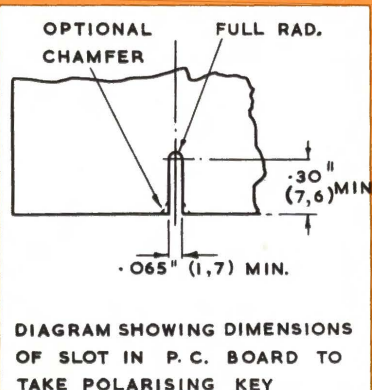
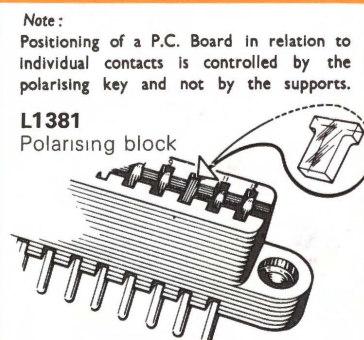
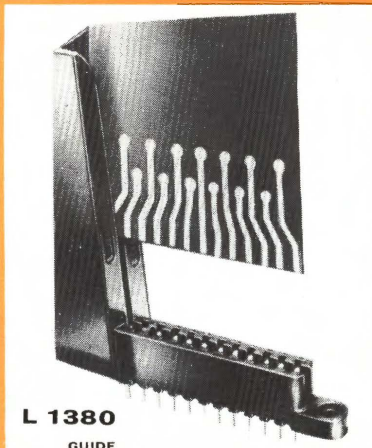
Contact resistance measured to include 2" of tape when new—12-16 m/ohms average increasing with wear of tape at the rate of about 1½ m/ohms per contact per 250 operations up to about 2,000 inserting and withdrawing operations. All the above tests were carried out with tape cable connector mated with L1372/Au P.C. connector.

List numbers * { Natural (transparent)
Black

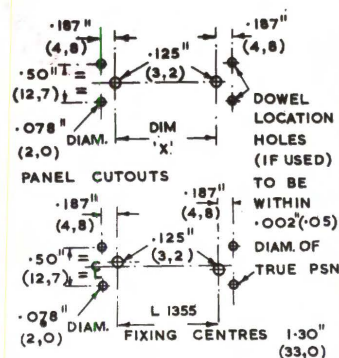
L1840/ 8/Colour* } 0.15" module
" /12/ " }
" /18/ " }
L1841/32/ " 0.1"
L1842A Nut, retaining, 6 B.A.

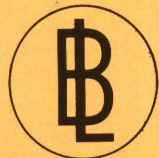
DIMENSIONS:

Cut-outs minima, normal tolerance +0.005"
Overall sizes and fixing centres nominal
Figures in brackets are approx. mm equivalents



STANDARD FIXING FOR SUPPORTS MOUNTED INDEPENDENTLY OF ALL P.C. CONNECTORS OR DIMENSIONS 'X' TO BE FIXING CENTRES OF ANY P.C. CONNECTOR EXCEPT L1355





Printed Circuit Edge Connectors 0.15" Module



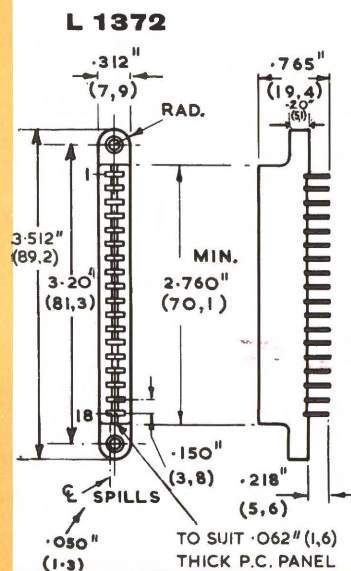
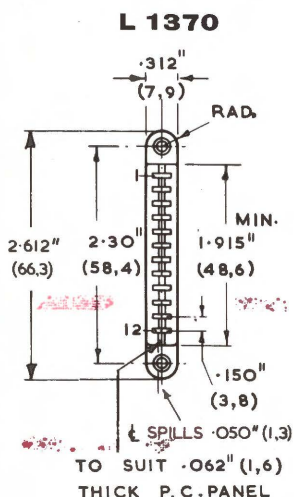
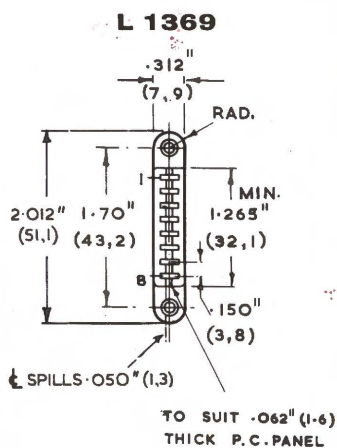
L1369/Ag or/Au, 8-pole



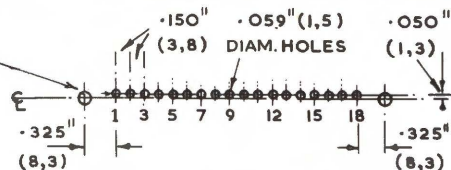
**12-pole
L1370/Ag or/Au,**



**L1372/Ag or/Au,
18-pole**



.125" (3,2) DIAM.
FIXING HOLES
FOR 6 BA.
CLEARANCE



.325" DIM. STANDARD
ON ALL .150" MODULE
CONNECTORS [FROM
6 BA. FIXING CENTRE TO
CENTRE 1 & LAST TAG
TO 6 BA. FIXING CENTRE]



L1741/Ag or/Au, 34-pole



L1740/Ag or/Au, 24-pole

REF TO PAGE 11 FOR SPECIFICATIONS

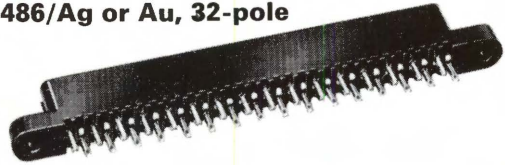
Printed Circuit Edge Connectors 0.1" Module



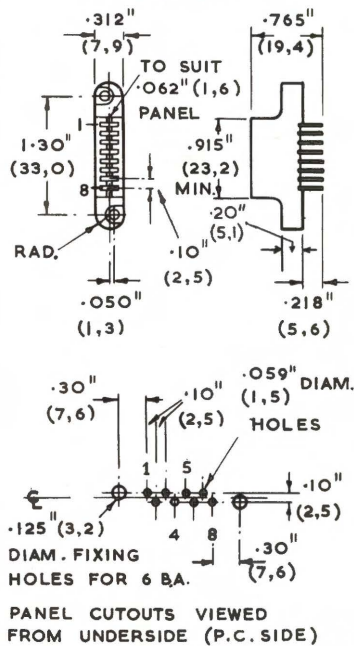
L1355/Ag or Au, 8-pole



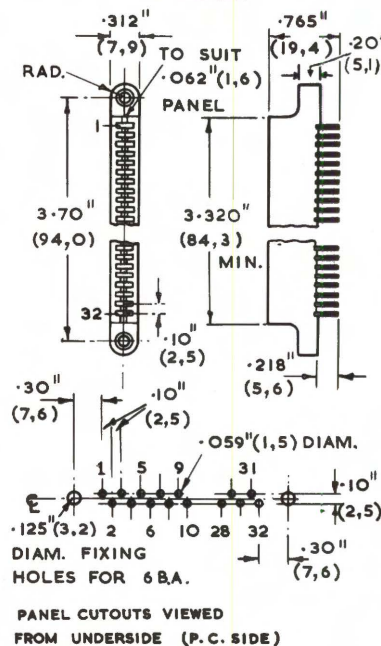
L1486/Ag or Au, 32-pole



L 1355



L 1486



Contacts numbered on top and underside of mouldings

Current rating:	3A per contact (printed wiring)	4A per contact (free wiring)
Breakdown voltage (d.c.):	<i>0.15" module</i> At sea-level At 20,000m (68,000 ft) > 3kV > 500V 4kV > 500V	
Between contacts	<i>0.1" module</i> At sea-level At 20,000m (68,000 ft) > 2kV 400V	
Contacts/earth	—	
Insulation resistance:	> 10 ⁶ megohms	
Contact resistance:	Au, 2.5 milliohms; Ag, 6.5 milliohms max.	
Capacitance:	0.1 pf between contacts	
Temperature range:	-40°C to +100°C (Temperature rise < 10°C)	
Contact pressure:	150-250 g /contact (5.3-8.9 oz)	
Insertion/withdrawal force:	Au, 227-454 g (8-16 oz)/contact; Ag, 142-198 g (5-7 oz)/contact	
Board thickness:	0.057-0.068 in (1.45-1.73mm)	
Panel thickness:	0.125 in (3mm) max.	
Contact width:	0.048 in (1.2 mm) max.	
Rec. printed contact width:	0.070 in (1.8 mm)	
Materials:	Phenolic resin moulding; beryllium-copper contacts, silver or gold-plated max conductor size (free wiring): 0.20, 25 s.w.g. (0.51 mm)	
Weight (average):	L1355 3,7 g (0.13 oz) L1486 12,0 g (0.43 oz)	

Domed beryllium-copper contacts of unique design, carefully heat treated, ensure gentle and consistent connection with minimum wear and low resistance. Ag — silver-plated Au — gold-plated.