



**Multicon plugs and sockets**

The Painton Multicon range of plugs and sockets is Post Office approved and consists of 2, 4, 6, 8, 10, 12, 18, 24 and 33 pole sizes.

Electrical contact is provided by a heavily silver plated plug blade engaging with a similar socket clip, each clip having four individual contact areas to ensure absolute reliability. Any possibility of free moisture remaining between the plug and socket face is prevented by spacers moulded onto the plug body keeping the mating faces slightly apart when the plugs and sockets are fully engaged.

Connectors are finished in silver grey hammer finish and are basically interchangeable with the Painton Standard range with the exception of the 6 pole size and the 10-in-line unit.

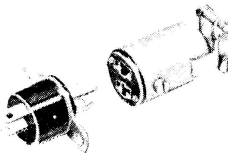
The terminal numbering is moulded into both the plug and socket bodies and appears in proximity to the appropriate soldering tag and on the mating face.

This facilitates wiring and enables complete cable forms to be tested prior to inclusion in equipments without removing the plug or socket covers.

**Specification**

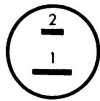
Ambient temperature range	-40 °C to +100 °C
Humidity classification	H5 (DEF-5011)
Voltage rating	500 V D.C. or A.C. peak (tropical conditions) 1000V D.C. or A.C. peak (temperate conditions)
Current rating	5 amps D.C. or A.C. r.m.s. per contact at 70 °C 2 amps D.C. or A.C. r.m.s. per contact at 100 °C
Proof voltage	2500V D.C. or A.C. peak between contacts 3000V D.C. or A.C. peak between contacts and flange 3000V D.C. or A.C. peak between contacts and cover
Contact resistance	2 mΩ (.002 Ω) average 2.5 mΩ (.0025 Ω) maximum

**Multicon range 2 poles**

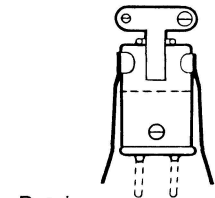
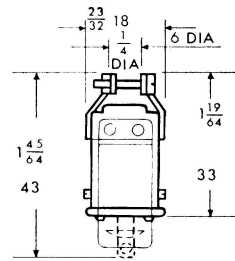
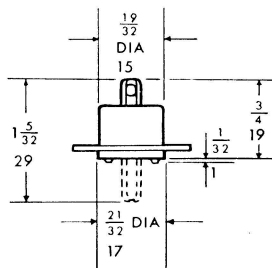


**Cable diameter**

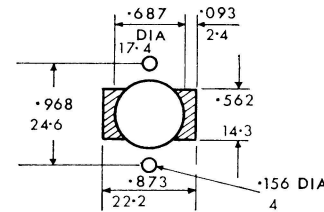
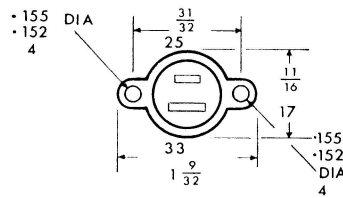
Max.  $\frac{1}{4}$  6  
Min.  $\frac{3}{16}$  5



**View looking on plug solder tags and socket face**



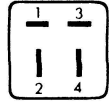
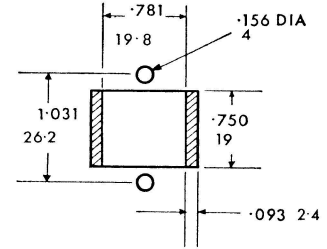
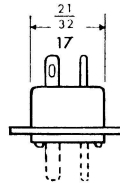
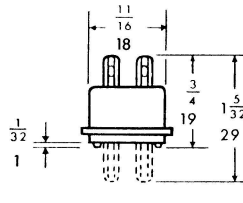
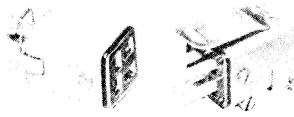
Retainers (optional)



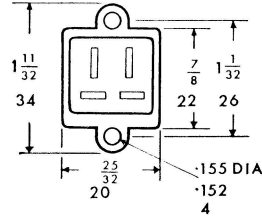
Panel cut-out. Shaded area needed only when retainers fitted.

DESCRIPTION	Ordering Code	Cat. No.
PLUGS FOR PANEL OR CHASSIS MOUNTING Side fixing mounting flange J.S. No. 5935-99-972-8221	P2/MFS	313261
PLUGS FOR CABLE TERMINATION Cable entry top cover	P2/CT	313260
Cable entry top cover with retainers	P2/CT/R2E	313600
SOCKETS FOR PANEL OR CHASSIS MOUNTING Side fixing mounting flange J.S. No. 5935-99-972-8229	S2/MFS	313263
SOCKETS FOR CABLE TERMINATION Cable entry top cover	S2/CT	313262
Cable entry top cover with retainers	S2/CT/R2E	313603

**Multicon range 4 pole**

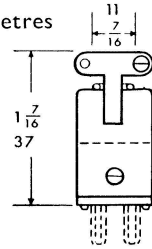


**Cable diameter**  
Max.  $\frac{7}{16}$  11  
Min.  $\frac{5}{32}$  4

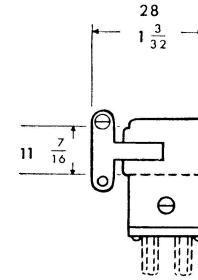
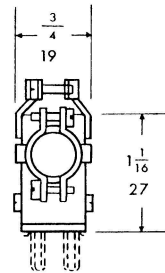


PANEL CUT-OUT  
EXTENSIONS MARKED ARE ONLY NEEDED WHEN RETAINERS ARE FITTED

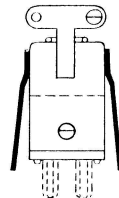
Dimensions in inches and millimetres



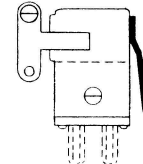
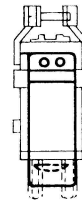
TOP ENTRY



SIDE ENTRY



WITH TWO RETAINERS

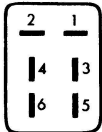


WITH ONE RETAINER

DESCRIPTION	Ordering Code	Cat. No.
PLUGS FOR PANEL OR CHASSIS MOUNTING Side fixing mounting flange J.S. No. 5935-99-972-8222	P4/MFS	310032
PLUGS FOR CABLE TERMINATION Cable entry top cover	P4/CT	310030
Cable entry top cover with retainers	P4/CT/R2E	311282
Cable entry side cover	P4/CS	310031
Cable entry side cover with retainer	P4/CS/R1E	311283
SOCKETS FOR PANEL OR CHASSIS MOUNTING Side fixing mounting flange J.S. No. 5935-99-972-8230	S4/MFS	310035
SOCKETS FOR CABLE TERMINATION Cable entry top cover	S4/CT	310033
Cable entry top cover with retainers	S4/CT/R2E	311284
Cable entry side cover	S4/CS	310034
Cable entry cover with retainer	S4/CS/R1E	311285



## Multicon range 6 poles

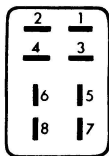
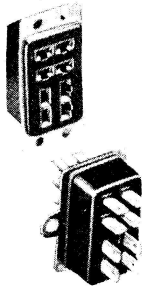


### Cable diameter

Max.  $\frac{7}{16}$  11  
 Min.  $\frac{5}{32}$  4

DESCRIPTION	Ordering Code	Cat. No.	DIMENSIONS					
			A	B	C	D	E	F
PLUGS FOR PANEL OR CHASSIS MOUNTING Side fixing mounting flange J.S. No. 5935-99-972-8223	P6/MFS	310007	$1\frac{1}{8}$ 24	$1\frac{3}{8}$ 26	—	—	—	—
End fixing mounting flange	P6/MFE	311520	—	—	$1\frac{1}{2}$ 32	$1\frac{1}{2}$ 38	—	—
PLUGS FOR CABLE TERMINATION Cable entry top cover	P6/CT	310009	—	—	—	—	1 25	—
Cable entry top cover with retainers	P6/CT/R2E	311291	—	—	—	—	1 25	—
Cable entry side cover	P6/CS	310018	—	—	—	—	1 25	$1\frac{1}{8}$ 35
Cable entry side cover with retainer	P6/CS/R1E	311292	—	—	—	—	1 25	$1\frac{1}{8}$ 35
SOCKETS FOR PANEL OR CHASSIS MOUNTING Side fixing mounting flange J.S. No. 5935-99-972-8231	S6/MFS	310006	$1\frac{1}{8}$ 24	$1\frac{3}{8}$ 26	—	—	—	—
End fixing mounting flange	S6/MFE	311521	—	—	$1\frac{1}{2}$ 32	$1\frac{1}{2}$ 38	—	—
SOCKETS FOR CABLE TERMINATION Cable entry top cover	S6/CT	310008	—	—	—	—	1 25	—
Cable entry top cover with retainers	S6/CT/R2E	311294	—	—	—	—	1 25	—
Cable entry side cover	S6/CS	310029	—	—	—	—	1 25	$1\frac{1}{8}$ 35
Cable entry side cover with retainer	S6/CS/R1E	311295	—	—	—	—	1 25	$1\frac{1}{8}$ 35

## Multicon range 8 poles

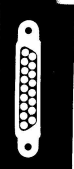


### Cable diameter

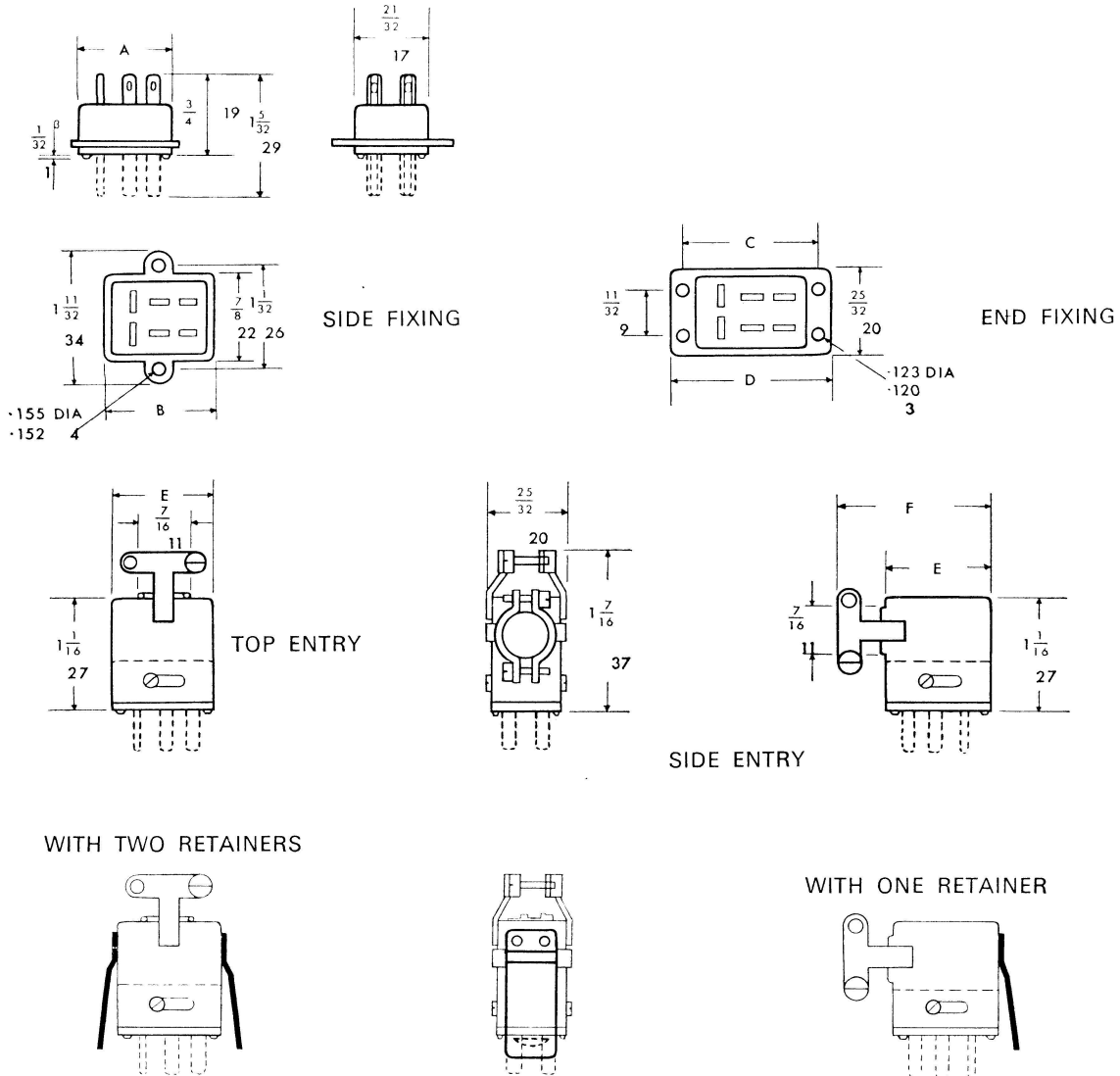
Max.  $\frac{7}{16}$  11  
 Min.  $\frac{1}{4}$  6.5

PLUGS FOR PANEL OR CHASSIS MOUNTING Side fixing mounting flange J.S. No. 5935-99-972-8224	P8/MFS	310052	$1\frac{7}{8}$ 30	$1\frac{5}{8}$ 33	—	—	—	—
End fixing mounting flange	P8/MFE	311522	—	—	$1\frac{1}{2}$ 38	$1\frac{1}{2}$ 44	—	—
PLUGS FOR CABLE TERMINATION Cable entry top cover	P8/CT	310050	—	—	—	—	$1\frac{1}{2}$ 32	—
Cable entry top cover with retainers	P8/CT/R2E	311450	—	—	—	—	$1\frac{1}{2}$ 32	—
Cable entry side cover	P8/CS	310051	—	—	—	—	$1\frac{1}{2}$ 32	$1\frac{1}{8}$ 41
Cable entry side cover with retainer	P8/CS/R1E	311451	—	—	—	—	$1\frac{1}{2}$ 32	$1\frac{1}{8}$ 41
SOCKETS FOR PANEL OR CHASSIS MOUNTING Side fixing mounting flange J.S. No. 5935-99-972-8232	S8/MFS	310055	$1\frac{7}{8}$ 30	$1\frac{5}{8}$ 33	—	—	—	—
End fixing mounting flange	S8/MFE	311523	—	—	$1\frac{1}{2}$ 38	$1\frac{1}{2}$ 44	—	—
SOCKETS FOR CABLE TERMINATION Cable entry top cover	S8/CT	310053	—	—	—	—	$1\frac{1}{2}$ 32	—
Cable entry top cover with retainers	S8/CT/R2E	311452	—	—	—	—	$1\frac{1}{2}$ 32	—
Cable entry side cover	S8/CS	310054	—	—	—	—	$1\frac{1}{2}$ 32	$1\frac{1}{8}$ 41
Cable entry side cover with retainer	S8/CS/R1E	311453	—	—	—	—	$1\frac{1}{2}$ 32	$1\frac{1}{8}$ 41

Outline drawings on next page.

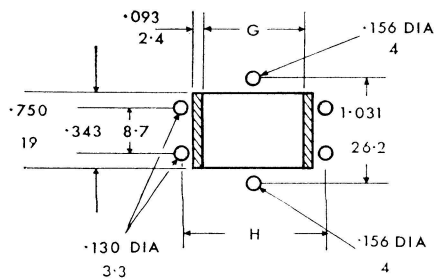


**Plugs & sockets Multicon range 6 & 8 poles** Dimensions in inches and millimetres



The illustrations show the form and principal dimensions of body mouldings and covers for the size or sizes of unit indicated, and are equally applicable to both plugs and sockets. The broken lines show the contact blades in the case of plugs.

**PANEL CUT-OUT**

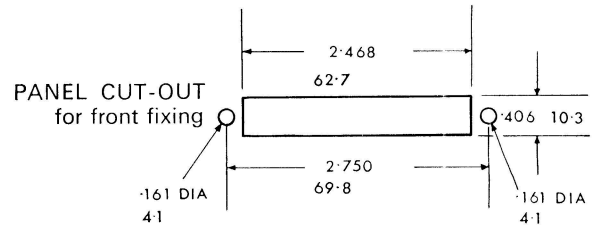
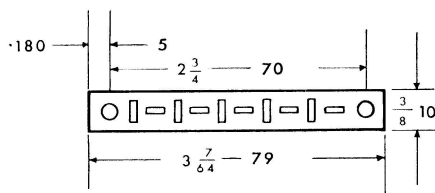
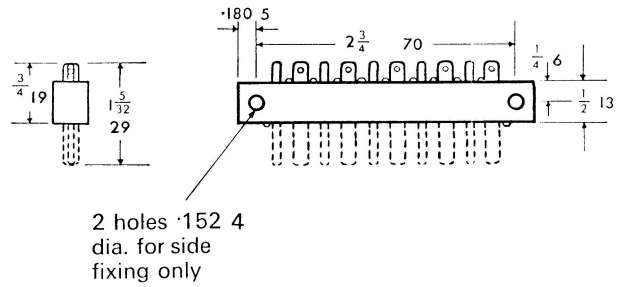
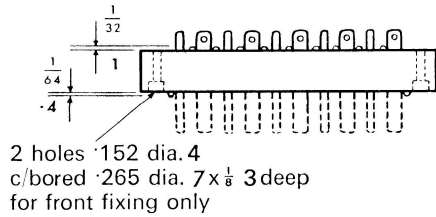
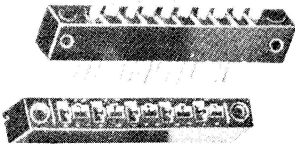


Type of Plug or Socket	DIMENSIONS	
	G	H
6 Poles	1.031 26.2	1.250 31.7
8 Poles	1.281 32.5	1.500 38.1

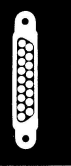
EXTENSIONS MARKED ARE ONLY NEEDED WHEN RETAINERS ARE FITTED



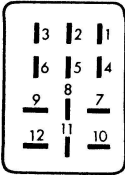
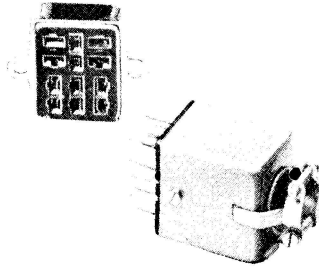
Multicon range 10 & 12 poles



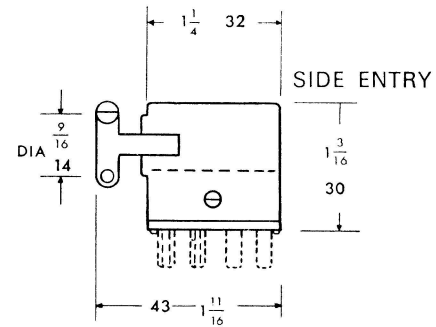
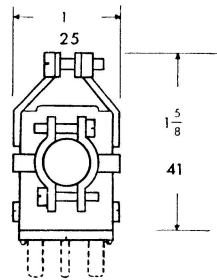
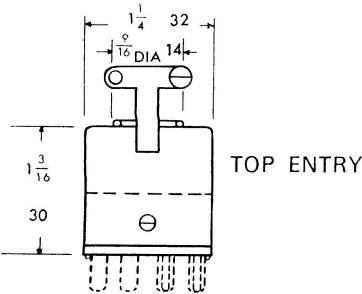
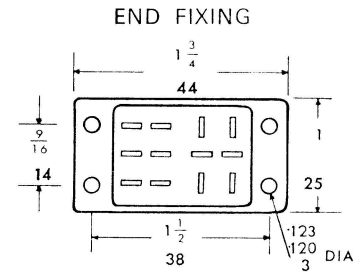
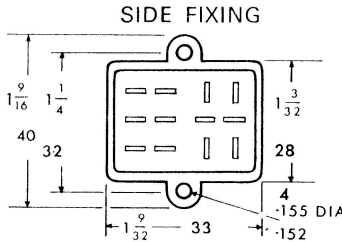
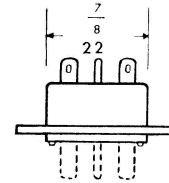
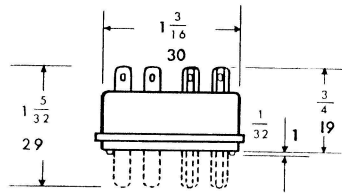
DESCRIPTION	Ordering Code	Cat. No.
PLUGS FOR PANEL OR CHASSIS MOUNTING		
Side fixing	P10/SF	501510
Front fixing	P10/FF	501461
SOCKETS FOR PANEL OR CHASSIS MOUNTING		
Side fixing	S10/SF	501511
Front fixing	S10/FF	501462



**Multicon range 12 poles**



**Cable diameter**  
Max.  $\frac{9}{16}$  14  
Min.  $\frac{11}{32}$  9



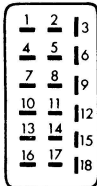
Dimensions in inches and millimetres

DESCRIPTION	Ordering Code	Cat. No.
<b>PLUGS FOR PANEL OR CHASSIS MOUNTING</b>		
Side fixing mounting flange J.S. No. 5935-99-972-8225	P12/MFS	310072
End fixing mounting flange	P12/MFE	311524
<b>PLUGS FOR CABLE TERMINATION</b>		
Cable entry top cover	P12/CT	310070
Cable entry top cover with retainers	P12/CT/R2E	311090
Cable entry side cover	P12/CS	310071
Cable entry side cover with retainer	P12/CS/R1E	311091
<b>SOCKETS FOR PANEL OR CHASSIS MOUNTING</b>		
Side fixing mounting flange J.S. No. 5935-99-972-8233	S12/MFS	310075
End fixing mounting flange	S12/MFE	311525
<b>SOCKETS FOR CABLE TERMINATION</b>		
Cable entry top cover	S12/CT	310073
Cable entry top cover with retainers	S12/CT/R2E	311092
Cable entry side cover	S12/CS	310074
Cable entry side cover with retainer	S12/CS/R1E	311093



**Multicon range**  
**18-33 poles**

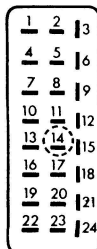
**18 POLES**



**Cable diameter**  
Max.  $\frac{9}{16}$  14  
Min.  $\frac{3}{8}$  9.5

DESCRIPTION	Ordering Code	Cat. No.	DIMENSIONS								
			A	B	C	D	E	F	G	H	
PLUGS FOR PANEL OR CHASSIS MOUNTING											
Side fixing mounting flange J.S. No. 5935-99-972-8226	P18/MFS	311064	1 $\frac{1}{2}$ 49	1 $\frac{1}{2}$ 32	2 $\frac{3}{4}$ 52	—	—	—	—	—	—
End fixing mounting flange	P18/MFE	311526	—	—	—	2 $\frac{1}{2}$ 57	2 $\frac{1}{2}$ 63	—	—	—	—
PLUGS FOR CABLE TERMINATION											
Cable entry top cover	P18/CT	311066	—	—	—	—	—	2 51	$\frac{7}{16}$ 14	—	—
Cable entry top cover with retainers	P18/CT/R2S	313331	—	—	—	—	—	2 51	$\frac{7}{16}$ 14	—	—
Cable entry side cover	P18/CS	311068	—	—	—	—	—	2 51	$\frac{7}{16}$ 14	2 $\frac{1}{2}$ 71	—
Cable entry side cover with retainers	P18/CS/R2S	313334	—	—	—	—	—	2 51	$\frac{7}{16}$ 14	2 $\frac{1}{2}$ 71	—
SOCKETS FOR PANEL OR CHASSIS MOUNTING											
Side fixing mounting flange J.S. No. 5935-99-972-8234	S18/MFS	311065	1 $\frac{1}{2}$ 49	1 $\frac{1}{2}$ 32	2 $\frac{3}{4}$ 52	—	—	—	—	—	—
End fixing mounting flange	S18/MFE	311527	—	—	—	2 $\frac{1}{2}$ 57	2 $\frac{1}{2}$ 63	—	—	—	—
SOCKETS FOR CABLE TERMINATION											
Cable entry top cover	S18/CT	311067	—	—	—	—	—	2 51	$\frac{7}{16}$ 14	—	—
Cable entry top cover with retainers	S18/CT/R2S	313333	—	—	—	—	—	2 51	$\frac{7}{16}$ 14	—	—
Cable entry side cover	S18/CS	311069	—	—	—	—	—	2 51	$\frac{7}{16}$ 14	2 $\frac{1}{2}$ 71	—
Cable entry side cover with retainers	S18/CS/R2S	313332	—	—	—	—	—	2 51	$\frac{7}{16}$ 14	2 $\frac{1}{2}$ 71	—

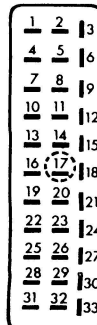
**24 POLES**



**Cable diameter**  
Max.  $\frac{31}{32}$  17  
Min.  $\frac{13}{32}$  10.5

PLUGS FOR PANEL OR CHASSIS MOUNTING (WITH LOCATOR)											
Side fixing mounting flange J.S. No. 5935-99-972-8227	P24/MFS	311186	2 $\frac{1}{8}$ 65	1 $\frac{1}{2}$ 32	2 $\frac{3}{4}$ 68	—	—	—	—	—	—
End fixing mounting flange	P24/MFE	311528	—	—	—	2 $\frac{3}{8}$ 73	3 $\frac{1}{8}$ 80	—	—	—	—
PLUGS FOR CABLE TERMINATION (WITH LOCATOR)											
Cable entry top cover	P24/CT	311187	—	—	—	—	—	2 $\frac{3}{8}$ 67	$\frac{3}{16}$ 17	—	—
Cable entry top cover with retainers	P24/CT/R2S	313335	—	—	—	—	—	2 $\frac{3}{8}$ 67	$\frac{3}{16}$ 17	—	—
Cable entry side cover	P24/CS	311188	—	—	—	—	—	2 $\frac{3}{8}$ 67	$\frac{3}{16}$ 17	3 $\frac{7}{16}$ 87	—
Cable entry side cover with retainers	P24/CS/R2S	313336	—	—	—	—	—	2 $\frac{3}{8}$ 67	$\frac{3}{16}$ 17	3 $\frac{7}{16}$ 87	—
SOCKETS FOR PANEL OR CHASSIS MOUNTING (WITH LOCATOR)											
Side fixing mounting flange J.S. No. 5935-99-972-8235	S24/MFS	311189	2 $\frac{1}{8}$ 65	1 $\frac{1}{2}$ 32	2 $\frac{3}{4}$ 68	—	—	—	—	—	—
End fixing mounting flange	S24/MFE	311529	—	—	—	2 $\frac{3}{8}$ 73	3 $\frac{1}{8}$ 80	—	—	—	—
SOCKETS FOR CABLE TERMINATION (WITH LOCATOR)											
Cable entry top cover	S24/CT	311190	—	—	—	—	—	2 $\frac{3}{8}$ 67	$\frac{3}{16}$ 17	—	—
Cable entry top cover with retainers	S24/CT/R2S	313337	—	—	—	—	—	2 $\frac{3}{8}$ 67	$\frac{3}{16}$ 17	—	—
Cable entry side cover	S24/CS	311191	—	—	—	—	—	2 $\frac{3}{8}$ 67	$\frac{3}{16}$ 17	3 $\frac{7}{16}$ 87	—
Cable entry side cover with retainers	S24/CS/R2S	313338	—	—	—	—	—	2 $\frac{3}{8}$ 67	$\frac{3}{16}$ 17	3 $\frac{7}{16}$ 87	—

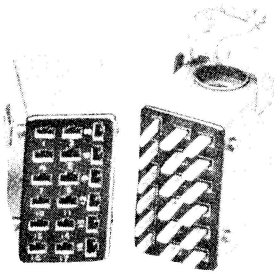
**33 POLES**



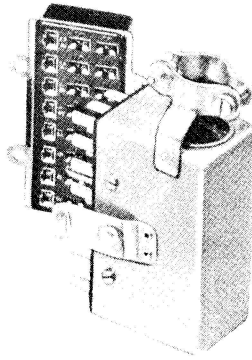
**Cable diameter**  
Max.  $\frac{3}{4}$  19  
Min.  $\frac{3}{8}$  9.5

PLUGS FOR PANEL OR CHASSIS MOUNTING (WITH LOCATOR)											
Side fixing mounting flange J.S. No. 5935-99-972-8228	P33/MFS	311205	3 $\frac{1}{2}$ 89	2 $\frac{3}{16}$ 56	3 $\frac{3}{16}$ 91	—	—	—	—	—	—
End fixing mounting flange	P33/MFE	311530	—	—	—	3 $\frac{1}{2}$ 97	4 $\frac{1}{16}$ 103	—	—	—	—
PLUGS FOR CABLE TERMINATION (WITH LOCATOR)											
Cable entry top cover	P33/CT	311206	—	—	—	—	—	3 $\frac{9}{16}$ 90	$\frac{1}{4}$ 19	—	—
Cable entry top cover with retainers	P33/CT/R2S	313295	—	—	—	—	—	3 $\frac{9}{16}$ 90	$\frac{1}{4}$ 19	—	—
Cable entry side cover	P33/CS	311207	—	—	—	—	—	3 $\frac{9}{16}$ 90	$\frac{1}{4}$ 19	4 $\frac{3}{16}$ 111	—
Cable entry side cover with retainers	P33/CS/R2S	313296	—	—	—	—	—	3 $\frac{9}{16}$ 90	$\frac{1}{4}$ 19	4 $\frac{3}{16}$ 111	—
SOCKETS FOR PANEL OR CHASSIS MOUNTING (WITH LOCATOR)											
Side fixing mounting flange J.S. No. 5935-99-972-8236	S33/MFS	311208	3 $\frac{1}{2}$ 89	2 $\frac{3}{16}$ 56	3 $\frac{3}{16}$ 91	—	—	—	—	—	—
End fixing mounting flange	S33/MFE	311531	—	—	—	3 $\frac{1}{2}$ 97	4 $\frac{1}{16}$ 103	—	—	—	—
SOCKETS FOR CABLE TERMINATION (WITH LOCATOR)											
Cable entry top cover	S33/CT	311209	—	—	—	—	—	3 $\frac{9}{16}$ 90	$\frac{1}{4}$ 19	—	—
Cable entry top cover with retainers	S33/CT/R2S	313297	—	—	—	—	—	3 $\frac{9}{16}$ 90	$\frac{1}{4}$ 19	—	—
Cable entry side cover	S33/CS	311210	—	—	—	—	—	3 $\frac{9}{16}$ 90	$\frac{1}{4}$ 19	4 $\frac{3}{16}$ 111	—
Cable entry side cover with retainers	S33/CS/R2S	313298	—	—	—	—	—	3 $\frac{9}{16}$ 90	$\frac{1}{4}$ 19	4 $\frac{3}{16}$ 111	—

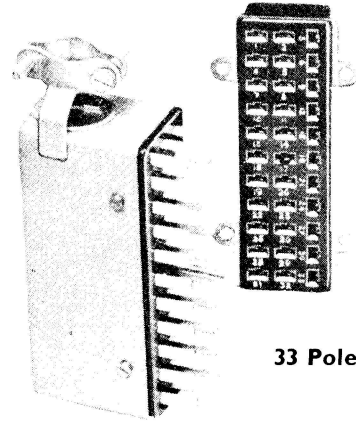
Multicon range 18-33 poles



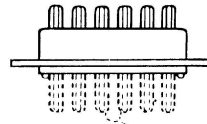
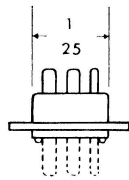
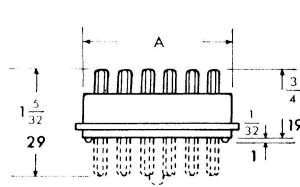
18 Pole



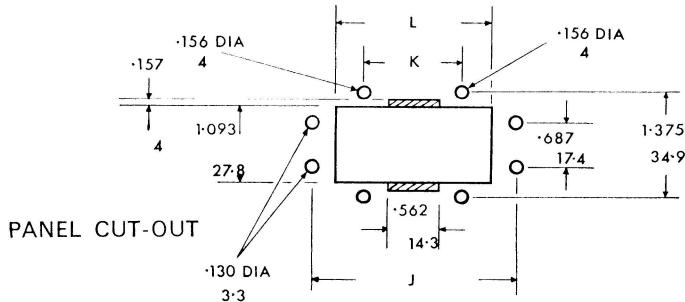
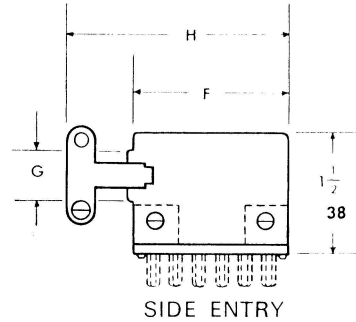
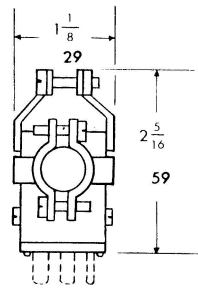
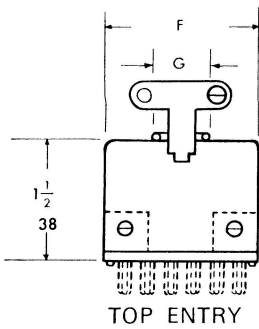
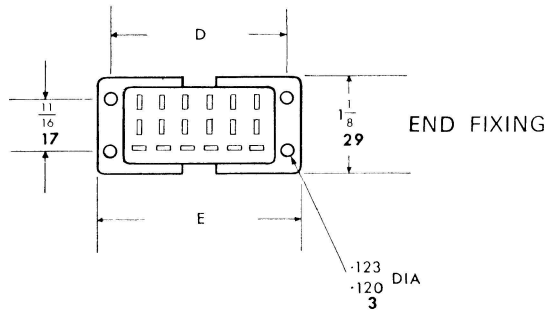
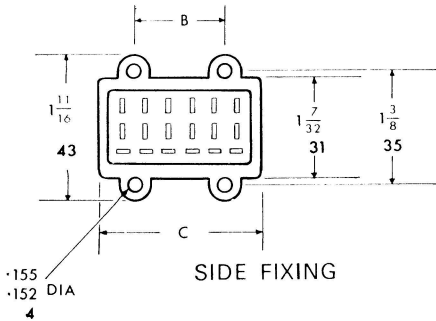
24 Pole



33 Pole



Large pin locator on 24 and 33 pole sizes only



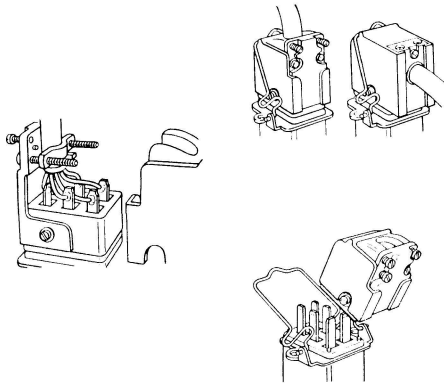
Type of Plug or Socket	DIMENSIONS		
	L	K	J
18 Poles	2.031 51.6	1.256 31.9	2.250 57.1
24 Poles	2.656 67.5	1.256 31.9	2.878 73.1
33 Poles	3.593 91.3	2.187 55.5	3.812 96.8

EXTENSIONS MARKED ARE ONLY NEEDED WHEN RETAINERS ARE FITTED



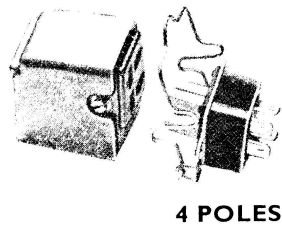
**Heavy duty Multicon range**

The range consists of 4, 6, 8, 12, 18, 24 and 33 pole sizes, using the same body mouldings, plug blades and socket clips as the Multicon range. Both plugs and sockets may be supplied either with a panel mounting flange and retaining loop or with a two part cover of rigid design to facilitate wiring and checking of joints. The covers are available

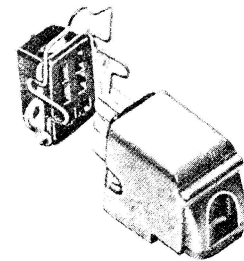


with either top or side entry and are fitted with earthing tags. Cable clamps are housed entirely within the cover. Electrical contact is provided by a heavily silver plated plug blade and socket clip, each clip having split limbs so that four individual areas are in contact with each plug blade.

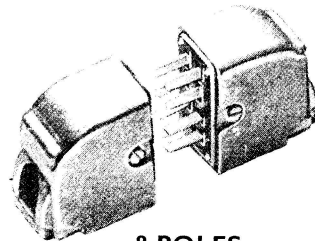
**Heavy duty Multicon range 4, 6 & 8 poles**



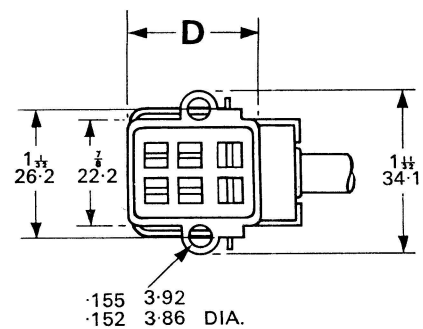
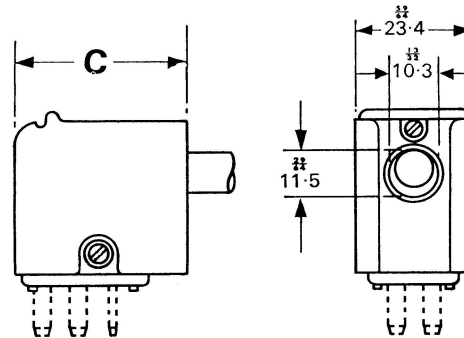
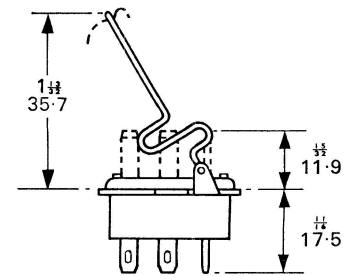
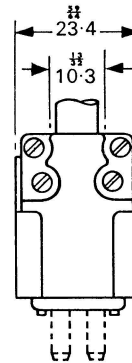
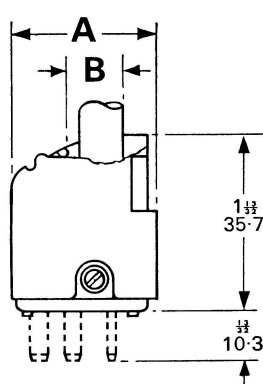
**4 POLES**



**6 POLES**



**8 POLES**



Dimensions in inches and millimetres

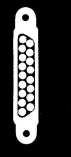
.155 3.92  
.152 3.86 DIA.

See next page for key and order codes.

**Specification**

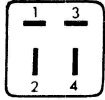
Ambient temperature range	-40 °C to +100 °C
Humidity classification	H5 (DEF 5011)
Voltage rating	500 V D.C. or A.C. peak (Tropical Conditions) 1000V D.C. or A.C. peak (Temperate Conditions)
Current rating	5 amps D.C. or A.C. r.m.s. per contact at 70 °C 2 amps D.C. or A.C. r.m.s. per contact at 100 °C
Proof voltage	2500V D.C. or A.C. peak between contacts 3000V D.C. or A.C. peak between contacts and flange 3000V D.C. or A.C. peak between contacts and cover
Contact resistance	2 mΩ (.002 Ω) average 2.5 mΩ (.0025 Ω) maximum

The terminal numbering is moulded into both the plug and socket bodies and appears in proximity to the appropriate soldering tag on the mating face. This facilitates wiring and enables complete cable forms to be tested prior to inclusion in equipments without removing the plug or socket covers.



View looking on  
 plug solder tags  
 and socket face

### 4 Poles

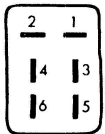


#### Cable diameter

Max.  $\frac{3}{8}$  9.6  
 Min.  $\frac{3}{32}$  2.4

DESCRIPTION	Part Numbers	DIMENSIONS							
		A		B		C		D	
		in.	mm	in.	mm	in.	mm	in.	mm
Plug with panel mounting flange Fitted with retaining loop	310566	—	—	—	—	—	—	$\frac{25}{32}$	13.8
Plug with top entry cover	311751	$\frac{63}{64}$	25.0	$\frac{7}{16}$	11.1	—	—	—	—
Plug with end entry cover	311744	—	—	$1\frac{1}{8}$	28.6	—	—	—	—
Socket with panel mounting flange Fitted with retaining loop	310567	—	—	—	—	—	—	$\frac{25}{32}$	19.8
Socket with top entry cover	311793	$\frac{63}{64}$	25.0	$\frac{7}{16}$	11.1	—	—	—	—
Socket with end entry cover	311786	—	—	$1\frac{1}{8}$	28.6	—	—	—	—

### 6 Poles

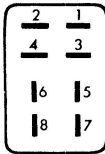


#### Cable diameter

Max.  $\frac{3}{8}$  9.6  
 Min.  $\frac{3}{32}$  2.4

Plug with panel mounting flange Fitted with retaining loop	310570	—	—	—	—	—	—	$1\frac{1}{32}$	26.2
Plug with top entry cover	311752	$1\frac{1}{8}$	28.6	$\frac{29}{64}$	11.5	—	—	—	—
Plug with end entry cover	311745	—	—	$1\frac{11}{32}$	34.1	—	—	—	—
Socket with panel mounting flange Fitted with retaining loop	310571	—	—	—	—	—	—	$1\frac{1}{32}$	26.2
Socket with top entry cover	311794	$1\frac{1}{8}$	28.6	$\frac{29}{64}$	11.5	—	—	—	—
Socket with end entry cover	311787	—	—	$1\frac{11}{32}$	34.1	—	—	—	—

### 8 Poles

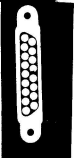


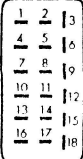
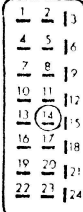
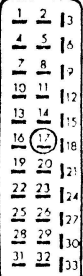
#### Cable diameter

Max.  $\frac{3}{8}$  9.6  
 Min.  $\frac{3}{32}$  2.4

Plug with panel mounting flange Fitted with retaining loop	310568	—	—	—	—	—	—	$1\frac{9}{32}$	32.5
Plug with top entry cover	311753	$1\frac{3}{8}$	34.9	$\frac{29}{64}$	11.5	—	—	—	—
Plug with end entry cover	311746	—	—	$1\frac{37}{64}$	40.1	—	—	—	—
Socket with panel mounting flange Fitted with retaining loop	310569	—	—	—	—	—	—	$1\frac{9}{32}$	32.5
Socket with top entry cover	311795	$1\frac{3}{8}$	34.9	$\frac{29}{64}$	11.5	—	—	—	—
Socket with end entry cover	311788	—	—	$1\frac{37}{64}$	40.1	—	—	—	—





View looking on plug solder tags and socket face	DESCRIPTION	CAT. NO.		DIMENSIONS				
		Plain	With Locator	A	B	C	D	E
				in. mm	in. mm	in. mm	in. mm	in. mm
 <p><b>18 POLES</b></p> <p>Cable diameter Max. <math>\frac{47}{32}</math> 13.4 Min. <math>\frac{37}{32}</math> 3.9</p>	Plug with panel mounting flange Fitted with retaining loop	310610	—	—	—	—	$2\frac{1}{32}$ 51.6	$1\frac{1}{4}$ 31.7
	Plug with top entry cover	311755	—	$2\frac{7}{64}$ 53.6	$\frac{3}{16}$ 13.9	—	—	—
	Plug with end entry cover	311748	—	—	—	$2\frac{21}{64}$ 59.1	—	—
	Socket with panel mounting flange Fitted with retaining loop	310611	—	—	—	—	$2\frac{1}{32}$ 51.6	$1\frac{1}{4}$ 31.7
	Socket with top entry cover	311797	—	$2\frac{7}{64}$ 53.6	$\frac{3}{16}$ 13.9	—	—	—
	Socket with end entry cover	311790	—	—	—	$2\frac{21}{64}$ 59.1	—	—
 <p><b>24 POLES</b></p> <p>Cable diameter Max. <math>\frac{5}{8}</math> 16.0 Min. <math>\frac{5}{32}</math> 3.9</p>	Plug with panel mounting flange Fitted with retaining loop	—	313343	—	—	—	$2\frac{1}{16}$ 67.1	$1\frac{1}{4}$ 31.7
	Plug with top entry cover	—	313339	$2\frac{1}{4}$ 69.8	$\frac{3}{16}$ 16.7	—	—	—
	Plug with end entry cover	—	313340	—	—	$2\frac{11}{16}$ 74.6	—	—
	Socket with panel mounting flange Fitted with retaining loop	—	313344	—	—	—	$2\frac{1}{16}$ 67.1	$1\frac{1}{4}$ 31.7
	Socket with top entry cover	—	313341	$2\frac{1}{4}$ 69.8	$\frac{3}{16}$ 16.7	—	—	—
	Socket with end entry cover	—	313342	—	—	$2\frac{11}{16}$ 74.6	—	—
 <p><b>33 POLES</b></p> <p>Cable diameter Max. <math>\frac{11}{16}</math> 17.6 Min. <math>\frac{37}{32}</math> 3.9</p>	Plug with panel mounting flange Fitted with retaining loop	—	316550	—	—	—	$3\frac{11}{32}$ 91.3	$2\frac{3}{16}$ 55.6
	Plug with top entry cover	—	316385	$3\frac{11}{16}$ 93.7	$\frac{1}{4}$ 17.9	—	—	—
	Plug with end entry cover	—	316386	—	—	$3\frac{7}{8}$ 98.4	—	—
	Socket with panel mounting flange Fitted with retaining loop	—	316552	—	—	—	$3\frac{11}{32}$ 91.3	$2\frac{3}{16}$ 55.6
	Socket with top entry cover	—	316387	$3\frac{11}{16}$ 93.7	$\frac{1}{4}$ 17.9	—	—	—
	Socket with end entry cover	—	316388	—	—	$3\frac{7}{8}$ 98.4	—	—

## 159 Series

The 159 range of plugs and sockets is available with from 7 to 71 poles, and a simple but extremely efficient locking device, gold flash on contacts and solder tags, a robust cover with either top or side cable entry protected by a bonded plastic coat. An inner plastic coating provides insulation between solder tags and cover.

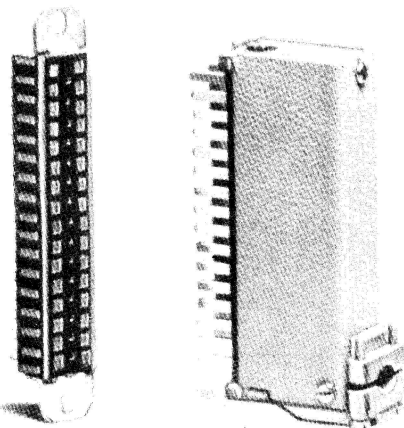
Contacts are arranged in two rows for the 7 to 31 pole range and four rows for the 35 to 71 pole. One row contains a polarised cavity.

The 159 series, apart from normal plug and socket applications and use as a unit, provides an efficient cable coupling. When used as a cable connector both plug and socket will be provided with the standard cover, the plug member however being fitted with the 159 series retainer.

### Specification

Working voltage	350V D.C. or A.C. (peak)
Current rating	3 amps D.C. or A.C. (RMS) at 55 °C 5 amps D.C. or A.C. (RMS) at 20 °C
Maximum operating temperature	70 °C
Average contact resistance	0.002 Ω
Maximum contact resistance	0.0025 Ω
Flashover voltage	4kV between contacts and between contacts and case
Insulation resistance	Greater than 10 <sup>12</sup> Ω (10 <sup>6</sup> MΩ) initially. Greater than 10 <sup>11</sup> Ω (10 <sup>5</sup> MΩ) after H6 Climatic exposure. (DEF 5011)
Vibration category	V1 (DEF 5011)
Insertion and withdrawal force	6 ozs per contact average

### Line connector with cover—2 row

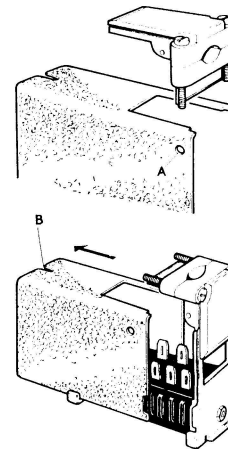


### Materials

Clips	Beryllium copper—gold flashed on 0.0003 silver
Blade	Brass—gold flashed on 0.0003 silver
Body mouldings	Delrin 500
Cover	Aluminium—grey PVC coated
End plates and cable clamps	Zinc alloy

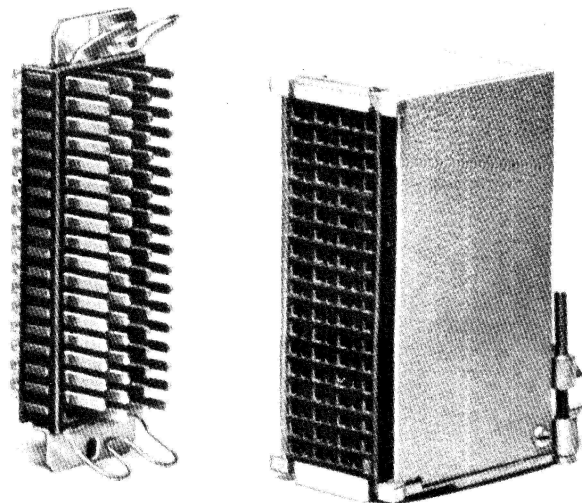
### Conversion from top entry to side entry

The cable clamp provides a simple method of conversion of the cover from top entry to side entry by its removal and reversal.



This is effected by removing cable clamp screw A and case retaining screw B. Case may now be moved away from cable clamp mounting in the direction of the arrow, and the cable clamp lifted clear, reversed and replaced.

### Line connector with cover—4 row





## I59 Series 2 Row

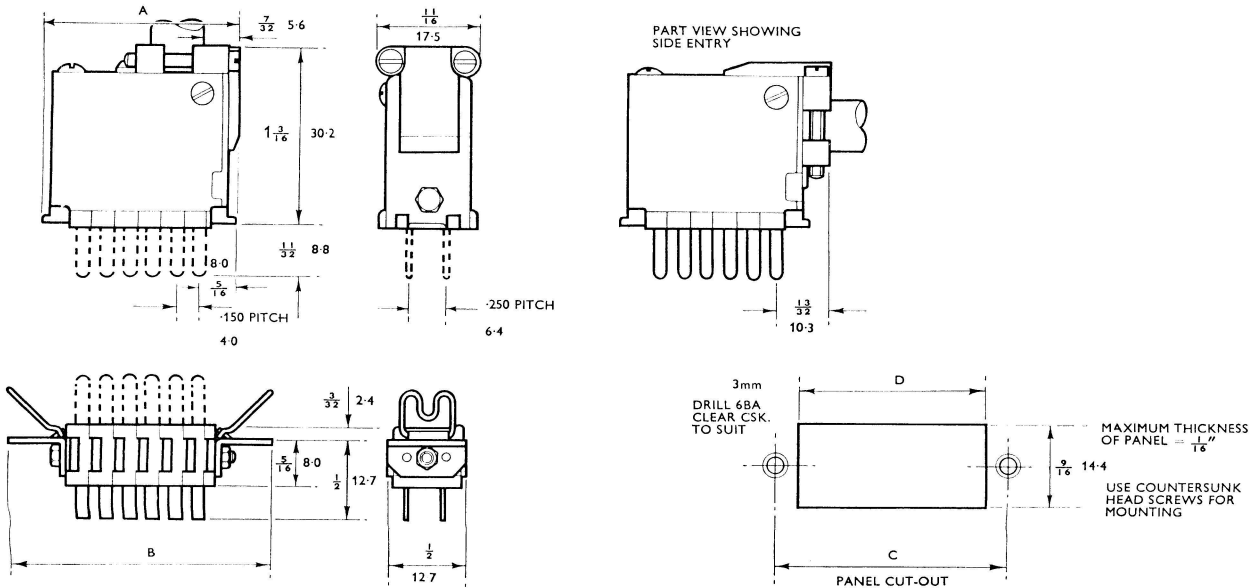
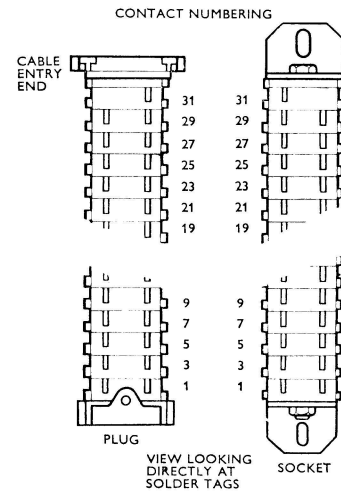
With mounting brackets, with or without retainers

NO. OF WAYS	PART NUMBERS				DIMENSIONS					
	PLUG		SOCKET		B		C		D	
	WITH RETAINERS	WITHOUT RETAINERS	WITH RETAINERS	WITHOUT RETAINERS	INCH	MM	INCH	MM	INCH	MM
<b>7</b>	74/10/0706/10 (324825)	74/10/0705/10 (324797)	74/10/0756/10 (324839)	74/10/0755/10 (324811)	1.37	34.8	1.13	28.7	0.85	21.6
<b>11</b>	74/10/1106/10 (324827)	74/10/1105/10 (324799)	74/10/1156/10 (324841)	74/10/1155/10 (324813)	1.67	42.4	1.43	36.3	1.15	29.2
<b>15</b>	74/10/1506/10 (324829)	74/10/1505/10 (324801)	74/10/1556/10 (324843)	74/10/1555/10 (324815)	1.97	50.0	1.73	43.9	1.44	36.6
<b>19</b>	74/10/1906/10 (324831)	74/10/1905/10 (324803)	74/10/1956/10 (324845)	74/10/1955/10 (324817)	2.26	57.4	2.02	51.3	1.74	44.2
<b>23</b>	74/10/2306/10 (324833)	74/10/2305/10 (324805)	74/10/2356/10 (324847)	74/10/2355/10 (324819)	2.56	65.0	2.32	58.9	2.04	51.8
<b>31</b>	74/10/3106/10 (324837)	74/10/3105/10 (324809)	74/10/3156/10 (324851)	74/10/3155/10 (324823)	3.15	80.0	2.91	73.9	2.63	66.8

Obsolete part numbers shown in brackets.

## With cover

NUMBER OF WAYS	PART NUMBERS			DIMENSION A	
	PLUG	PLUG WITH RETAINER	SOCKET	INCH	MM
<b>7</b>	74/10/0701/10 (324965)	74/10/0702/10 (324993)	74/10/0751/10 (324979)	1.06	26.9
<b>11</b>	74/10/1101/10 (324967)	74/10/1102/10 (324995)	74/10/1151/10 (324981)	1.35	34.3
<b>15</b>	74/10/1501/10 (324969)	74/10/1502/10 (324997)	74/10/1551/10 (324983)	1.65	41.9
<b>19</b>	74/10/1901/10 (324971)	74/10/1902/10 (324999)	74/10/1951/10 (324985)	1.94	49.3
<b>23</b>	74/10/2301/10 (324973)	74/10/2302/10 (325001)	74/10/2351/10 (324987)	2.24	56.9
<b>31</b>	74/10/3101/10 (324977)	74/10/3102/10 (325005)	74/10/3151/10 (324991)	2.83	71.9





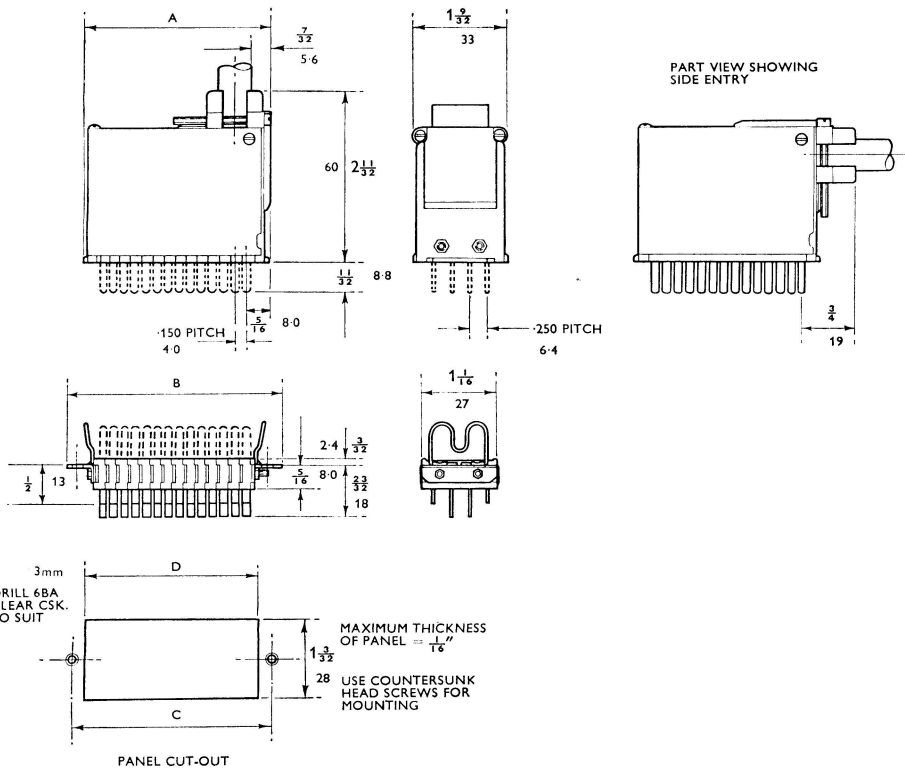
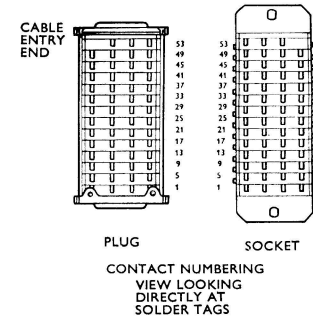
**I59 Series 4 row**

**With mounting brackets**

NO. OF WAYS	PART NUMBERS				DIMENSIONS					
	PLUG		SOCKET		B		C		D	
	WITH RETAINERS	WITHOUT RETAINERS	WITH RETAINERS	WITHOUT RETAINERS	INCH	MM	INCH	MM	INCH	MM
<b>35</b>	74/10/3506/10	74/10/3505/10	74/10/3556/10	74/10/3555/10	2.13	54.1	1.89	48.0	1.60	40.6
<b>47</b>	74/10/4706/10	74/10/4705/10	74/10/4756/10	74/10/4755/10	2.58	65.5	2.34	59.4	2.05	52.1
<b>55</b>	74/10/5506/10	74/10/5505/10	74/10/5556/10	74/10/5555/10	2.88	73.2	2.64	67.1	2.35	59.7
<b>59</b>	74/10/5906/10	74/10/5905/10	74/10/5956/10	74/10/5955/10	3.03	77.0	2.79	70.9	2.50	63.5
<b>71</b>	74/10/7106/10	74/10/7105/10	74/10/7156/10	74/10/7155/10	3.48	88.4	3.24	82.3	2.95	74.9

**With cover**

NO. OF WAYS	PART NUMBERS			DIMENSION A	
	PLUG	PLUG WITH RETAINER	SOCKET	INCH	MM
	<b>35</b>	74/10/3501/10	74/10/3502/10	74/10/3551/10	1.80
<b>47</b>	74/10/4701/10	74/10/4702/10	74/10/4751/10	2.25	57.2
<b>55</b>	74/10/5501/10	74/10/5502/10	74/10/5551/10	2.55	64.8
<b>59</b>	74/10/5901/10	74/10/5902/10	74/10/5951/10	2.70	68.6
<b>71</b>	74/10/7101/10	74/10/7102/10	74/10/7151/10	3.15	80.0



### Standard range

The Painton Standard Range of plugs and sockets cover from 2 to 33 poles. Male and female contacts are of silver plated phosphor bronze, housed in an electrical grade phenolic moulding and polarised.

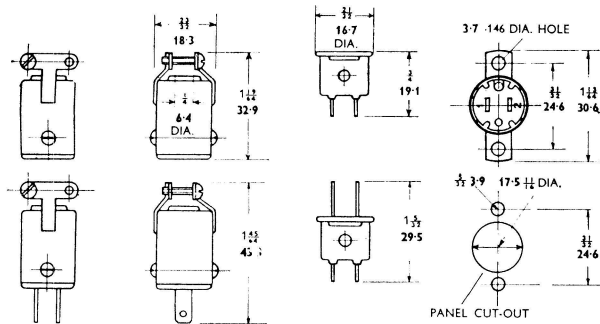
The Standard Range is basically interchangeable with the Painton Multicon and Heavy Duty Multicon series of plugs and sockets.

### Specification

Ambient temperature range  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

Voltage rating	500V D.C. or A.C. peak (tropical conditions) 750V D.C. or A.C. peak (temperate conditions)
Current rating	55 amps D.C. or A.C. r.m.s. per contact at $70^{\circ}\text{C}$
Proof voltage	2000V D.C. or A.C. peak between contacts 2000V D.C. or A.C. peak between contacts and brackets 2000V D.C. or A.C. peak between contacts and cover
Contact resistance	$2\text{m}\Omega$ ( $-0.002\ \Omega$ ) average $2.5\text{m}\Omega$ ( $0.0025\ \Omega$ ) max.

### 2 way plug and socket

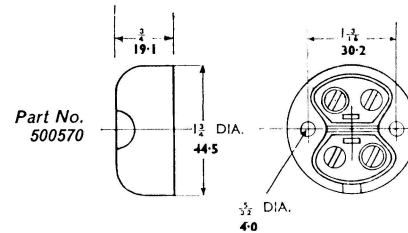


Dimensions in inches and millimetres

PART NUMBERS		
	PLUG	SOCKET
CABLE ENTRY TOP	501041	500461
WITH MOUNTING BRACKETS	501042	500462

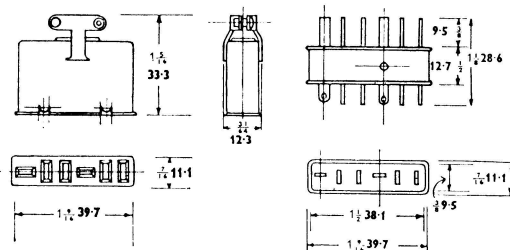
### 2 way wall socket

This 2 way socket is designed for mounting on a wall, and is intended for use with the 2 way plug.



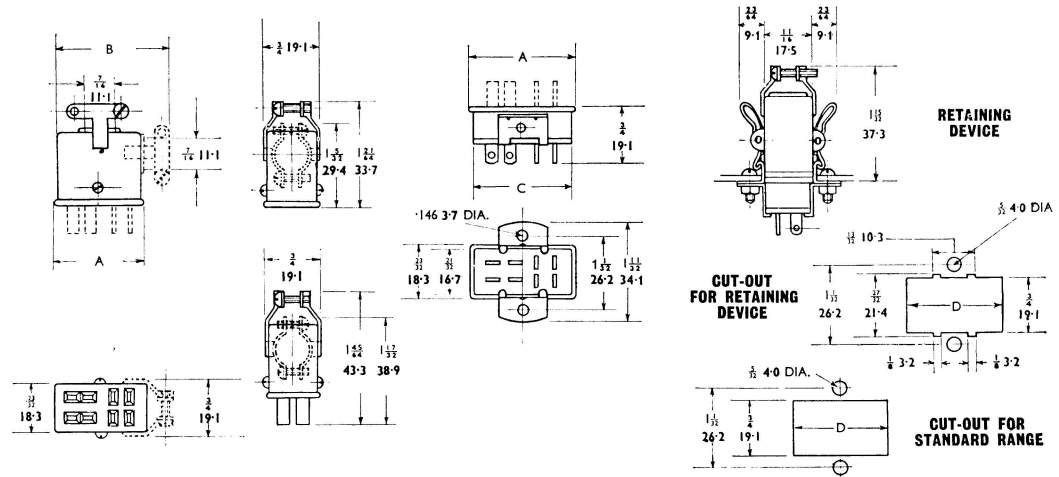
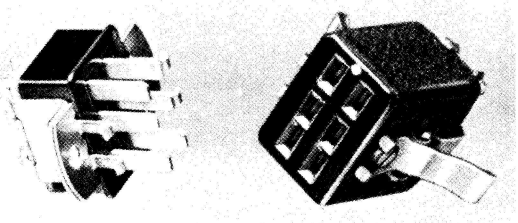
### 6 way in-line plug and socket

The plug is mounted by means of an 8 BA clearance hole passing through number 4 contact and this position must, unless the mounting is insulated, only be used for connections in contact with the frame.

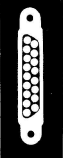


6 WAY IN LINE	PART NUMBER
SOCKET With Top Entry Case	500348
PLUG	500347

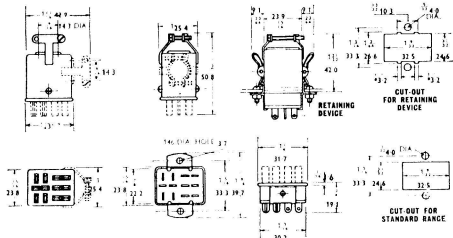
Standard range 4, 6 and 8 way plugs and sockets



NUMBER OF WAYS		PART NUMBERS				DIMENSIONS			
		PLUG		SOCKET		A	B	C	D
		STANDARD	WITH RETAINER	STANDARD	WITH RETAINER				
4	CABLE ENTRY TOP	500207	500698	500465	500689	$\frac{3}{4}$ 19.1	—	—	—
	CABLE ENTRY SIDE	500463	500697	500466	500700	$\frac{3}{4}$ 19.1	$1\frac{1}{2}$ 26.2	—	—
	WITH MOUNTING BRACKETS	500464	500695	500467	500699	$\frac{3}{4}$ 19.1	—	$\frac{11}{16}$ 17.5	$\frac{3}{8}$ 19.8
6	CABLE ENTRY TOP	500198	500693	500470	500681	1 25.4	—	—	—
	CABLE ENTRY SIDE	500468	500694	500471	500682	1 25.4	$1\frac{3}{8}$ 34.9	—	—
	WITH MOUNTING BRACKETS	500469	500692	500472	500680	1 25.4	—	$\frac{11}{16}$ 23.8	$1\frac{1}{2}$ 26.2
8	CABLE ENTRY TOP	500208	500683	500475	500684	$1\frac{1}{2}$ 31.8	—	—	—
	CABLE ENTRY SIDE	500473	500676	500476	500679	$1\frac{1}{2}$ 31.8	$1\frac{5}{8}$ 41.3	—	—
	WITH MOUNTING BRACKETS	500474	500677	500477	500678	$1\frac{1}{2}$ 31.8	—	$1\frac{3}{8}$ 30.2	$1\frac{3}{4}$ 32.5



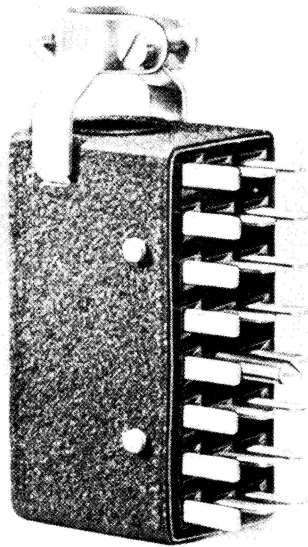
## Standard range 12 way plug and socket



### PART NUMBERS

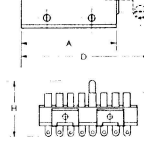
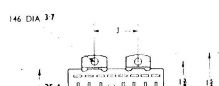
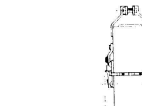
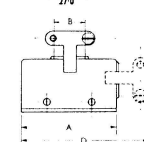
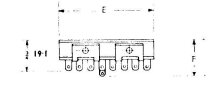
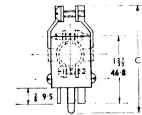
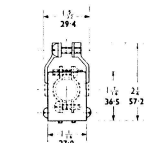
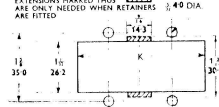
	PLUG		SOCKET	
	STANDARD	WITH RETAINER	STANDARD	WITH RETAINER
CABLE ENTRY TOP	500204	500690	500480	500687
CABLE ENTRY SIDE	500478	500691	500481	500686
WITH MOUNTING BRACKETS	500479	500685	500482	500688

## Standard range 18, 24 and 33 way plug and socket



### PANEL CUT-OUT

EXTENSIONS MARKED THIS ARE ONLY NEEDED WHEN RETAINERS ARE FITTED



### CABLE CONNECTORS WITH RETAINERS

TYPE		
18 WAY	PLUG	500949
	SOCKET	500953
24 WAY	PLUG	501073
	SOCKET	501063



NUMBER OF WAYS		PART NUMBERS				DIMENSIONS											
		PLUG		SOCKET		A	B	C	D	E	F	G	H	J	K		
		STANDARD	WITH RETAINER	STANDARD	WITH RETAINER												
18	CABLE ENTRY TOP	500203	500949	500485	500951	2	$\frac{7}{8}$	14.3	-	-	-	-	-	-	-	-	
	CABLE ENTRY SIDE	500483	500948	500486	500950	2	$\frac{7}{8}$	14.3	-	$2\frac{3}{8}$	70.6	-	-	-	-	-	
	WITH MOUNTING BRACKETS	500484	-	500487	-	-	-	-	-	$1\frac{1}{2}$	49.2	$1\frac{1}{2}$	31.8	$1\frac{1}{2}$	31.8	$1\frac{3}{8}$	50.0
24	CABLE ENTRY TOP	500194	501073	500490	501075	$2\frac{3}{8}$	$\frac{1}{2}$	$16.7$	$2\frac{7}{8}$	73.0	-	-	-	-	-	-	
	CABLE ENTRY SIDE	500488	501074	500491	501076	$2\frac{7}{8}$	$\frac{1}{2}$	16.7	-	$3\frac{3}{8}$	87.3	-	-	-	-	-	
	WITH MOUNTING BRACKETS	500489	-	500492	-	-	-	-	-	$2\frac{5}{8}$	65.1	$\frac{7}{8}$	22.2	$1\frac{1}{2}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$2\frac{3}{8}$
33	CABLE ENTRY TOP	500202	-	500495	-	$3\frac{3}{8}$	$\frac{1}{2}$	$19.1$	$2\frac{7}{8}$	73.0	-	-	-	-	-	-	
	CABLE ENTRY SIDE	500493	-	500496	-	$3\frac{3}{8}$	$\frac{1}{2}$	19.1	-	$4\frac{3}{8}$	111.1	-	-	-	-	-	
	WITH MOUNTING BRACKETS	500494	-	500497	-	-	-	-	-	$3\frac{1}{2}$	88.9	$\frac{7}{8}$	22.2	$2\frac{3}{8}$	$1\frac{3}{8}$	$2\frac{3}{8}$	$3\frac{3}{8}$

\*No locating pin on 18 way

## Microcon range

Painton Microcon printed circuit connectors are suitable for boards punched to the standard 0.1 in (2.5 mm) pitch. Plugs are available with the contact blades either at 90° or in line with, the solder tags for horizontal or vertical mounting, the mating sockets being respectively mounted on the associated chassis giving a plug-in facility to the board, or fitted with a cover and connected to a free cable. The inner surfaces are sprayed with an insulating coating to obviate short circuits.

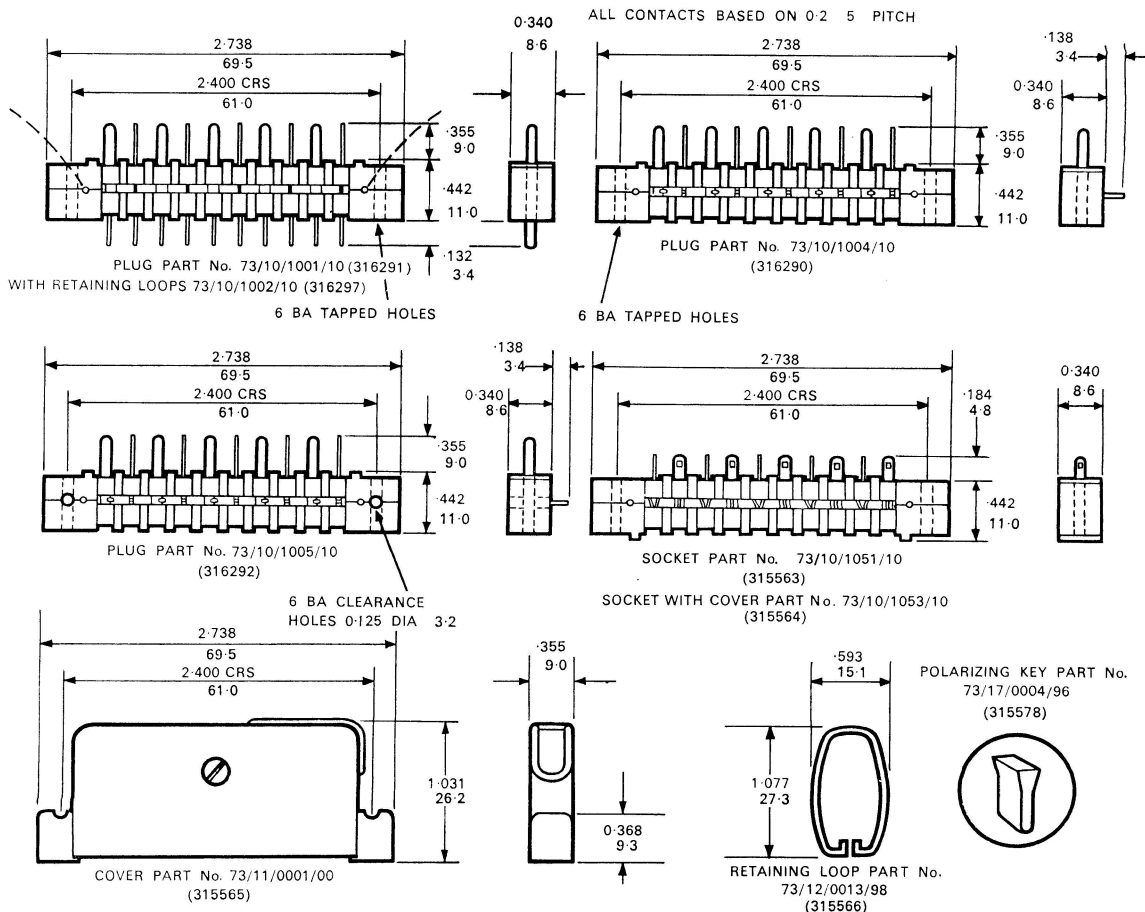
The plugs may be fixed to the board by either passing the solder tags through standard 0.052 in (1.3 mm) holes, flattening them to ensure mechanical rigidity and then dip soldering, or by a bracket at each end, for which tapped metal inserts are provided. A further version may be bolted directly to the board through transverse fixing holes.

All mouldings are of a nylon filled phenolic in two halves to allow insertion of the wire retaining loops and removal of any plug contacts for polarising purposes. Polarised versions are available.

## Specification

Working voltage	350V D.C. or A.C. peak at 70 °C 250V D.C. or A.C. peak at 100 °C
Current rating	5 amp D.C. or A.C. r.m.s. at 20 °C 3 amp D.C. or A.C. r.m.s. at 70 °C 1 amp D.C. or A.C. r.m.s. at 100 °C
Maximum operating temperature	100 °C
Average contact resistance	0.002 Ω
Maximum contact resistance	0.003 Ω
Flashover voltage	4kV for plugs with 90° solder tags 5kV for plugs with in line solder tags and for sockets
Insulation resistance	Greater than 10 <sup>4</sup> MΩ (10 <sup>10</sup> Ω) initially. Greater than 10 <sup>3</sup> MΩ (10 <sup>9</sup> Ω) after H5 climatic exposure

Dimensions in inches and millimetres  
 obsolete part numbers shown in brackets.

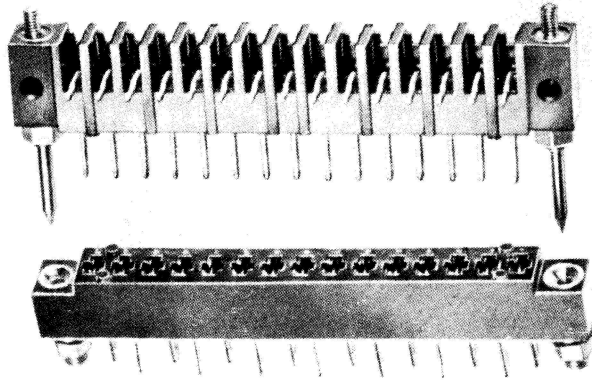






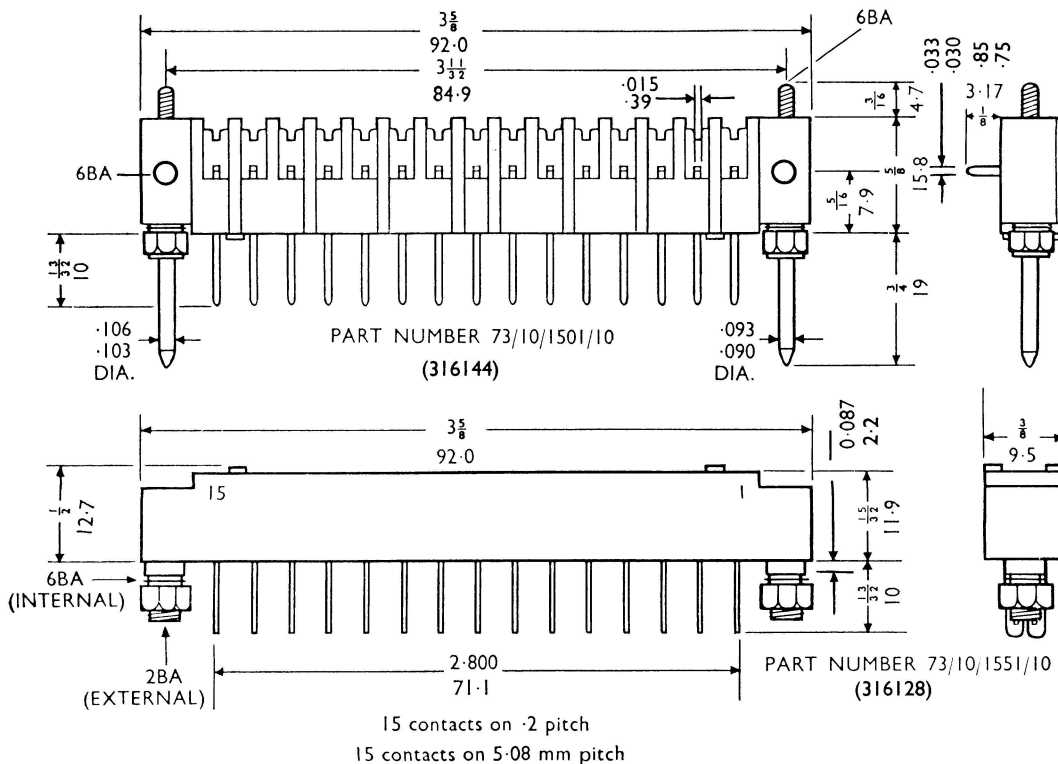
**15-way Heavy duty range**

The Painton 15-way heavy duty printed circuit connector. The solder tags are at 90° to the blades on a 0.2 in. pitch and are designed to pass through standard 0.052 in. holes in the board, they are also annealed to facilitate bending. Plug blades and socket contacts are of phosphor bronze and both incorporate a standard finish of silver plating protected by gold flash. Body mouldings are of a high strength nylon-filled phenolic resin and identification numbers are moulded on to the mating and solder tag faces.



**Specification**

Working voltage	500V D.C. or A.C. peak at 70 °C 350V D.C. or A.C. peak at 100 °C
Current rating	5 amps D.C. or A.C. r.m.s. at 70 °C 2 amps D.C. or A.C. r.m.s. at 100 °C
Maximum operating temperature	100 °C
Average contact resistance	0.003 Ω
Maximum contact resistance	0.005 Ω
Flashover voltage	5kV
Insulation resistance	Greater than 10 <sup>6</sup> MΩ (10 <sup>12</sup> Ω) initially Greater than 10 <sup>5</sup> MΩ (10 <sup>11</sup> Ω) after H5 climatic exposure
Insertion and withdrawal forces	Approximately 10 lb.
Plug blades and socket contacts	Phosphor bronze
Body moulding	High strength nylon-filled phenolic resin
Finish on plug blades and socket contacts	Silver plating protected by gold flash



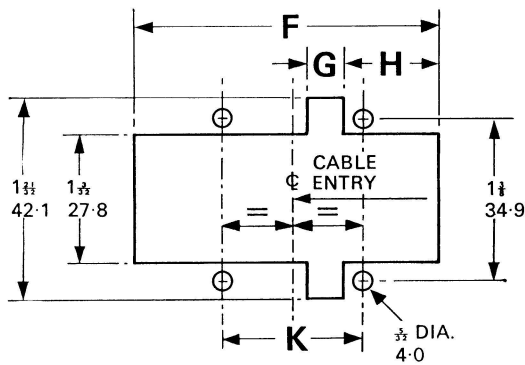
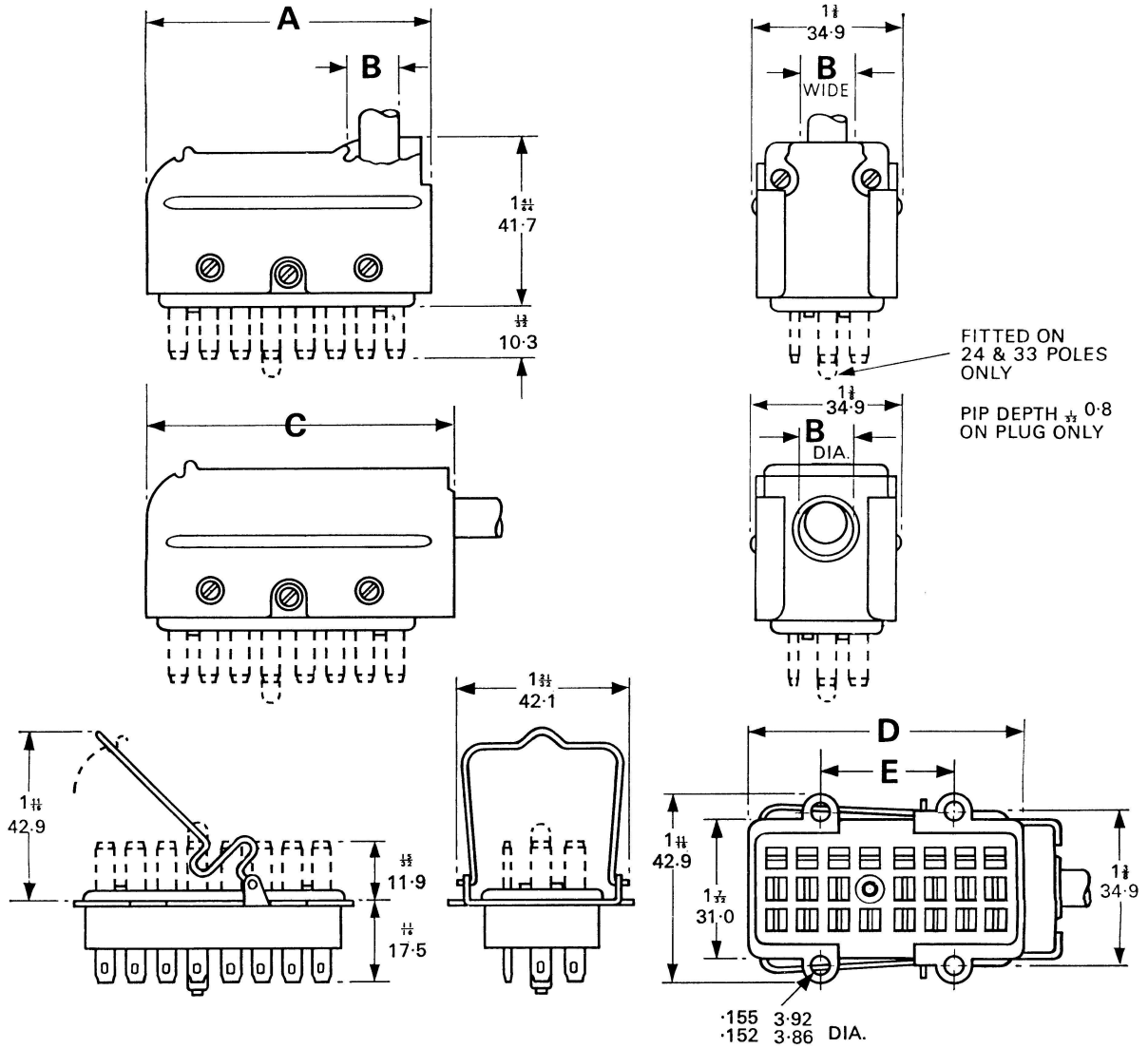
Dimensions in inches and millimetres



**Heavy duty Multicon range 18, 24 & 33 poles**

Dimensions in inches and millimetres

Key letters refer to tables on previous page.



**PANEL CUT-OUT**

Type of Plug or Socket	DIMENSIONS			
	F	G	H	K
<b>18 POLES</b>	2 $\frac{1}{2}$ 51.6	$\frac{1}{2}$ 7.5	$\frac{1}{2}$ 13.9	1 $\frac{1}{2}$ 31.7
<b>24 POLES</b>	2 $\frac{1}{2}$ 67.5	$\frac{1}{2}$ 6.7	$\frac{1}{2}$ 21.8	1 $\frac{1}{2}$ 31.7
<b>33 POLES</b>	3 $\frac{1}{2}$ 91.3	$\frac{1}{2}$ 6.7	$\frac{1}{2}$ 21.8	2 $\frac{1}{2}$ 55.6