

COMPONENTS COVERED: THIS SECTION COVERS THREE SIZES OF MK IV PLUGS AND SOCKETS:-

SIZE 1 (SMALL)                      SIZE 2 (MEDIUM)                      SIZE 3 (LARGE)

THE INFORMATION IS GIVEN IN THE FOLLOWING SEQUENCE:-

TABLES A AND B - MISCELLANEOUS DATA COVERING ALL THREE SIZES

SIZE 1 - SKETCHES, TABLES OF MATING ITEMS, PERFORMANCE DATA

SIZE 2 - SKETCHES, TABLES OF MATING ITEMS, PERFORMANCE DATA

SIZE 3 - SKETCHES, TABLES OF MATING ITEMS, PERFORMANCE DATA

JOINT SERVICE CATALOGUE NUMBERS: THESE ARE GIVEN IN THE TABLES OF MATING ITEMS

DEFINITIONS: FIXED - INTENDED FOR PANEL MOUNTING

FREE - INTENDED FOR ATTACHMENT TO A CABLE

SHELLS: WITH ONE EXCEPTION, FIXED ITEMS HAVE FEMALE SHELLS AND FREE ITEMS HAVE MALE SHELLS. THE RANGE IN EACH SIZE IS THUS:-

PLUG FIXED, FEMALE SHELL MATING WITH SOCKET FREE MALE SHELL

SOCKET FIXED, FEMALE SHELL MATING WITH PLUG FREE MALE SHELL

PLUG FREE FEMALE SHELL MATING WITH SOCKET FREE MALE SHELL (FOR COUPLING CABLE)

ORIENTATION: EACH PLUG OR SOCKET MOULDING, EXCEPT THREE POLE VERSIONS, IS ASSEMBLED TO ITS SHELL IN ONE OF SIX DISTINCT ORIENTATIONS TO PROVIDE SIX NON-INTERCHANGEABLE MATING PAIRS. THE 3-POLE ITEMS CAN ONLY PROVIDE TWO NON-INTERCHANGEABLE MATING PAIRS BECAUSE THE POLES ARE ARRANGED SYMMETRICALLY. SPECIAL TOOLS AND TEST GEAR ARE NECESSARY TO ENSURE PROPER SEALING AFTER RE-ORIENTATION. ITEMS SHOULD NORMALLY BE ORDERED WITH THE ORIENTATION REQUIRED

POLE ARRANGEMENT: DIAGRAMS ARE GIVEN ON THE PERFORMANCE DATA SHEETS

SEALING: ALL ITEMS WHEN CORRECTLY ASSEMBLED TO PANELS OR CABLES ARE SEALED AGAINST THE INGRESS OF MOISTURE, AS ARE MATING PARTS WHEN ASSEMBLED TOGETHER

CABLE SHIELDS: THE RIGHT-ANGLE CABLE SHIELD CAN BE ORIENTATED IN ANY OF EIGHT POSITIONS                      Δ

CABLE ADAPTORS: A CABLE CLAMPING DEVICE (SEE SECTION A) CAN BE SUBSTITUTED FOR THE BUSHING NUT                      Δ

CABLES: SUITABLE CABLES, TO DEF-10, ARE GIVEN IN TABLE B. IT SHOULD BE NOTED THAT THESE CABLES MAY NOT HAVE THE SAME TEMPERATURE RATINGS AS THE ITEMS WITH WHICH THEY MAY BE USED

DAMP HEAT: THIS EXPRESSION COVERS BOTH CLIMATIC AND TROPICAL EXPOSURE CONDITIONING

ASSOCIATED DATA SHEETS: GENERAL INFORMATION ON THE USE OF MK IV PLUGS AND SOCKETS IS GIVEN IN SECTION B

SEE SECTION A FOR ACCESSORIES AND PANEL PIERCING DIMENSIONS

SPECIAL NOTE: CERTAIN ACCESSORIES ARE ESSENTIAL FOR CORRECT ASSEMBLY OF ITEMS TO CABLES AND ARE NOT SUPPLIED COMPLETE WITH THE PLUGS OR SOCKETS

# PLUGS AND SOCKETS

## MULTIPOLE SEALED (MK IV)

### MISCELLANEOUS DATA

SIZES 1,2,3

WEIGHTS, D.C. WORKING VOLTAGE AND CURRENT CARRYING CAPACITY FOR 10°C RISE.						
DESCRIPTION			POLES	OZS	VOLTS	AMPS
SIZE 1 (SMALL)	PLUG FIXED	FEMALE SHELL	2	0.8	350	16
			3,4,6	0.8	350	2.5
	SOCKET FREE	MALE SHELL	2	0.7	350	16
			3,4,6	0.7	350	2.5
	SOCKET FIXED	FEMALE SHELL	2	0.8	350	16
			3,4,6	0.8	350	2.5
	PLUG FREE	MALE SHELL	2	0.7	350	16
			3,4,6	0.7	350	2.5
	PLUG FREE	FEMALE SHELL	2	N.S.	350	16
			3,4,6	N.S.	350	2.5
SIZE 2 (MEDIUM)	PLUG FIXED	FEMALE SHELL	4	1.1	350	16
			6	1.2	1500	2.5
			12	1.3	350	2.5
	SOCKET FREE	MALE SHELL	4	1.0	350	16
			6	1.1	1500	2.5
			12	1.1	350	2.5
	SOCKET FIXED	FEMALE SHELL	4	1.1	350	16
			6	1.2	1500	2.5
			12	1.3	350	2.5
	PLUG FREE	MALE SHELL	4	1.1	350	16
			6	1.2	1500	2.5
			12	1.1	350	2.5
	PLUG FREE	FEMALE SHELL	4	N.S.	350	16
			6	N.S.	1500	2.5
			12	N.S.	350	2.5
SIZE 3 (LARGE)	PLUG FIXED	FEMALE SHELL	18	1.9	†	2.5
			25	2.4	350	2.5
	SOCKET FREE	MALE SHELL	18	1.7	†	2.5
			25	2.2	350	2.5
	SOCKET FIXED	FEMALE SHELL	18	1.9	†	2.5
			25	2.4	350	2.5
	PLUG FREE	MALE SHELL	18	1.9	†	2.5
			25	2.2	350	2.5
	PLUG FREE	FEMALE SHELL	18	N.S.	†	2.5
			25	N.S.	350	2.5

TABLE A

#### TABLE A NOTES

VOLTAGE FIGURES APPLY TO ALL POLES, POLE TO MOUNTING OR POLE TO POLE EXCEPT THOSE MARKED † WHICH ARE AS FOLLOWS:-

#### POLE TO MOUNTING

A,B,C ..... 1500  
D TO P ..... 350  
Q,R,S ..... 1500

#### POLE TO POLE

A,B,C, ..... 1500  
D TO P ..... 350  
Q,R,S ..... 350

SEE DATA SHEET NO.12 FOR POLES A,B,C ETC.

N.S. = NOT SPECIFIED

SUITABLE CABLES FOR ANY FREE ITEM ACCORDING TO SIZE AND POLES (P)					
SIZE 1 (SMALL)	P	J.S.CAT.NO. (DEF-10)	SIZE 2 (MEDIUM)	P	J.S.CAT.NO. (DEF-10)
	2	910-0007 8		4	910-0018 9
	3	910-0010 1		6	910-0026 7
	4	910-0014 5	SIZE 3 (LARGE)	12	910-0031 2
	6	910-0021 2		18	910-0041 2
				25	910-0044 5

TABLE B

ALL J.S. CAT. NOS. ARE PRECEDED BY 6145-99-

SECTION 15/A

SHEET No. 2

ISS. No.3 12/59

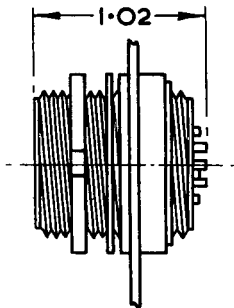
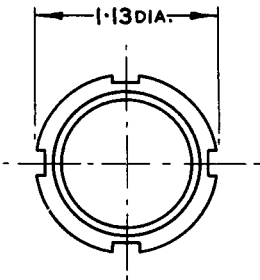
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**PLUGS AND SOCKETS**

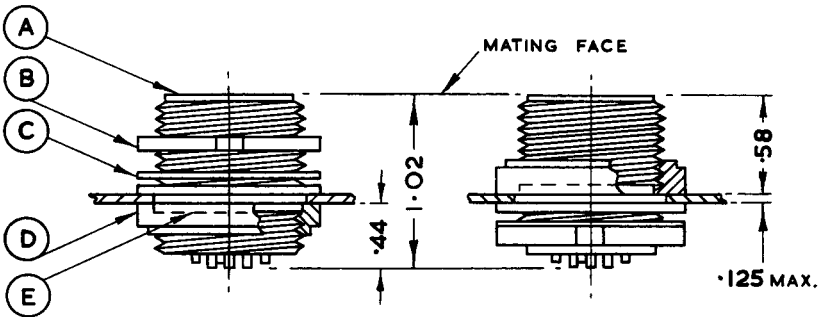
**MULTIPOLE SEALED (MK IV)**

**2,3,4 & 6 POLE**

**SIZE 1 (SMALL)**

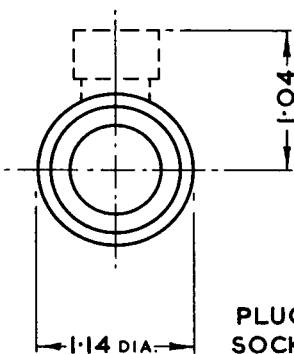


**PLUG FIXED FEMALE SHELL  
SOCKET FIXED FEMALE SHELL**

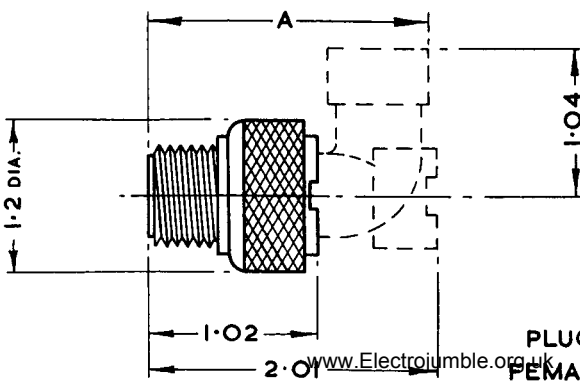
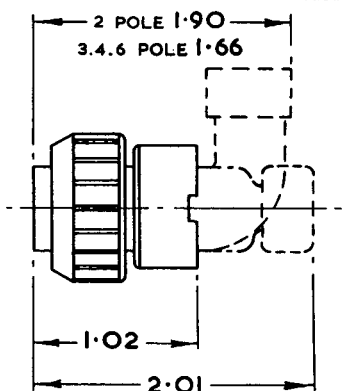


ASSEMBLY ITEMS	
A	SHELL
B	NUT
C	LOCKING WASHER
D	LOCKING WASHER
E	RUBBER SEAL

**ALTERNATIVE METHOD OF MOUNTING**



**PLUG FREE MALE SHELL  
SOCKET FREE MALE SHELL**



**PLUG FREE  
FEMALE SHELL**

**NOTE:**  
DIMENSION A  
2 POLE 1.90  
3,4,6 POLE 1.66

<b>SECTION 15/A</b>
<b>SHEET No.3</b>
<b>ISS. No.3 7/61</b>

# PLUGS AND SOCKETS

## MULTIPOLE SEALED (MK IV)

### MATING ITEMS

### SIZE I (SMALL)

PLUG FIXED FEMALE SHELL			SOCKET FREE MALE SHELL		
P	O	J.S. CATALOGUE NO.	J.S. CATALOGUE NO.	O	P
2	0	5935 - Z.560050	5935 - Z.560090	0	2
	1	Z.560551	Z.560591	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
3	0	5935 - Z.560060	5935 - Z.560100	0	3
	5	Z.560565	Z.560505	5	
4	0	5935 - Z.560070	5935 - Z.560110	0	4
	1	Z.560571	Z.560511	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
6	0	5935 - Z.560080	5935 - Z.560120	0	6
	1	Z.560581	Z.560521	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	

### TABLE IA

P = POLES  
O = ORIENTATION

SOCKET FIXED FEMALE SHELL			PLUG FREE MALE SHELL		
P	O	J.S. CATALOGUE NO.	J.S. CATALOGUE NO.	O	P
2	0	5935 - Z.560230	5935 - Z.560270	0	2
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
3	0	5935 - Z.560240	5935 - Z.560280	0	3
	5	5	5	5	
4	0	5935 - Z.560250	5935 - Z.560290	0	4
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
6	0	5935 - Z.560260	5935 - Z.560300	0	6
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	

### TABLE IB

SECTION 15/A

SHEET No.4

ISSUE No.1

# PLUGS AND SOCKETS

MULTIPOLE SEALED (MK IV)

MATING ITEMS

SIZE I (SMALL)

PLUG FREE FEMALE SHELL			SOCKET FREE MALE SHELL		
P	O	J.S. CATALOGUE NO.	J.S. CATALOGUE NO.	O	P
2	0	5935 - Z.560410	5935 - Z.560090	0	2
	1	1	Z.560591	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
3	0	5935 - Z.560420	5935 - Z.560100	0	3
	5	5	Z.560505	5	
4	0	5935 - Z.560430	5935 - Z.560110	0	4
	1	1	Z.560511	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
6	0	5935 - Z.560440	5935 - Z.560120	0	6
	1	1	Z.560521	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	

TABLE IC

P = POLES  
O = ORIENTATION

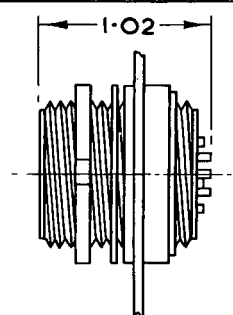
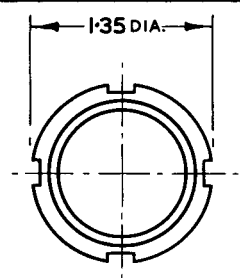
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# PLUGS AND SOCKETS

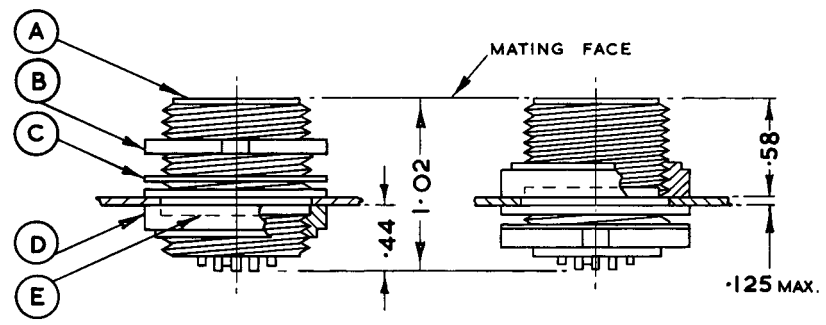
MULTIPOLE SEALED (MK IV)

4,6 & 12 POLE

SIZE 2 MEDIUM

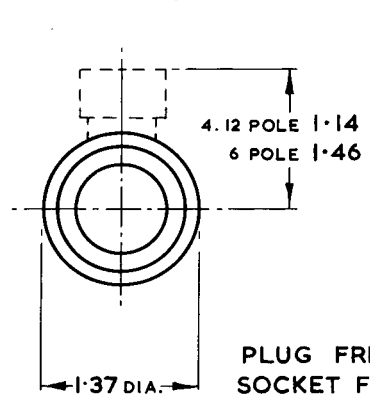


PLUG FIXED FEMALE SHELL  
SOCKET FIXED FEMALE SHELL

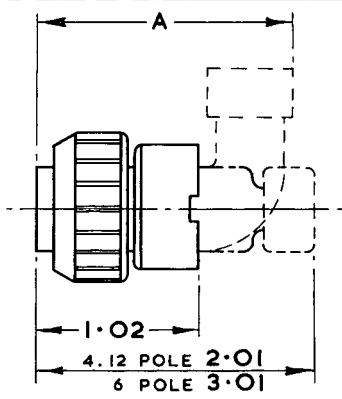


ASSEMBLY ITEMS	
A	SHELL
B	NUT
C	LOCKING WASHER
D	LOCKING WASHER
E	RUBBER SEAL

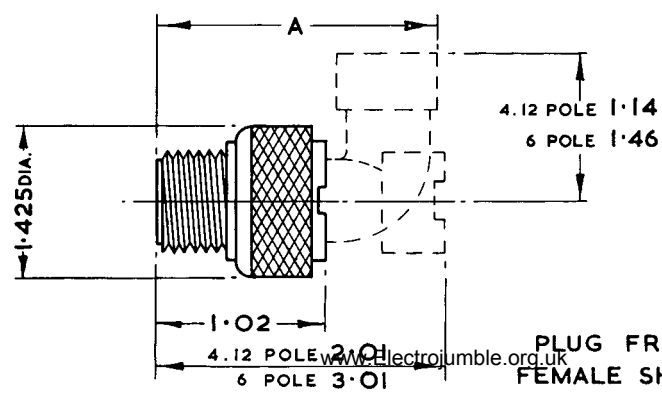
## ALTERNATIVE METHOD OF MOUNTING



NOTE:  
DIMENSION A  
4 POLE 1.85  
6 POLE 2.26  
12 POLE 1.80



PLUG FREE MALE SHELL  
SOCKET FREE MALE SHELL



NOTE:  
DIMENSION A  
4 POLE 1.85  
6 POLE 2.26  
12 POLE 1.80

PLUG FREE  
FEMALE SHELL

SECTION 15/A
SHEET No.7
ISS. No.3 7/61

## PLUGS AND SOCKETS

## MULTIPOLE SEALED (MK IV)

## MATING ITEMS

## SIZE 2 (MEDIUM)

PLUG FIXED FEMALE SHELL			SOCKET FREE MALE SHELL		
P	0	J.S. CATALOGUE NO.	J.S. CATALOGUE NO.	0	P
4	0	5935 - Z.560130	5935 - Z.560160	0	4
	1	Z.560531	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
6	0	5935 - Z.560140	5935 - Z.560170	0	6
	1	Z.560541	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
12	0	5935 - Z.560150	5935 - Z.560180	0	12
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	

TABLE 2A

SOCKET FIXED FEMALE SHELL			PLUG FREE MALE SHELL		
P	0	J.S. CATALOGUE NO.	J.S. CATALOGUE NO.	0	P
4	0	5935 - Z.560310	5935 - Z.560340	0	4
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
6	0	5935 - Z.560320	5935 - Z.560350	0	6
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
12	0	5935 - Z.560330	5935 - Z.560360	0	12
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	

TABLE 2B

P = POLES  
0 = ORIENTATION

PLUG FREE FEMALE SHELL			SOCKET FREE MALE SHELL		
P	0	J.S. CATALOGUE NO.	J.S. CATALOGUE NO.	0	P
4	0	5935 - Z.560450	5935 - Z.560160	0	4
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
6	0	5935 - Z.560460	5935 - Z.560170	0	6
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
12	0	5935 - Z.560470	5935 - Z.560180	0	12
	1	1	1	1	
	2	2	2	2	
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	5	5	5	5	

TABLE 2C

SECTION 15/A

SHEET No. 8

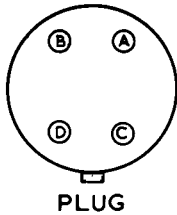
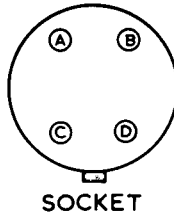
ISSUE No. 1

## PLUGS AND SOCKETS

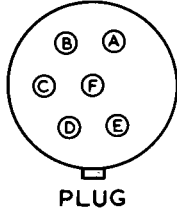
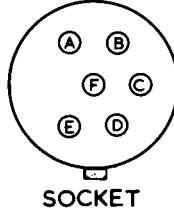
## MULTIPOLE SEALED (MK IV)

PERFORMANCE  
SIZE 2 (MEDIUM)

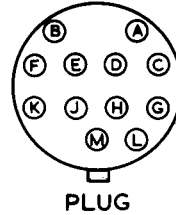
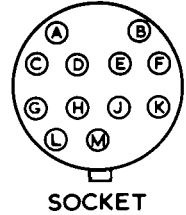
4,6,12 POLE

4  
POLE

SOCKET

6  
POLE

SOCKET

12  
POLE

SOCKET

THE ILLUSTRATIONS APPLY TO ALL PLUGS AND SOCKETS WHETHER FIXED OR FREE VIEWS ARE ON THE MATING FACE AND THE ORIENTATION IS 0(NORMAL) THE BLACK RECTANGLE REPRESENTS THE SINGLE KEYWAY OR KEY IN THE SHELL

HUMIDITY CLASS:	H2
TEMPERATURE CATEGORY:	40/85
INSULATION RESISTANCE:	WITH 500V.D.C. APPLIED, EACH POLE TO ALL OTHERS CONNECTED WITH SHELL - INITIALLY 100 MEGOHMS MINIMUM. AFTER DAMP HEAT 10 MEGOHMS MINIMUM
CONTACT RESISTANCE:	FOR POLE RATINGS GREATER THAN 10 AMPS:- INITIALLY 1 MILLIOHM MAXIMUM. AFTER DAMP HEAT 3 MILLIOHMS MAXIMUM FOR POLE RATINGS LESS THAN 10 AMPS:- INITIALLY 2 MILLIOHMS MAXIMUM. AFTER DAMP HEAT 5 MILLIOHMS MAXIMUM
PROOF VOLTAGE:	6 POLE ITEM 4000V PEAK 4 AND 12 POLE ITEMS 1700V PEAK
SEALING:	AIR LEAKAGE NOT GREATER THAN 1 c.c. PER HOUR AT 20lb/sq.in. AFTER ALL CONDITIONING
CABLE FIXING:	WITHSTANDS 30lb PULL ALONG CABLE AXIS
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST WITH CONTACT RESISTANCE FIGURES AS FOR AFTER DAMP HEAT
VIBRATION:	NO RESONANCE, DISENGAGEMENT OR MECHANICAL DAMAGE WITHIN RANGE OF RCS-11 TEST
BUMPING:	SUSTAINS BUMPING TO RCS-11 WITHOUT DAMAGE OR DISENGAGEMENT OF MATING PARTS
ENDURANCE:	SUSTAINS ENGAGEMENT AND DISENGAGEMENT 100 TIMES, BY MEANS OF LOCKING DEVICE, WITHOUT DAMAGE. SUSTAINS 42 CYCLES OF 18 HOURS AT 85°C FOLLOWED BY 6 HOURS AT NORMAL TEMPERATURE, WITHOUT DETRIMENT TO SEALING OR CONTACT RESISTANCE

SECTION 15/A

SHEET No.9

ISS. No.3 10/59

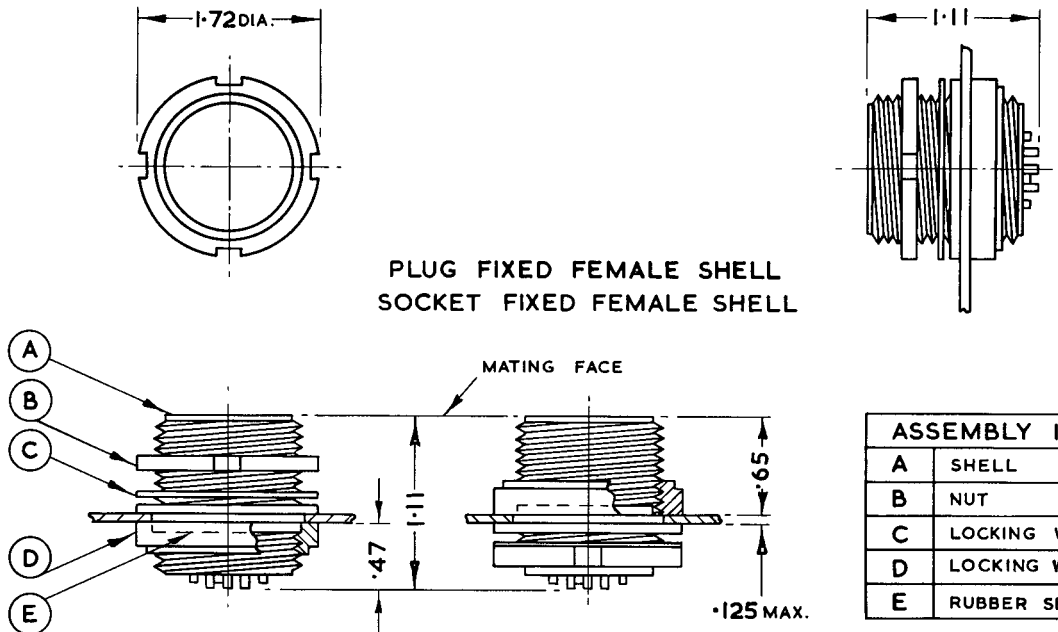


# PLUGS AND SOCKETS

MULTIPOLE SEALED (MK IV)

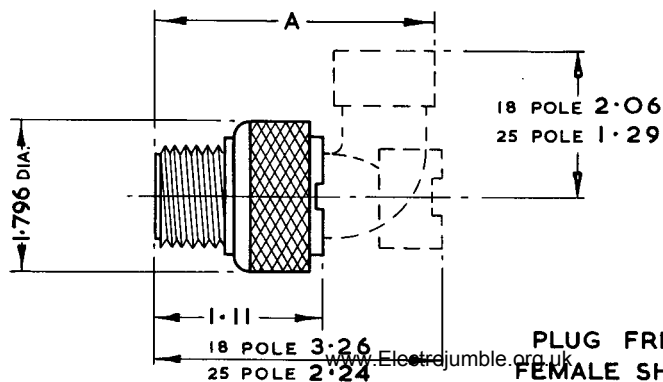
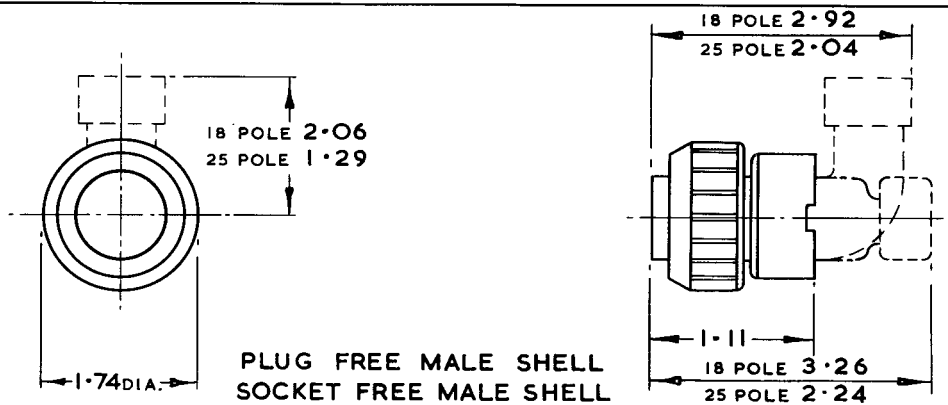
18, 25 POLE

SIZE 3 LARGE



ASSEMBLY ITEMS		Δ
A	SHELL	
B	NUT	
C	LOCKING WASHER	
D	LOCKING WASHER	
E	RUBBER SEAL	

## ALTERNATIVE METHOD OF MOUNTING



NOTE:  
DIMENSION A  
18 POLE 2.92  
25 POLE 2.04

SECTION 15/A

SHEET No.10

ISS. No.3 7/61

# PLUGS AND SOCKETS

## MULTIPOLE SEALED (MK IV)

### MATING ITEMS

### SIZE 3 (LARGE)

TABLE 3A

PLUG FIXED FEMALE SHELL			SOCKET FREE MALE SHELL		
P	O	J.S. CATALOGUE NO.	J.S. CATALOGUE NO.	O	P
18	0	5935 - Z.560190	5935 - Z.560210	0	18
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
25	0	5935 - Z.560200	5935 - Z.560220	0	25
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	

TABLE 3B

SOCKET FIXED FEMALE SHELL			PLUG FREE MALE SHELL		
P	O	J.S. CATALOGUE NO.	J.S. CATALOGUE NO.	O	P
18	0	5935 - Z.560370	5935 - Z.560390	0	18
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
25	0	5935 - Z.560380	5935 - Z.560400	0	25
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	

TABLE 3C

PLUG FREE FEMALE SHELL			SOCKET FREE MALE SHELL		
P	O	J.S. CATALOGUE NO.	J.S. CATALOGUE NO.	O	P
18	0	5935 - Z.560480	5935 - Z.560210	0	18
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	
25	0	5935 - Z.560490	5935 - Z.560220	0	25
	1	1	1	1	
	2	2	2	2	
	3	3	3	3	
	4	4	4	4	
	5	5	5	5	

P = POLES  
O = ORIENTATION

SECTION 15/A

SHEET No.11

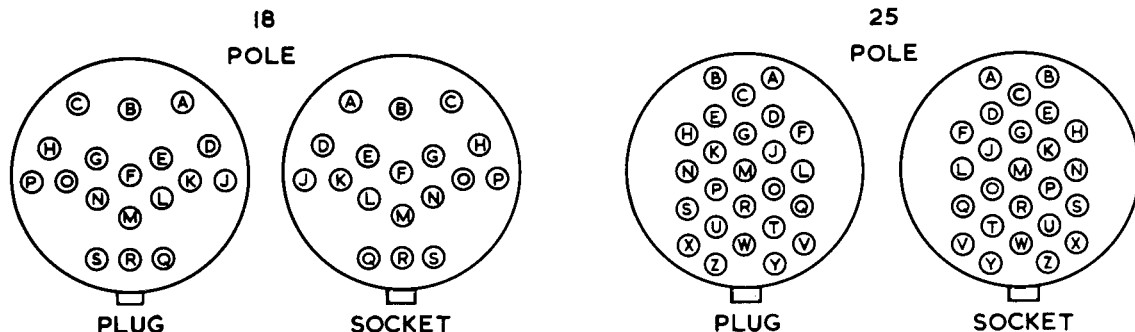
ISSUE No.1

## PLUGS AND SOCKETS

## MULTIPOLE SEALED (MK IV)

PERFORMANCE  
SIZE 3 (LARGE)

18, 25 POLE



THE ILLUSTRATIONS APPLY TO ALL PLUGS AND SOCKETS WHETHER FIXED OR FREE  
VIEWS ARE ON THE MATING FACE AND THE ORIENTATION IS O(NORMAL)  
THE BLACK RECTANGLE REPRESENTS THE SINGLE KEYWAY OR KEY IN THE SHELL

HUMIDITY CLASS:	H2
TEMPERATURE CATEGORY:	40/70
INSULATION RESISTANCE:	WITH 500V.D.C. APPLIED, EACH POLE TO ALL OTHERS CONNECTED WITH SHELL - INITIALLY 100 MEGOHMS MINIMUM. AFTER DAMP HEAT 10 MEGOHMS MINIMUM
CONTACT RESISTANCE:	FOR POLE RATINGS GREATER THAN 10 AMPS:- INITIALLY 1 MILLIOHM MAXIMUM. AFTER DAMP HEAT 3 MILLIOHMS MAXIMUM FOR POLE RATINGS LESS THAN 10 AMPS:- INITIALLY 2 MILLIOHMS MAXIMUM. AFTER DAMP HEAT 5 MILLIOHMS MAXIMUM
PROOF VOLTAGE:	FOR 18 POLE ITEM: POLES A, B, C, POLE TO SHELL 4000V PEAK. POLE TO POLE 4000V PEAK D TO P POLE TO SHELL 1700V PEAK. POLE TO POLE 1700V PEAK Q, R, S POLE TO SHELL 4000V PEAK. POLE TO POLE 1700V PEAK FOR 25 POLE ITEM: ALL POLES TO SHELL OR EACH OTHER 1700V PEAK
SEALING:	AIR LEAKAGE NOT GREATER THAN 1 c.c. PER HOUR AT 20lb/sq.in. AFTER ALL CONDITIONING <span style="float: right;">Δ</span>
CABLE FIXING:	WITHSTANDS 30lb PULL ALONG CABLE AXIS
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST WITH CONTACT RESISTANCE FIGURES AS FOR AFTER DAMP HEAT
VIBRATION:	NO RESONANCE, DISENGAGEMENT OR MECHANICAL DAMAGE WITHIN RANGE OF RCS-11 TEST
BUMPING:	SUSTAINS BUMPING TO RCS-11 WITHOUT DAMAGE OR DISENGAGEMENT OF MATING PARTS
ENDURANCE:	SUSTAINS ENGAGEMENT AND DISENGAGEMENT 100 TIMES, BY MEANS OF LOCKING DEVICE, WITHOUT DAMAGE. SUSTAINS 42 CYCLES OF 18 HOURS AT 85°C FOLLOWED BY 6 HOURS AT NORMAL TEMPERATURE, WITHOUT DETRIMENT TO SEALING OR CONTACT RESISTANCE

SECTION 15/A

SHEET No.12

ISS. No.3 10/59

COMPONENTS COVERED: THIS SECTION COVERS THE FOLLOWING TYPES LISTED IN THE ORDER GIVEN:-

4 POLE, 8 POLE AND 12 POLE  
18 POLE AND 25 POLE

JOINT SERVICE CATALOGUE NUMBERS: CATALOGUE NUMBERS ARE STATED ON THE DATA SHEETS FOR THE COMPONENTS TO WHICH THE NUMBERS APPLY

GENERAL PURPOSE: ALL THE ABOVE TYPES ARE CLASSIFIED AS GENERAL PURPOSE i.e. THERE IS NO IMPEDANCE MATCHING

CABLES: SINCE ALL THE ITEMS ARE "FIXED", NO SUITABLE CABLES ARE INDICATED

MATING COMPONENTS: PLUGS AND SOCKETS WITH THE SAME NUMBER OF POLES ARE MATING COMPONENTS. IT WILL BE NOTED THAT THE DISPOSITION OF THE LARGE POLES INDICATES THE CORRECT MOUNTING POSITIONS OF ASSOCIATED ITEMS

DAMP HEAT: THIS EXPRESSION COVERS BOTH CLIMATIC AND TROPICAL EXPOSURE CONDITIONING

ASSOCIATED DATA SHEETS: NO GENERAL INFORMATION CONCERNING THE USE OF MULTIPOLE UNITORS HAS BEEN ISSUED

SEE SECTION A FOR PANEL PIERCING DIMENSIONS

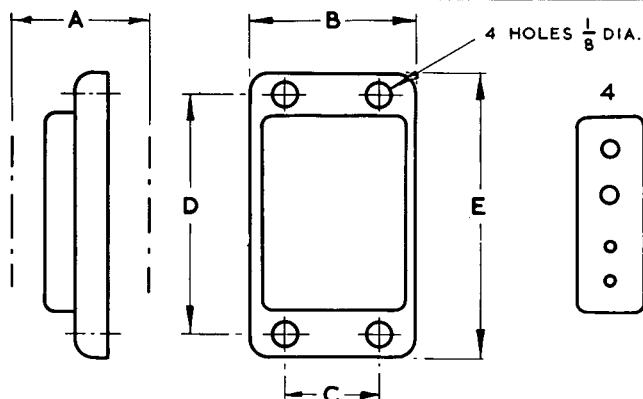
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## PLUGS AND SOCKETS

MULTIPOLE UNITORS No.102

GENERAL PURPOSE

4,8,12 WAY



DIMENSION A COVERS PROJECTION  
OF POLES FOR BOTH PLUGS & SOCKETS

ARRANGEMENT OF POLES  
FACE VIEW OF SOCKETS

HUMIDITY CLASS:	H2
TEMPERATURE CATEGORY:	40/100
VOLTAGE RATING:	500V.D.C. AT 70°C. NOT SPECIFIED AT 100°C
WITHDRAWAL FORCE:	11b PER CONTACT
CURRENT RATING:	LARGE POLES - 10 AMPS MAXIMUM. SMALL POLES - 3 AMPS MAXIMUM
INSULATION RESISTANCE:	WITH 500V.D.C. APPLIED, FROM EACH POLE TO ALL OTHERS CONNECTED TOGETHER: INITIALLY 100 MEGOHMS MINIMUM. AFTER DAMP HEAT 10 MEGOHMS MINIMUM.
CONTACT RESISTANCE:	10 AMP POLES INITIALLY 1 MILLIOHM MAXIMUM. AFTER DAMP HEAT 3 MILLIOHMS MAXIMUM 3 AMP POLES INITIALLY 2 MILLIOHMS MAXIMUM. AFTER DAMP HEAT 5 MILLIOHMS MAXIMUM
PROOF VOLTAGE	FROM EACH POLE TO ALL OTHERS CONNECTED TOGETHER 2000V PEAK
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST WITH CONTACT RESISTANCE FIGURES AS AFTER DAMP HEAT
VIBRATION:	NO RESONANCE, DISENGAGEMENT OR MECHANICAL DAMAGE WITHIN RANGE OF RCS-11 TEST
BUMPING:	SUSTAINS BUMPING TO RCS 11 WITHOUT DAMAGE OR DISENGAGEMENT OF MATING ITEMS A
ENDURANCE:	SUSTAINS 500 ENGAGEMENTS AND DISENGAGEMENTS WITHOUT INCREASE OF CONTACT RESISTANCE

LIST OF ITEMS, DIMENSIONS AND JOINT SERVICE CATALOGUE NUMBERS

ITEM	POLES	DIMENSIONS					JOINT SERVICE CATALOGUE NO.
		A ±.016	B ±.005	C ±.005	D ±.005	E ±.005	
PLUG	4	0.640	0.406	NIL	1.250	1.437	056-2501
SOCKET	4	0.531	0.406	NIL	1.250	1.437	056-2506
PLUG	8	0.640	0.578	0.312	1.296	1.484	056-2502
SOCKET	8	0.531	0.578	0.312	1.296	1.484	056-2507
PLUG	12	0.640	0.843	0.500	1.296	1.500	056-2503
SOCKET	12	0.531	0.843	0.500	1.296	1.500	056-2508

ALL J.S. CATALOGUE NUMBERS TO BE PRECEDED BY 5935-99-

SECTION 15/B

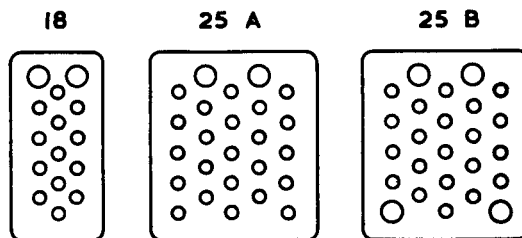
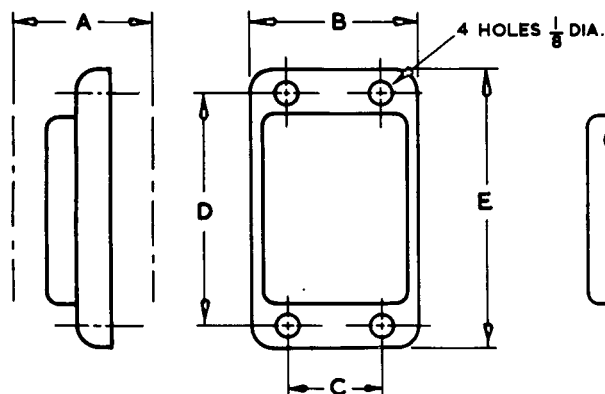
SHEET No. 2

ISS. No.2 3/59

www.Electrojumble.org.uk  
**PLUGS AND SOCKETS**  
 MULTIPOLE UNITORS No.102

**GENERAL PURPOSE**

**18,25 WAY**



**ARRANGEMENT OF POLES  
FACE VIEW OF SOCKETS**

**DIMENSION A COVERS PROJECTION  
OF POLES FOR BOTH PLUGS AND SOCKETS**

<b>HUMIDITY CLASS:</b>	H2
<b>TEMPERATURE CATEGORY:</b>	40/100
<b>VOLTAGE RATING:</b>	500V.D.C. AT 70°C. NOT SPECIFIED AT 100°C
<b>WITHDRAWAL FORCE:</b>	11b PER CONTACT
<b>CURRENT RATING:</b>	LARGE POLES - 10 AMPS MAXIMUM. SMALL POLES - 3 AMPS MAXIMUM
<b>INSULATION RESISTANCE:</b>	WITH 500V.D.C. APPLIED, FROM EACH POLE TO ALL OTHERS CONNECTED TOGETHER: INITIALLY 100 MEGOHMS MINIMUM. AFTER DAMP HEAT 10 MEGOHMS MINIMUM
<b>CONTACT RESISTANCE:</b>	10 AMP POLES INITIALLY 1 MILLIOHM MAXIMUM. AFTER DAMP HEAT 3 MILLIOHMS MAXIMUM 3 AMP POLES INITIALLY 2 MILLIOHMS MAXIMUM. AFTER DAMP HEAT 5 MILLIOHMS MAXIMUM
<b>PROOF VOLTAGE:</b>	FROM EACH POLE TO ALL OTHERS CONNECTED TOGETHER 2000V PEAK
<b>CORROSION:</b>	WITHSTANDS RCS-11 SALT WATER TEST WITH CONTACT RESISTANCE FIGURES AS AFTER DAMP HEAT
<b>VIBRATION:</b>	NO RESONANCE, DISENGAGEMENT OR MECHANICAL DAMAGE WITHIN RANGE OF RCS-11 TEST
<b>BUMPING:</b>	SUSTAINS BUMPING TO RCS 11 WITHOUT DAMAGE OR DISENGAGEMENT OF MATING ITEMS
<b>ENDURANCE:</b>	SUSTAINS 500 ENGAGEMENTS AND DISENGAGEMENTS WITHOUT INCREASE OF CONTACT RESISTANCE

**LIST OF ITEMS, DIMENSIONS AND JOINT SERVICE CATALOGUE NUMBERS**

ITEM	POLES	DIMENSIONS					JOINT SERVICE CATALOGUE NO.
		A ±.016	B ±.005	C ±.005	D ±.005	E ±.005	
PLUG	18	0.640	0.843	0.500	1.750	2.000	056-2504
SOCKET	18	0.531	0.843	0.500	1.750	2.000	056-2509
PLUG	25A	0.640	1.187	0.875	1.500	1.750	056-2505
SOCKET	25A	0.531	1.187	0.875	1.500	1.750	056-2510
PLUG	25B	0.640	1.187	0.875	1.500	1.750	056-2007
SOCKET	25B	0.531	1.187	0.875	1.500	1.750	056-2008

ALL J.S. CATALOGUE NUMBERS TO BE PRECEDED BY 5935-99-

**SECTION 15/B**

**SHEET No. 3**

**ISS. No.3 3/59**

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PLUGS AND SOCKETS  
MULTIPOLE UNITORS NO. 103  
NOTES

SECTION 15/B

SHEET NO. 1

ISS. NO. 3 7/61

COMPONENTS COVERED: THIS SECTION COVERS THE FOLLOWING TYPES LISTED IN THE ORDER GIVEN:-

7 POLE, 14 POLE, 18 POLE AND 26 POLE  
34 POLE AND 50 POLE

△

JOINT SERVICE CATALOGUE NUMBERS: CATALOGUE NUMBERS ARE STATED ON THE DATA SHEETS FOR THE COMPONENTS TO WHICH THE NUMBERS APPLY

GENERAL PURPOSE: ALL THE ABOVE TYPES ARE CLASSIFIED AS GENERAL PURPOSE i.e. THERE IS NO IMPEDANCE MATCHING

CABLES: SINCE ALL THE ITEMS ARE "FIXED", NO SUITABLE CABLES ARE INDICATED

MATING COMPONENTS: PLUGS AND SOCKETS WITH THE SAME NUMBER OF POLES ARE MATING COMPONENTS

DAMP HEAT: THIS EXPRESSION COVERS BOTH CLIMATIC AND TROPICAL EXPOSURE CONDITIONING

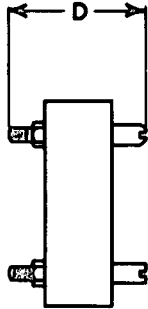
ASSOCIATED DATA SHEETS: NO GENERAL INFORMATION CONCERNING THE USE OF MULTIPOLE UNITORS HAS BEEN ISSUED

SEE SECTION A FOR PANEL PIERCING DIMENSIONS

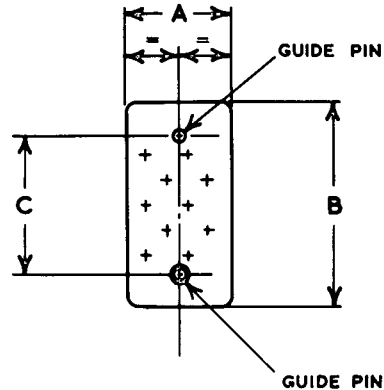
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**PLUGS AND SOCKETS**  
**MULTIPOLE UNITORS No. 103**

**GENERAL PURPOSE**

**7,14,18 & 26 WAY**



**DIMENSION 'D' COVERS PROJECTION  
OF POLES FOR BOTH PLUGS AND SOCKETS**



HUMIDITY CLASS:	H1
TEMPERATURE CATEGORY:	40/100
VOLTAGE RATING:	750V.D.C
CURRENT RATING:	7.5 AMPS PER POLE
INSERTION/WITHDRAWAL FORCE:	6 lb FOR 7 POLE 16 lb FOR 14 POLE 20 lb FOR 18 POLE 24 lb FOR 26 POLE
INSULATION RESISTANCE:	WITH 500V.D.C APPLIED, FROM EACH POLE TO ALL OTHERS CONNECTED TOGETHER: INITIALLY 100 MEGOHMS MINIMUM. AFTER DAMP HEAT 10 MEGOHMS MINIMUM
CONTACT RESISTANCE:	INITIALLY 2 MILLIOHMS MAXIMUM. AFTER DAMP HEAT 5 MILLIOHMS MAXIMUM
PROOF VOLTAGE:	FROM EACH POLE TO ALL OTHERS CONNECTED TOGETHER 2500V PEAK
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST WITH CONTACT RESISTANCE FIGURES AS AFTER DAMP HEAT
VIBRATION:	NO RESONANCE, DISENGAGEMENT OR MECHANICAL DAMAGE WITHIN RANGE OF RCS-11 TEST
BUMPING:	SUSTAINS BUMPING TO RCS 11 WITHOUT DAMAGE OR DISENGAGEMENT OF MATING ITEMS
ENDURANCE:	SUSTAINS 500 ENGAGEMENTS AND DISENGAGEMENTS WITHOUT INCREASE OF CONTACT RESISTANCE

ITEM	POLES	DIMENSIONS				WT OZ	J.S. CAT. NUMBER
		A	B	C	D		
PLUG	7	0.380	1.223	0.906	0.875	0.3	012-2839
SOCKET	7	0.370	1.213	0.906	0.797	0.3	012-2840
PLUG	14	0.441	1.255	0.937	0.875	0.3	012-2841
SOCKET	14	0.431	1.245	0.937	0.797	0.3	012-2842
PLUG	18	0.567	1.317	1.000	0.875	0.4	012-2843
SOCKET	18	0.557	1.307	1.000	0.797	0.4	012-2844
PLUG	26	0.567	1.630	1.312	0.875	0.6	012-2845
SOCKET	26	0.557	1.620	1.312	0.797	0.5	012-2846

ALL J.S. CAT. NUMBERS TO BE PRECEDED BY 5935-99-  
www.ElectroJumble.org.uk

**SECTION 15/B**

**SHEET No. 2**

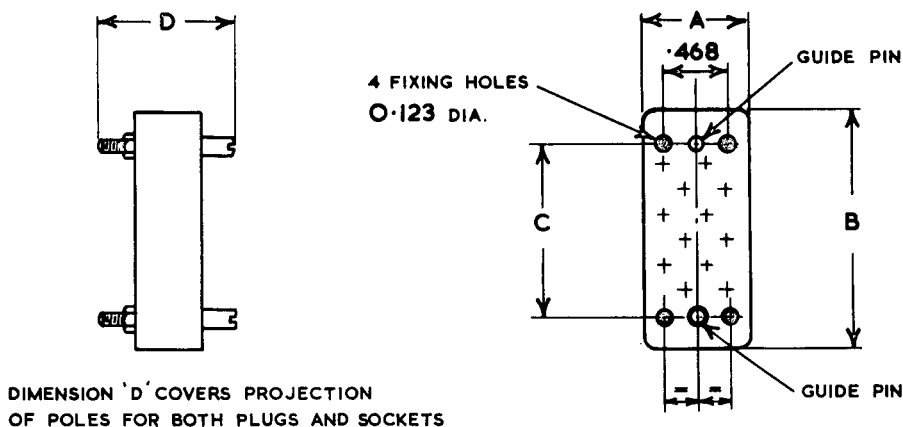
**ISS. No. 3 7/61**



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**PLUGS AND SOCKETS**  
**MULTIPOLE UNITORS No. 103**

**GENERAL PURPOSE**

**34 & 50 WAY**



HUMIDITY CLASS:	H1
TEMPERATURE CATEGORY:	40/100
VOLTAGE RATING:	750V.D.C.
CURRENT RATING:	7.5 AMPS PER POLE
INSERTION/WITHDRAWAL FORCE:	30 lb FOR 34 POLE 42 lb FOR 50 POLE
INSULATION RESISTANCE:	WITH 500V.D.C. APPLIED, FROM EACH POLE TO ALL OTHERS CONNECTED TOGETHER: INITIALLY 100 MEGOHMS MINIMUM. AFTER DAMP HEAT 10 MEGOHMS MINIMUM
CONTACT RESISTANCE:	INITIALLY 2 MILLIOHMS MAXIMUM. AFTER DAMP HEAT 5 MILLIOHMS MAXIMUM
PROOF VOLTAGE:	FROM EACH POLE TO ALL OTHERS CONNECTED TOGETHER 2500V PEAK
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST WITH CONTACT RESISTANCE FIGURES AS AFTER DAMP HEAT
VIBRATION:	NO RESONANCE, DISENGAGEMENT OR MECHANICAL DAMAGE WITHIN RANGE OF RCS-11 TEST
BUMPING:	SUSTAINS BUMPING TO RCS 11 WITHOUT DAMAGE OR DISENGAGEMENT OF MATING ITEMS
ENDURANCE:	SUSTAINS 500 ENGAGEMENTS AND DISENGAGEMENTS WITHOUT INCREASE OF CONTACT RESISTANCE

ITEM	POLES	DIMENSIONS				WT OZ	J.S. CAT. NUMBER
		A	B	C	D		
PLUG SOCKET	34	0.755	2.008	1.687	0.797	0.8	012-2847
	34	0.745	1.995	1.687	0.875	0.7	012-2848
PLUG SOCKET	50	0.880	2.723	2.281	0.797	1.0	012-2849
	50	0.870	2.713	2.281	0.875	0.9	012-2850

ALL J.S. CAT. NUMBERS TO BE PRECEDED BY 5935-99-

**SECTION 15/B**

**SHEET No. 3**

**ISS. No. 4 7/61**

NOTES

COMPONENTS COVERED: THIS SECTION COVERS THE FOLLOWING TYPES LISTED IN THE ORDER GIVEN:-

50 OHM CONCENTRIC  
50 OHM MOULDED  
60 OHM CONCENTRIC  
GENERAL PURPOSE

ALL ITEMS ARE SUITABLE FOR USE AT FREQUENCIES ABOVE 1Mc/s

MATCHED IMPEDANCE TYPES: THESE ARE DESIGNED TO MINIMISE REFLECTIONS AT FREQUENCIES ABOVE 600Mc/s, WHEN INSERTED IN THE APPROPRIATE CABLE

CABLES: WHERE POSSIBLE, SUITABLE CABLES HAVE BEEN INDICATED. IT SHOULD BE NOTED THAT SUCH CABLES DO NOT NECESSARILY HAVE THE SAME TEMPERATURE RATING AS THE ASSOCIATED PLUGS AND/OR SOCKETS. THE SPECIFICATION DEALING WITH CABLES IS DEF-14

MATING COMPONENTS: WHERE POSSIBLE, THE JOINT SERVICE APPROVED MATING COMPONENTS ARE TABULATED WITH THEIR ASSOCIATED ITEMS

DAMP HEAT: THIS EXPRESSION COVERS BOTH CLIMATIC AND TROPICAL EXPOSURE CONDITIONING

PATTERN 12: THESE SUPERSEDE PATTERN 1 NOW OBSOLESCE. THE MAXIMUM DIMENSIONAL INCREASE IN BODY LENGTH DOES NOT EXCEED 13/32. THE WORKING VOLTAGE IS INCREASED TO 500 VOLTS

ASSOCIATED DATA SHEETS:

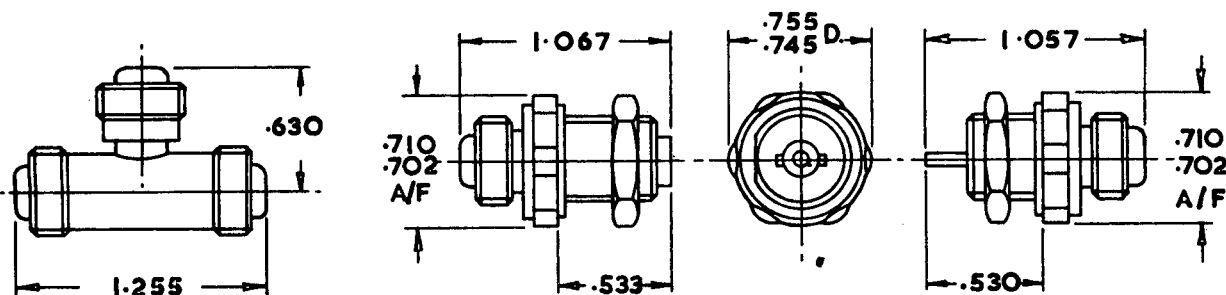
NO GENERAL INFORMATION CONCERNING THE USE OF R.F. PLUGS HAS BEEN ISSUED

SEE SECTION A FOR PANEL PIERCING DIMENSIONS AND ACCESSORIES FOR PATTERNS 4, 8 AND 40

# RADIO FREQUENCY PLUGS & SOCKETS

## WITH BARRIER AND PANEL SEALS

PATTERN 2



**STYLE AR2B**

**STYLE ABR2G**

**STYLE SR2E**

MAXIMUM PANEL THICKNESS 1/8. ALL THREADS 9/16. DIA. x 26 T.P.I. WHITWORTH FORM  
 MATERIAL - ALUMINIUM BRONZE OR APPROVED ALTERNATIVE. FINISH - CLEAN  
 THE ADAPTOR AR2B IS SEALED ONLY WHEN IT IS MATED WITH THREE SEALED PLUGS

HUMIDITY CLASS:	H1.	
TEMPERATURE CATEGORY:	40/70	Δ
WORKING VOLTAGE: (NORMAL AIR DENSITY)	500 VOLTS PEAK	
WORKING VOLTAGE: (LOW AIR DENSITY)	NOT SPECIFIED	
PROOF VOLTAGE:	2kV PEAK	
INSULATION RESISTANCE:	NOT LESS THAN 100MΩ INITIALLY OR 10MΩ AFTER DAMP HEAT	
CONTACT RESISTANCE:	POLE. INITIALLY 2 MILLIOHMS MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX. SCREEN. INITIALLY 1 MILLIOHM MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX.	
IMPEDANCE MATCHING:	INSERTION OF ITEM IN SUITABLE CABLE PRODUCES MISMATCH WHICH, EXPRESSED AS VOLTAGE STANDING WAVE RATIO, IS LESS THAN 1.2:1	
SEALING:	AIR LEAKAGE NOT GREATER THAN 1 c.c. PER HOUR AT 20lb/sq. in. AFTER ALL CONDITIONING	
CABLE FIXING:	WITHSTANDS 30lb PULL ALONG CABLE AXIS	
VIBRATION:	WITHSTANDS FREQUENCY CYCLING TO RCS-11 WITHOUT RESONANCE, LOOSENING OR DISENGAGEMENT	
BUMPING:	WITHSTANDS RCS-11 TEST WITHOUT MECHANICAL DETERIORATION	
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST	
ENDURANCE:	WITHSTANDS ENGAGEMENT AND DISENGAGEMENT 500 TIMES AND SIX WEEKS HIGH TEMPERATURE CYCLING WITH NEGLIGIBLE ELECTRICAL AND MECHANICAL DETERIORATION	

MATING COMPONENTS, APPROPRIATE CABLES AND JOINT SERVICE CATALOGUE NUMBERS

STYLE	TYPE	MATING COMPONENT	APPROPRIATE CABLES	JOINT SERVICE CATALOGUE NO.
AR2B	ADAPTOR, FREE, PLUG TO PLUG TO PLUG MALE SHELL	PR2A PR2C PR2E	NOT SPECIFIED	054-0013
SR2E	SOCKET, FIXED, MALE SHELL	PR2A PR2C PR2E	NOT SPECIFIED	054-0014
ABR2G	ADAPTOR, FIXED, PLUG TO PLUG, MALE SHELL	PR2A PR2C PR2E	NOT SPECIFIED	054-0015

ALL J.S. CAT. NUMBERS TO BE PRECEDED BY 999-99-

**SECTION 15/D**

**SHEET No. 2**

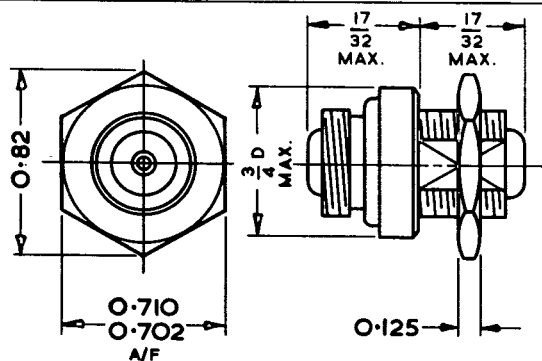
**ISS.No.3 9/63**

# RADIO FREQUENCY PLUGS & SOCKETS

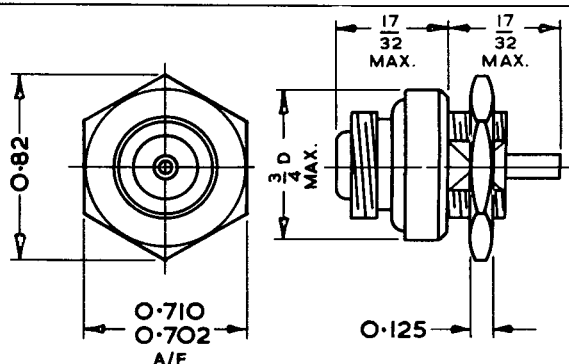
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## PATTERN 2

## 50 OHM CONCENTRIC



STYLE ABR2G



STYLE SR2E

ALL THREADS  $\frac{9}{16}$  DIA. X 26 TPI. BS WHIT.

MATERIALS - ALUMINIUM BRONZE. FINISH CLEAN

HUMIDITY CLASS:	H1
TEMPERATURE CATEGORY:	40/85
WORKING VOLTAGE: (NORMAL AIR DENSITY)	NOT SPECIFIED
WORKING VOLTAGE: (LOW AIR DENSITY)	NOT SPECIFIED
PROOF VOLTAGE:	NOT SPECIFIED
INSULATION RESISTANCE:	NOT LESS THAN 100MΩ INITIALLY OR 10MΩ AFTER DAMP HEAT
CONTACT RESISTANCE:	POLE. INITIALLY 2 MILLIOHMS MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX. SCREEN. INITIALLY 1 MILLIOHM MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX.
IMPEDANCE MATCHING:	INSERTION OF ITEM IN SUITABLE CABLE PRODUCES MISMATCH WHICH, EXPRESSED AS VOLTAGE STANDING WAVE RATIO, IS LESS THAN 1.2:1
SEALING:	AIR LEAKAGE NOT GREATER THAN 1 c.c. PER HOUR AT 20lb/sq. in. AFTER ALL CONDITIONING
CABLE FIXING:	WITHSTANDS 30lb PULL ALONG CABLE AXIS
VIBRATION:	WITHSTANDS FREQUENCY CYCLING TO RCS-11 WITHOUT RESONANCE, LOOSENING OR DISENGAGEMENT
BUMPING:	WITHSTANDS RCS-11 TEST WITHOUT MECHANICAL DETERIORATION
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST
ENDURANCE:	WITHSTANDS ENGAGEMENT AND DISENGAGEMENT 500 TIMES AND SIX WEEKS HIGH TEMPERATURE CYCLING WITH NEGLIGIBLE ELECTRICAL AND MECHANICAL DETERIORATION

MATING COMPONENTS, APPROPRIATE CABLES AND JOINT SERVICE CATALOGUE NUMBERS

STYLE	TYPE	MATING COMPONENT	APPROPRIATE CABLES	JOINT SERVICE CATALOGUE NO.
ABR2G	ADAPTOR, FIXED, PLUG TO PLUG, MALE SHELL	PR2A PR2C PR2E	NOT SPECIFIED	Z. 540015
SR2E	SOCKET, FIXED, MALE SHELL	PR2A PR2C PR2E	NOT SPECIFIED	Z. 540014

ALL Z NUMBERS TO BE PRECEDED BY 5935-

SECTION 15/D

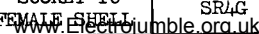
SHEET No.3

ISSUE No.1

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PATTERN 4



NOTE 1 On PR4E and SR4G the Cable Entry and Cap are detachable and interchangeable to give a straight cable entry.

NOTE 2 The Flanged Washer and Packing Washer are used when fitting component to a panel of dissimilar metal or finish.

NOTE 3 Accessories for PR4E, SR4G and Cables, see Sheet No.1

HUMIDITY CLASS:	H2
TEMPERATURE CATEGORY:	40/70
WORKING VOLTAGE: (NORMAL AIR DENSITY)	500 VOLTS PEAK
WORKING VOLTAGE: (LOW AIR DENSITY)	NOT SPECIFIED
PROOF VOLTAGE:	2kv PEAK
INSULATION RESISTANCE:	100MΩ UNDER ALL TEST CONDITIONS
CONTACT RESISTANCE:	POLE. INITIALLY 2 MILLIOHMS MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX. SCREEN. INITIALLY 1 MILLIOHM MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX.
IMPEDANCE MATCHING:	INSERTION OF ITEM IN SUITABLE CABLE PRODUCES MISMATCH WHICH, EXPRESSED AS VOLTAGE STANDING WAVE RATIO, IS LESS THAN 1.2:1
SEALING:	AIR LEAKAGE NOT GREATER THAN 1 c.c. PER HOUR AT 20lb/sq. in. AFTER ALL CONDITIONING
CABLE FIXING:	WITHSTANDS 30lb PULL ALONG CABLE AXIS
VIBRATION:	WITHSTANDS FREQUENCY CYCLING TO RCS-11 WITHOUT RESONANCE, LOOSENING OR DISENGAGEMENT
BUMPING:	WITHSTANDS RCS-11 TEST WITHOUT MECHANICAL DETERIORATION
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST
ENDURANCE:	WITHSTANDS ENGAGEMENT AND DISENGAGEMENT 500 TIMES AND SIX WEEKS HIGH TEMPERATURE CYCLING WITH NEGLIGIBLE ELECTRICAL AND MECHANICAL DETERIORATION

STYLE	TYPE	MATING COMPONENT	JOINT SERVICE CATALOGUE NO.
PR4D	PLUG, FIXED, FEMALE SHELL	SR4G	011-9484
PR4E	PLUG, FIXED, FEMALE SHELL	SR4G	054-0018
SR4G	SOCKET, FREE MALE SHELL	( PR4D PR4E ABR4F	054-0022
ABR4F	ADAPTOR, SOCKET TO SOCKET, FEMALE SHELL	SR4G	054-0019

SECTION 15/D

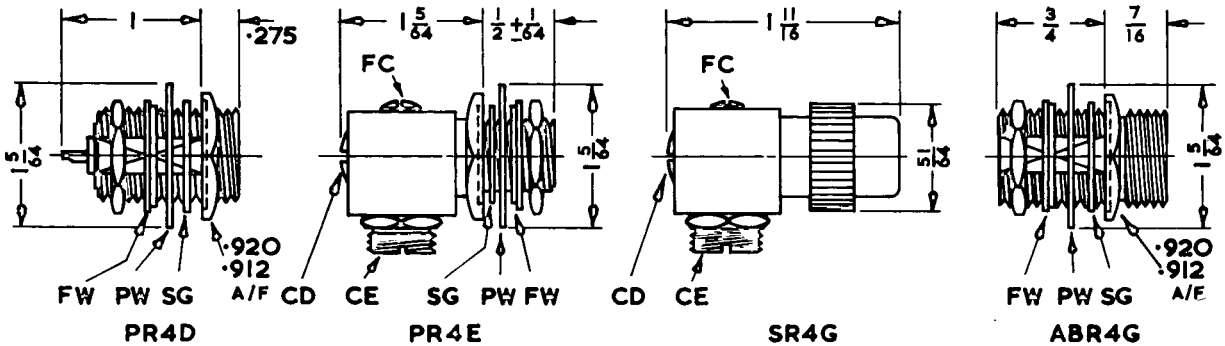
**SHEET No.4**

ISS. No. 3 9/63

# RADIO FREQUENCY PLUGS & SOCKETS

**60 OHM CONCENTRIC**  
(IMPEDANCE 60 OHMS WHEN FILLED  
WITH SUITABLE COMPOUND)

**PATTERN 4 Δ**



**Finish:-** Flanged Washer - tinned brass  
All other parts - silver plated

**FW:-** Flanged Washer  
**PW:-** Packing Washer  
(Syn. Resin Bonded Fabric)  
**SG:-** Panel Sealing Gasket  
**CD:-** Cap, Detachable  
**CE:-** Cable Entry

**NOTE 1** On PR4E and SR4G the Cable Entry and Cap are detachable and interchangeable to give a straight cable entry.

**NOTE 2** The Flanged Washer and Packing Washer are used when fitting component to a panel of dissimilar metal or finish.

**NOTE 3** Accessories, see Sheet No.1.

**HUMIDITY CLASS:** H2  
**TEMPERATURE CATEGORY:** 40/70  
**WORKING VOLTAGE:** 500 VOLTS PEAK  
(NORMAL AIR DENSITY)  
**WORKING VOLTAGE:** NOT SPECIFIED  
(LOW AIR DENSITY)  
**PROOF VOLTAGE:** 2.0kV PEAK  
**INSULATION RESISTANCE:** 100MΩ UNDER ALL TEST CONDITIONS  
**CONTACT RESISTANCE:** POLE. INITIALLY 2 MILLIOHMS MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX.  
SCREEN. INITIALLY 1 MILLIOHM MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX.  
**IMPEDANCE MATCHING:** INSERTION OF ITEM IN SUITABLE CABLE PRODUCES MISMATCH WHICH, EXPRESSED AS VOLTAGE STANDING WAVE RATIO, IS LESS THAN 1.2:1  
**SEALING:** AIR LEAKAGE NOT GREATER THAN 1 c.c. PER HOUR AT 20lb/sq. in. AFTER ALL CONDITIONING  
**CABLE FIXING:** WITHSTANDS 30lb PULL ALONG CABLE AXIS  
**VIBRATION:** WITHSTANDS FREQUENCY CYCLING TO RCS-11 WITHOUT RESONANCE, LOOSENING OR DISENGAGEMENT  
**BUMPING:** WITHSTANDS RCS-11 TEST WITHOUT MECHANICAL DETERIORATION  
**CORROSION:** WITHSTANDS RCS-11 SALT WATER TEST  
**ENDURANCE:** WITHSTANDS ENGAGEMENT AND DISENGAGEMENT 500 TIMES AND SIX WEEKS HIGH TEMPERATURE CYCLING WITH NEGLIGIBLE ELECTRICAL AND MECHANICAL DETERIORATION

MATING COMPONENTS  
AND JOINT SERVICE  
CATALOGUE NUMBERS

STYLE	TYPE	MATING COMPONENT	JOINT SERVICE CATALOGUE NO.
PR4D	PLUG, FIXED, FEMALE SHELL	SR4G	Z.119484
PR4E	PLUG, FIXED, FEMALE SHELL	SR4G	Z.540018
SR4G	SOCKET, FREE MALE SHELL	{ PR4D PR4E ABR4F	Z.540022
ABR4F	ADAPTORS, SOCKET, NO SOCKET, FEMALE SHELL	SR4G	Z.540019

ALL Z NUMBERS TO  
BE PRECEDED BY  
5935-

**SECTION 15/D**

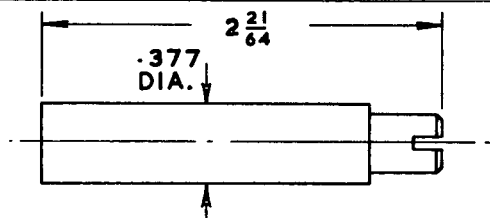
**SHEET No.4A**

**ISS. No. 2 2/59**

# RADIO FREQUENCY PLUGS AND SOCKETS NON-SEALED

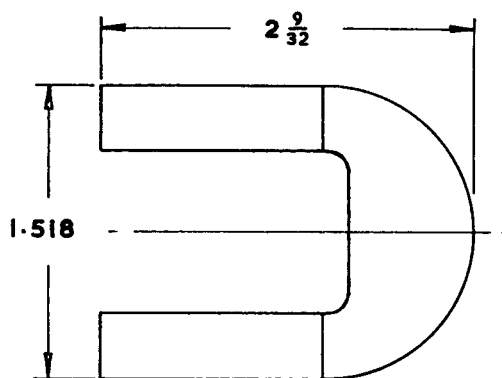
GENERAL PURPOSE

PATTERN 8

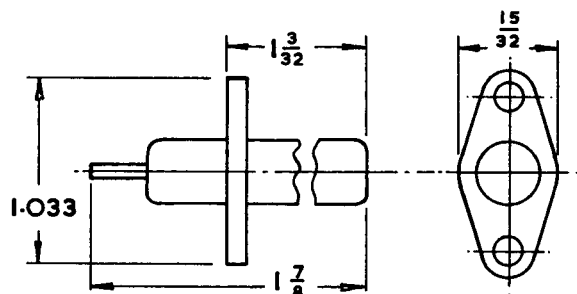


STYLE SR8C

ALL STYLES FINISH - SILVER PLATE



STYLE AR8D



STYLE PR8A

HUMIDITY CLASS:	H2
TEMPERATURE CATEGORY:	40/85
WORKING VOLTAGE: (NORMAL AIR DENSITY)	250 VOLTS PEAK
WORKING VOLTAGE: (LOW AIR DENSITY)	NOT SPECIFIED
PROOF VOLTAGE:	1.5kV PEAK
INSULATION RESISTANCE:	NOT LESS THAN 100MΩ AFTER ALL CONDITIONING
CONTACT RESISTANCE:	POLE. INITIALLY 2 MILLIOHMS MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX. SCREEN. INITIALLY 1 MILLIOHM MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX.
CABLE FIXING:	WITHSTANDS 30lb PULL ALONG CABLE AXIS
VIBRATION:	WITHSTANDS FREQUENCY CYCLING TO RCS-11 WITHOUT RESONANCE, LOOSENING OR DISENGAGEMENT
BUMPING:	WITHSTANDS RCS-11 TEST WITHOUT MECHANICAL DETERIORATION
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST
ENDURANCE:	WITHSTANDS ENGAGEMENT AND DISENGAGEMENT 500 TIMES WITH NEGLIGIBLE MECHANICAL DETERIORATION

MATING COMPONENTS, APPROPRIATE CABLES AND JOINT SERVICE CATALOGUE NUMBERS

STYLE	TYPE	MATING COMPONENT	APPROPRIATE CABLES	J.S. CAT. NUMBER
PR8A	PLUG, FIXED (MALE)	SR8C	UNIRADIO No. 6 OR 39	054-0201
SR8C	SOCKET, FREE (FEMALE)	PR8A	NOT SPECIFIED	054-0203
AR8D	ADAPTOR, PLUG TO PLUG	PR8A	NOT SPECIFIED	012-2924

Δ

ALL J.S. CAT. NUMBERS TO BE PRECEDED BY 5935-99-

SECTION 15/D

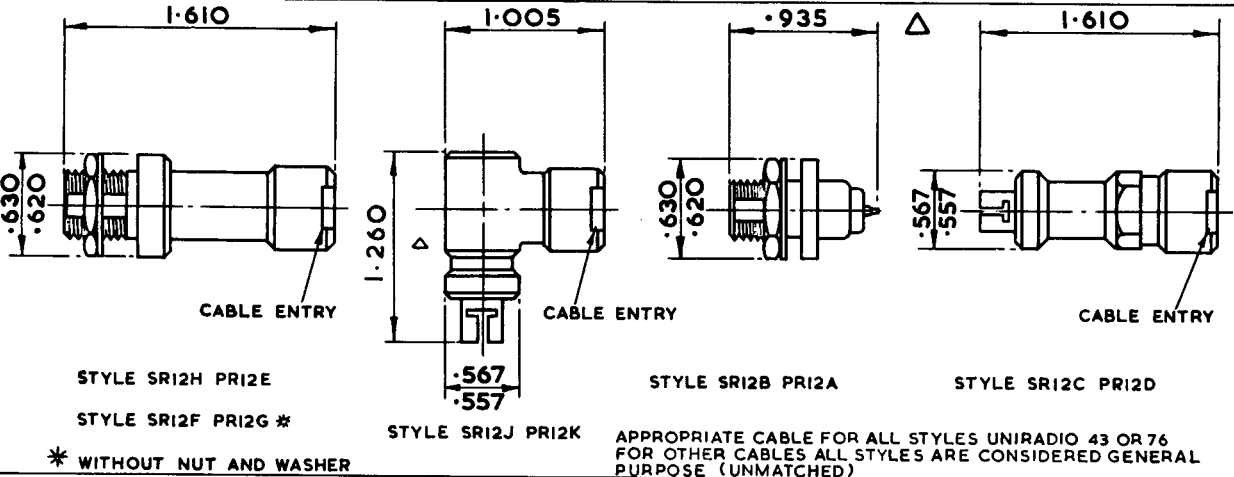
SHEET No. 5

ISS.No.3 9/63

RADIO FREQUENCY PLUGS & SOCKETS  
WITH BARRIER AND PANEL SEALS

50 OHM

PATTERN 12



HUMIDITY CLASS:	H2	TEMPERATURE CATEGORY:	40/85
WORKING VOLTAGE:	500 VOLTS PEAK NORMAL AIR DENSITY NOT SPECIFIED FOR LOW AIR DENSITY		
PROOF VOLTAGE	2kV PEAK		
INSULATION RESISTANCE:	NOT LESS THAN 100MΩ AFTER ALL CONDITIONING		
CONTACT RESISTANCE:	POLE. INITIALLY 2 MILLIOHMS MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX. SCREEN. INITIALLY 1 MILLIOHM MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX.		
SEALING:	AIR LEAKAGE NOT GREATER THAN 1 c.c. PER HOUR AT 20lb/sq. in. AFTER ALL CONDITIONING		
CABLE FIXING:	WITHSTANDS 30lb PULL ALONG CABLE AXIS		
VIBRATION:	WITHSTANDS FREQUENCY CYCLING TO RCS-11 WITHOUT RESONANCE, LOOSENING OR DISENGAGEMENT		
BUMPING:	WITHSTANDS RCS-11 TEST WITHOUT MECHANICAL DETERIORATION		
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST		
ENDURANCE:	WITHSTANDS ENGAGEMENT AND DISENGAGEMENT 500 TIMES AND SIX WEEKS HIGH TEMPERATURE CYCLING WITH NEGLIGIBLE ELECTRICAL AND MECHANICAL DETERIORATION		

STYLE	TYPE	MATING COMP.	J.S. CAT. NO.
PR12A	PLUG FIXED FEMALE SHELL	SR12C SR12J	011-9806
PR12D	PLUG FREE MALE SHELL	SR12B SR12F SR12H	012-2823
PR12E	PLUG FIXED FEMALE SHELL	SR12C SR12J	012-2824
†PR12G	PLUG FREE FEMALE SHELL	SR12C SR12J	Δ
PR12K	PLUG FREE MALE SHELL	SR12B SR12F SR12H	012-2826

STYLE	TYPE	MATING COMP.	J.S. CAT. NO.
SR12B	SOCKET FIXED FEMALE SHELL	PR12D PR12K	011-9810
SR12C	SOCKET FREE MALE SHELL	PR12A PR12E PR12G	012-2827
†SR12F	SOCKET FREE FEMALE SHELL	PR12D PR12K	Δ
SR12H	SOCKET FIXED FEMALE SHELL	PR12D PR12K	012-2829
SR12J	SOCKET FREE MALE SHELL	PR12A PR12E PR12G	012-2830

† PR12G AND SR12F SHOULD BE PROCURED AS PR12E AND SR12H RESPECTIVELY, THE ITEMS ARE IDENTICAL EXCEPT FOR THE NUT AND WASHER. Δ

WITH THE EXCEPTION OF SR12B AND PR12A ALL ITEMS REQUIRE ACCESSORIES WHICH MUST BE ORDERED SEPARATELY (SEE SHEET No.1)

ALL J.S. CAT. NUMBERS TO BE PRECEDED BY 5935-99-

SECTION 15/D

SHEET No.6

ISS. No. 4 9/63

ELECTRONIC TECHNICAL SERVICES DATA SHEET - COPYRIGHT RESERVED



RADIO FREQUENCY PLUGS & SOCKETS  
NON-SEALED

GENERAL PURPOSE

PATTERN 40

STYLE PR40A

STYLE SR40B

STYLE SR40C

MATERIAL - BODY, ALUMINIUM ALLOY. WASHERS, BERYLLIUM COPPER. FINISH, ALL CLEAN.

SPECIAL NOTE:- THE NUT, BUSHING RETAINER ON SR40B AND SR40C CAN BE INTERCHANGED WITH THE CAP TO GIVE A STRAIGHT CABLE OUTLET.

HUMIDITY CLASS:	H1
TEMPERATURE CATEGORY:	40/85
WORKING VOLTAGE: (NORMAL AIR DENSITY)	500 VOLTS PEAK
WORKING VOLTAGE: (LOW AIR DENSITY)	NOT SPECIFIED
PROOF VOLTAGE:	2kV PEAK
INSULATION RESISTANCE:	NOT LESS THAN 100MΩ INITIALLY OR 10MΩ AFTER DAMP HEAT
CONTACT RESISTANCE:	POLE. INITIALLY 2 MILLIOHMS MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX. SCREEN. INITIALLY 1 MILLIOHM MAX. AFTER DAMP HEAT 5 MILLIOHMS MAX.
IMPEDANCE MATCHING:	INSERTION OF ITEM IN SUITABLE CABLE PRODUCES MISMATCH WHICH, EXPRESSED AS VOLTAGE STANDING WAVE RATIO, IS LESS THAN 1.2:1
CABLE FIXING:	WITHSTANDS 30lb PULL ALONG CABLE AXIS
VIBRATION:	WITHSTANDS FREQUENCY CYCLING TO RCS-11 WITHOUT RESONANCE, LOOSENING OR DISENGAGEMENT
BUMPING:	WITHSTANDS RCS-11 TEST WITHOUT MECHANICAL DETERIORATION
CORROSION:	WITHSTANDS RCS-11 SALT WATER TEST
ENDURANCE:	WITHSTANDS ENGAGEMENT AND DISENGAGEMENT 500 TIMES WITH NEGLIGIBLE MECHANICAL DETERIORATION

MATING COMPONENTS, APPROPRIATE CABLES AND JOINT SERVICE CATALOGUE NUMBERS

STYLE	TYPE	MATING COMPONENT	APPROPRIATE CABLES UNIRADIO (DEF-14-A)	JOINT SERVICE CATALOGUE NO.
PR40A	PLUG, FIXED, FEMALE SHELL	SR40B SR40C	SEE SHEET NO.1	054-0101
SR40B	SOCKET, FREE, MALE SHELL	PR40A		054-9028
SR40C	SOCKET, FIXED, MALE SHELL			054-9027

Accessories are required for styles SR40B and SR40C (See Sheet No.1)

ALL J.S. CAT. NUMBERS TO BE PRECEDED BY 5935-99-

SECTION 15/D
SHEET No. 8
ISS.No. 3 9/63

## PLUGS AND SOCKETS, ELECTRICAL, PATTERN 109

SHEET No.1

ISS. No.1 4/64

<u>SCOPE:</u>	THIS SECTION RELATES TO A RANGE OF MOULDED, UNSEALED PLUGS AND SOCKETS WITH LOW ENGAGEMENT AND DISENGAGEMENT FORCES. THEY ARE INTENDED FOR D.C. AND LOW FREQUENCY APPLICATIONS AS MULTIPOLE CONNECTORS FOR USE WITH RACK MOUNTED EQUIPMENT.		
<u>SOURCE:</u>	DEF-5325-4		
<u>CURRENT RATING:</u>	3 AMPERES PER CONTACT AT 100°C		
<u>VOLTAGE RATING:</u>	WORKING D.C.	500V AT SEA LEVEL	250V AT 30,000 FEET
	WORKING A.C. (r.m.s. 45-60c/s)	350V AT SEA LEVEL	175V AT 30,000 FEET
<u>TYPES:</u>	THREE TYPES ARE COVERED:-      35 POLES      70 POLES      91 POLES		
<u>PLATING:</u>	ALL TYPES ARE AVAILABLE WITH EITHER GOLD OR SILVER PLATED CONTACTS. GOLD PLATING IS RECOMMENDED WHERE THE APPLIED VOLTAGE MAY BE LESS THAN 1 VOLT OR WHEN THE COMPONENTS ARE TO BE USED IN POLLUTED ATMOSPHERES.		
<u>SECTION ARRANGEMENT:</u>	PERFORMANCE DATA BEING THE SAME FOR ALL THREE TYPES IS GIVEN ON SHEET No. 2. DRAWINGS AND N.A.T.O. STOCK NUMBERS ARE ON SHEET No. 3.		
<u>DIMENSIONS:</u>	THE THREE TYPES OF CONNECTOR ARE IDENTICAL IN TERMS OF THE DIMENSIONS STATED. VARIANTS A, B, C, ETC., ARE LISTED IN TABLE 1 ON SHEET No. 3. THE 70 POLE VERSION IS ILLUSTRATED AND THE POLE ARRANGEMENT FOR THE OTHER TWO TYPES FOLLOWS THE SAME PATTERN OF 7 ROWS OF CONTACTS. IN THE 35 POLE ITEM THERE ARE 5 POLES PER ROW AND IN THE 91 POLE ITEM THERE ARE 13 POLES PER ROW.		
<u>TOLERANCES:</u>	TOLERANCES ON DRAWINGS ARE $\pm 0.005$ UNLESS OTHERWISE STATED. POSITIONAL TOLERANCE ZONE DIAMETER 0.006 FOR LOCATING DOWELS AND ALL HOLES EMBODYING PLUG AND SOCKET CONTACTS AND FIXING SCREWS.		
<u>CONTACT NUMBERING:</u>	THE CONTACTS ARE IDENTIFIED ON THE FRONT FACE OF THE MOULDING AND THE CONTACT NUMBERING SYSTEM IS THE SAME FOR ALL THREE ITEMS.		
<u>ALIGNMENT:</u>	A MEANS MUST BE PROVIDED TO ENSURE THAT MISALIGNMENT BETWEEN THE RACK AND EQUIPMENT PARTS OF THE CONNECTOR SHALL NOT EXCEED 0.012. THE WEIGHT OF THE EQUIPMENT MUST BE CARRIED BY GUIDES OR OTHER MECHANICAL MEANS AND NOT BY THE CONNECTOR.		
<u>ASSOCIATED DATA SHEETS:</u>	SEE SECTION A/15 SHEET No. 7 FOR PANEL PIERCING DIMENSIONS.		

## PLUGS AND SOCKETS, ELECTRICAL, PATTERN 109

DEF-5011 CLASSIFICATION:

T4 (-55°C TO 100°C)

H6

GP1

TESTS APPLIED

- |                                       |                                |                     |
|---------------------------------------|--------------------------------|---------------------|
| 1. BUMPING (ATMOSPHERIC CONDITIONS)   | 5. ENDURANCE MECHANICAL        | 10. PLATING PROVING |
| 2. CLIMATIC                           | 6. RAPID CHANGE OF TEMPERATURE | 11. POLARISATION    |
| 3. DAMP HEAT, LONG TERM               | 7. SALT MIST                   | 12. FIRE RISK       |
| 4. ENDURANCE HIGH TEMPERATURE         | 8. SHELF LIFE                  | 13. MOULD GROWTH    |
| 9. VIBRATION (ATMOSPHERIC CONDITIONS) |                                |                     |

N.B. ALL THE ABOVE ARE AS SPECIFIED IN DEF-5011 EXCEPT TESTS 10 AND 11. TEST 10 CONSISTS OF EXPOSURE TO MOIST SULPHUR DIOXIDE AND HYDROGEN SULPHIDE GASES TO SIMULATE INDUSTRIAL ATMOSPHERES. TEST 11 SPECIFIES THAT IT SHALL NOT BE POSSIBLE TO MISMATE THE COMPONENT USING A FORCE NOT GREATER THAN 25lb.

MEASUREMENTS

CONTACT RESISTANCE: (MAXIMUM) INITIALLY 4 MILLIOHMS AND 9 MILLIOHMS DURING OR AFTER TESTS 1 TO 10 INCLUSIVE

ENGAGEMENT AND DISENGAGEMENT FORCE: INITIALLY AND AFTER TESTS 5, 7, 10 WITHIN TABULATED LIMITS

NO. OF POLES	35	70	91
MAX. (1b)	10	20	26
MIN. (1b)	2	4	5

INSULATION RESISTANCE: (MINIMUM) 5000 MEGOHMS INITIALLY. 1000 MEGOHMS AFTER TEST 8.  
1000 MEGOHMS DURING OR AFTER TESTS 4, 7 (AFTER CLEANING), 10.  
100 MEGOHMS AFTER TESTS 2, 3, 7 (BEFORE CLEANING)

INTERMITTENCY: MAXIMUM 1 MICROSECOND INTERMITTENCY OF CURRENT DURING TESTS 1 AND 9

ROBUSTNESS OF TERMINATIONS: NO DAMAGE OR LOOSENING OF PARTS DUE TO STEADY FORCE OF 1.5lb APPLIED TO ANY TERMINATION IN ANY DIRECTION RADIAL TO THE AXIS OF THE CONTACT

VOLTAGE PROOF: APPLIED BETWEEN ONE POLE AND ALL OTHERS CONNECTED TO EACH OTHER AND TO THE SHELL AND/OR MOUNTING PLATE

2000V d.c. OR PEAK AT SEA LEVEL  
1000V d.c. OR PEAK AT 30,000ft (D1)

2000V APPLIED AFTER TESTS 2, 3, 4, 7, 8  
1000V APPLIED DURING TEST 2 AT LOW AIR DENSITY

OBSERVATIONS

RESONANCE: NO RESONANCE DURING TEST 9

MOULD: NO MOULD RESULTING FROM TEST 13

CORROSION: NO CORROSION OR OTHER DETERIORATION SUCH AS WOULD IMPAIR OPERATION RESULTING FROM TESTS 2, 3, 7

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**PLUGS AND SOCKETS, ELECTRICAL, PATTERN 109**

SECTION 15/E

SHEET No.3

ISS.No.1 4/64

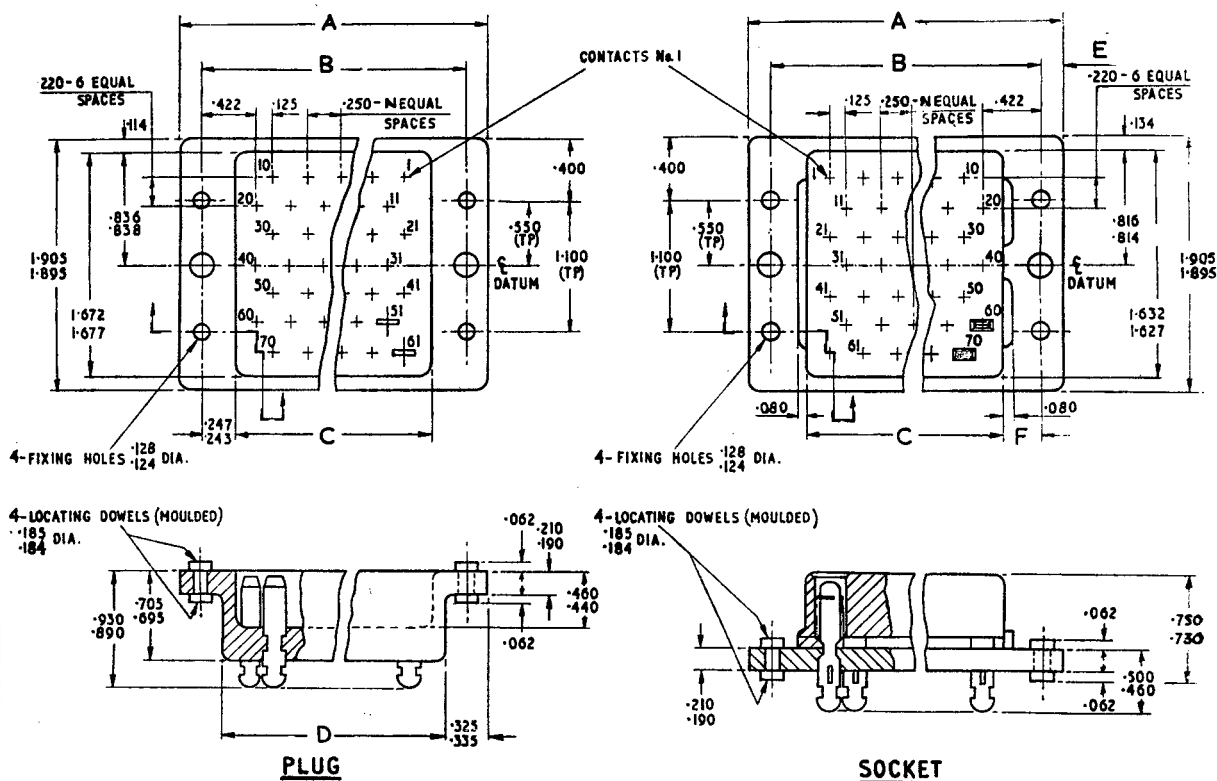


TABLE 1

PLUG						SOCKET						
POLES	A	B	C	D	N	A	B	C	E	F	N	POLES
35	2.270	1.970 (TP)	1.485 1.480	1.610	4	2.270	1.970 (TP)	1.437 1.432	0.150	0.268	4	35
70	3.520	3.225 (TP)	2.735 2.730	2.860	9	3.520	3.225 (TP)	2.687 2.682	0.148	0.270	9	70
91	4.270	3.970 (TP)	3.485 3.480	3.610	12	4.270	3.970 (TP)	3.437 3.432	0.150	0.269	12	91

TABLE 2 - PLUGS AND SOCKETS  
WITH GOLD PLATED CONTACTS

STYLE	ITEM	POLES	WT.†	N.A.T.O. STOCK NO.*
P09G35	PLUG	35	45	012-8451
S09G35	SOCKET	35	43	012-8452
P09G70	PLUG	70	74	012-8453
S09G70	SOCKET	70	71	012-8454
P09G91	PLUG	91	96	012-8455
S09G91	SOCKET	91	89	012-8456

TABLE 3 - PLUGS AND SOCKETS  
WITH SILVER PLATED CONTACTS

STYLE	ITEM	POLES	WT.†	N.A.T.O. STOCK NO.*
P09S35	PLUG	35	45	012-8457
S09S35	SOCKET	35	43	012-8458
P09S70	PLUG	70	74	012-8459
S09S70	SOCKET	70	71	012-8460
P09S91	PLUG	91	96	012-8461
S09S91	SOCKET	91	89	012-8462

† MAXIMUM WEIGHT IN GRAMMES

\* ALL N.A.T.O. STOCK NUMBERS PRECEDED BY 5935-99--