



**REVERSE POLARITY
(RP-MCX / RP-SMA / RP-TNC) / UHF**

R300 / R155

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REVERSE POLARITY

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Introduction

What is a reverse polarity connector ?

Radiall offers reverse polarity (or gender) connectors with the inversion of the center contact genders and of the interface insulators:

The plugs have a female center contact and the jacks have a male center contact (for the RP SMA and RP TNC series).

The plug and the jack connector set also has the same visual shape and mechanical attributes as the standard series (see below).



They are compliant with the F.C.C. standard (Federal Communications Commissions) Part 15.203 which requires a nonstandard coaxial connector interface.

Secure connection

This design prevents any inadvertent mating with standard connectors.

Example: a RP jack will only mate with a RP plug.

Performances

All the RP series maintain the same characteristics (material, plating, matings...) and performances as the standard series to which they refer.

Example: a RP BNC connector will have the same characteristics as the equivalent BNC connector.

Finder guide

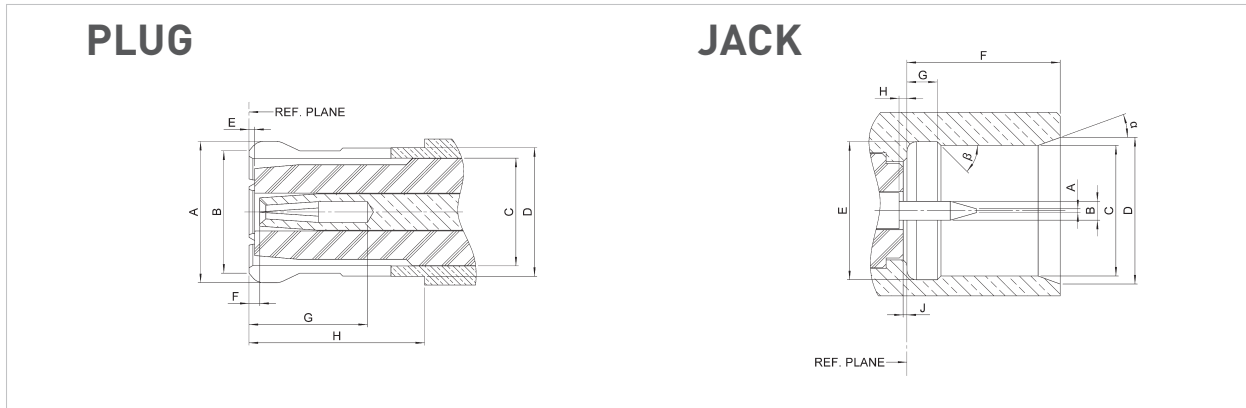
Model	Cable goupe	Cable group dia.	RP MCX series	RP SMA series	RP TNC series
	RD316	2.6/50/D		R300 124 040 (page 16-9)	
	RG58/RG141	5/50/S		R300 124 073 (page 16-9)	
	RG142/RG223/RG400	5/50/D			
	Belden 9913	10.2/50/S			R300 143 050 (page 16-11)
right angle plug	RG174/RG316	2.6/50/S	R300 113 100 (page 16-8)	R300 124 183 (page 16-9)	
straight bulkhead jack	RG178/R196	2/50/S		R300 124 235 (page 16-10)	
	RG174/RG316	2.6/50/S		R300 124 240 (page 16-10)	
right angle bulkhead jack	RG58/RG141	5/50/S			R300 143 240 (page 16-11)
	RG178/R196	2/50/S		R300 124 323 (page 16-10)	
right angle PCB receptacle	RG174/RG316	2.6/50/S		R300 124 343 (page 16-10)	
		-		R300 124 403 (page 16-10)	

* CLamp type

All dimensions are given in mm.

Interface

RP-MCX

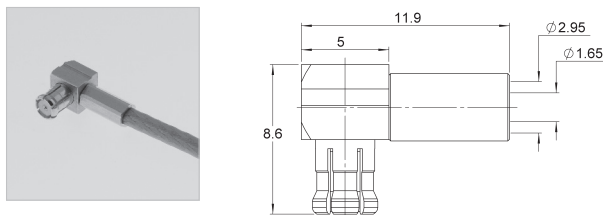


Letter	mm		inch	
	min.	max.	min.	max.
A DIA	0.1	0.2	.004	.008
B DIA	0.48	0.52	.019	.020
C DIA	3.42	3.48	.135	.137
D DIA	3.80		.150	
E DIA	3.60	3.75	.142	.148
F	4.00	4.12	.157	.162
G	0.75	0.85	.029	.033
H	0		0	
J	0		0	
a	18°	22°	18°	22°
β	43°	47°	43°	47°

Letter	mm		inch	
	min.	max.	min.	max.
A DIA		3.80		.150
B DIA		3.60		.142
C DIA		3.00		.118
D DIA		3.40		.134
E	0		0	.004
F	0		0	.008
G	2.60		.110	
H	4.15		.163	

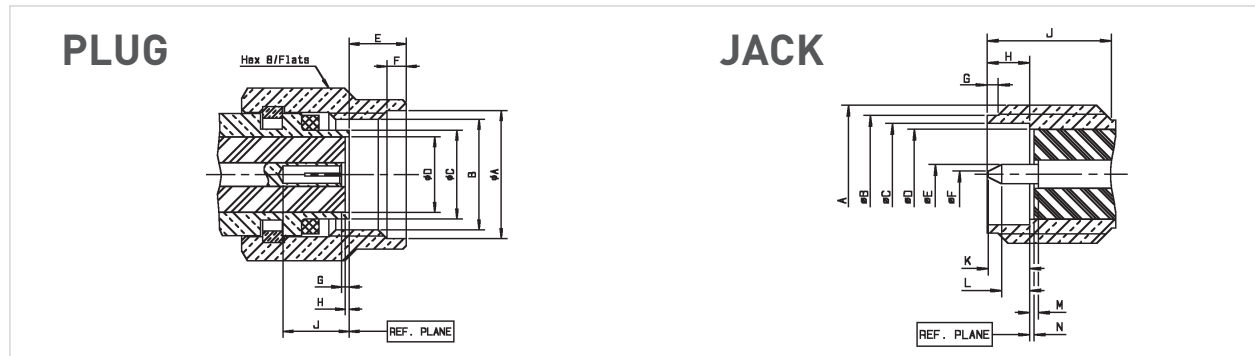
Plug

RIGHT ANGLE PLUG CRIMP TYPE FOR FLEXIBLE CABLES



Cable group	Cable group dia.	Part number	Captive center contact	Finish	Packaging
RG174/RG316	2.6/50/S	R300 113 100	Yes	gold	100 pieces/bulk

Interface

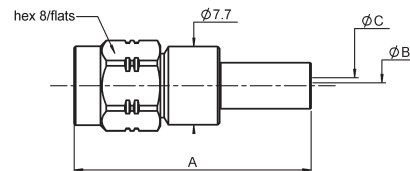


Letter	mm		inch	
	min.	max.	min.	max.
A DIA	6.35		.250	
B	1/4-36 UNS-2B			
C DIA		4.59		.181
D DIA	4.1 nominal		.161 nominal	
E		3.43		.135
F	0.38	1.14	.015	.045
G	0	0.25	0	.010
H	0	0.20	0	.008
J	2.92		.115	

Letter	mm		inch	
	min.	max.	min.	max.
A	1/4-36 UNS-2A			
B DIA	5.28	5.49	.208	.216
C DIA	4.596		.181	
D DIA	4.1 nominal		.161 nominal	
E DIA	0.90	0.94	.035	.037
F DIA	0.30		.012	
G	0.38	1.14	.015	.045
H	1.88	1.98	.074	.078
J	4.31		.170	
K		2.54		.100
L	1.27		.050	
M	0	0.25	0	.010
N	0	0.20	0	.008

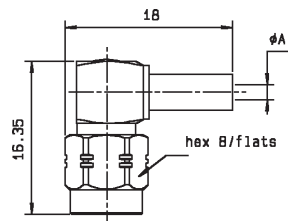
Plugs

STRAIGHT PLUGS CRIMP TYPE FOR FLEXIBLE CABLES (female center contact)



Cable group	Cable group dia.	Part number	Dimensions			Captive center contact	Finish	Packaging	Note
			A	B	C				
RD316	2.6/50/D	R300 124 040	23.4	0.6	1.61	yes	BBR	100 pieces/bulk	full crimp
RG58/RG141	5/50/S	R300 124 073	26.4	1.05	3.11	yes	BBR	100 pieces/bulk	

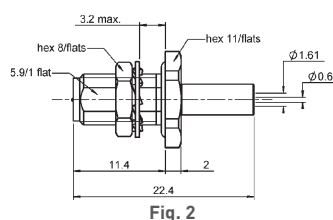
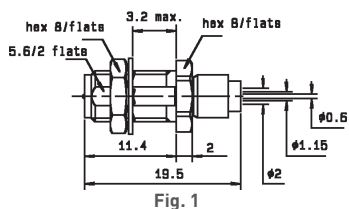
RIGHT ANGLE PLUG CRIMP TYPE FOR FLEXIBLE CABLES (female center contact)



Cable group	Cable group dia.	Part number	A dia.	Captive center contact	Finish	Packaging
RG174/RG316	2.6/50/S	R300 124 183	1.61	Yes	gold	100 pieces/bulk

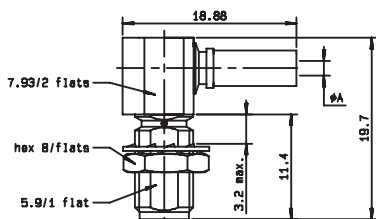
Jacks and receptacle

STRAIGHT BULKHEAD JACKS CRIMP TYPE FOR FLEXIBLE CABLES (male center contact)



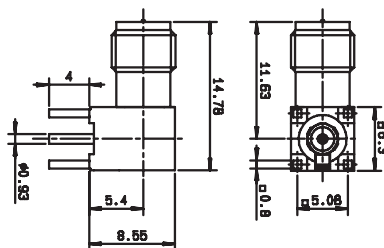
Cable group	Cable group dia.	Part number	Fig.	Captive center contact	Panel drilling	Finish	Packaging	Note
RG178/RG196	2/50/S	R300 124 235	1	yes	P05	nickel	100 pieces/bulk	
RG174/RG316	2.6/50/S	R300 124 240	2	yes	P02	BBR		panel seal full crimp

RIGHT ANGLE BULKHEAD JACKS CRIMP TYPE FOR FLEXIBLE CABLES (male center contact)



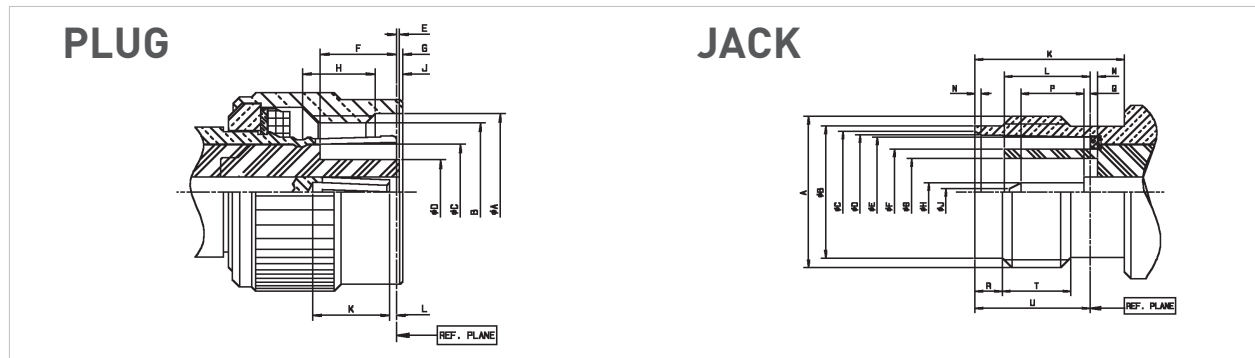
Cable group	Cable group dia.	Part number	A dia.	Captive center contact	Panel drilling	Finish	Packaging
RG178/RG196	2/50/S	R300 124 323	0.95	yes	P02	nickel	100 pieces/bulk
RG174/RG316	2.6/50/S	R300 124 343	1.63				

PCB RECEPTACLE (male center contact)



Part number	Captive center contact	PCB pattern	Finish	Packaging	Note
R300 124 403	yes	P01	nickel	100 pieces/reel	solder legs

Interface

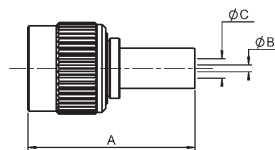
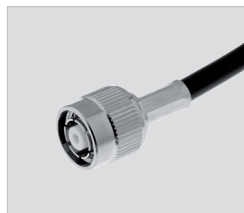


Letter	mm		inch	
	min.	max.	min.	max.
A DIA	11.18		.440	
B		7/16-28 UNEF-2B		
C DIA	7		.275	
D DIA		4.72		.186
E	0.03	0.53	.001	.020
F	5.28	5.79	.208	.228
G		1.98		.078
H	3.96		.156	
J	1.60		.063	
K	4.95		.195	
L	0.61	1.12	.024	.044

Letter	mm		inch	
	min.	max.	min.	max.
A		7/16-28 UNEF-2A		
B DIA	9.60	9.68	.378	.381
C DIA	8.79	9.04	.346	.356
D DIA	8.31	8.46	.327	.333
E DIA	8.10	8.15	.319	.321
F DIA	-	6.40		.252
G DIA	4.83		.190	
H DIA	1.32	1.37	.052	.054
J DIA		0.64		.025
K	10.52		.414	
L	4.78	5.28	.188	.208
M	0.53	1.04	.021	.041
N	0.38	0.76	.015	.030
P	1.98		.078	
Q	0	0.25	0	.010
R	1.73	2.24	.068	.088
T	4.75		.187	
U	8.31	8.51	.327	.335

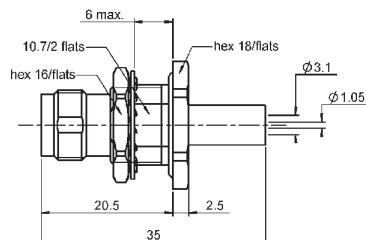
Plug and jack

STRAIGHT PLUG CRIMP TYPE FOR FLEXIBLE CABLES (female center contact)



Cable group	Cable group dia.	Part number	Dimensions			Captive center contact	Finish	Packaging
			A	B	C			
Belden 9913	10.2/50/S	R300 143 050	28.2	2.85	7.8	yes	nickel	100 pieces/bulk

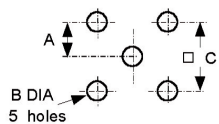
STRAIGHT BULKHEAD JACK FULL CRIMP TYPE FOR FLEXIBLE CABLES (male center contact)



Cable group	Cable group dia.	Part number	Captive center contact	Panel drilling	Finish	Packaging	Note
RG58/RG141	5/50/S	R300 143 240	yes	P04	nickel	100 pieces/bulk	panel seal

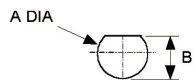
Panel drilling

PO1



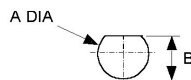
	mm	
	maxi	mini
A	2.59	2.49
B	1.4	1.3
C	5.13	5.03

PO2



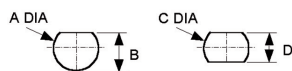
	mm	
	maxi	mini
A	6.5	6.4
B	6.15	6

PO3



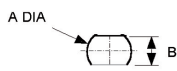
	mm	
	maxi	mini
A	9.75	9.65
B	8.9	8.8

PO4



	mm	
	maxi	mini
A	12.8	12.7
B	12.1	12
C	12.8	12.7
D	10.9	10.8

PO5

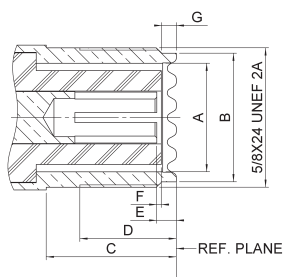


	mm	
	maxi	mini
A	6.5	6.4
B	5.8	5.7

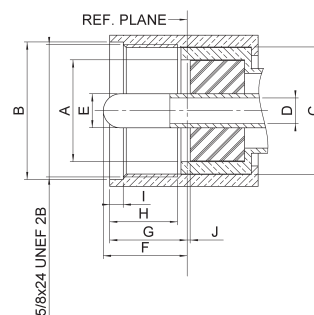
REVERSE POLARITY

Interface

PLUG



JACK



Letter	mm		inch	
	min.	max.	min.	max.
A DIA	11.56	12.22	.455	.481
B DIA	16.00	---	.630	---
C DIA	13.92	---	.548	---
D DIA	---	3.35	---	.132
E DIA	3.912	4.013	.154	.158
F	---	11.10	---	.437
G	---	9.91	---	.390
H	8.76	---	.335	---
I	1.19	4.27	.047	.168
J	0.00	---	.000	---

Letter	mm		inch	
	min.	max.	min.	max.
A DIA	11.56	12.22	.455	.481
B DIA	14.00	14.25	.551	.561
C	11.10	---	.437	---
D	7.87	---	.310	---
E	1.02	---	.040	---
F	0.03	---	.001	---
G	1.19	1.96	.047	.077

Characteristics

Test/characteristics	Values/remarks
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ELECTRICAL CHARACTERISTICS

Impedance	50Ω
Maximum frequency range	500 MHz
Test voltage (at sea level)	2000 V rms - 50 Hz
Working voltage (at sea level)	750 V
Insulation resistance (under 500 V)	≤ 5 GΩ
Contact resistance - centre contact - outer contact	5 mΩ max 5 mΩ max

MECHANICAL CHARACTERISTICS

Mating cycles	500
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ENVIRONMENTAL CHARACTERISTICS

Temperature range - PTFE - bakelite - styramic	-55°C to + 155°C -40°C to + 165°C -40°C to + 70°C
Salt spray	48 Hrs

MATERIALS

Contacts and interfaces	Heat treated beryllium copper
Other parts	Brass
Insulator	PTFE (T) - bakelite (B) or styramic (St.)
Gaskets	Neoprene or silicone rubber

All dimensions are given in mm

Plugs, receptacles and adapter

STRAIGHT PLUGS

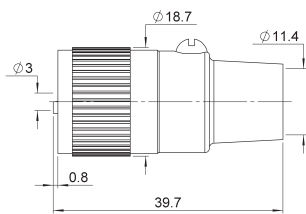


Fig. 1

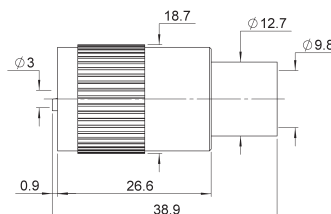


Fig. 2



Cable group	Cable group dia.	Part number	Fig	Note
RG213/RG393/RG11/RG12/RG144	10/50+75Ω	R155 003 000	1	Insulator: PTFE
		R155 005 000	2	Insulator: PTFE

RECEPTACLES

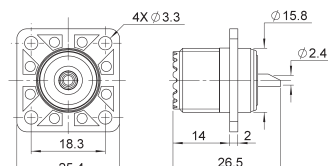


Fig. 1

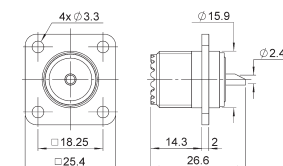


Fig. 2

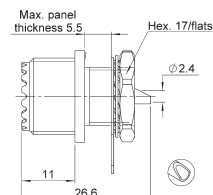
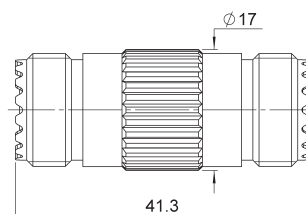


Fig. 3

Part number	Fig	Panel drilling	Note
R155 404 161	1	P01	Square flange - Solder pot - Insulator: Bakelite
R155 405 000	2	P01	Square flange - Solder pot - Insulator: PTFE
R155 560 000	3	P02	Bulkhead - Solder pot - Insulator: PTFE

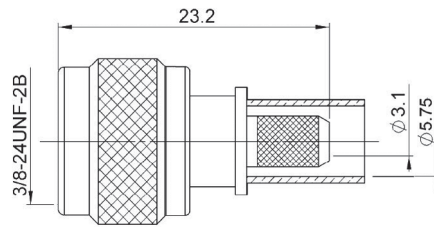
IN SERIES ADAPTER



Part number	Note
R155 705 000	Straight female - female - Insulator: Styramic

Mini UHF plug

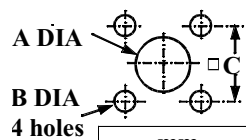
MINI UHF STRAIGHT PLUG



Cable group	Cable group dia.	Part number	Note
RG142/RG223/RG400	5/50D	R154 078 100	Crimp

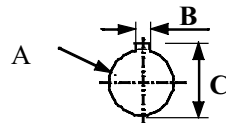
Panel drilling

PO1



	mm	
	Maxi	mini
A	16.3	16.2
B	3.3	3.2
C	18.3	18.2

PO2



	mm	
	Maxi	mini
A	12.3	12.2
B	2.3	2.2
C	15.8	15.7