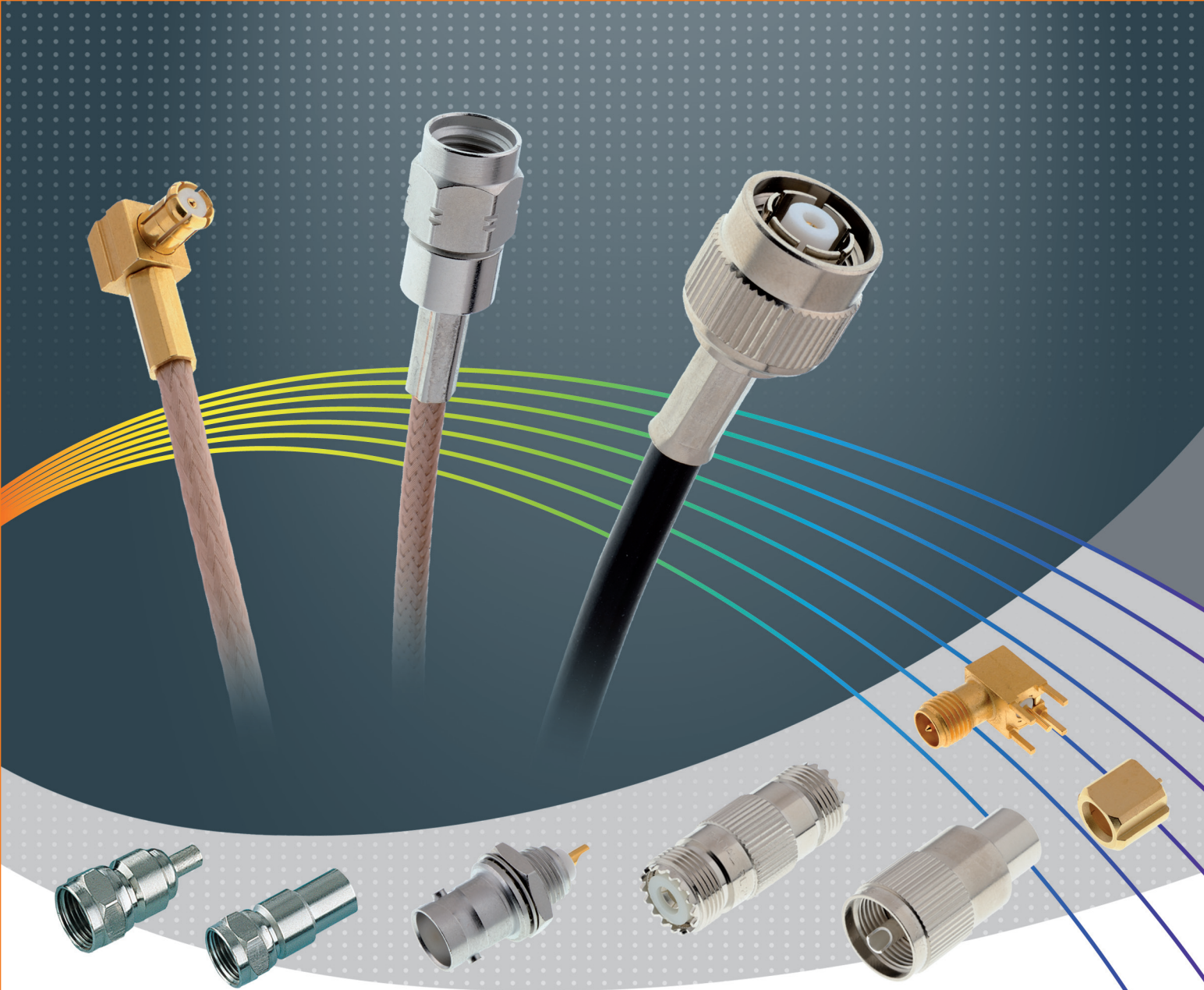




DT-F / REVERSE POLARITY (RP-MCX / RP-SMA / RP-BNC / RP-TNC) / UHF series

R139 / R300 / R155

RADIAL 
The next conneXion

Pages

DT-F

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REVERSE POLARITY

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RP-MCX

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RP-SMA

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Receptacle	16-10

RP-BNC

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RP-TNC

Interface	16-12
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UHF

Interface	16-14
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INTERFACE

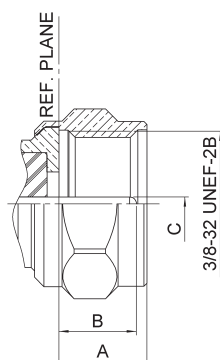
The DT-F (Digital Transmission F) is a new screw-on 75Ω coaxial connector series compatible with the existing F-type connectors which comply with the IEC 169-24 standard.

Designed according to this standard, DT-F series offers high reliability and enhanced performance up to 3 GHz, for digital applications like CATV, Internet, satellite, instrumentation and test equipment.

Most of DT-F connectors feature a **single piece design**, with its integrated center contact and crimp ferrule for **easy and low cost installation**.

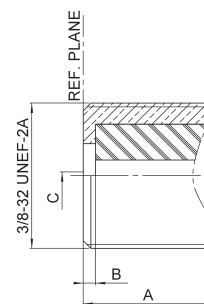
PLUG

male contact



JACK

female contact



Letter	mm		inch	
	min.	max.	min.	max.
A	8.4		.331	
B		0.9		.035
C DIA	Accepts pin diameter 0.8 to 1.2		Accepts pin diameter .031 to .047	

Letter	mm		inch	
	min.	max.	min.	max.
A		5.95		.234
B	4.95		.195	
C DIA	0.88	0.92	.035	.036

CHARACTERISTICS

Test/characteristics	Values/remarks
ELECTRICAL CHARACTERISTICS	
Impedance	75Ω
Operating frequency	DC to 3 GHz
V.S.W.R. max	$1.02 + 0.1\sqrt{F}$ (F in GHz)
Max insertion loss (dB)	$0.085\sqrt{F}$ (F in GHz)
Insulation resistance (M Ω)	5000
Operating voltage (VRMS)	500
Dielectric withstanding voltage (VRMS)	1500

MECHANICAL CHARACTERISTICS

Life	500 matings
Cabling retention force ϕ 2.6/S ϕ 6/S + 7/S ϕ 10/S	40N
	80N
	100N

ENVIRONMENTAL CHARACTERISTICS

Temperature range	-40°C to + 80°C
-------------------	-----------------

MATERIALS and PLATING

Components		Materials	Platings
Body		Brass	BBR (non magnetic alloy)
Center contact	Male Female	Brass Beryllium copper	Silver Gold
Insulator		Polypropylene	

STRAIGHT PLUGS, CRIMP TYPE

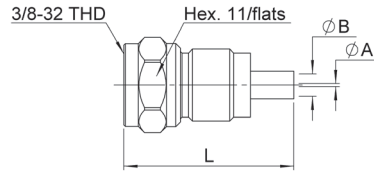


Fig. 1

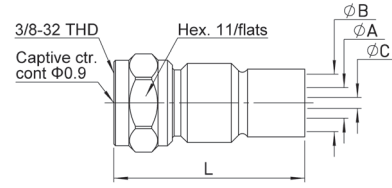
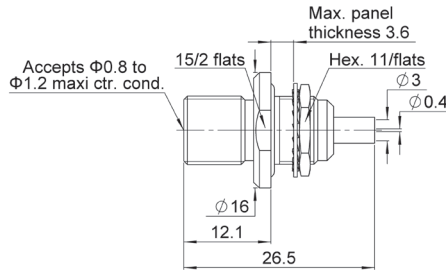


Fig. 2

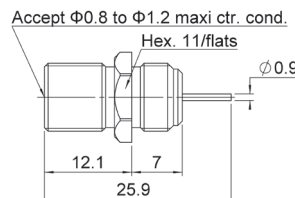
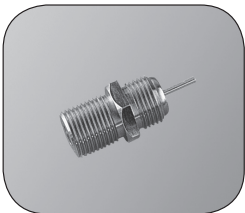
Cable group	Cable group dia.	Part number	Fig.	Captive center contact	Dimensions				Note
					A dia	B dia	C dia max	L	
RG179/RG187	2.6/75/S	R139 077 000	1	no	0.4	3		22.3	with separated center contact
RG59	6/75	R139 084 000			0.75	6.6		28.5	
RG11/RG12/RG144 Belden 9064	10/75/S	R139 089 000	2	yes	7.45	11.95	Rear socket accepts 1.2 to 1.65	26	

STRAIGHT BULKHEAD JACK, WITH SEPARATED CENTER CONTACT



Cable group	Cable group dia.	Part number	Captive center contact	Panel drilling	Note
RG179/RG187	2.6/75/S	R139 331 100	yes	P01	with separated center contact

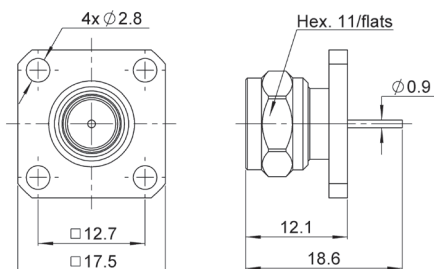
STRAIGHT SCREW RECEPTACLE



Part number	Captive center contact
R139 555 200	yes

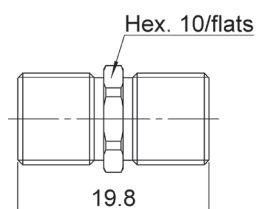
PLUG, RECEPTACLE AND ADAPTER

SQUARE FLANGE RECEPTACLE WITH CYLINDRICAL CONTACT



Part number	Panel drilling
R139 433 023	P03

BULKHEAD ADAPTER FEMALE-FEMALE



Part number
R139 705 023

PANEL DRILLING

P01

mm		
	Maxi	mini
A	9.8	9.6

P02

mm		
	Maxi	mini
A	4.3	4.2
B	2.1	2
C	12.65	12.55

P03

mm		
	Maxi	mini
A	11	10.9
B	2.9	2.8
C	12.75	12.65

What is a reverse polarity connector ?

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

The plugs have a female center contact and the jacks have a male center contact (for the RP SMA, RP BNC 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

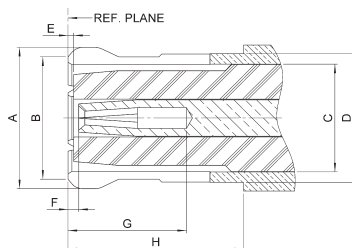
Model	Cable goupe	Cable group dia.	RP MCX series	RP SMA series	RP BNC series	RP TNC series
	RD316	2.6/50/D		R300 124 040 (page 16-9)		
	RG58/RG141	5/50/S		R300 124 073 (page 16-9)	R300 141 030* (page 16-11)	
	RG142/RG223/RG400	5/50/D			R300 141 030* (page 16-11)	
	Belden 9913	10.2/50/S				R300 143 050 (page 16-12)
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)		
	RG58/RG141	5/50/S				R300 143 240 (page 16-12)
right angle bulkhead jack	RG178/R196	2/50/S		R300 124 323 (page 16-10)		
	RG174/RG316	2.6/50/S		R300 124 343 (page 16-10)		
straight bulkhead receptacle		-			R300 141 400 (page 16-11)	
straight SMT receptacle		-	R300 113 800 (page 16-8)			
right angle PCB receptacle		-		R300 124 403 (page 16-10)		

* Clamp type

All dimensions are given in mm.

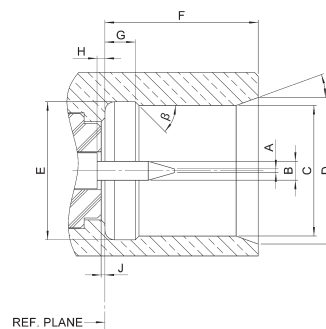
INTERFACE

PLUG



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	
α	18°	22°	18°	22°
β	43°	47°	43°	47°

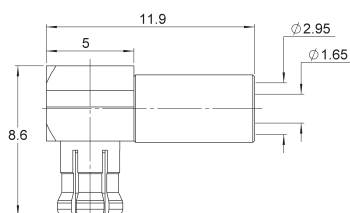
JACK



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	

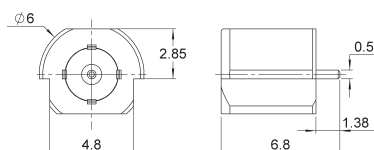
PLUG AND RECEPTACLE

RIGHT ANGLE PLUG CRIMP TYPE FOR FLEXIBLE CABLES



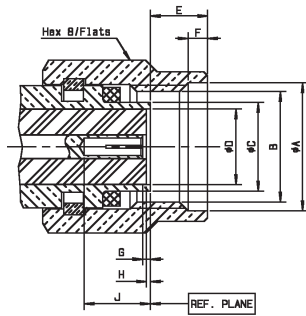
Cable group	Cable group dia.	Part number	Captive center contact	Finish	Packaging
RG174/ RG316	2.6/50/S	R300 113 100	Yes	gold	100 pieces/ bulk

SMT RECEPTACLE

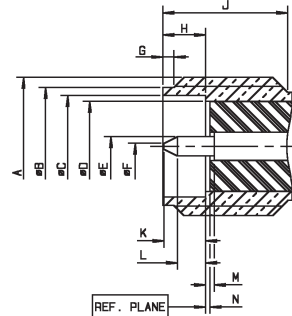


Part number	Captive center contact	Finish	Packaging
R300 113 800	yes	gold	1000 pieces/reel

PLUG



JACK

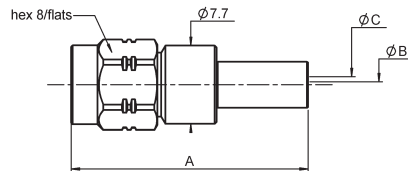


Letter	mm		inch	
	min.	max.	min.	max.
A DIA	6.35		.250	
B	1/4-36 UNS-2B			
C DIA		4.59		.181
D DIA	4.1 nominal		.161 nominal	
E		3.43		.135
F	0.38	1.14	.015	.045
G	0	0.25	0	.010
H	0	0.20	0	.008
J	2.92		.115	

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

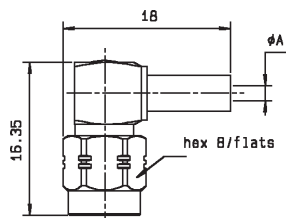
PLUGS

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)

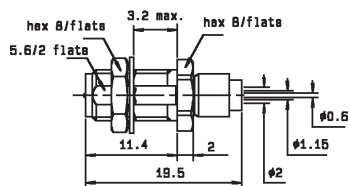


Fig. 1

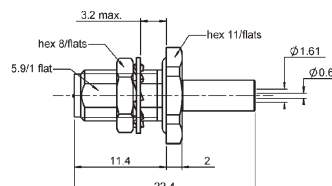
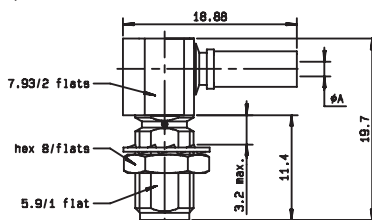


Fig. 2

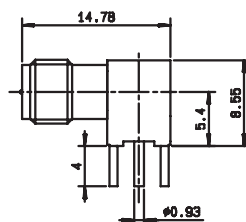
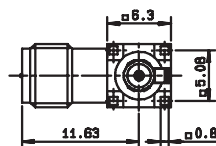
Cable group	Cable group dia.	Part number	Fig.	Captive center contact	Panel drilling	Finish	Packaging	Note
RG178/RG196	2/50/S	R300 124 235	1	yes	P05	nickel	100 pieces/ bulk	
RG174/RG316	2.6/50/S	R300 124 240	2	yes	P02	BBR		panel seal full crimp

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



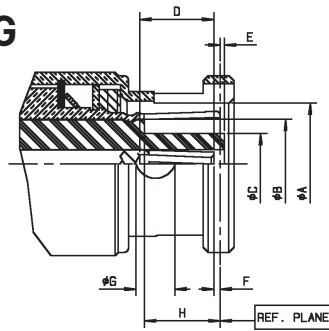
Cable group	Cable group dia.	Part number	A dia.	Captive center contact	Panel drilling	Finish	Packaging
RG178/RG196	2/50/S	R300 124 323	0.95	yes	P02	nickel	100 pieces/bulk
RG174/RG316	2.6/50/S	R300 124 343	1.63				

PCB RECEPTACLE (male center contact)

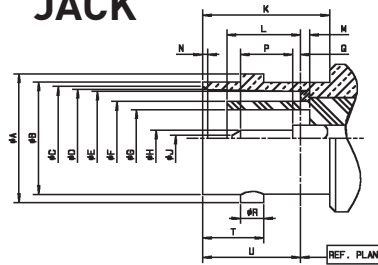


Part number	Captive center contact	PCB pattern	Finish	Packaging	Note
R300 124 403	yes	P01	nickel	100 pieces/reel	solder legs

PLUG



JACK

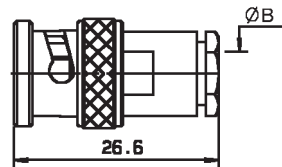


Letter	mm		inch	
	min.	max.	min.	max.
A DIA	9.78	9.91	.385	.390
B DIA	7		.275	
C DIA		4.72		.186
D	4.95		.195	
E	0.03	0.53	.001	.021
F	0.61	1.12	.024	.044
G DIA	3.15		.124	
H	5.28	5.79	.208	.228

Letter	mm		inch	
	min.	max.	min.	max.
A DIA	10.97	11.07	.432	.436
B DIA	9.60	9.70	.378	.382
C DIA	8.79	9.04	.346	.356
D DIA	8.31	8.46	.327	.333
E DIA	8.1	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	.009
R DIA	1.91	2.06	.075	.081
T	5.18	5.28	.204	.208
U	8.31	8.51	.327	.335

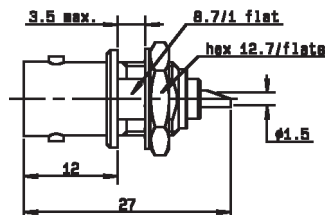
PLUG AND RECEPTACLE

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



Cable group	Cable group dia.	Part number	B dia.	Captive center contact	Finish	Packaging
RG58/RG141/RG142/RG223	5/50/S + D	R300 141 030	5.6	no	nickel	100 pieces/bulk

RECEPTACLE (male center contact)

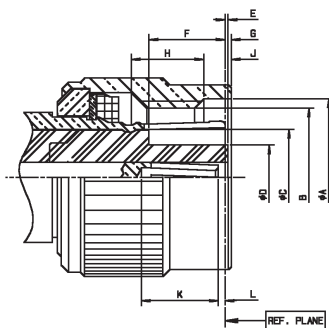


Part number	Captive center contact	Panel drilling	Finish	Packaging
R300 141 400	yes	P03	nickel	100 pieces/bulk

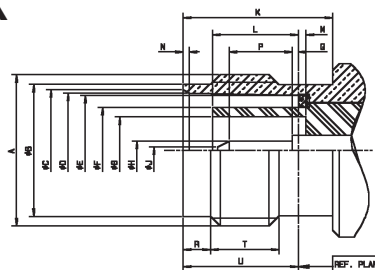
To download data sheets and assembly instructions, visit www.radiall.com & enter the part number in the Search box.
Bold part numbers represent products typically in stock & available for immediate shipment.
 See page 8 and 9 for packaging information.

INTERFACE

PLUG



JACK

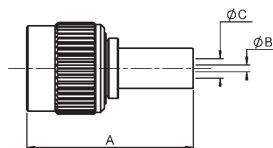


Letter	mm		inch	
	min.	max.	min.	max.
A DIA	11.18		.440	
B		7/16-28 UNEF-2B		
C DIA	7		.275	
D DIA		4.72		.186
E	0.03	0.53	.001	.020
F	5.28	5.79	.208	.228
G		1.98		.078
H	3.96		.156	
J	1.60		.063	
K	4.95		.195	
L	0.61	1.12	.024	.044

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

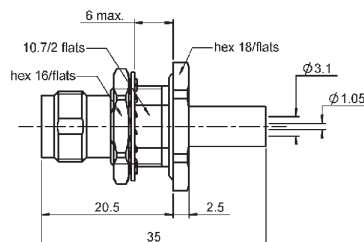
PLUG AND JACK

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



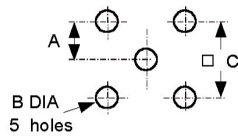
Cable group	Cable group dia.	Part number	Dimensions			Captive center contact	Finish	Packaging
			A	B	C			
Belden 9913	10.2/50/S	R300 143 050	28.2	2.85	7.8	yes	nickel	100 pieces/bulk

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



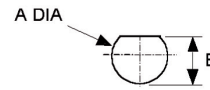
Cable group	Cable group dia.	Part number	Captive center contact	Panel drilling	Finish	Packaging	Note
RG58/RG141	5/50/S	R300 143 240	yes	P04	nickel	100 pieces/bulk	panel seal

P01



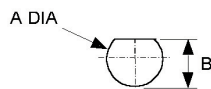
	mm	
	maxi	mini
A	2.59	2.49
B	1.4	1.3
C	5.13	5.03

P02



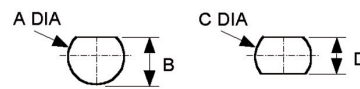
	mm	
	maxi	mini
A	6.5	6.4
B	6.15	6

P03



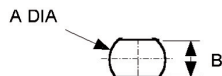
	mm	
	maxi	mini
A	9.75	9.65
B	8.9	8.8

P04



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

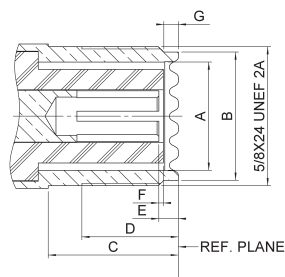
P05



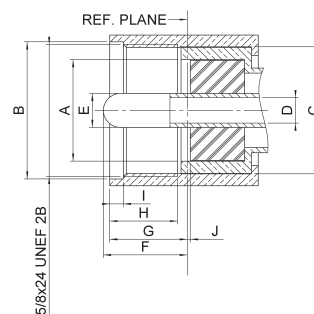
	mm	
	maxi	mini
A	6.5	6.4
B	5.8	5.7

INTERFACE

PLUG



JACK



Letter	mm		inch	
A DIA	min.	max.	min.	max.
B DIA	11.56	12.22	.455	.481
C DIA	16.00	---	.630	---
D DIA	13.92	---	.548	---
E DIA	---	3.35	---	.132
F 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	
A DIA	min.	max.	min.	max.
B DIA	11.56	12.22	.455	.481
C DIA	14.00	14.25	.551	.561
D	11.10	---	.437	---
E	7.87	---	.310	---
F	1.02	---	.040	---
F	0.03	---	.001	---
G	1.19	1.96	.047	.077

CHARACTERISTICS

Test/characteristics	Values/remarks
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

STRAIGHT PLUGS

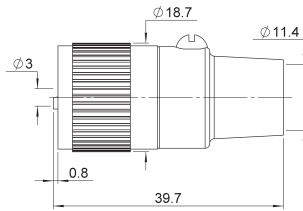


Fig. 1

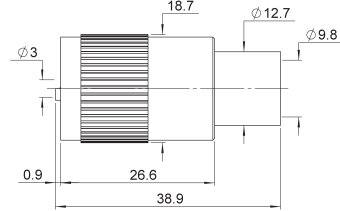


Fig. 2

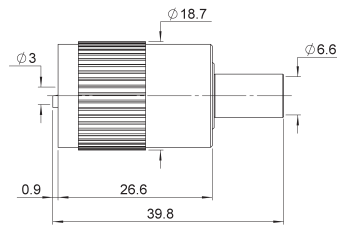


Fig. 3

Cable group	Cable group dia.	Part number	Fig	Note
RG59/RG62	6/75Ω	R155 074 000	3	Crimp type - Insulator: PTFE
RG213/RG393/RG11/RG12/RG144	10/50+75Ω	R155 003 000	1	Insulator: PTFE
		R155 005 000	2	Insulator: PTFE

RECEPTACLES

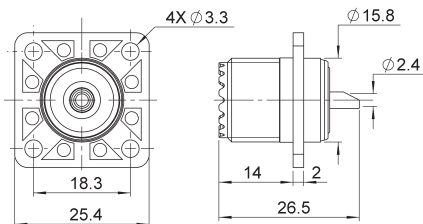


Fig. 1

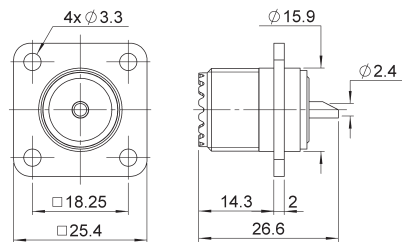


Fig. 2

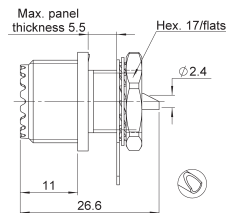
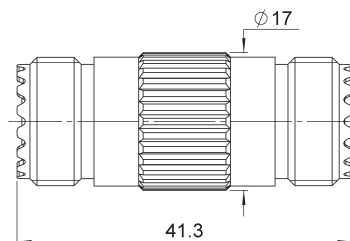


Fig. 3

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

ADAPTER

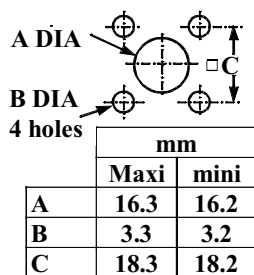
IN SERIES ADAPTER



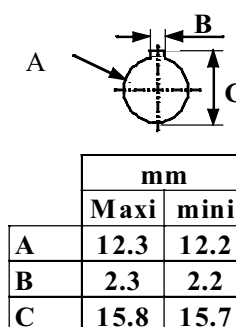
Part number	Note
R155 705 000	Straight female - female - Insulator: Styramic

PANEL DRILLING

P01



P02





AEROSPACE



AUTOMOTIVE



DEFENSE



INDUSTRIAL



INSTRUMENTATION



MEDICAL



SPACE



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