

## R0 SERIES (50 Ω)



### RF applications connectors

Specially designed for RF applications up to 10 GHz, the R0 Series offer various connector models combining quality, ruggedness and safety.

Small size, and ease of use guaranteed by LEMO's Push-Pull self-latching system, allows sockets to be mounted at a high density in a limited space.

## Technical Characteristics

### Mechanical and Climatical

Characteristics	Value	Standard
Contact retention force	> 18 N	IEC 60512-8 test 15a
Cable pull off force	1)	IEC 60512-9 test 17c
Connector pull off force	> 90 N	IEC 60512-8 test 15f
Endurance	> 5000 cycles	IEC 60512-5 test 9a
Operating temperature	-55°C, + 260°C	

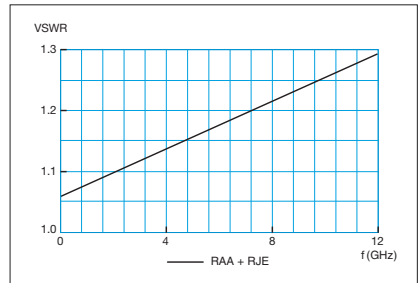
Note: 1) depending on cable design.

### Electrical

Characteristics	Value	Standard
Impedance	50 Ω	–
Operating voltage (50 Hz)	0.7 kV rms	–
Test voltage (50 Hz)	2.1 kV rms	IEC 60512-2 test 4a
Rated current	4 A	IEC 60512-3 test 5a
Contact resistance	< 7.5 mΩ	IEC 60512-2 test 2a
Insulating resistance	> 10 <sup>12</sup> Ω	IEC 60512-2 test 3a
VSWR	see chart below	
Shielding efficiency	85 dB at 2 GHz	

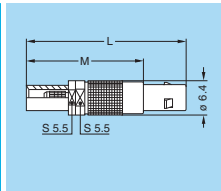
### Voltage Standing Wave Ratio

The VSWR (Voltage Standing Wave Ratio) is the value representing the power reflected in a connection. The VSWR varies with frequency, in most cases, the working frequency range is where VSWR is ≤ 1.25.



Note: value measured with a RG-142 B/U cable.

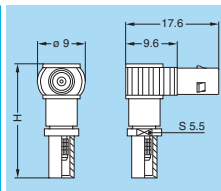
## Models



### RAA Straight plug, for cable crimping

Part number	Dim. (mm)		Cable group
	L	M	
RAA.C1.0NT.AS400	30.2	22.2	4
RAA.C1.0NT.AS600	34.9	26.9	6
RAA.C1.0NT.AS700	30.2	22.2	7

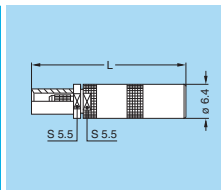
**M1** Cable assembly (page 4)



### RAL Elbow plug (90°) for cable crimping

Part number	Dim.	Cable group
	H	
RAL.C1.0NT.AS400	22.2	4
RAL.C1.0NT.AS600	26.9	6
RAL.C1.0NT.AS700	22.2	7

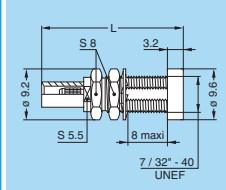
**M1** Cable assembly (page 4)



### RJA Free socket for cable crimping

Part number	Dim.	Cable group
	L	
RJA.C1.0NT.MS400	26.6	4
RJA.C1.0NT.MS600	31.3	6

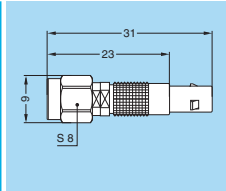
**M1** Cable assembly (page 4)



### RJE Fixed socket, two nuts and flange for cable crimping (back panel mounting)

Part number	Dim.	
	L	Cable group
RJE.C1.0NT.MS400	26.6	4
RJE.C1.0NT.MS600	31.3	6
RJE.C1.0NT.MS700	26.6	7

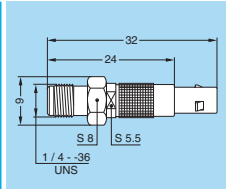
**P2** Panel cut-out (page 4)    **M1** Cable assembly (page 4)



### RVA Adaptor from LEMO plug to SMA plug

Part number	Weight
RVA.C1.0NT.T	3.9

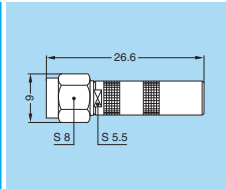
**M1** Cable assembly (page 4)



### RVB Adaptor from LEMO plug to SMA socket

Part number	Weight
RVB.C1.0NT.F	3.6

**M1** Cable assembly (page 4)



### RVC Adaptor from LEMO socket to SMA plug

Part number	Weight
RVC.C1.0NT.T	3.9

**M1** Cable assembly (page 4)

## Part Numbering System

Plug **RAA** . **C1** . **0** **N** **T** . **A** **S** **4** **0** **0**

Free socket **RJA** . **C1** . **0** **N** **T** . **M** **S** **4** **0** **0**

Fixed socket **RJE** . **C1** . **0** **N** **T** . **M** **S** **4** **0** **0**

Adaptor **RVB** . **C1** . **0** **N** **T** . **F**

Model 50 Ω

R0 Series: coax 10 GHz

Housing: N = Nickel-plated brass

Insulator: T = Teflon®

Cable Ø:  
400 = max 3.0 mm  
600 = max 5.0 mm  
700 = max 3.0 mm

Contact type:  
A = male solder  
M = female solder  
F, T = adaptor

## Recommended coaxial cables

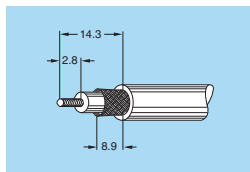
### Electrical and general properties

	MIL-C-17	IEC 60096-2	CCTU 10-01A	LEMO Part-No	LEMO Cable group	Impedance Ohm	Capacitance pF/m	Attenuation dB/100 m at 100 MHz	Operating voltage U max. KV eff.	Temperature °C from to
	Standard	RG 58 C/U	50.3.1	KX 15	CCX.50.RG5.8CU50N	6	50 ± 2	101	23	1.90
RG 142 B/U				CCX.50.RG1.42BU50M	7	50 ± 2	95	12.8	1.50	-70 +200
RG 188 A/U		50.2.3		CCX.50.RG1.88AU26B	4	50 ± 2	96	33	1.20	-50 +205
RG 316 /U		50.2.2	KX 22A	CCX.50.RG3.16U26M	4	50 ± 2	96	33	1.20	-90 +205

### Mechanical properties

	Type	Conductor			Dielectric		Screen		Sheath			Weight kg/100m
		Mat.	Stranding	e mm	Mat.	e mm	Mat.	e mm	Mat.	Colour	e mm	
Standard	RG 58 C/U	CuSn	19 x 0.18	0.90	PE	2.92	CuSn	3.6	PVC	black	4.95	3.80
	RG 142 B/U	CuStAg	solid	0.95	PTFE	2.95	CuAg CuAg	1 <sup>st</sup> : 3.53 2 <sup>nd</sup> : 4.20	FEP		4.95	6.60
	RG 188 A/U	CuStAg	7 x 0.18	0.54	PTFE	1.50	CuAg	2.0	PFA	white	2.60	1.60
	RG 316 /U	CuStAg	7 x 0.18	0.54	PTFE	1.50	CuAg	2.1	FEP	brown	2.60	1.60

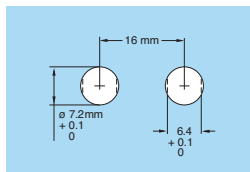
### Cable stripping lengths



Connector Type	Ø Contact A (mm)
R0	0.9

**Note:** The tolerances on these dimensions are: L: ± 0.5 mm; S: ± 0.5 mm; T: ± 0.2 mm.

### Panel cut-out



Screw coupling = 1 Nm

## LEMO HEADQUARTERS

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