

# NIM-CAMAC RF Cable Sets & Delay Lines for Nuclear Instrumentation

Uses LEMO or Fischer Connectors based on NIM-CAMAC CD/N 549 Standard

NC... series cable sets have been designed for use in nuclear instrumentation applications to adhere to the NIM-CAMAC CD/N 549 standard for instrumentation inter-operability. These are based on either Fischer/LEMO push-pull connectors conforming to NIM-CAMAC CD/N 549 and MIL-C17 conforming cable. We can provide the finished cable sets as per your asked lengths, cable type and small quantities



## MATERIALS USED

- LEMO FFA.00.250 Series Connectors
- Fischer S 101 Series Connectors
- MIL-C-17 conforming RG Series Cables

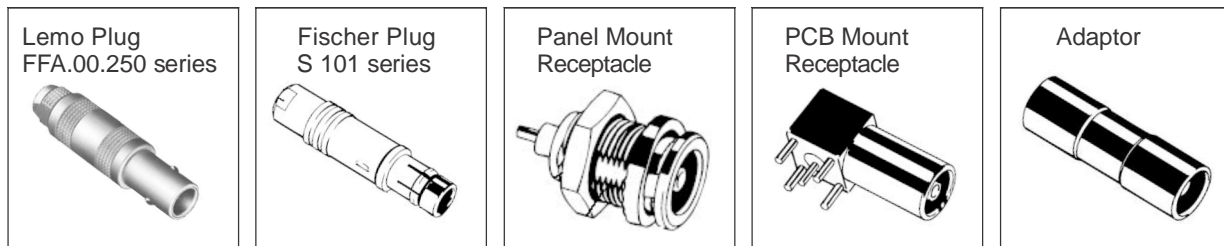
## CONFORMANT MIL STANDARDS

- Cable conforms to MIL-C-17
- Connectors conform to NIM-CAMAC CD/N 549

## APPLICATIONS

- Fundamental research in particle physics
- Nuclear Instrumentation

## Choice of Lemo and Fischer Connectors for Nuclear Instrumentation cables



Many other varieties available upon request

## Connector Specifications

Impedance	50 Ohm	Rated Current	2 A
Operating Voltage	500 Vrms	Frequency range	DC~4GHz
Test Voltage	3 kVDC	Insulation Resistance	>10 <sup>12</sup>

## Choice of RF Cable Types for Nim-Camac Nuclear Instrumentation cables

Parameter	RG316	RG 142	RG 174	MF05
Diameter Outer	0.098 inch (2.48mm)	0.195 inch (4.95mm)	0.114 inch (2.9mm)	0.106 inch (2.7mm)
Dielectric	PTFE	PTFE	PE	PTFE
Outer Shield	Silver-plated copper	Silver-plated copper	Tinned copper	Silver-plated copper
Jacket	FEP	FEP	PVC	FEP
Min. Bend Radius	0.5 inch (12.5mm)	1 inch (25.4mm)	0.4 inch (10.2mm)	0.78 inch (20mm)
Weight	0.0122 (lb/ft)	0.0043 (lbs/ft)	0.0008 (lbs/ft)	0.015 (lbs/ft)
Temp. Range	-55°C to +125° C	-55°C to +125° C	-40°C to +85°C	-55°C to +125° C
Impedance	50Ω	50Ω	50Ω	50Ω
Capacitance	29.4 (pF/ft)	29.3 (pF/ft)	29.9 (pF/ft)	30 (pF/ft)

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## Ordering Codes Description

NC-XXX - (Length) (Connector 1) (Connector 2)  
 □ □ - (□ / □) □ - (□ / □) □ - □  
**L L 1 2 3 1 2 3 U**

<b>XXX</b>	Cable	RG316 = RG316 ; RG174 = RG174 ; RG142 = RG142; MF05 = MF05
<b>LL</b>	Length	0.5 = 0.5 ; 1 = 1.0 ; 2 = 2.0
<b>1</b>	Connector Series	FS101 = Fischer S101; LF250 = Lemo FFA.00.250
<b>2</b>	Male/Female Designator	M = Male ; F = Female
<b>3</b>	Orientation of Connector	ST = Straight ; RA = Right Angle
<b>U</b>	Unit of Length	M = Meter ; F = Feet ; I = Inch; ns = nano seconds for delay lines

1m RG174 cable set with Fischer S101 Straight connectors on 2 sides = NC-RG174-1.0-FS101(M/ST)-FS101(M/ST)-M

## Cable Set Ordering Codes (Substitute XXX = Cable Code)

Ordering Code	Length	Conn 1	Conn 2
<b>With Fischer Connectors</b>			
NC-XXX-0.3-FS101(M/ST)-FS101(M/ST)-M	0.3 m	S101, Male, Straight	S101, Male, Straight
NC-XXX-0.5-FS101(M/ST)-FS101(M/ST)-M	0.5 m	S101, Male, Straight	S101, Male, Straight
NC-XXX-0.7-FS101(M/ST)-FS101(M/ST)-M	0.7 m	S101, Male, Straight	S101, Male, Straight
NC-XXX-1.0-FS101(M/ST)-FS101(M/ST)-M	1.0 m	S101, Male, Straight	S101, Male, Straight
NC-XXX-1.5-FS101(M/ST)-FS101(M/ST)-M	1.5 m	S101, Male, Straight	S101, Male, Straight
NC-XXX-2.0-FS101(M/ST)-FS101(M/ST)-M	2.0 m	S101, Male, Straight	S101, Male, Straight
NC-XXX-3.0-FS101(M/ST)-FS101(M/ST)-M	3.0 m	S101, Male, Straight	S101, Male, Straight
NC-XXX-4.0-FS101(M/ST)-FS101(M/ST)-M	4.0 m	S101, Male, Straight	S101, Male, Straight
NC-XXX-5.0-FS101(M/ST)-FS101(M/ST)-M	5.0 m	S101, Male, Straight	S101, Male, Straight
<b>With Lemo Connectors</b>			
NC-XXX-0.3-LF250(M/ST)-LF250(M/ST)-M	0.3 m	FFA.00.250, Male, St.	FFA.00.250, Male, St.
NC-XXX-0.5-LF250(M/ST)-LF250(M/ST)-M	0.5 m	FFA.00.250, Male, St.	FFA.00.250, Male, St.
NC-XXX-0.7-LF250(M/ST)-LF250(M/ST)-M	0.7 m	FFA.00.250, Male, St.	FFA.00.250, Male, St.
NC-XXX-1.0-LF250(M/ST)-LF250(M/ST)-M	1.0 m	FFA.00.250, Male, St.	FFA.00.250, Male, St.
NC-XXX-1.5-LF250(M/ST)-LF250(M/ST)-M	1.5 m	FFA.00.250, Male, St.	FFA.00.250, Male, St.
NC-XXX-2.0-LF250(M/ST)-LF250(M/ST)-M	2.0 m	FFA.00.250, Male, St.	FFA.00.250, Male, St.
NC-XXX-3.0-LF250(M/ST)-LF250(M/ST)-M	3.0 m	FFA.00.250, Male, St.	FFA.00.250, Male, St.
NC-XXX-4.0-LF250(M/ST)-LF250(M/ST)-M	4.0 m	FFA.00.250, Male, St.	FFA.00.250, Male, St.
NC-XXX-5.0-LF250(M/ST)-LF250(M/ST)-M	5.0 m	FFA.00.250, Male, St.	FFA.00.250, Male, St.

## Delay Line Ordering Codes (Substitute XXX = Cable Code)

Ordering Code	Delay	Conn 1	Conn 2
NC-XXX-1.0-FS101(M/ST)-FS101(M/ST)-NS	1 ns	S101, Male, Straight	S101, Male, Straight
NC-XXX-2.0-FS101(M/ST)-FS101(M/ST)-NS	2 ns	S101, Male, Straight	S101, Male, Straight
NC-XXX-5.0-FS101(M/ST)-FS101(M/ST)-NS	5 ns	S101, Male, Straight	S101, Male, Straight
NC-XXX-8.0-FS101(M/ST)-FS101(M/ST)-NS	8 ns	S101, Male, Straight	S101, Male, Straight
NC-XXX-10-FS101(M/ST)-FS101(M/ST)-NS	10 ns	S101, Male, Straight	S101, Male, Straight
NC-XXX-16-FS101(M/ST)-FS101(M/ST)-NS	16 ns	S101, Male, Straight	S101, Male, Straight
NC-XXX-32-FS101(M/ST)-FS101(M/ST)-NS	32 ns	S101, Male, Straight	S101, Male, Straight
NC-XXX-64-FS101(M/ST)-FS101(M/ST)-NS	64 ns	S101, Male, Straight	S101, Male, Straight

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