Semflex, Inc.

HPI Series — "Vital Links™"

HIGH PERFORMANCE INTERCONNECT CABLE ASSEMBLY

HPI-190 Group **Frequency Range: DC-28 GHz**

The **HPI 190** Interconnect Assembly series incorporates high performance HP190 cable and high performance connectors providing excellent interconnect cables for a wide range of applications to 28 GHz. These assemblies feature low loss triple shielded cable with a standard FEP Teflon® jacket and optional Polyurethane, and armored jackets. The triple shielded construction of these cables gives outstanding shielding effectiveness of greater than -90dB @ 18 GHz. The assemblies feature a wide variety of precision stainless steel connector designs including, 3.5mm, 7mm, N, TNC, plus SMA, and are available in male, female, right angles, bulkheads and four hole flanges. All the connector interfaces are designed to meet MIL-C-39012, MIL-STD-348A or applicable industry specs. These cable assemblies feature both low loss, excellent VSWR, and good phase stability over a wide range of applications up to 28 GHz.

FEATURES

Precision high performance stainless steel connectors

FEP outer jacket; options include polyurethane, armor

Triple shielded for >-90 dB leakage at 18 GHz

Low loss PTFE tape dielectric

CONNECTORS

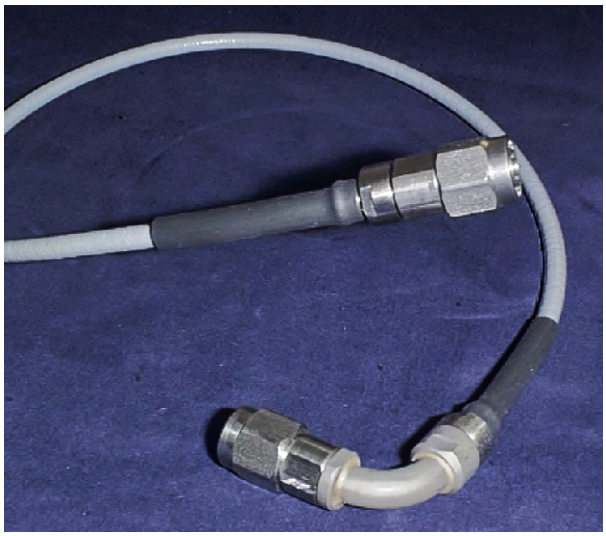
SMA, TNC, Extended TNC, N, 7mm, 3.5mm

CABLE SIZE

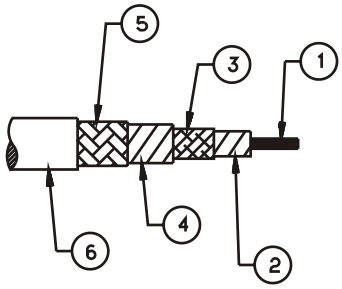
.205 inches, nominal outer diameter (FEP)

APPLICATIONS

High performance, low loss RF signal distribution
High temperature (+200° C); low temperature (-65° C)



Cable Construction



1. Center conductor: Silver plated copper *
2. Dielectric: Microporous PTFE tape
3. Outer conductor: Silver plated copper flat braid*
4. Shield interlayer: Metalized tape
5. Braid: Silver plated copper round braid *
6. Jacket options: Extruded FEP, polyurethane, armor

* Silver plating per ASTM-B-298

Teflon is a registered trademark of the DuPont Corporation

Semflex, Inc. 5550 E. McDowell Rd. | Mesa, AZ 85215 | tel: 480.985.9000 | fax: 480.985.0334
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ELECTRICALS

Velocity of Propagation	%	76
RF Leakage Min. @ 18GHz	dB/ft	-90
Impedance	Nominal	50
Capacitance	pF/ft (pF/m)	27 (88.58)
Delay	ns/ft (ns/m)	1.34 (4.40)
Breakdown Voltage	kV	>10
Phase Stability vs Flexure	deg/(deg of bend per GHz)	<.003

MECHANICAL/ENVIRONMENTAL

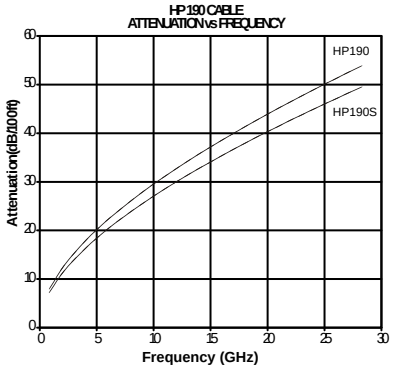
Nominal Diameter	inches (cm)	.205 (.521)
Minimum Bend Radius	inches (cm)	1.1 (2.794)
Temperature	DEG. C	-65/+200
Weight	lb./ft (g/m)	.05 (74.31)

MATERIALS AND FINISHES CONNECTOR

Body	Stainless steel
Nut	Stainless steel
Gasket	Silicone Rubber
Contact	BeCu / Gold plated
Insulator	PTFE

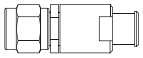
MATERIALS AND FINISHES CABLE

Cable Jacket	FEP
Outer Shield	Silver Copper
Inter Shield	Aluminum Polymer
Inter Conductor	Silver Copper
Dielectric	Micro-porous PTFE
Center Conductor	Silver Copper



HP190S is solid center conductor
HP190 is stranded center conductor

CONNECTOR CODES



CONNECTOR STYLE	FREQ GHz	MALE			FEMALE		
		STR	RA	SWEPT RA	STR	BULKHD	FLANGE
SMA	18	S1	S2	S6	S3	S4	S5
* ESMA	26	ES1	ES2	ES6	ES3	ES4	ES5
3.5MM	35	M1	M2	M6	M3	M4	M5
N TYPE	18	N1	N2	N6	N3	N4	N5
TNC	16	T1	T2	T6	T3	T4	T5
* ETNC	18	ET1	ET2	ET6	ET3	ET4	ET5
7MM	18	Y1					

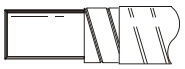
* EXTENDED FREQUENCY RANGE

CENTER CONDUCTOR

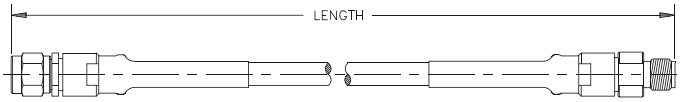
STYLE	CODE
SOLID WIRE	S
STRANDED WIRE	B

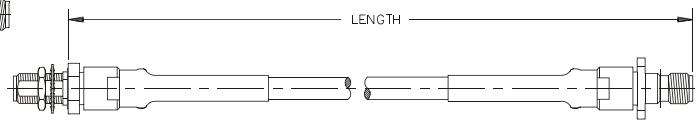
** SPECIAL ORDER ONLY

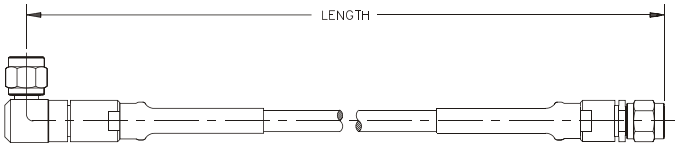
JACKET OPTIONS



DESCRIPTION	CODE
FEP JACKET	BF
POLYURETHANE JACKET	BP
POLYURETHANE JACKET OVER FLEXIBLE STAINLESS STEEL ARMOR	LC
STAINLESS STEEL FLEXIBLE ARMOR	SF







HOW TO SPECIFY PART NUMBER

□□□	1 9	□□	S	□□□	□□□□
CONNECTOR TYPE	CABLE	OPTION	CENTER CONDUCTOR	CONNECTOR TYPE	STANDARD LENGTH (INCHES)

FOR EXAMPLE: SMA STRAIGHT MALE TO SMA STRAIGHT FEMALE, FEP JACKET, 36 INCHES LONG.
NOTE: USE LEADING ZEROS WHEN SPECIFYING LENGTH.

PART NUMBER IS: **S 1 1 9 B F S S 3 0 0 3 6**

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