M&P

Hyperflex 13

/.500”

Ham Radio Pro Cables

MESSI & PAOLONI

JACKET:

UV-resistant black PVC
overall Ø 12,7mm ± 0,15
(0.500”)

Also available:
HYPERFLEX 13 SAHARA White jacket for Hot Countries
EXTRAFLEX BURY 13: PE jacket for Direct Burial
HYPERFLEX 13 LSZH Low Smoke Zero Halogen jacket

REACTIVE BRAID:

82% SCREENING - 240 wires of copper clad aluminium made with 24 spool machines (instead of 16). Thanks to 50% more crossovers, grants exceptional Screening Attenuation (SA) and reacts to twisting and bending like a spring

FOIL: 100% SCREENING

First screen made of copper with an applied PE-layer: prevents cracking due to short radius bends



DIELECTRIC:

High pressure physical injection foamed polyethylene
TRIPLE LAYER
overall Ø 9,9 mm ± 0,05 (0.39 “)

INNER CONDUCTOR:

37x0,56mm copper wires - overall Ø 3,8 mm ± 0,15
(37x0.022” - overall Ø 0.149”)

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	0,5	0,1
3,5 MHz	0,6	0,2
7 MHz	0,8	0,2
10 MHz	1,0	0,3
14 MHz	1,1	0,3
21 MHz	1,3	0,4
28 MHz	1,5	0,4
50 MHz	2,0	0,6
100 MHz	2,8	0,8
144 MHz	3,6	1,1
200 MHz	4,2	1,3
400 MHz	6,1	1,8
430 MHz	6,4	1,9
800 MHz	9,0	2,7
1000 MHz	10,1	3,0
1296 MHz	11,7	3,5
2400 MHz	16,6	5,0
3000 MHz	18,9	5,7
4000 MHz	22,4	6,8
5000 MHz	25,6	7,8
6000 MHz	28,7	8,7
7000 MHz	31,7	9,6
8000 MHz	34,5	10,5
9000 MHz	37,5	11,4
10.000 MHz	40,5	12,3
12.000 MHz	46,0	14,0

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 140mm single bend (choke): 100mm
Temperature:	-40°C to +60°C (-40°F to +140°F)
Capacitance:	75 pF/m ± 2 (22.9 pF/ft ± 2)
Velocity factor:	86%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Inner conductor resistance:	2 Ohm/Km (0.6 Ohm/1000ft)
Outer conductor resistance:	9,5 Ohm/Km (2.0 Ohm/1000ft)
Tension test (spark test):	8 kV
Net weight x 100m (100ft):	18 Kg (12 lb)
Maximum peak power:	20000 WATT
Structural Return Loss:	0,3-600 MHz >30 dB; 600-1200 MHz >25 dB; 1200-2000 MHz >20 dB

*DUE TO THE DIMENSIONAL PARAMETERS OF THIS CABLE THE FREQUENCY OF 2500 MHz +/- 15 MHz IS NOT USABLE.

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	14681 W	430 MHz	1435 W
3,5 MHz	12650 W	800 MHz	1022 W
7 MHz	9880 W	1000 MHz	907 W
10 MHz	8321 W	1296 MHz	786 W
14 MHz	7130 W	2400 MHz	552 W
21 MHz	5732 W	3000 MHz	487 W
28 MHz	4962 W	4000 MHz	410 W
50 MHz	3873 W	5000 MHz	358 W
100 MHz	2795 W	6000 MHz	320 W
144 MHz	2396 W	8000 MHz	266 W
200 MHz	2150 W	10.000 MHz	227 W
400 MHz	1486 W	12.000 MHz	200 W

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:
CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods); R118 (ISO7622-1);
IEC 60332-1-2 (cables with PVC and LSZH jacket); CPR305/11 - **EuroClass Eca** - EN50575:2014 - DoP number: MP00109

WHY CHOOSE THIS CABLE

- The best M&P cable: a must-have for the most ambitious installations.
- The only coaxial cable that has 37 wires on the central conductor.
- Excellent performances with the lowest possible signal loss, even at the highest frequencies and over long distances.
- Despite its half-inch size, it is designed to withstand tight bendings and movement of the rotor antennas.
- Equal attenuations of stiffer and bulkier competitors' cables of 15mm (.600").
- Also, this coax results lighter, more flexible, more manageable and less expensive.
- Better than Ultraflex 13 at high frequencies (UHF) and slightly more flexible.

FREQUENCY SUGGESTIONS*

HF (from 3MHz to 30Mhz)

example at 14 MHz
EXCELLENT up to 150m of cable length
GOOD up to 250m of cable length

example 28 MHz
EXCELLENT up to 100m of cable length
GOOD up to 150m of cable length

VHF (from 30MHz to 300Mhz)

example at 50 Mhz
EXCELLENT up to 75m of cable length
GOOD up to 100m of cable length

example at 144 Mhz
EXCELLENT up to 50m of cable length
GOOD up to 75m of cable length

UHF (from 300MHz to 3000Mhz)

example at 430 MHz
EXCELLENT up to 25m of cable length
GOOD up to 45m of cable length

example at 1296 MHz
EXCELLENT up to 20m of cable length
GOOD up to 30m of cable length

example at 2400 MHz
EXCELLENT up to 12m of cable length
GOOD up to 20m of cable length

*data valuable for Power Application (trasmission)
**you can find Watt / MAX POWER in the datasheet above.

RESIDUAL POWER PERCENTAGE (Cable Run Efficiency)

Given a power fed to the X value (any value expressed in Watts), the actual power output of the cable is shown in the table in the form of remaining percentage. (for example, if we use a cable such as M&P-HYPERFLEX 13, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 74.7 % of 1000). **For maximum applicable power, see the Power Handling of the cable concerned.** From these values, have already been deducted the SRL values, typical of each one of our models, for the respective frequencies. **REMEMBER: Make sure to match the line accurately!**

			M&P-HYPERFLEX 13/.500"												
	feet		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2
	meters		5	10	15	20	25	35	50	75	100	130	160	200	300
	Wave length	MHz	Useful signal output (residual power %)												
Frequencies	85.71 m	3,5	99,1	98,3	97,5	96,7	96,0	94,4	92,2	88,5	85,0	81,0	77,2	72,3	61,6
	42.85 m	7	98,9	97,8	96,8	95,8	94,9	92,9	90,1	85,5	81,2	76,3	71,7	66,0	53,6
	21.42 m	14	98,6	97,2	95,9	94,6	93,3	90,8	87,2	81,5	76,1	70,1	64,6	58,0	44,2
	10.71 m	28	98,1	96,3	94,6	92,9	91,2	87,9	83,3	76,0	69,4	62,2	55,8	48,2	33,5
	6 m	50	97,6	95,4	93,2	91,1	89,0	85,0	79,3	70,7	63,0	54,9	47,8	39,7	25,0
	2 m	144	95,8	91,9	88,2	84,6	81,2	74,7	66,0	53,6	43,6	33,9	26,4	19,0	8,2
	69 cm	430	92,7	86,1	80,0	74,3	69,0	59,5	47,6	32,9	22,7	14,5	9,3	5,1	
	23.1 cm	1296	86,8	75,8	66,1	57,7	50,4	38,3	25,4	12,6	6,1				
	12.5 cm	2400	81,9	67,5	55,6	45,8	37,7	25,4	14,0	5,0					
	10 cm	3000	79,4	63,7	51,1	40,9	32,7	20,8	10,4						
	7.5 cm	4000	76,2	58,6	45,1	34,6	26,5	15,4	6,5						
	6 cm	5000	73,4	54,4	40,2	29,6	21,8	11,6	4,2						
	5 cm	6000	70,3	50,0	35,5	25,1	17,6	8,3							
	3.75 cm	8000	65,6	43,5	28,7	18,8	12,1	4,6							
	3 cm	10.000	59,6	36,2	21,5	12,3	6,6								
	2.5 cm	12.000	55,7	31,5	17,3	8,9	3,9								

M&P-HYPERFLEX 13 /.500" Power Handling/Temperature (in Continuous Carrier)

	Wave length		Temperature C° / F°									
		MHz	-10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158
Frequencies	166.66 m	1,8	18000	18000	18000	18000	18000	16501	14681	12523	10365	8221
	85.71 m	3,5	18000	18000	18000	17204	15838	14219	12650	10790	8931	7084
	42.85 m	7	15295	14781	14346	13437	12370	11105	9880	8428	6975	5533
	30 m	10	12880	12448	12081	11316	10417	9352	8321	7097	5874	4660
	21.42 m	14	11037	10666	10353	9697	8927	8014	7130	6082	5034	3993
	14.28 m	21	8873	8574	8322	7795	7176	6442	5732	4889	4047	3210
	10.71 m	28	7682	7424	7205	6749	6213	5578	4962	4233	3503	2779
	6 m	50	5995	5794	5624	5267	4849	4353	3873	3304	2734	2169
	3 m	100	4327	4182	4059	3801	3500	3142	2795	2384	1973	1565
	2.08 m	144	3709	3584	3479	3258	3000	2693	2396	2044	1691	1342
	1.5 m	200	3327	3216	3121	2923	2691	2416	2150	1834	1518	1204
	75 cm	400	2301	2223	2158	2021	1861	1671	1486	1268	1049	832
	69 cm	430	2222	2147	2084	1952	1797	1613	1435	1224	1013	804
	37.5 cm	800	1582	1529	1484	1390	1280	1149	1022	872	722	572
	30 cm	1000	1404	1357	1317	1234	1136	1020	907	774	641	508
	23.1 cm	1296	1217	1176	1142	1069	984	884	786	671	555	440
	12.5 cm	2400	854	825	801	750	691	620	552	470	389	309
	10 cm	3000	754	728	707	662	609	547	487	415	344	273
	7.5 cm	4000	634	613	595	557	513	461	410	350	289	229
	6 cm	5000	555	536	520	487	449	403	358	306	253	201
	5 cm	6000	496	479	465	436	401	360	320	273	226	179
	4.2 cm	7000	449	434	421	395	363	326	290	247	205	162
	3.75 cm	8000	412	398	386	362	333	299	266	227	188	149
	3.3 cm	9000	380	367	356	334	307	276	245	209	173	137
	3 cm	10.000	352	340	330	309	284	255	227	194	160	127

WATT

Do not use the cable as power supply for both direct current and 50-60 HZ mains

GENERIC COAXIAL CABLE APPLICATIONS*

- Aircraft communications
- Amateur Radio
- Antenna
- Antenna Analyzer
- Beacons Base Station
- Broadcast Radios
- CB Radio (Citizen Band)
- CB Radio Scanner
- Dummy Load
- Land Mobile Communications
- Maritime Mobile Communications
- Military Communications
- Microwave Relay System
- Moon Bouncing Trasmission EME
- Mobile Transmission Applications (Car, Van, Caravans, Trucks, etc.)
- Motorhome
- Network Analyzer
- Portable Handheld Radio (Walkie Talkie - PMR antenna extension)
- Radar
- Radio Astronomy and Telescope
- Radio Receivers
- Router connections
- Satellite Radio
- Scanner
- Switch connections
- SWR Meter connections
- Transceiver
- Tuner connections
- Weather Radio Antenna Extension

*See “Frequency Suggestions” for a correct correlation

PRE-ASSEMBLED COAX JUMPERS

YOU’VE NO TIME FOR ASSEMBLING THE CONNECTORS YOURSELF?
GRAB OUR FACTORY MADE COAX JUMPERS **“LAB TESTED”** ONE BY ONE!
LAB CERTIFICATE ENCLOSED IN EACH PACKAGING.







USEFUL ACCESSORIES



SPECIAL COAX SCISSORS



ADHESIVE REUSABLE VELCRO



CABLE PULLING LUBRIFICANT



M&P T-SHIRT



POTA-SPEED





POTA-CASE

CONNECTORS for 12,7mm (.500”) Coaxial Cables



EVOlution

“UHF” Male Solder / Solderless

Watch the Assembly Video: https://youtu.be/vIX7sNiYKug

Code: CO.UHF.13M-SL EVO



“N” Male Solder / Solderless

Watch the Assembly Video: https://youtu.be/JacfJYrZVjM

Code: CO.N.13M-SL



“N” Female Solder / Solderless

Watch the Assembly Video: https://youtu.be/eGoROD85eec

Code: C.N.UF13F-SL



7/16

Watch the Assembly Video: https://youtu.be/CK12Z7Agj4U

Code: C.7-16.13M-S

HEAT SUPPRESSOR



Pairing to our ‘’N’’ or ‘’UHF’’ connectors, the Heat Suppressor represents an extension of the operational life of your valuable cables and a greater homogeneity of their performance in hot enviroments.

The benefits will also be more evident for those who use high power linear amplifiers for prolonged periods during contests. Cooling and stabilizing the cable, could be the ace in your sleeve!

For other connectors and adapters, visit **www.messi.it** or contact us at **web@messi.it**