M&P UltraFlex 10 LSZH /400"

Ham Radio Pro Cables — M&P AIRBORNE — MESSI & PAOLONI

CE Pb RoHS Compliant 2002/95/EC

JACKET:
UV-resistant black LSZH
overall Ø 10,3mm ± 0,15
(0.405 inches ± 0.0059)

REACTIVE BRAID:
71% SCREENING - 144 wires of copper
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 7,3 mm ± 0,05 (0.287 inch. ± 0.0019)

INNER CONDUCTOR:
7x1.0mm copper wires - overall Ø 2,9 mm ± 0,15
(7x0.039 inches - overall Ø 0.114 inches ± 0.0059)

ATTENUATION (20°C /68°F)

FREQUENCY	dB/100m	dB/100ft
1,8 MHz	0,8	0,2
3,5 MHz	1,0	0,3
7 MHz	1,2	0,3
10 MHz	1,3	0,4
14 MHz	1,5	0,4
21 MHz	1,8	0,5
28 MHz	2,0	0,6
50 MHz	2,7	0,8
100 MHz	3,9	1,1
144 MHz	4,7	1,4
200 MHz	5,7	1,7
400 MHz	8,3	2,5
430 MHz	8,6	2,6
800 MHz	12,1	3,7
1000 MHz	13,8	4,2
1296 MHz	16,4	5,0
2400 MHz	23,7	7,2
3000 MHz	27,3	8,3
4000 MHz	32,9	10,0
5000 MHz	38,9	11,8
6000 MHz	44,5	13,5
7000 MHz	50,2	15,3
8000 MHz	55,8	17,0

ELECTRICAL DATA

Impedence @200Mhz:	50 Ohm ± 3
Minimum bending radius:	up to 15 bends: 80mm (3.15 in) single bend (choke): 40mm (1.57 in)
Temperature:	-40°C to +60°C (-40°F to +140°F)
Capacitance:	78 pF/m ± 2 (23.8 pF/ft ± 2)
Velocity ratio:	83%
Screening Efficiency (SA)	100-2000 MHz >105 dB
Screening Class:	A++
Inner conductor resistance:	3,2 Ohm/Km (1.0 Ohm/1000ft)
Outer conductor resistance:	9,2 Ohm/Km (2.8 Ohm/1000ft)
Tension test (spark test):	8 kV
Net weight (100m/100ft):	13 Kg (8.7 lb)
Maximum peak power:	8.000 WATT
Connectors:	UHF (PL), N, BNC, SMA, TNC, 7/16

SRL

0,3-600 MHz	>30 dB
600-1200 MHz	>25 dB
1200-2000 MHz	>20 dB

POWER HANDLING (40°C/104°F)

FREQUENCY	MAX P.	FREQUENCY	MAX P.
1,8 MHz	9927 W	430 MHz	803 W
3,5 MHz	7721 W	800 MHz	571 W
7 MHz	7164 W	1000 MHz	503 W
10 MHz	5345 W	1296 MHz	445 W
14 MHz	4370 W	2400 MHz	293 W
21 MHz	3657 W	3000 MHz	255 W
28 MHz	3247 W	4000 MHz	211 W
50 MHz	2518 W	5000 MHz	182 W
100 MHz	1768 W	6000 MHz	162 W
144 MHz	1466 W	7000 MHz	138 W
200 MHz	1215 W	8000 MHz	125 W
400 MHz	836 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 (EN50575:2014 - DoP number: MP0088)

Messi & Paoloni coaxial cables
www.messi.it

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-ULTRAFLEX 10, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 68.2 % 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-ULTRAFLEX 10 /.400"

	length --->		16,4	32,8	49,2	65,6	82	114,8	164	246	328	426,5	524,9	656,2	984,2	feet
	Wave length	MHz	5	10	15	20	25	35	50	75	100	130	160	200	300	m
Frequencies / Frequenze	85.71 m	3,5	99.2	98.5	97.7	97	96.2	94.8	92.7	89.2	85.9	82	78.4	73.8	63.4	Useful signal output (residual power %)
	42.85 m	7	98.9	97.8	96.7	95.6	94.5	92.4	89.4	84.5	80	74.8	69.9	63.9	51.1	
	21.42 m	14	98.1	96.4	94.6	92.9	91.2	87.9	83.2	75.9	69.3	62.1	55.6	48.1	33.3	
	10.71 m	28	97.5	95.2	92.8	90.6	88.4	84.1	78.1	69.1	61.1	52.7	45.4	37.3	22.8	
	6 m	50	96.8	93.8	90.9	88	85.3	80	72.7	62.1	52.9	43.7	36.1	28	14.8	
	2.08 m	144	94.6	89.6	84.8	80.3	76.1	68.2	57.9	44	33.5	24.1	17.4	11.2	3.7	
	69 cm	430	90.4	81.8	74.1	67	60.7	49.7	36.8	22.3	13.5	7.4	4			
	23.1 cm	1296	82,2	67,9	56,1	46,4	38,3	26	14,5	5,3						
	12.5 cm	2400	74.5	56.3	42.9	31.9	23.9	13.2	4.9							
	10 cm	3000	71.4	51.7	37.4	26.9	19.2	9.5								
	7.5 cm	4000	66.5	44.9	30.1	20	13.1	5.1								
	6 cm	5000	61.9	39	24.2	14.7	8.6									
	5 cm	6000	57.9	34.2	19.6	10.8										
	3.75 cm	8000	51	26.2	12.6	5.1										
	3 cm	10.000	43.2	18.2	5.9											
	2.5 cm	12.000	38.4	13.6												

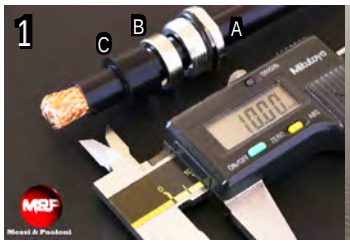
M&P-ULTRAFLEX 10 /.400" Power Handling/Temperature (in RTTY)

			Temperature C° / F°									
	Wave length	MHz	-10 / 14	-5 / 23	0 / 32	10 / 50	20 / 68	30 / 86	40 / 104	50 / 122	60 / 140	70 / 158
Frequencies / Frequenze	166.66 m	1,8	12000	12000	12000	11980	11178	10710	9927	8468	7008	5559
	85.71 m	3,5	11700	11450	11211	10500	9667	8678	7721	6586	5451	4324
	42.85 m	7	11089	10717	10402	9743	8969	8052	7164	6111	5058	4012
	30 m	10	8274	7996	7761	7270	6692	6008	5345	4559	3774	2993
	21.42 m	14	6765	6538	6346	5944	5472	4912	4370	3728	3085	2447
	14.28 m	21	5661	5471	5310	4974	4579	4111	3657	3120	2582	2048
	10.71 m	28	5027	4858	4715	4416	4065	3650	3247	2770	2292	1818
	6 m	50	3897	3766	3656	3424	3152	2830	2518	2148	1777	1410
	3 m	100	2737	2645	2567	2405	2214	1987	1768	1508	1248	990
	2.08 m	144	2269	2193	2129	1994	1835	1648	1466	1250	1035	821
	1.5 m	200	1881	1817	1764	1652	1521	1365	1215	1036	858	680
	75 cm	400	1294	1251	1214	1137	1047	940	836	713	590	468
	69 cm	430	1244	1202	1166	1093	1006	903	803	685	567	450
	37.5 cm	800	884	854	829	777	715	642	571	487	403	320
	30 cm	1000	779	753	731	684	630	566	503	429	355	282
	23.1 cm	1296	690	666	647	606	558	501	445	380	314	249
	12.5 cm	2400	453	438	425	398	366	329	293	250	207	164
	10 cm	3000	394	381	370	346	319	286	255	217	180	143
	7.5 cm	4000	327	316	307	287	264	237	211	180	149	118
	6 cm	5000	282	272	264	248	228	205	182	155	128	102
	5 cm	6000	251	243	236	221	203	182	162	138	115	91
	4.2 cm	7000	214	207	201	188	173	156	138	118	98	78
	3.75 cm	8000	193	186	181	169	156	140	125	106	88	70

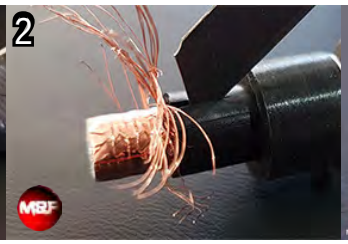
WATT

Connector assembly

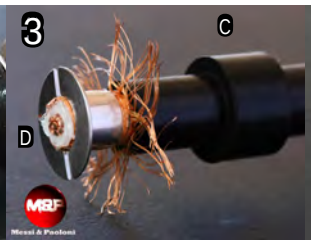
Connector “N” type



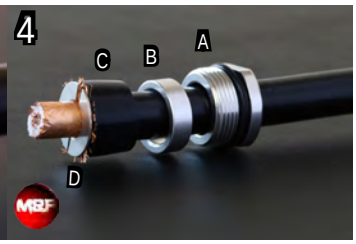
Insert in the cable components A, B, C and immediately after, make a circular cut on the black PVC jacket at the indicated length shown in the caliber (in mm). Subsequently remove it.



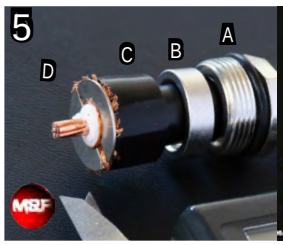
Make a cut on the jacket of 7mm, than rotate the cable of 180° and make an other equal cut.



Insert component D after having opened the braid as shown in the picture. Push component D between the foil and the braid until it stops against the black PVC jacket.

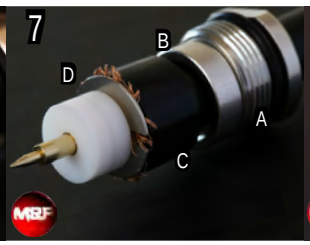


Flatten the wires as shown in the picture and cut the excess.



Cut and remove the tape and dieletric for a length as shown in the picture (6mm).

Insert one of the two teflon discs and subsequently the central pin. Solder the pin to the inner conductor, inserting tin in the provided hole. Avoid heating the pin for a too long time in order not to transfer excessive heat to the highly conductive copper underneath. Excessive heat deforms the dielectric which is made of foam PE and not in teflon!.

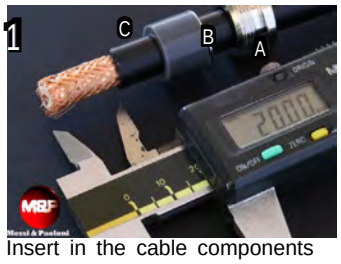


Insert the second teflon disc as shown in the picture.

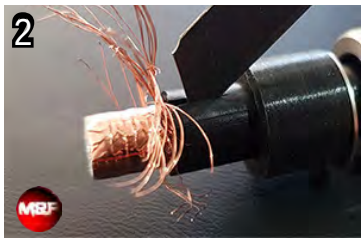
Wrench 18mm (23/32”)

Insert the connector and fasten accurately until the o-ring present in component A, will be pressed against the connector body. Inside, the rubber component C (pic. 1) will expand, granting optimal sealing against moisture and a perfect contact to ground.

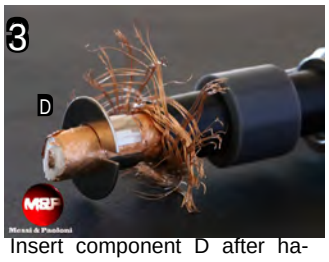
Connector “UHF” type



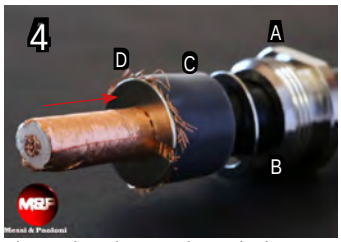
Insert in the cable components A, B, C and immediately after, make a circular cut on the black PVC jacket at the indicated length shown in the caliber (in mm). Subsequently remove it.



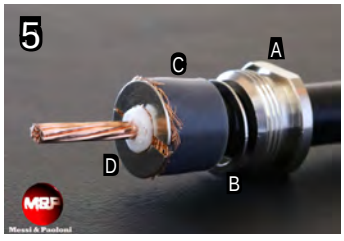
Make a cut on the jacket of 7mm, than rotate the cable of 180° and make an other equal cut.



Insert component D after having opened the braid as shown in the picture. Push component D between the foil and the braid until it stops against the black PVC jacket.



Flatten the wires as shown in the picture and cut the excess.



Cut and remove the tape and dieletric for a length as shown in the picture (6mm).

Insert the connector and solder it with tin to the inner conductor (see picture above). Avoid heating the pin for a too long time in order not to transfer excessive heat to the highly conductive copper underneath. Excessive heat deforms the dielectric which is made of foam PE and not in teflon!.

Wrench 18mm (23/32”)

Fasten together the connector and component A, until it will be pressed against the connector body. Inside, the rubber component C (pic. 1) will expand, granting optimal sealing against moisture and a perfect contact to ground.

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CONNECTORS for 10,3mm/.400” cables

N solder male

N solderless male

N solderless female

N at 90°

NO braid soldering needed!

Perfect match with M&P PRO cables! 105dB (SA)

Humidity proof compression design!

Dramatic suppression of the background noise!

N crimp male

UHF/PL solder male

UHF/PL solder female

CONNECTORS for 10,3mm/.400” cables

PL259 AMPHENOL©

NO braid soldering needed!

Perfect match with M&P PRO cables! 105dB (SA)

BNC solder male

SMA solder male

Humidity proof compression design!

Dramatic suppression of the background noise!

TNC solder male

TNC crimp male

7/16

Heat Suppressor