



M&P

# POTA-FLEX 7

1.300"

## YELLOW JACKET:

High visibility and reflective polyethylene, for outdoor use, direct burial, trample resistant & constant handling overall Ø 7,65mm ± 0,15 (0.301")

## TWIN BRAID + COPPER FOIL

1st Braid = 83% SCREENING - 144 wires of copper clad aluminium  
 2nd Braid = 80% SCREENING - 144 wires of copper clad aluminium  
 Light and flexible, yet sturdy: the twin braids form a real armor to resist extreme conditions. This device has been designed for demanding applications: for a longer operative life consider treating it wisely.

## 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 5 mm ± 0,05 (0.196")

## INNER CONDUCTOR:

19x0,38mm copper wires - overall Ø 1,9 mm ± 0,15 (19x0.015" - overall Ø 0.075")

## ATTENUATION (20°C/68°F)

| FREQUENCY | dB/100m | dB/100ft |
|-----------|---------|----------|
| 1,8 MHz   | 1,1     | 0,3      |
| 3,5 MHz   | 1,3     | 0,4      |
| 7 MHz     | 1,7     | 0,5      |
| 10 MHz    | 1,9     | 0,6      |
| 14 MHz    | 2,2     | 0,6      |
| 21 MHz    | 2,6     | 0,8      |
| 28 MHz    | 3,0     | 0,9      |
| 50 MHz    | 4,0     | 1,2      |
| 100 MHz   | 5,8     | 1,7      |
| 144 MHz   | 6,9     | 2,1      |
| 200 MHz   | 8,2     | 2,5      |
| 400 MHz   | 11,8    | 3,6      |
| 430 MHz   | 12,3    | 3,7      |
| 800 MHz   | 17,1    | 5,2      |
| 1000 MHz  | 19,3    | 5,8      |
| 1296 MHz  | 22,3    | 6,8      |
| 2400 MHz  | 32,3    | 9,8      |
| 3000 MHz  | 36,2    | 11,0     |
| 4000 MHz  | 42,6    | 12,9     |
| 5000 MHz  | 49,3    | 15,0     |
| 6000 MHz  | 55,3    | 16,8     |
| 7000 MHz  | 61,6    | 18,7     |
| 8000 MHz  | 68,4    | 20,8     |

## ELECTRICAL DATA

|                             |   |
|-----------------------------|---|
| Impedance @200Mhz:          | 50 Ohm ± 3  |
| Minimum bending radius:     | successfully tested up to 100 bends, using our "PotaSpeed" with inner core Ø126mm (4,96 in) |
| Temperature:                | -40°C to +60°C (-40°F to +140°F)  |
| Capacitance:                | 75 pF/m ± 2 (22.9 pF/ft ± 2)  |
| Velocity factor:            | 83%   |
| Screening Efficiency (SA)   | 100-2000 MHz >105 dB  |
| Inner conductor resistance: | 7,3 Ohm/Km  |
| Outer conductor resistance: | 12 Ohm/Km   |
| Tension test (spark test):  | 4 kV  |
| Net weight 100m (100ft):    | 5,4 Kg (3,63 lbs)   |
| Maximum peak power:         | 8000 WATT   |
| Structural Return Loss:     | 0,3-600 MHz >28 dB    600-1200 MHz >22 dB    1200-2000 MHz >18 dB                           |

## POWER HANDLING (40°C/104°F)

| FREQUENCY | MAX P. | FREQUENCY | MAX P. |
|-----------|--------|-----------|--------|
| 1,8 MHz   | 4572 W | 430 MHz   | 353 W  |
| 3,5 MHz   | 3393 W | 800 MHz   | 254 W  |
| 7 MHz     | 2714 W | 1000 MHz  | 225 W  |
| 10 MHz    | 2286 W | 1296 MHz  | 195 W  |
| 14 MHz    | 1974 W | 2400 MHz  | 134 W  |
| 21 MHz    | 1670 W | 3000 MHz  | 120 W  |
| 28 MHz    | 1448 W | 4000 MHz  | 102 W  |
| 50 MHz    | 1086 W | 5000 MHz  | 88 W   |
| 100 MHz   | 749 W  | 6000 MHz  | 79 W   |
| 144 MHz   | 629 W  | 7000 MHz  | 71 W   |
| 200 MHz   | 530 W  | 8000 MHz  | 63 W   |
| 400 MHz   | 368 W  |           |        |

OUR PRODUCTS ARE MANUFACTURED IN COMPLIANCE WITH:

CEI 46-1 (construction parameters); EN 50117 (screening efficiency); CEI EN 50289 (SA test methods); CPR305/11 - EuroClass Fca - EN50575:2014

## WHY CHOOSE THIS CABLE

- Unique model, excellent for any type of application. Double braid with additional copper foil which form a real armor to resist extreme conditions. Incredibly sturdy, but also light and flexible. (This device was designed for demanding applications, for greater operational longevity use it wisely.)
- Totally waterproof and buriable, trample resistant and perfect for constant handling.
- High visibility reflective sheath, a very important detail in crowded places, stages and events, audio-video systems, outdoor applications (e.g. Park on the Air Activations).
- Designed in such a way that it can be stripped smoothly and well frictioned, greatly facilitating the installation of the connectors (especially using our specific scissors).
- We have carefully tested this cable to evaluate its performance after 200 unwindings, obtaining very minimal variations. These results are guaranteed especially in combination with our POTA-SPEED, which ensures that the minimum bending radius is always respected, as well as the fast and practical management of the coils.

## FREQUENCY SUGGESTIONS

### HF (from 3MHz to 30Mhz)

#### example at 14 MHz

**EXCELLENT** up to 60m of cable length

**GOOD** up to 100m of cable length

**Choose a bigger cable** above 100m:

#### example 28 MHz

**EXCELLENT** up to 50m of cable length

**GOOD** up to 75m of cable length

**Choose a bigger cable** above 75m

### VHF (from 30MHz to 300Mhz)

#### example at 50 Mhz

**EXCELLENT** up to 35m of cable length

**GOOD** up to 50m of cable length

**Choose a bigger cable** above 50m

#### example at 144 Mhz

**EXCELLENT** up to 15m of cable length

**GOOD** up to 25m of cable length

**Choose Ø 10,3mm cable** above 20m

### UHF (from 300MHz to 3000Mhz)

#### example at 430 MHz

**EXCELLENT** up to 10m of cable length

**GOOD** up to 15m of cable length

**Choose a bigger cable** above 15m

#### example at 1296 MHz

**GOOD** up to 5m of cable length

**Choose a bigger cable** above 5m

#### example at 2400 MHz

**GOOD** up to 3m of cable length

**Choose a bigger cable** above 3m

\*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-ULTRAFLEX 7, entering 1000 Watts over a length of 35m, at a frequency of 144 MHz, there remains 57,2% 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!**

|             |         | <b>M&amp;P-POTAFLEX 7</b>               |      |      |      |      |       |      |      |      |       |       |       |       |      |
|-------------|---------|---|------|------|------|------|-------|------|------|------|-------|-------|-------|-------|------|
| 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                                     | 98,4 | 97,0 | 95,6 | 94,2 | 92,8  | 90,1 | 86,2 | 80,1 | 74,4  | 68,1  | 62,3  | 55,4  | 41,2 |
|             | 42.85 m | 7                                       | 98,1 | 96,3 | 94,5 | 92,8 | 91,1  | 87,8 | 83,1 | 75,8 | 69,1  | 61,8  | 55,4  | 47,8  | 33,0 |
|             | 21.42 m | 14                                      | 97,4 | 95,0 | 92,6 | 90,3 | 88,0  | 83,7 | 77,5 | 68,3 | 60,2  | 51,7  | 44,4  | 36,2  | 21,8 |
|             | 10.71 m | 28                                      | 96,5 | 93,2 | 90,1 | 87,0 | 84,0  | 78,4 | 70,7 | 59,5 | 50,0  | 40,6  | 33,0  | 25,0  | 12,5 |
|             | 6 m     | 50                                      | 95,4 | 91,1 | 87,0 | 83,1 | 79,3  | 72,3 | 63,0 | 50,0 | 39,7  | 30,1  | 22,8  | 15,7  | 6,2  |
|             | 2.08 m  | 144                                     | 92,3 | 85,2 | 78,7 | 72,7 | 67,1  | 57,2 | 45,1 | 30,3 | 20,3  | 12,6  | 7,8   | 4,1   |      |
|             | 69 cm   | 430                                     | 86,6 | 75,2 | 65,2 | 56,6 | 49,1  | 37,0 | 24,1 | 11,8 | 5,7   |       |       |       |      |
|             | 23.1 cm | 1296                                    | 76,7 | 59,2 | 45,6 | 35,1 | 27,0  | 15,9 | 7,0  |      |       |       |       |       |      |
|             | 12.5 cm | 2400                                    | 67,4 | 45,9 | 31,2 | 21,0 | 14,0  | 5,8  |      |      |       |       |       |       |      |
|             | 10 cm   | 3000                                    | 64,3 | 41,9 | 27,1 | 17,3 | 10,9  | 3,8  |      |      |       |       |       |       |      |
|             | 7.5 cm  | 4000                                    | 59,2 | 35,4 | 20,9 | 12,0 | 6,6   |      |      |      |       |       |       |       |      |
|             | 6 cm    | 5000                                    | 53,5 | 28,9 | 15,0 | 7,1  |       |      |      |      |       |       |       |       |      |
|             | 5 cm    | 6000                                    | 48,9 | 24,0 | 10,8 | 3,8  |       |      |      |      |       |       |       |       |      |

## M&P-POTAFLEX 7 Power Handling/Temperature (in Continuous Carrier)

|             |          | Temperature C° / F° |         |        |         |         |         |          |          |          |          |      | WATT |
|-------------|----------|---------------------|---------|--------|---------|---------|---------|----------|----------|----------|----------|------|------|
| Wave length | 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                 | 6838    | 6838   | 6638    | 6217    | 5724    | 5138     | 4572     | 3900     | 3228     | 2560 |      |
|             | 85.71 m  | 3,5                 | 5252    | 5076   | 4927    | 4614    | 4248    | 3814     | 3393     | 2894     | 2395     | 1900 |      |
|             | 42.85 m  | 7                   | 4202    | 4061   | 3941    | 3692    | 3398    | 3051     | 2714     | 2315     | 1916     | 1520 |      |
|             | 30 m     | 10                  | 3538    | 3420   | 3319    | 3109    | 2862    | 2569     | 2286     | 1950     | 1614     | 1280 |      |
|             | 21.42 m  | 14                  | 3056    | 2953   | 2866    | 2685    | 2472    | 2219     | 1974     | 1684     | 1394     | 1105 |      |
|             | 14.28 m  | 21                  | 2586    | 2499   | 2425    | 2272    | 2091    | 1878     | 1670     | 1425     | 1179     | 935  |      |
|             | 10.71 m  | 28                  | 2241    | 2166   | 2102    | 1969    | 1812    | 1627     | 1448     | 1235     | 1022     | 811  |      |
|             | 6 m      | 50                  | 1681    | 1624   | 1577    | 1477    | 1359    | 1220     | 1086     | 926      | 767      | 608  |      |
|             | 3 m      | 100                 | 1159    | 1120   | 1087    | 1018    | 937     | 842      | 749      | 639      | 529      | 419  |      |
|             | 2.08 m   | 144                 | 974     | 942    | 914     | 856     | 788     | 707      | 629      | 537      | 444      | 352  |      |
|             | 1.5 m    | 200                 | 820     | 792    | 769     | 720     | 663     | 595      | 530      | 452      | 374      | 297  |      |
|             | 75 cm    | 400                 | 570     | 551    | 534     | 501     | 461     | 414      | 368      | 314      | 260      | 206  |      |
|             | 69 cm    | 430                 | 547     | 528    | 513     | 480     | 442     | 397      | 353      | 301      | 249      | 198  |      |
|             | 37.5 cm  | 800                 | 393     | 380    | 369     | 345     | 318     | 285      | 254      | 217      | 179      | 142  |      |
|             | 30 cm    | 1000                | 348     | 337    | 327     | 306     | 282     | 253      | 225      | 192      | 159      | 126  |      |
|             | 23.1 cm  | 1296                | 301     | 291    | 283     | 265     | 244     | 219      | 195      | 166      | 137      | 109  |      |
|             | 12.5 cm  | 2400                | 208     | 201    | 195     | 183     | 168     | 151      | 134      | 115      | 95       | 75   |      |
| 10 cm       | 3000     | 186                 | 179     | 174    | 163     | 150     | 135     | 120      | 102      | 85       | 67       |      |      |
| 7.5 cm      | 4000     | 158                 | 153     | 148    | 139     | 128     | 115     | 102      | 87       | 72       | 57       |      |      |
| 6 cm        | 5000     | 136                 | 132     | 128    | 120     | 110     | 99      | 88       | 75       | 62       | 49       |      |      |
| 5 cm        | 6000     | 122                 | 117     | 114    | 107     | 98      | 88      | 79       | 67       | 55       | 44       |      |      |
| 4.2 cm      | 7000     | 109                 | 105     | 102    | 96      | 88      | 79      | 71       | 60       | 50       | 39       |      |      |
| 3.75 cm     | 8000     | 98                  | 95      | 92     | 86      | 79      | 71      | 63       | 54       | 45       | 36       |      |      |

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
  - Hotspot
  - Maritime Mobile Communications
  - Military Communications
  - Microwave Relay System
  - Moon Bouncing Transmission 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 LUBRICANT



M&P T-SHIRT



POTA-SPEED



M&P-STRAP



POTA-CASE



# CONNECTORS for 7,3mm (.287") Coaxial Cables



**EVO**lution

## “UHF” (PL-259) Male Solder

Watch the Assembly

**Video:**

<https://youtu.be/c9FhvNKpMR4>

**Code:**

CO.UHF.7M-S EVO



## “UHF” (PL-259) Female Solder

Watch the Assembly

**Video:**

<https://youtu.be/holnER7UGo>

**Code:**

C.UHF.AC7F-S



## “N” Male Solder

Watch the Assembly

**Video:**

<https://youtu.be/LbiDRPEgtlo>

**Code:**

CO.N.7M-S



## “N” Female Solder

Watch the Assembly

**Video:**

<https://youtu.be/-RTkDU4gxjw>

**Code:**

C.N.AC7F-S



## “N” Male Crimp

Watch the Assembly

**Video:**

<https://youtu.be/hDcL8rDc6JA>

**Code:**

C.N.AC7M-CR



## “UHF” Male Solder - 90° Angle

Watch the Assembly

**Video:**

<https://youtu.be/M-gCs-iZqoE>

**Code:**

C.UHF.AC7-M90



## “N” Male Solder - 90° Angle

Watch the Assembly

**Video:**

<https://youtu.be/QXKlR4a-OoO>

**Code:**

C.N.AC7M-90

# CONNECTORS for 7,3mm (.287") Coaxial Cables



## “SMA” Male Solder

Watch the Assembly

**Video:**

<https://youtu.be/ClaO7xDQPUw>

**Code:**

C.SMA.AC7M-S

## “BNC” Male Solder

Watch the Assembly

**Video:**

<https://youtu.be/Ss13iNlygrQ>

**Code:**

C.BNC.AC7M-S



## “BNC” Male Crimp

Watch the Assembly

**Video:**

<https://youtu.be/dQpnp1WhWP4>

**Code:**

C.BNC.AC7M-CR

## “BNC” Female Solder

Watch the Assembly

**Video:**

<https://youtu.be/ruVcqS2ry8o>

**Code:**

C.BNC.AC7F-S



## “TNC” Male Solder

Watch the Assembly

**Video:**

<https://youtu.be/AuVS2MEoSAI>

**Code:**

C.TNC.AC7M-S

## “TNC” Male Crimp

Watch the Assembly

**Video:**

<https://youtu.be/vW9gfig-pK4>

**Code:**

C.TNC.AC7M-CR

