

# TWS-195FR-M (Fire Retardant) Bulk Coaxial Cable

TerraWave's TWS-195FR-M series bulk coaxial cable is non-halogenated, low smoke, fire retardant cable. With maximum flexibility where curves, bends and twists exist, our cable eliminates the need for hard-line transmission cables. In addition, TerraWave's 195FR series cable has been MSHA tested and approved for safe, reliable use in underground mining applications where critical safety standards apply. It is designed for any indoor, non-plenum application requiring high-quality, flexible cabling such as WLL, GPS, WLAN, WISP, WiMAX, SCADA and mobile applications. TerraWave's cable is compatible with a wide variety of TerraWave connectors and is can be used for an off-the-shelf cable assembly or customized cable assembly. *For questions or to purchase product, contact your Regional Sales Executive at 210-375-8482, 800-851-4965 or sales@terra-wave.com.*



TESSCO SKU: 344479  
TerraWave Part Number: TWS-195FR-M

Construction Specifications		
	Material	Diameter
Inner Conductor	Solid Copper	0.037"
Dielectric	Physical Foam Polyethylene	0.11"
Outer Conductor	Bonded Aluminum Foil + Tinned Copper Braid	Nominal 0.138"
Jacket	Black FR Polyethylene	0.195"

Electrical Characteristics	
Capacitance	25.4 pF/ft
Impedance	50 Ω
Velocity	80%
Inner Conductor DC Resistance	< 8.15 (Ω/1000 ft)
Outer Conductor DC Resistance	< 5.00 (Ω/1000 ft)
Shielding Effectiveness	> 90 dB
Inductance	0.064 μH/ft
Jacket Spark	5000 VAC
Cut off Frequency	41 GHz
Peak Power	2.5 kW
Return Loss	≤ -18 dB (0.03-3000 MHz)

Mechanical and Environmental Characteristics	
Installation Bend Radius	0.5"
Repeated Bend Radius	2.0"
Weight	0.021 lb/ft
Operating Temperature	-40° F to +185° F
Installation Temperature	-40° F to +185° F
Storage Temperature	-94° F to +185° F

General Information	
Warranty	7 Years
Life Expectancy	20 Years (Outdoor Use)



Attenuation (68° F) and Avg. Power (104°F) At Sea Level			
Frequency MHz	Typical Attenuation dB/100 ft	Max Attenuation dB/100 ft	Average Power kW
30	2.0	2.3	0.89
50	2.5	2.75	0.68
150	4.3	4.4	0.35
220	5.2	5.4	0.29
450	7.5	7.8	0.20
700	9.6	9.8	0.16
750	9.9	10.2	0.15
800	10.2	10.5	0.14
900	10.7	11.1	0.14
1500	13.4	14.5	0.11
1800	15.3	16.0	0.10
2000	16.1	16.9	0.09
2500	18.1	19.0	0.08
5800	28.2	29.9	0.05

## > Connectors for TWS-195FR-M Series Cable

TESSCO SKU	TerraWave Part Number	Product Description
488984	CON-01-195	RPTNC Jack (F)
463990	CON-02-195	RPTNC Plug (M)
308167	CON-02RA-195	Right Angle RPTNC Plug
487973	CON-03-195	RPTNC BH Jack (F)
496905	CON-04-195	TNC Jack (F)
423926	CON-05-195	TNC Plug (M)
466951	CON-06-195	N-Style Jack (F)
430967	CON-07-195	N-Style Plug (M)
451950	CON-08-195	N-Style BH Jack (F)
493983	CON-09-195	RP N-Style Jack (F)
469946	CON-10-195	RP N-Style Plug (M)
431978	CON-11-195	BNC Jack (F)
362963	CON-11-195-BH	BNC BH Jack (F)

TESSCO SKU	TerraWave Part Number	Product Description
415977	CON-12-195	BNC Plug (M)
481989	CON-13-195	RPBNC Jack (F)
442956	CON-14-195	RPBNC Plug (M)
499977	CON-15-195	RPBNC BH Jack (F)
486992	CON-17-195	SMA Jack (F)
488957	CON-18-195	SMA Plug (M)
419972	CON-18-195-RA	RA SMA Plug (M)
475930	CON-19-195	RPSMA Jack (F)
444926	CON-19-195-RA	RA RPSMA Jack (F)
432900	CON-20-195	RPSMA Plug
453939	CON-23-195	SMA BH Jack (F)
303878	CON-30-195	RPSMA BH Jack (F)



RPTNC Jack (M) with  
Captivated Center Pin

TESSCO SKU	TerraWave Part Number	Product Description
358950	CON-19-195-CCP	RPSMA Jack (M) with CCP
368457	CON-20-195-CCP	RPSMA Plug (F) with CCP
359366	CON-01-195-CCP	RPTNC Jack (M) with CCP
319726	CON-02-195-CCP	RPTNC Plug (F) with CCP

## > Tools for TWS-195FR-M Series Cable

TESSCO SKU	TerraWave Part Number	Description
452919	HT-336P1	Crimp Tool (RG 58, 59, 62, 6)
487941	HT-336A	Crimp Tool (RG 58, 59, 62)
411972	HT-322S	2 Blade Strip Tool
490947	HT-312B	3 Blade Strip Tool



HT-336P1 Crimp Tool



HT-312B Strip Tool

## > Connector Adapters for TWS-195FR-M Series Cable

TESSCO SKU	TerraWave Part Number	Product Description
323264	RARPTNCJ-RPTNCP	RA RPTNC Jack (F) to RPTNC Plug (M)
467986	RPTNCJACK-NPLUG	RPTNC Jack (F) to N-Style Plug (M)
413999	RPTNCP-NJ	RPTNC Plug (M) to N-Style Jack (F)
424971	RPTNCP-NP	RPTNC Plug (M) to N-Style Plug (M)
315485	RPTNCP-RPSMAJ	RPTNC Plug (M) to RPSMA Jack (F)
424995	NJACK-NJACK	N-Style Jack (F) to N-Style Jack (F)
485981	NM-NM	N-Style Plug (M) to N-Style Plug (M)
312060	SMAP-TNCJ	SMA Plug (M) to TNC Jack (F)
437905	AXA-SMSM	SMA Jack (F) to SMA Jack (F)



N-Style Plug (M) to  
N-Style Plug (M)



RA RPTNC Jack (F)  
to RPTNC Plug (M)

