

LMR[®]

195, 240, 400 & 600 Coaxial Cables,
Connectors and Hardware



LMR[®]

Flexible Communications Coax



Times LMR cables are high performance broadband, flexible, low loss 50 Ohm coaxial communication cables designed for use in wireless applications such as:

- Private land mobile/2-way land mobile
- WiFi
- Cellular
- Satellite
- GPS
- RFID
- In-Building Communications
- M 2 M Networks
- Positive Train Control (PTC)
- Distributed Antenna Systems (DAS)
- Public Safety Networks
- SCADA/Telemetry
- Lo RA

Times LMR cables can be used virtually anywhere high performance coaxial cables are used, including:

- Internal component and equipment wiring
- Inter/intra cabinet jumpers
- Base station and antenna jumpers
- Tower and pole feeder runs
- In-building runs, including riser runs and air-handling plenums
- Rooftop installations
- Oil & Gas Fields
- Power Plants

A full range of LMR cables are available from LMR-100 (0.100") all the way up to LMR-1700-DB (1 1/4").

To see the complete line of LMR[®] cables please visit our website at www.timesmicrowave.com

In this catalog the focus is on standard LMR cables - specifically LMR-195, 240, 400 and 600 but there are many different types of LMR cables which are available, so you can always be certain that there is an LMR cable just right for your particular application. Besides standard LMR cable, Times offers:

- **LMR-FR:** Fire retardant cable for installation in building vertical risers or where fire retardancy is critical, both UL and CSA listed (CMR/CATVR).
- **LMR-LLPL:** cables are the most rugged and easiest to install plenum rated cables available, especially for difficult installs in older buildings. Cables are both UL and CSA listed (CMP/CATVP).
- **LMR-DB:** Watertight cables with an inert flooding compound injected in the braid to completely eliminate the possibility of any water migration with a 10 year warranty! The DB feature is optional on sizes 600 and smaller, and standard on sizes 900 and larger.
- **LMR Ultraflex:** Stranded center conductor and thermoplastic rubber jacket for maximum flexibility.
- **LMR-75:** These are 75 Ohm versions of the standard LMR cable for unsurpassed performance in broadband video and specialized RF applications.

Note:

For applications requiring low Passive Intermodulation (PIM), we recommend using one of our many low PIM cable constructions. See TFT[®], SPP[®], SPF[®], SPO[®], LMR-SW[®] and TCOM[®]. The standard LMR[®] construction is not suitable for low PIM applications.

Times Microwave Systems also offers a wide range of Times-Protect[®] RF Lightning Protection products. For information please refer to our website at www.timesmicrowave.com.

LMR[®]

Flexible Communications Coax



In this catalog the focus is also on our well-known line of Advantage[™] EZ-X series non-solder connectors.

All Advantage[™] EZ-X series connectors have the following benefits:

- No braid trimming required
- Corrosion resistant
- Center pin contacts made from silver or gold plated beryllium copper
- Spring finger inner contacts
- Crimp style outer contacts
- Optimized connector retention

EZ connectors are the preferred choice for quick and reliable field installations.

Times offers an extensive portfolio of connectors covering numerous applications and is always adding new ones. For a complete listing, please refer to the Times website at www.timesmicrowave.com or contact Times directly.

A complete line of cable prep and connector installation tools is available so you never will be frustrated by not having the right tools - Times is your one-stop source.

Times furnishes a complete line of site installation hardware and accessories- everything you need to get you from the antenna to the equipment:

- Ground kits: Perfectly sized to each LMR cable, with never a chance of the ground strap being too tight (crushed cable), or too loose (poor grounding).
- Hangers: Snap-in, butterfly
- Hoisting grips
- Weatherproofing kits: Tape and cold shrink
- Entry ports and hardware

Times manufactures high quality LMR cable assemblies and performs 100% factory tests before shipment for insertion loss and VSWR. Many of Times' LMR distributors also supply LMR cable assemblies and provide excellent service, especially for quick delivery requirements.

Times has put together a full complement of "how-to" videos of many of the most popular Advantage[™] -X Series EZ connectors as well as ground kits and other accessories. These videos are available both on the Times Microwave Website and YouTube. And if you ever need help on a job, just call us - our phone number is right on the cable.





Ideal for...

- Drop-in replacement for RG-58 and RG-142
- Cabinet interconnects
- Antenna Jumpers
- RFID

Connectors



Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Length in (mm)	Width in (mm)	Weight lb. (g)
SMA Male	Straight Plug	EZ-195-SM-X	3190-6140	<1.30:1 (6)	Hex	0.9 (22.0)	0.37 (9.4)	0.019 (8.6)
BNC Male	Straight Plug	EZ-195-BM-X	3190-6141	<1.30:1 (4)	Knurl	1.1 (28.4)	0.60 (14.5)	0.045 (20.4)
TNC Male	Reverse Polarity	*EZ-195-TM-RP-X	3190-6142	<1.35:1 (6)	Hex	1.1 (22.0)	0.87 (22.0)	0.045 (20.4)

* Indicates that connector is not compatible with WSB-195-200 (3109-445)

Hardware and Installation Tools



CT-240/200/195/100
3190-667

Crimp tool for LMR-100, 195, 200 and 240 connectors



TK-195/200
660-0829

Install tool kit for LMR-195/200 (CCT-02, DBT-U, CST-195/200, CT-240/200/100, tool pouch)



CCT-02
3192-165

Cable end flush cut tool



RB-CST
3192-086

Replacement blade kit for all CST cutting tools



CST-195/200
3192-102

Prep tool for LMR-195-200



WSB-195-200
3109-445

Weather proofing and strain relief kit for LMR-195-200



DBT-U
3192-001

Deburr tool that removes the center conductor rough edges



Rubber Slide
3109-424

Lubricant for WSB and IPB boots

LMR[®]-195

Part Number	Part Description Application	Jacket	Color	Stock Code
LMR-195	Outdoor	PE	Black	54110
LMR-195-DB	Outdoor/Watertight	PE	Black	54113
LMR-195-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54111
LMR-195-LSZH	Low Smoke/ Zero Halogen	FRPE	Black	54387

Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BC	0.037	(0.94)
Dielectric	Foam PE	0.110	(2.79)
Outer Conductor	Aluminum Tape	0.116	(2.95)
Overall Braid	Tinned Copper	0.139	(3.53)
Jacket	(see table)	0.195	(4.95)

Environmental Specifications			
Performance Property	°F	°C	
Installation Temperature Range	-40/+185	-40/+85	
Storage Temperature Range	-94/+185	-70/+85	
Operating Temperature Range	-40/+185	-40/+85	

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	80	
Dielectric Constant	NA	1.56	
Time Delay	nS/f (nS/m)	1.27	(4.17)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	25.4	(83.3)
Inductance	uH/ft (uH/m)	0.064	(0.21)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	7.6	(24.9)
Outer Conductor	ohms/1000ft (/km)	4.9	(16.1)
Voltage Withstand	Volts DC	1000	
Jacket Spark	Volts RMS	3000	
Peak Power	kW	2.5	

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.5	(12.7)
Bend Radius: repeated	in. (mm)	2.0	(50.8)
Bending Moment	ft-lb (N-m)	0.2	(0.27)
Weight	lb/ft (kg/m)	0.021	(0.03)
Tensile Strength	lb (kg)	40	(18.2)
Flat Plate Crush	lb/in. (kg/mm)	15	(0.27)

Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800	8000
Attenuation dB/100 ft	2.0	2.5	4.4	5.4	7.8	11.1	14.5	16.0	16.9	19.0	29.9	35.7
Attenuation dB/100 m	6.5	8.4	14.6	17.7	25.5	36.5	47.7	52.5	55.4	62.4	98.1	117.1
Avg. Power kW	0.89	0.68	0.39	0.32	0.22	0.16	0.12	0.11	0.10	0.09	0.06	0.04





Ideal for...

- SCADA antenna systems
- In-building cabinet intra - connects
- RFID

Connectors

	Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Length in (mm)	Width in (mm)	Weight lb. (g)
	1.0/2.3 DIN	Straight Plug	*EZ-240-1023M-X	3190-6283	<1.35:1 (2.5)	Knurl	1.1 (228.5)	0.33 (8.5)	0.014 (6.63)
	N Female	Straight Jack	*EZ-240-NF-X	3190-2795	<1.25:1 (6)	NA	1.4 (35.4)	0.62 (15.8)	0.040 (18.0)
	BNC Male	Straight Plug	*EZ-240-BM-X	3190-6120	<1.25:1 (2.5)	Knurl	1.3 (34)	0.58 (14.7)	0.043 (19.5)
	BNC Male	Right Angle	EZ-240-BM-RA-X	3190-2868	<1.30:1 (4)	Knurl	1.3 (33.6)	1.19 (30.1)	0.091 (41.7)
	TNC Male	Straight Plug	*EZ-240-TM-X	3190-2725	<1.25:1 (2.5)	Hex/ Knurl	1.4 (34.3)	0.59 (15.0)	0.043 (19.5)
	TNC Male	Reverse Polarity	*EZ-240-TM-RP-X	3190-2892	<1.25:1 (6)	Knurl	1.4 (36)	0.59 (15.0)	0.043 (19.5)
	TNC Female	Straight Jack	EZ-240-TF-X	3190-6204	<1.25:1 (6)	NA	1.1 (27.2)	0.87 (22.0)	0.033 (15.0)
	FME Male	Straight Plug	TC-240-FMEM-X	3190-6251	<1.25:1 (2)	NA	1.10 (28)	0.42 (10.8)	0.421 (10.7)

* Indicates that connector is not compatible with WSB-240 (3109-400)

Connectors

	Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Length in (mm)	Width in (mm)	Weight lb. (g)
	TNC Female	Reverse Polarity	*EZ-240-TF-RP-X	3190-6167	<1.35:1 (6)	NA	1.1 (27.2)	0.87 (22.0)	0.033 (15.0)
	QMA Male	Straight Plug	EZ-240-QM-X	3190-2894	<1.25:1 (6)	NA	1.2 (30.0)	0.41 (10.5)	0.014 (6.35)
	QMA Male	Right Angle	*EZ-240-QM-RA-X	3190-2895	<1.25:1 (6)	NA	0.8 (20.3)	0.65 (16.5)	0.019 (8.62)
	SMA Male	Straight Plug	EZ-240-SM-X	3190-2897	<1.25:1 (6)	Hex	1.0 (25.4)	0.32 (8.1)	0.016 (7.26)
	SMA Male	Right Angle	*EZ-240-SM-RA-X	3190-2899	<1.25:1 (6)	Hex	0.9 (22.8)	0.31 (7.9)	0.019 (8.6)

* Indicates that connector is not compatible with WSB-240 (3109-400)

Hardware and Installation Tools



CT-240/200/195/100
3190-667

Crimp tool for LMR-100, 195, 200 and 240 connectors



TK-240
660-0830

Install tool kit for LMR-240 (CCT-02, DBT-U, CST-240A, CT-240/200/100, tool kit)



CCT-02
3192-165

Cable end flush cut tool



RB-CST
3192-086

Replacement blade kit for all CST cutting tools



CST-240A
3192-152

Prep tool for LMR-240



WSB-240
3109-400

Weather proofing and strain relief kit for LMR-240



DBT-U
3192-001

Deburr tool that removes the center conductor rough edges



Rubber Slide
3109-424

Lubricant for WSB and IPB boots

LMR[®]-240

Part Description				Stock Code
Part Number	Application	Jacket	Color	
LMR-240	Outdoor	PE	Black	54021
LMR-240-DB	Outdoor/Watertight	PE	Black	54090
LMR-240-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54029
LMR-240-LSZH	Low Smoke/Zero Halogen	FRPE	Black	54389

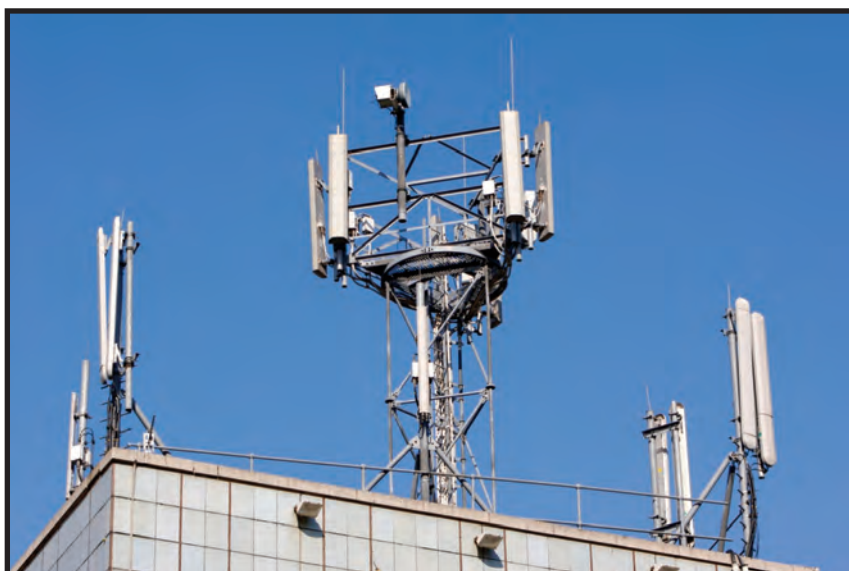
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BC	0.056	(1.42)
Dielectric	Foam PE	0.150	(3.81)
Outer Conductor	Aluminum Tape	0.155	(3.94)
Overall Braid	Tinned Copper	0.178	(4.52)
Jacket	(see table)	0.240	(6.10)

Environmental Specifications			
Performance Property	°F	°C	
Installation Temperature Range	-40/+185	-40/+85	
Storage Temperature Range	-94/+185	-70/+85	
Operating Temperature Range	-40/+185	-40/+85	

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	83	
Dielectric Constant	NA	1.42	
Time Delay	nS/ft (nS/m)	1.21	(3.97)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	24.2	(79.4)
Inductance	uH/ft (uH/m)	0.060	(0.20)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	3.2	(10.5)
Outer Conductor	ohms/1000ft (/km)	3.89	(12.8)
Voltage Withstand	Volts DC	1500	
Jacket Spark	Volts RMS	5000	

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.75	(19.1)
Bend Radius: repeated	in. (mm)	2.5	(63.5)
Bending Moment	ft-lb (N-m)	0.25	(0.34)
Weight	lb/ft (kg/m)	0.034	(0.05)
Tensile Strength	lb (kg)	80	(36.3)
Flat Plate Crush	-lb/in. (kg/mm)	20	(0.36)

Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800	8000
Attenuation dB/100 ft	1.3	1.7	3.0	3.7	5.3	7.6	9.9	10.9	11.5	12.9	20.4	24.3
Attenuation dB/100 m	4.4	5.7	9.9	12.0	17.3	24.8	32.4	35.6	37.7	42.4	66.8	79.7
Avg. Power kW	1.49	1.15	0.66	0.54	0.38	0.26	0.20	0.18	0.17	0.15	0.10	0.08





The industry standard for short RF feeder requirements

Ideal for...

- Drop-in replacement for RG-8/9913 Air-Dielectric type Cable
- Antenna feeder runs
- Public safety antenna installations
- WiFi

Connectors



Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Length in (mm)	Width in (mm)	Weight lb. (g)
7-16 DIN Male	Straight Plug	EZ-400-716M-X	3190-2524	<1.25:1 (6)	Hex	1.6 (39.5)	1.38 (35)	0.277 (126.0)



7-16 DIN Male	Right Angle	EZ-400-716M-RA-X	3190-2545	<1.35:1 (4)	Hex	1.6 (4.7)	1.75 (44.3)	0.374 (0.17)
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BNC Male	Straight Plug	EZ-400-BM-X	3190-2852	<1.35:1 (2)	Knurl	1.7 (42.7)	0.56 (14.2)	0.066 (29.9)
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BNC Male	Right Angle	EZ-400-BM-RA-X	3190-2847	<1.35:1 (2)	Knurl	1.9 (48.0)	1.32 (33.5)	0.097 44.0)
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N Female	Straight Jack	EZ-400-NF-X	3190-2818	<1.25:1 (2.5)	N/A	1.8 (45)	0.66 (16.8)	0.105 (47.6)
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N Male	Straight Plug	EZ-400-NMH-X	3190-2590	<1.25:1 (10)	Hex/ Knurl	1.5 (38)	0.89 (22.6)	0.103 (46.8)
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N Male	Right Angle	EZ400-NMH-RA-X	3190-2638	<1.35:1 (6)	Hex/ Knurl	1.87 (47)	1.42 (36.0)	0.177 (80.2)
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Connectors

	Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Length in (mm)	Width in (mm)	Weight lb. (g)
	QN Male	Straight Plug	EZ-400-QNM-X	3190-2979	<1.25:1 (6)	NA	1.5 (38)	0.89 (22.6)	0.103 (46.8)
	QN Male	Right Angle	EZ-400-QNM-RA-X	3190-2981	<1.25:1 (6)	NA	1.9 (47.0)	1.42 (36.0)	0.177 (80.2)
	QN Female	Straight Jack	EZ-400-QNF-X	3190-2980	<1.25:1 (6)	N/A	1.8 (45.0)	0.66 (16.8)	0.105 (47.6)
	TNC-Female	Straight Jack	EZ-400-TF-X	3190-3049	<1.25:1 (6)	N/A	1.8 (45)	0.55 (14.0)	0.074 (33.6)
	TNC Male	Straight Plug	EZ-400-TM-X	3190-2533	<1.25:1 (6)	Hex/ Knurl	1.9 (48)	0.67 (17.5)	0.075 (34.3)
	TNC Male	Right Angle	EZ-400-TM-RA-X	3190-2800	<1.25:1 (6)	Hex/ Knurl	2.0 (50.0)	0.62 (15.7)	0.130 (59.0)
	4310M	Straight Plug	TC-400-4310M-X	3190-6272	<1.25:1 (6)	Hex	1.28 (32.6)	0.89 (22.6)	0.15 (68)

Hardware and Installation Tools



CCT-02
3192-165

Cable end flush cut tool



RB-CST
3192-086

Replacement blade kit for all
CST strip tools



CT-400/300
3190-666

Crimp tool for LMR 400
connectors



GK-S400TT

Standard ground kit (each)



CT-U
3192-181

Crimp tool - crimp handle,
crimp dies required



WSB-400
3109-394

Weather seal strain relief boots
(10 pk) for use with most
popular LMR-400-X series
connectors



CST-400
3192-004

Combination prep tool for LMR-
400 crimp and clamp style
connectors



IPB-400-NM
3109-417-1

LMR-400 Male IP boots
(weather seal boot system)
suitable for type N, TNC, BNC,
4310, 4195



GST-400
3190-2174

Mid-Span strip tool for ground
strap attachment



IPB-400-NF
3109-417-2

LMR-400 Female IP boots
(weather seal boot system)
suitable for type N,TNC, BNC,
4310,4195



TK-400EZ
3190-1601

Tool kit for LMR-400
crimp/clamp connectors
(includes CCT-02, CST-400,
CT-400/300, tool pouch)



Rubber Slide
3109-424

Lubricant for WSB and IPB boots



HG-400T

Hoisting grip- laced type (each)



Crimp Dies
3190-202

.429" Hex dies

LMR[®]-400

Part Description				
Part Number	Application	Jacket	Color	Stock Code
LMR-400	Outdoor	PE	Black	54001
LMR-400-DB	Outdoor/Watertight	PE	Black	54091
LMR-400-FR	Indoor/Outdoor	FRPE	Black	54030
LMR-400-LSZH	Riser CMR			
	Low Smoke Zero Halogen	FRPE	Black	54390

Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCAI	0.108	(2.74)
Dielectric	Foam PE	0.285	(7.24)
Outer Conductor	Aluminum Tape	0.291	(7.39)
Overall Braid	Tinned Copper	0.320	(8.13)
Jacket	(see table)	0.405	(10.29)

Environmental Specifications		
Performance Property	°F	°C
Installation Temperature Range	-40/+185	-40/+85
Storage Temperature Range	-94/+185	-70/+85
Operating Temperature Range	-40/+185	-40/+85

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	84	
Dielectric Constant	NA	1.38	
Time Delay	nS/ft (nS/m)	1.20	(3.92)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	23.9	(78.4)
Inductance	uH/ft (uH/m)	0.060	(0.20)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	1.39	(4.6)
Outer Conductor	ohms/1000ft (/km)	1.65	(5.4)
Voltage Withstand	Volts DC	2500	
Jacket Spark	Volts RMS	8000	
Peak Power	kW	16	

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	1.00	(25.4)
Bend Radius: repeated	in. (mm)	4.0	(101.6)
Bending Moment	ft-lb (N-m)	0.5	(0.68)
Weight	lb/ft (kg/m)	0.068	(0.10)
Tensile Strength	lb (kg)	160	(72.6)
Flat Plate Crush	lb/in. (kg/mm)	40	(0.71)

Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800	8000
Attenuation dB/100 ft	0.7	0.9	1.5	1.9	2.7	3.9	5.1	5.7	6.0	6.8	10.8	13.0
Attenuation dB/100 m	2.2	2.9	5.0	6.1	8.9	12.8	16.8	18.6	19.6	22.2	35.5	42.7
Avg. Power kW	3.33	2.57	1.47	1.20	0.83	0.58	0.44	0.40	0.37	0.33	0.21	0.17





Ideal for...

- Long antenna cable runs
- High power applications
- Private land mobile radio networks
- WiFi

Connectors

	Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Length in (mm)	Width in (mm)	Weight lb. (g)
	7-16 DIN Male	Straight Plug	EZ-600-716M-X	3190-2643	<1.30:1 (6)	Hex	1.6 (42)	1.38 (35.0)	0.209 (94.8)
	7/16 DIN Male	Right Angle	EZ-600-716M-RA-X	3190-2546	<1.35:1 (6)	Hex	1.6 (40)	1.38 (35.0)	0.462 (210.0)
	N Female	Straight Jack	EZ-600-NF-X	3190-2817	<1.30:1 (6)	NA	1.7 (43)	0.69 (17.6)	0.090 (40.6)
	N Male	Straight Plug	EZ-600-NMH-X	3190-2627	<1.25:1 (8)	Hex/ Knurl	2.1 (53)	0.92 (23.4)	0.164 (74.4)
	N Male	Right Angle	*EZ-600-NMH-RA-X	3190-2639	<1.35:1 (6)	Hex	2.0 (50)	1.42 (36.0)	0.224 (101.7)
	TNC Male	Straight Plug	EZ-600-TM-X	3190-2531	<1.25:1 (6)	Hex/ Knurl	2.3 (57.6)	0.75 (19.0)	0.100 (45.6)
	4310M	Straight Plug	TC-600-4310M-X	3190-6273	<1.25:1 (6)	Hex	1.76 (44.8)	0.89 (22.6)	0.25 (113)

* Indicates that connector is not compatible with WSB-600 (3109-401)

Hardware and Installation Tools



Cable end flush cut tool

CCT-02
3192-165



Crimp tool - crimp handle,
crimp dies required

CT-U
3192-181



Crimp tool for LMR 600
connectors

CT-600
3192-170



Midspan strip tool for ground
strap attachment

GST-600A
3190-1051



Replacement blade kit for all
CST strip tools

RB-CST
3192-086



Tool kit for LMR-600 crimp/clamp
connectors (includes CCT-02, CST-
600, CT-600, Tool Pouch)

TK-600EZ
3190-1602



Weather seal strain relief boot (10
pk) for use with most popular
LMR-600-X series connectors

WSB-600
3109-401



Weather proof boot - LMR-600
Male IP boot suitable for type N,
TNC, BNC, 4310, 4195

IPB-600-NM
3109-417-4



Weather proof boot - LMR-600
Female IP boot suitable for type
N, TNC, BNC, 4310, 4195

IPB-600-NF
3109-417-5



Weather proof boot - LMR-600
Male IP boot right angle suit-
able for type N, TNC, BNC,
4310, 4195

IPB-600-NM-RA
3109-417-6



Lubricant for WSB and IPB boots

Rubber Slide
3109-424



Hoisting grip- laced type (each)

HG-600T



.610" hex dies

Y1720
3190-203

LMR[®]-600

Part Number	Part Description			Stock Code
	Application	Jacket	Color	
LMR-600	Outdoor	PE	Black	54003
LMR-600-DB	Outdoor/Watertight	PE	Black	54093
LMR-600-FR	Indoor/Outdoor	FRPE	Black	54032
LMR-600-LSZH	Riser CMR Low Smoke Zero Halogen	FRPE	Black	54392

Description	Construction Specifications		
	Material	In.	(mm)
Inner Conductor	Solid BCCAI	0.176	(4.47)
Dielectric	Foam PE	0.455	(11.56)
Outer Conductor	Aluminum Tape	0.461	(11.71)
Overall Braid	Tinned Copper	0.490	(12.45)
Jacket	(see table)	0.590	(14.99)

Performance Property	Environmental Specifications	
	°F	°C
Installation Temperature Range	-40/+185	-40/+85
Storage Temperature Range	-94/+185	-70/+85
Operating Temperature Range	-40/+185	-40/+85

Performance Property	Electrical Specifications		
	Units	US	(metric)
Velocity of Propagation	%	85	
Dielectric Constant	NA	1.32	
Time Delay	nS/ft (nS/m)	1.17	(3.83)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	23.4	(76.6)
Inductance	uH/ft (uH/m)	0.058	(0.19)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	0.53	(1.7)
Outer Conductor	ohms/1000ft (/km)	1.2	(3.9)
Voltage Withstand	Volts DC	4000	
Jacket Spark	Volts RMS	8000	
Peak Power	kW	40	

Performance Property	Mechanical Specifications		
	Units	US	(metric)
Bend Radius: installation	in. (mm)	1.50	(38.1)
Bend Radius: repeated	in. (mm)	6.0	(152.4)
Bending Moment	ft-lb (N-m)	2.75	(3.73)
Weight	lb/ft (kg/m)	0.131	(0.20)
Tensile Strength	lb (kg)	350	(158.9)
Flat Plate Crush	lb/in. (kg/mm)	60	(1.07)

Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800	800
Attenuation dB/100 ft	0.4	0.5	1.0	1.2	1.7	2.5	3.3	3.7	3.9	4.4	7.3	8.8
Attenuation dB/100 m	1.4	1.8	3.2	3.9	5.6	8.2	10.9	12.1	12.8	14.5	23.8	29.0
Avg. Power kW	5.51	4.24	2.41	1.97	1.35	0.93	0.70	0.63	0.59	0.52	0.32	0.26



About Times Microwave Systems

Times Microwave Systems, was founded in 1948 as the Times Wire and Cable Company. Today, the company specializes in the design and manufacture of high performance flexible, semi-flexible and semi-rigid coaxial cable, connectors and cable assemblies. With over 60 years of leadership in the design, development, and manufacture of coaxial products for defense microwave systems, Times Microwave Systems is the acknowledged leader, offering high tech solutions for today's most demanding applications.

Cable assemblies from Times Microwave Systems are used as interconnects for microwave transmitters, receivers, and antennas on airframes, missiles, ships, satellites, and ground based communications systems, and as leads for test and instrumentation applications.

As a highly specialized and technically focused company, Times Microwave Systems has been able to continually meet the challenges of specialty engineered transmission lines for both the military and commercial applications, drawing upon our:

- Thousands of unique cable and connector designs
- Exceptional RF and microwave design capability
- Precise material and process controls
- Unique in-house testing capabilities including RF shielding/leakage, vibration, moisture/vapor sealing, phase noise and flammability
- Years of MIL-T-81490, MIL-C-87104, and MIL-PRF-39012 experience
- ISO 9001 Certification

In 2010, Times Microwave Systems introduced its Times-Protect™ line of lightning and surge protection solutions to address the challenging needs of wireless systems in the 21st century.

With over 60 years of Times Microwave Systems aerospace cable and connector technology experience and unparalleled design expertise, Times Microwave Systems' staff of Field Applications Engineers can help to provide the right solution for your interconnect applications.

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