TIMES MICROWAVE SYSTEMS

LMR®-400-75 Ohm
Flexible Low Loss Coaxial Cable

Ideal for...

- Satellite Applications
- Video Applications-CCTV, CATV, baseband or broadband
- In-Building Feeder Runs
- Any 75 ohm Wireless Application requiring an easily routed,

• **LMR®-75** standard is a UV Resistant Polyethylene jacketed cable designed for 20-year service outdoor use. The bending and handling characteristics are significantly better than any smooth wall or corrugated hard-line cables.

• **Flexibility** and bendability are hallmarks of the LMR-400-75 cable design. The flexible outer conductor enables the tightest bend radius available for any cable of similar size and performance.

• **Low Loss** is another hallmark feature of LMR-400-75. Size for size LMR-75 has the lowest loss of any flexible cable and comparable loss to semirigid hard-line cables.

• **RF Shielding** is 50 dB greater than typical single shielded coax (40 dB). The multi-ply bonded foil outer conductor is rated conservatively at > 90 dB (i.e. >180 dB between two adjacent cables).

• **Weatherability**: LMR-400-75 cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **Connectors**: Standard available connectors include type-N and type-F male plug with 75 ohm interface. Most LMR-75 connectors are the EZ install type with crimp outer and non-solder center contact attachment.

• **Cable Assemblies**: All LMR-400-75 cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

Part Description

Part Number	Application	Jacket	Color	Stock Code
LMR-400-75	Indoor/Outdoor	PE	Black	54147
LMR-400-75-DB	Outdoor	PE	Black	54228

Construction Specifications

Description	Material	In.	(mm)
Inner Conductor	Solid BC	0.065	(1.65)
Dielectric	Foam PE	0.285	(7.24)
Outer Conductor	Aluminum Tape	0.291	(7.39)
Overall Braid	Tinned Copper	0.320	(8.13)
Jacket	Black PE	0.405	(10.29)

Mechanical Specifications

Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	1.0	(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)

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

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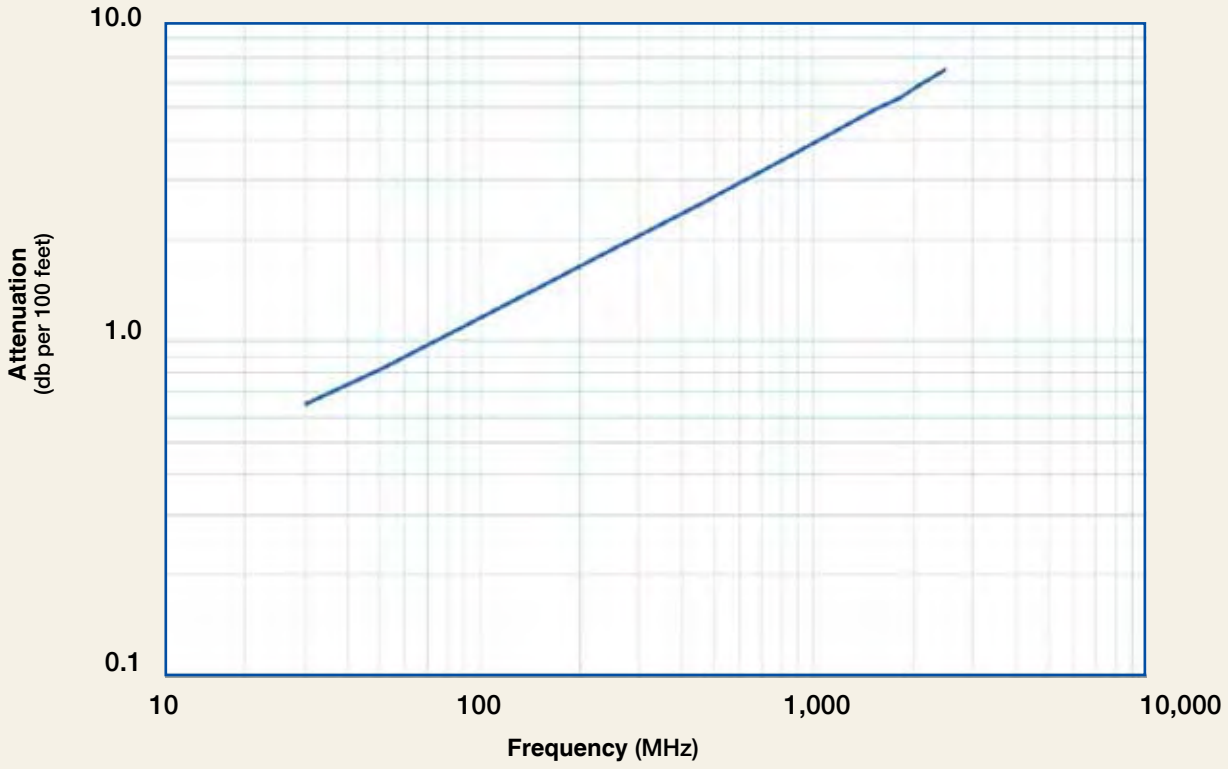
Electrical Specifications

Performance Property	Units	US	(metric)
Max Operating Frequency	GHz	2.5	
Velocity of Propagation	%	85	
Dielectric Constant	NA	1.38	
Time Delay	nS/ft (nS/m)	1.20	(3.92)
Impedance	ohms	75	
Capacitance	pF/ft (pF/m)	15.9	(52.3)
Inductance	uH/ft (uH/m)	0.090	(0.29)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	2.50	(8.20)
Outer Conductor	ohms/1000ft (/km)	1.65	(5.4)
Voltage Withstand	Volts DC	2000	
Jacket Spark	Volts RMS	5000	
Peak Power	kW	10	

Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	**2500**
Attenuation dB/100 ft	0.6	0.8	1.5	1.8	2.6	3.7	4.9	5.4	5.7	6.4
Attenuation dB/100 m	2.1	2.7	4.8	5.8	8.4	12.1	16.0	17.6	18.7	21.1
Avg. Power kW	2.99	2.31	1.32	1.08	0.74	0.52	0.39	0.35	0.33	0.30

Calculate Attenuation =

$(0.115570) \bullet \sqrt{FMHz} + (0.000260) \bullet FMHz$ (interactive calculator available at http://www.timesmicrowave.com/cable_calculators)

Attenuation:

VSWR=1.0 ; Ambient = +25°C (77°F)

Power:

VSWR=1.0; Ambient = +40°C; Inner Conductor = 100°C (212°F); Sea Level; dry air; atmospheric pressure; no solar loading

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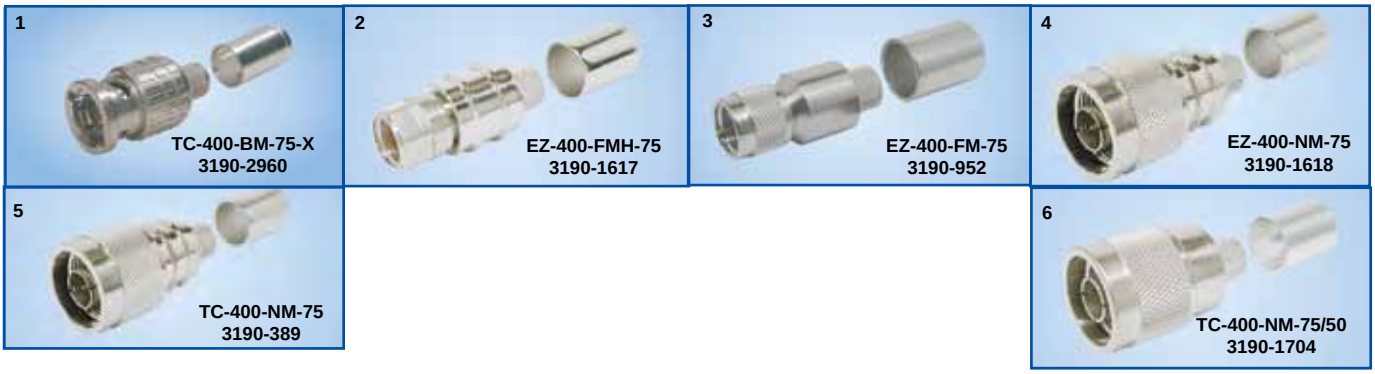


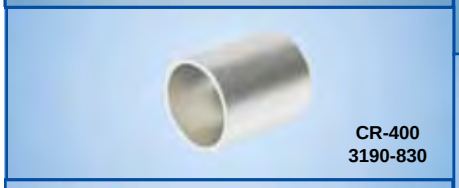
Connectors Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in	Length (mm)	Width in	Width (mm)	Weight lb	Weight (g)
1. BNC Male	Straight Plug	TC-400-BM-75-X	3190-2960	<1.1:1 (2.0)	Knurl	Solder-on	Crimp	N/G	1.37	(34.8)	0.56	(14.2)	0.043	(19.5)
2. F Male	Straight Plug	EZ-400-FMH-75	3190-1617	<1.25:1 (2.0)	Hex	Spring Finger	Crimp	N/G	1.7	(42.9)	0.49	(12.4)	0.02	(9.07)
3. F Male	Straight Plug	EZ-400-FM-75	3190-952	<1.25:1 (2.5)	Knurl	Spring Finger	Crimp	N/G	1.7	(43.2)	0.56	(14.2)	0.002	(9.1)
4. N Male	Straight Plug	EZ-400-NM-75	3190-1618	<1.25:1 (2.0)	Knurl	Spring Finger	Crimp	N/G	2.0	(50.5)	0.81	(20.6)	0.10	(45.36)
5. N Male	Straight Plug	TC-400-NM-75	3190-389	<1.25:1 (2.5)	Knurl	Solder	Crimp	N/G	1.5	(38.1)	0.83	(21.1)	0.90	(40.8)
6. N Male	Straight Plug	TC-400-NM-75/50***	3190-1704	<1.25:1 (2.0)	Knurl	Solder	Crimp	N/G	1.5	(38.1)	0.83	(21.1)	0.09	(39.01)

* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy **VSWR spec based on 3 foot cable with a connector pair
***NOTE: 75/50 suffix indicates the connector is for installation on 75 ohm LMR cable and mates with 50 ohm type-N connectors


HX-4
3190-200


Y1719
3190-202


CT-400/300
3190-666


CR-400
3190-830


CST-400-75
3192-089


DBT-U
3192-001


CCT-01
3190-1544


GST-400
3190-2174


TK-400EZ-75
660-0084


RB-CST
3192-086

Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	HX-4	3190-200	Crimp Handle
Crimp Dies	Y1719	3190-202	.429" Hex Dies
Crimp Tool	CT-400/300	3190-666	Crimp tool for LMR 400 connectors
Crimp Rings	CR-400	3190-830	Crimp rings for TC/EZ-400 connectors (package of 10)
Strip Tool	CST-400-75	3192-089	Combination prep tool for LMR-400-75 crimp and clamp connectors
Mid-Span Strip Tool	GST-400	3190-2174	For ground strap attachment
Deburr Tool	DBT-U	3192-001	Removes center conductor rough edges
Cutting Tool	CCT-01	3190-1544	Cable end flush cut tool
Replacement Blade	RB-01	3190-1609	Replacement blade for cutting tool
Replacement Blade Kit	RB-CST	3192-086	Replacement blade kit for all CST tools
Tool Kit	TK-400EZ-75	660-0084	Tool kit for LMR-400-75 crimp/clamp connectors includes, CCT-01,CST-400-75, CT-400/300, Tool Pouch)


GK-S400TT


HG-400T

Hardware Accessories

Type	Part Number	Stock Code	Description
Ground Kit	GK-S400TT	GK-S400TT	Standard Grounding Kit (each)
Hoisting Grip	HG-400T	HG-400T	Laced Type (each)