

LMR[®]-900 Flexible Low Loss Communications Coax

Ideal for...

- Medium Antenna Feeder runs (no jumpers required)
- Jumper Assemblies for 1-5/8" & 2-1/4" Feeders
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable



| Part Description | | | | Stock |
|------------------|--------------------------|--------|-------|-------|
| Part Number | Application | Jacket | Color | Code |
| LMR-900-DB | Outdoor/Watertight | PE | Black | 54094 |
| LMR-900-FR | Indoor/Outdoor Riser CMR | FRPE | Black | 54033 |

PVC: Poly Vinyl Chloride

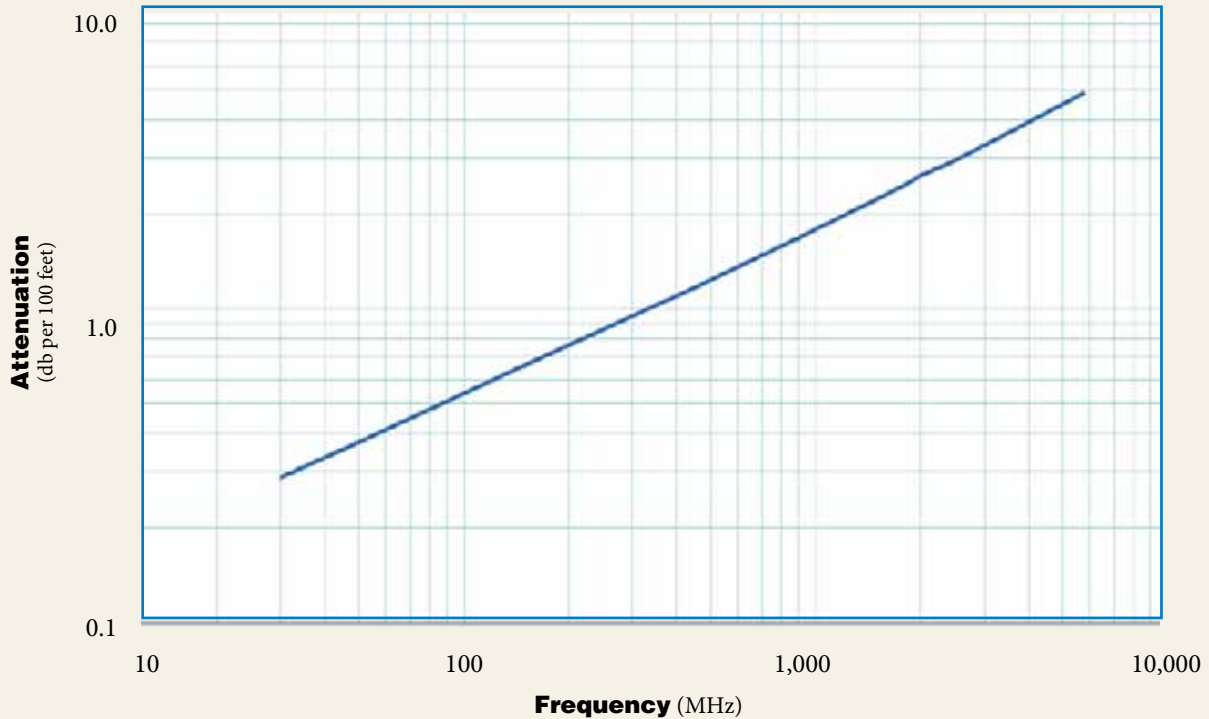
| Mechanical Specifications | | | |
|---------------------------|----------------|-------|----------|
| Performance Property | Units | US | (metric) |
| Bend Radius: installation | in. (mm) | 3.00 | (76.2) |
| Bend Radius: repeated | in. (mm) | 9.0 | (228.6) |
| Bending Moment | ft-lb (N-m) | 9.0 | (12.20) |
| Weight | lb/ft (kg/m) | 0.266 | (0.40) |
| Tensile Strength | lb (kg) | 750 | (340.5) |
| Flat Plate Crush | lb/in. (kg/mm) | 100 | (1.79) |

| Construction Specifications | | |
|-----------------------------|--------------------|---------------|
| Description | Material | In. (mm) |
| Inner Conductor | BC Tube (.222" ID) | 0.262 (6.65) |
| Dielectric | Foam PE | 0.680 (17.27) |
| Outer Conductor | Aluminum Tape | 0.686 (17.42) |
| Overall Braid | Tinned Copper | 0.732 (18.59) |
| Jacket | (see table) | 0.870 (22.10) |

| 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 | % | 87 | |
| 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) | 0.54 | (1.77) |
| Outer Conductor | ohms/1000ft (/km) | 0.55 | (1.8) |
| Voltage Withstand | Volts DC | 5000 | |
| Jacket Spark | Volts RMS | 8000 | |
| Peak Power | kW | 62 | |

Attenuation vs. Frequency (typical)



| Frequency (MHz) | 30 | 50 | 150 | 220 | 450 | 900 | 1500 | 1800 | 2000 | 2500 | 5800 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Attenuation dB/100 ft | 0.3 | 0.4 | 0.7 | 0.8 | 1.2 | 1.7 | 2.2 | 2.5 | 2.6 | 3.0 | 4.9 |
| Attenuation dB/100 m | 0.9 | 1.2 | 2.2 | 2.6 | 3.8 | 5.6 | 7.4 | 8.2 | 8.6 | 9.8 | 16.0 |
| Avg. Power kW | 8.89 | 6.85 | 3.89 | 3.19 | 2.19 | 1.51 | 1.14 | 1.03 | 0.97 | 0.86 | 0.52 |

Calculate Attenuation =

$(0.051770) \cdot \sqrt{\text{FMHz}} + (0.000160) \cdot \text{FMHz}$ (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

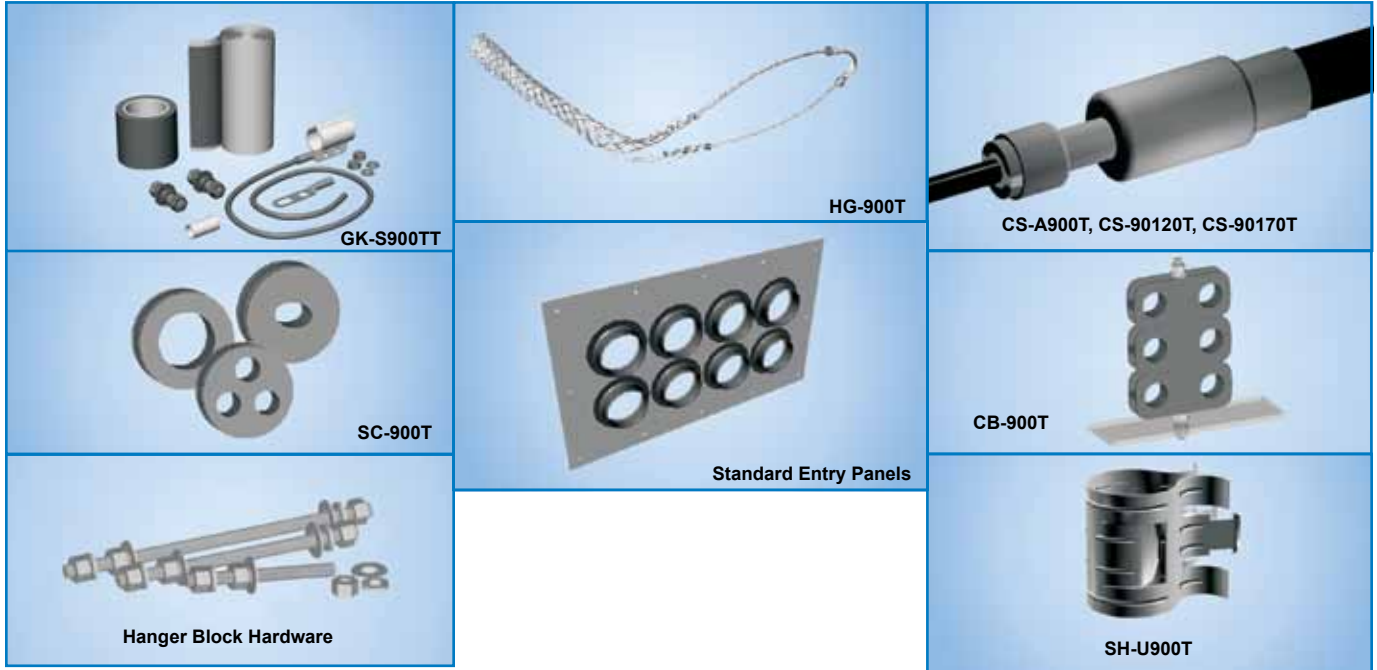
| Interface | Description | Part Number | Stock Code | VSWR Freq. (GHz) | **Coupling Nut | Inner Contact Attach | Outer Contact Attach | Finish* /Pin | Length in (mm) | Width in (mm) | Weight lb (g) |
|--------------------|---------------|------------------|------------|------------------|----------------|----------------------|----------------------|--------------|----------------|---------------|---------------|
| 1. 7-16 DIN Female | Straight Jack | EZ-900-716FC-2 | 3190-1550 | <1.25:1 | (2.5) NA | Press Fit | Clamp | S/S | 2.0 (51) | 1.38 (35.1) | 0.379 (171.9) |
| 2. 7-16 DIN Male | Straight Plug | EZ-900-716MC-2 | 3190-1641 | <1.25:1 | (2.5) Hex | Press Fit | Clamp | S/S | 2.0 (51) | 1.44 (36.6) | 0.485 (220.0) |
| 3. 7-16 DIN Male | Right Angle | EZ-900-716-MC-RA | 3190-614 | <1.35:1 | (2.5) Hex | Press Fit | Clamp | S/S | 2.7 (69) | 2.15 (55.0) | 1.150 (521.6) |
| 4. 7/8 EIA Male | Straight Plug | EZ-900-78EIA-2 | 3190-1282 | <1.25:1 | (2.5) NA | Press Fit | Clamp | S/S | 3.0 (76) | 2.24 (56.9) | 1.013 (459.5) |
| 5. 7/8 EIA Male | Right Angle | EZ-900-78EIA-RA | 3190-1450 | <1.25:1 | (1) Flange | Press Fit | Clamp | S/S | 2.95 (75.0) | 2.60 (66.0) | 1.50 (680.4) |
| 6. N Female | Straight Jack | EZ-900-NFC-2 | 3190-1263 | <1.25:1 | (6) NA | Press Fit | Clamp | S/S | 2.0 (51) | 1.38 (35.1) | 0.443 (200.9) |
| 7. N Male | Straight Plug | EZ-900-NMC-2 | 3190-1262 | <1.25:1 | (6) Hex/Knurl | Press Fit | Clamp | S/S | 2.0 (51) | 1.38 (35.1) | 0.463 (210.0) |

* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy **VSWR spec based on 3 foot cable with a connector pair



Install Tools

| Type | Part Number | Stock Code | Description |
|--------------------|-------------|------------|------------------------------------|
| Strip Tool | ST-900C | 3190-1310 | For LMR 900 Clamp Style Connectors |
| Midspan Strip Tool | GST-900A | 3190-435 | For Ground Strap Attachment |
| Wrenches | WR-900 | 3190-509 | 1-1/4" Box Wrench (2 required) |
| Cutting Tool | CCT-02 | 3192-165 | Cable end flush cut tool |
| Replacement Blade | RB-02 | 3192-166 | Replacement blade for cutting tool |



Accessories

| Type | Part Number | Stock Code | Description |
|----------------------------------|-------------|------------|--|
| Ground Kit | GK-S900TT | GK-S900TT | Standard Grounding Kit (each) |
| Hoisting Grip | HG-900T | HG-900T | Split/Laced Type (each) |
| Cold Shrink | CS-A900T | CS-A900T | Cable to Antenna Junction (each) |
| Cold Shrink | CS-90120T | CS-90120T | LMR-900 to -1200 Junction (each) |
| Cold Shrink | CS-90170T | CS-90170T | LMR-900 to -1700 Junction (each) |
| Stand. Entry Port Cushion | SC-900T-3 | SC-900T-3 | Three Cables (each) |
| Standard Entry Panels | | | Full Range of Port Styles/Combinations Available |
| Hanger Blocks | CB-900T | CB-900T | Dual Cable Support Block (kit of 10) |
| Hanger Block Supporting Hardware | | | Complete Range of Supporting Hardware & Adapters Available |
| Snap-in Hangers | SH-U900T | SH-U900T | Snap-in Hanger (Kit of 10) |