

DETAILS OF CONSTRUCTION AND MATERIAL

CENTER CONDUCTOR

Copper-clad steel or solid copper

FIRST OUTER CONDUCTOR

Sealed aluminum-polypropylene-aluminum (APA) laminated tape longitudinally wrapped with an overlap around the dielectric to provide 100% coverage of the dielectric and long-term reliability of shielding performance.

THIRD OUTER CONDUCTOR

Unsealed aluminum-polypropylene-aluminum (APA) laminated tape, in conjunction with the second shield, provides an additional shield for improved signal isolation.

MESSENGER

PVC jacketed, galvanized steel wire integrally attached to cable jacket with easily separable PVC web (see note under Jacket) serves as support for cable.

DIELECTRIC

Closed cell, high velocity precision matrix foamed polyethylene which provides optimum dielectric hardness. The foam is bonded to the center conductor with a clean stripping, proprietary moisture-blocking polymer. Attenuation remains stable from 0% to 100% relative humidity.

SECOND OUTER CONDUCTOR

Standard coverage aluminum alloy wire braids improve shielding ability and provide additional mechanical strength.

FOURTH OUTER CONDUCTOR

Aluminum alloy wire braids, in conjunction with the first braids, sandwiches the second tape assuring good metallic contact in the overlap of the tape.

CORROSION RESISTANT PROTECTANT

(See further explanation under Features, p.36.)

Aerial

lifeTime™ is a dripless compound which remains functional over a temperature range of -40°F to 190°F (-40°C to +90°C).

Underground

Flooding compound having cold flow properties for self-healing of small jacket ruptures.

JACKET

Protective PVC applied over the braid to environmentally seal the construction. Both black and non-black jackets are UV resistant and may be used outdoors.

Note: Polyethylene jacket used on the 11 Series messengered versions using 0.109 inch (2.77mm) messenger wire, or by special request Polyethylene jackets are also available on underground drop cables. Contact customer service.

Pictured is T10 Drop Cable, Quadshield version showing a complete drop cable construction including Times' exclusive **lifeTime™** protectant.

FEATURES AND BENEFITS

The T10 Drop Cable Series is designed with reducing system operating costs in mind. The construction types offered in this series can be used in a variety of applications which can facilitate smooth system operation.

FLOODING COMPOUND

Recommended for burial cable applications, flooding compound is designed to provide additional internal corrosion protection. Flooding compound primarily prevents moisture ingress by flowing into any small area of jacket damage, acting as a self-healer.

TFC's burial flooding compound for drop cable is a low viscous material that allows the compound to flow readily into the crevices of the cables outer braid and onto the taped outer conductor.

In addition to required viscosity and flow properties, flooding compounds are chosen for compatibility with the cable materials used and for overall chemical, oxidation and UV resistance properties. Flooding materials are also compounded for high tackiness to aluminum, polyethylene and PVC to ensure uniform and continuous material protection.

lifeTime™

Available exclusively from TFC, **lifeTime™** is a corrosion resistant protectant designed to form a barrier against moisture ingress and retard corrosion. A stable slightly tacky composition, **lifeTime™** is applied to the aluminum braid and underlying tape. It does not drip and retains its consistency through a wide range of temperatures. **lifeTime™** is used from the pole to the groundblock, is suitable for indoor use from the groundblock to the television set, and can solve problems related to remote dc powering such as interdiction.

The standard drop cable choice for many system operators, **lifeTime™** drop cable offers actual dollar saving benefits. Protecting against corrosion not only extends cable life, it also maintains performance. This means improved return on labor and material investment while minimizing maintenance costs as the system ages.

NEC

TFC manufactures **CATV** and **CATVR** drop cables that are NEC compliant. These cables are listed by Underwriter's Laboratories (UL), (File #E86650) and meets the requirements of National Electric Code (NEC), Article 820, Community Antenna Television and Radio Distribution Systems.

In addition to requirements governing various installation methods and materials, the code sets forth different levels of fire, flame, or smoke performance for communication cables.

For more information, refer to Technical Note NEC #1044B.

BONDING

The bonded construction of drop cable begins with the center conductor to dielectric interface and continues from the dielectric to the tape.

A bonded center conductor serves as a guard against moisture ingress, defending against corrosion. In addition, the bonded dielectric, which prevents center conductor movement, facilitates connectorization by removing cleanly and easily. Finally, bonding of the dielectric to tape allows the overlapping tape to stay sealed during cable flexure, minimizing RF signal ingress/egress.

1 GHz BANDWIDTH

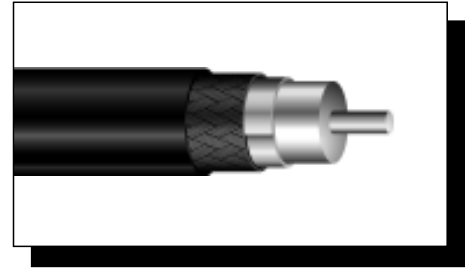
T10 drop cable is specified to have SRL sweep performance to 1 GHz. Specifying 1 GHz bandwidth for rebuilds, upgrades or new plant allows a system to handle future increasing capacity needs demanded by more channels, higher definition television and other emerging technologies.

APPLICATION OF CONSTRUCTION TYPES

T10 Drop Cable Series offers a number of variations suited for different applications. Below is a listing which describes the recommended applications for each construction type. T10 Drop Cable Series is intended for applications from -40°F to +140°F and its attenuation remains stable from 0% to 100% relative humidity.

SINGLE

Single drop cable is well-suited for a wide range of general purpose indoor and outdoor applications.



MESSENGERED

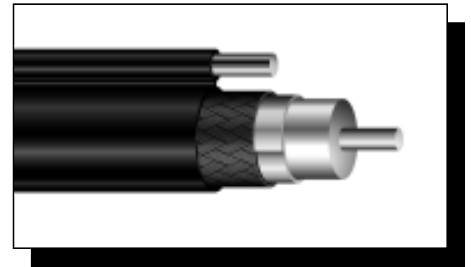
Messengered cable is recommended for longer spans when higher strength is required to improve reliability in severe weather conditions. A galvanized steel messenger wire is integrally joined to the coaxial cable by an overall extruded jacket and connecting web.

- POLE-TO-HOUSE

A high, flex-life messenger wire is utilized making it ideal for wrapping around span clamps and “P” hooks. The wire can be easily cut for installation purposes and has superior break strength compared to other versions available in similar sizes. Messenger sizes vary; refer to specifications.

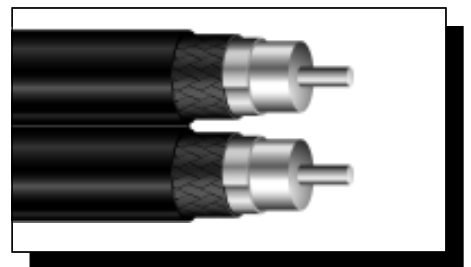
- POLE-TO-POLE

An extra high strength 0.109 inch (2.77mm) wire with an 1800 pound (8007N) break strength is used for clearance control between power and telephone cables and for resistance to heavy loading such as ice, wind and other hazardous conditions.



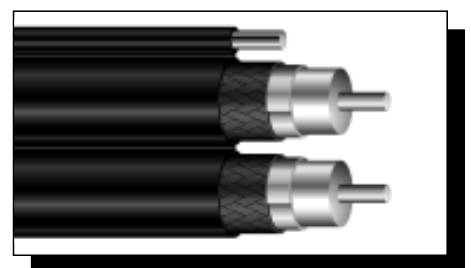
SIAMESE

Two single cables are joined by an overall extruded PVC jacket and connecting web for use in apartments and dual plant systems since it is more economical to install one siamese cable than two single cables.



SIAMESE MESSENGERED

A PVC jacketed, galvanized steel wire is integrally attached to the jacket of the siamese cable by an extruded web. The wire acts as a support for the cable in pole-to-house drops. Refer to MESSENGERED, Pole-to-House for an explanation of high flex-life wire.



BRAID COVERAGE DESCRIPTIONS

T10 Drop Cable is available in a wide selection of braid coverages. These coverage distinctions are designed to offer a choice of protection for a variety of environmental conditions. The descriptions below detail braid construction and environmental applications.

STANDARD

- Outer Conductor:
 1. Sealed APA Laminated Tape
 2. Aluminum Braid
- Braid Coverage Available:
 - 59 Series - 53% and 67%
 - 6 Series - 60%
 - 7 Series - 60%
 - 11 Series - 53% and 60%
- Low-medium RF noise environment application

TRISHIELD

- Outer Conductor:
 1. Sealed APA Laminated Tape
 2. Aluminum Braid
 3. APA Laminated Tape
- Braid Coverage Available:
 - 59 Series - 53% and 80%
 - 6 Series - 60% and 80%
 - 7 Series - 80%
 - 11 Series - 60%
- High RF noise environment and two way applications.

PREMIUM

- Outer Conductor:
 1. Sealed APA Laminated Tape
 2. Aluminum Braid
- Braid Coverage Available:
 - 59 Series - 95%
 - 6 Series - 90%
 - 7 Series - 76%
 - 11 Series - 60%
- Medium-moderately high RF noise environment application

QUADSHIELD

- Outer Conductor:
 1. Sealed APA Laminated Tape
 2. Inner Aluminum Braid
 3. APA Laminated Tape
 4. Outer Aluminum Braid
- Braid Coverage Available:
 - 59 Series - 53% Inner, 34% Outer
 - 6 Series - 60% Inner, 40% Outer
 - 7 Series - 60% Inner, 36% Outer
 - 11 Series - 53% Inner, 32% Outer
 - 11 Series - 60% Inner, 40% Outer
- Severe RF noise environment application, and two way applications.

In addition to the 100% shielding coverage provided by internal shielding tapes, wire braid provides additional shielding coverage. The percentage of coverage that a wire braid contributes is a function of the diameters of the wire braid and the underlying structure, the number of carriers (groups of wire ends), the number of individual wires in each carrier and the picks per inch (the points of crossing of the carriers). The following formulae are applicable:

$$\text{Percent Coverage} = (2F - F^2) \times 100$$

Where: $F = NPd/\sin A$
 $A = \tan^{-1} 2\pi(D + 2d)(P/C)$

And: $C =$ Number of carriers (groups of ends)
 $N =$ Number of ends (strands) per carrier
 $P =$ Picks per inch (carrier crossing points)
 $d =$ Diameter of individual wire strand (inch)
 $D =$ Diameter of structure under the braid (inch)

