PRYSMIAN CABLES & SYSTEMS

TRIPLESEAL™

Performance | Innovation | Reliability

Increased Reliability

As Prysmian considers the reliability requirements of our customers, we strive to develop medium voltage underground cables which will provide failure-free performance throughout their service lives.

Since water and moisture have been shown to be the major causes of decreased cable life, Prysmian's approach to cable design continues to be focused on the control and elimination of water migrating into the cable core.

Prysmian developed Tripleseal™ as an enhancement to our LC Shield® design. We've included a sealed overlap of the longitudinally folded, transversely corrugated copper tape shield as well as water blocking layers both under and over the shield. The Tripleseal product has a unique sealing. (U.S. Patent Number RE36307)

Among the many benefits of this state-of-the-art design are:

- Complete longitudinal and radial water blocking
- Hot-melt adhesive provides continuous seal to shield
- Improved short-circuit ratings due to better heat dissipation
- Uniform fault current distribution due to 100% core coverage
- Higher ampacity ratings under most installation conditions
- Lower life-cycle costs due to lower shield losses

Higher Fault Currents

Due to 100% core coverage and superior heat dissipation characteristics, the LC Shield design offers the most effective means of allowing fault currents a path to ground. During fault conditions, the entire cross-section of the LC Shield ensures a continuous, low-resistance path to ground, which reduces damage due to lightning strikes.

By contrast, more expensive copper neutral wire shields will typically take the fault to ground using only a few of the wires around the circumference of the cable. The remaining wires typically remain virtually unused.

The Ultimate in Design

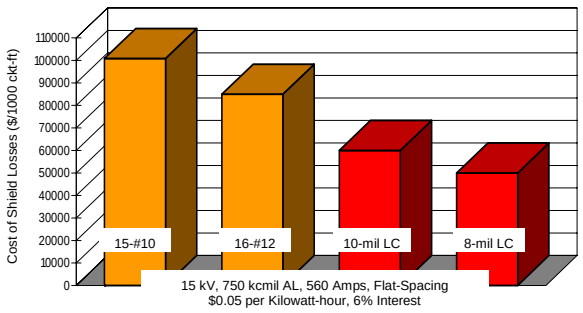
Reducing the amount of copper in your shield results in up-front and lifetime cost savings. Because the LC Shield uses less copper than a 1/3 Concentric Neutral on some sizes, the cable becomes lighter, is better able to handle fault currents, and has lower losses in a flat-spaced and triplexed configurations.

The use of an LC Shield cable in flat-spaced and triplexed installations often results in lower circulating currents, thereby allowing higher cable ampacity ratings and smaller conductor sizes. Because there is no unnecessary copper in the shield, your entire investment is being utilized in a premium performance power cable.

Life-Cycle Costs

In addition to the cost savings associated with longer life cables and lower failure rates, the Tripleseal design offers utility customers the most economical shield performance to date. Typical metallic shield losses can be quite high, so a re-design of the metallic shield can result in significant savings.

The LC Shield exhibits lower losses than its standard 1/3 concentric neutral counterpart. The following chart demonstrates typical operating costs associated with shield losses over a 40 year cable life.



Complete Water Blocking

Tripleseal™ cables withstand a minimum of 5 psi for one hour both radially and longitudinally over the entire cable cross-section, a feat unmatched by any other cable design today.

Radial Water Penetration Tank Test
5 psi for 1 hour **PASS**

Longitudinal Water Penetration Test
5 psi for 1 hour **PASS**

Additionally, the water blocking effectiveness of the sealed overlap is tested after aging to ensure a continuous bond even during emergency operating conditions. The combination of Prysmian's Strandseal® filling compound, the sealed overlap on the LC Shield®, two water-swellable tapes and water-swellable powder in the Tripleseal cable results in a cost-effective, water-blocked cable which is expected to last far longer than traditional medium voltage URD cables.

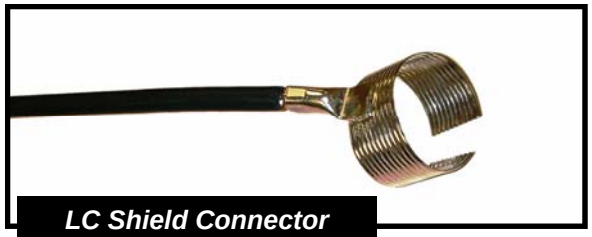
Key Design Features

Aluminum or Copper Conductor
Prysmian Strandseal Filling Compound
EPR or TRXLPE Insulation
Semi-Conducting Water Swellable Tape
Sealed LC Shield
Water Swellable Bridging Tape
Additional Water Swellable Agents
Linear Low-Density Polyethylene Jacket

Connection Is A Snap

The Prysmian LC Shield Connector makes terminating an LC Shield cable simple and effective. The LC Shield Connector is available with the Prysmian Elaspeed™ splice kit or individually. LC Shield Connectors offer the following:

- LC rings manufactured exactly like the LC Shield for maximum contact area.
- Silver soldered lugs for high heat handling during excessive fault currents.
- Insulated ground leads for better protection of the ground wire.
- Leads available in sizes from #2 AWG to #1/0 AWG, with Strandseal as an option.
- Leads available with additional bare #12 AWG copper wire for attachment to pre-molded rubber accessories.
- Easily connected with two constant force springs.
- High fault current capability: 15kA for 15 cycles



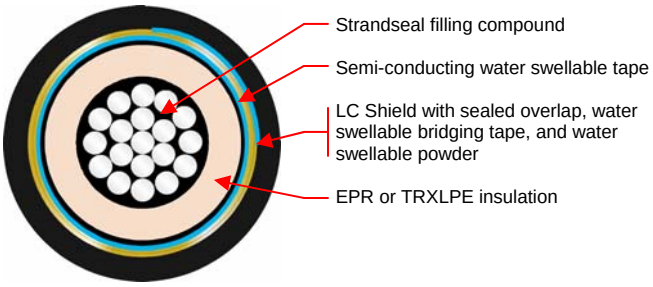
LC Shield Connector
(Catalog vii-1)

Countless Applications

PILC Replacement/Reduced Diameter - The corrugation depth of the LC Shield is less than the diameter of a #16 AWG wire, so the Tripleseal cable is ideal for tight duct applications.

URD Applications - The LC Shield carries high fault currents, enables higher ampacities, and exhibits greater flexibility than standard concentric neutral URD cable.

Substation Feeders/CoGen - Lower shield resistance for better performance during surges, high ampacities.



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