

Prysmian's EPRCompact™ medium voltage network cable is an advanced concept in maximizing the power transmitting ability of existing network systems, while minimizing the diameter of traditional solid dielectric cables. Consider EPRCompact™ for PILC-replacement cables where a maximum cable diameter must be observed.

Description

Single conductor cable with a compact stranded copper conductor, Strandseal® strand block compound, triple extruded insulation system consisting of a thermosetting semiconducting conductor shield, high dielectric strength high-temperature ethylene propylene rubber (EPROTENAX™) insulation, thermosetting semiconducting insulation shield, soft drawn tinned flat strap concentric neutral wires, water-swellable powder, and an encapsulating linear low-density polyethylene (LLDPE) jacket.

Specifications

Ratings

ICEA ICEA S-94-649 (testing ONLY)

AEIC AEIC CS8 (testing ONLY)

ICEA ICEA T-31-610

For 105°C continuous, 140°C emergency, 250°C short-circuit operation.



Design Parameters

Conductor

- Solid or Class B Compact concentric strand soft drawn annealed copper per ASTM, filled with Prysmian Strandseal® strand block compound to prevent water from entering the conductor. In network cables, where conductor temperatures often rise to 100°C, Strandseal® will prevent steam from traveling along the conductor.

Conductor Shield

- Extruded thermosetting semiconducting shield which is free stripping from the conductor and bonded to the insulation.

Insulation

- Natural high dielectric, strength specially-formulated high-temperature EPROTENAX™ (EPR) insulation, exhibiting an optimum balance of mechanical and electrical properties, insuring resistance to treeing. **The insulation thickness is based on maximum allowable voltage stress, rather than conventional AEIC or CSA insulation thicknesses. This allows for a reduced diameter cable.**

Insulation Shield

- Extruded thermosetting semiconducting shield with controlled adhesion to the insulation providing the required balance between electrical integrity and ease of stripping.

Metallic Shield

- Helically applied tinned copper flat strap concentric neutral wires applied over the insulation shield. Using flat concentric neutral wires allows Prysmian to further reduce the diameter, enabling EPRCompact™ cables to fit into existing network ducts. Water-blocking agents are applied over the insulation shield and around the neutral wires to prevent longitudinal water penetration.

Jacket

- Black sunlight resistant linear low-density polyethylene (LLDPE) encapsulating the neutral wires.

Testing

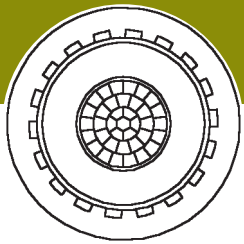
- Prysmian's EPRCompact™ cables passed all applicable AEIC and ICEA qualification tests. In addition, long-term Accelerated Cable Life Testing (ACLT) was performed with cables surpassing 70 months.

Options

- Polypropylene jacket
- Multiplexed cables
- LC Shield™, in lieu of flat straps
- Three-conductor cable with copper tape shields and overall LLDPE jacket.

Because every installation is different, EPRCompact™ cables are specially designed for each customer, for a specific application. Prysmian engineers are ready to provide technical assistance for the design and installation of an EPRCompact™ cable.

For an EPRCompact™ cable quote, please complete and return the attached questionnaire to a Prysmian Customer Service Representative.



EPRCompact™

Please complete the following questionnaire.
To ensure the best design for the application, we ask that you answer all questions.
Additional information may be required.

DESIGN

Design Criteria (Conductor Size or Rating – See Below)

- If Design by Conductor Size _____
Type (Copper or Aluminum) _____
Conductor Size (kcm or AWG) _____
- If Design by Rating [Default indicated] _____
Ampacity Rating (Amps) _____
Conductor Temperature (°C) _____ [90°C]
Ambient Earth Temperature (°C) _____ [20°C for Canada, 25°C for U.S.]
Load Factor _____ [75% or 100%]
Earth RHO (°C-cm/Watt) _____ [90°C-cm/Watt]
Number of Ducts (If more than one, provide sketch) _____
Spacing between ducts, center-to-center (inches) _____ [7.5"]
Depth of Burial (inches) _____ [36" for single duct or 30" to top of duct bank]
Concrete Encasement? Yes No
If yes, Concrete RHO (°C-cm/Watt) _____ [80°C-cm/Watt]
Thickness of Concrete (inches) _____ [3"]

SYSTEM

- System voltage Phase to Phase (kV) _____
Phase to Ground (kV) _____
Duct Size (inches) _____
Duct Type (round or square) _____
Condition of Duct _____
Preferred Cable Type (3/C or 1/C) _____
System Fault Current Requirements:
Amps _____
Duration (cycles or seconds) _____

CONTACT INFORMATION (if additional details are required)

Name _____
Telephone _____

PRODUCT NOTES:

Return to Prysmian Power Cables and Systems Customer Service.

Information in brackets "[]" is considered typical values and will be used for electrical calculations unless otherwise specified.

Information Subject to Change without Notice.