

# Underground Residential Distribution (URD) Cable

Concentric Neutral (CN) | Jacketed & Unjacketed | 15kV & 25kV | Direct Burial Service

## PRODUCT OVERVIEW

Mirabel Energy USA URD (Underground Residential Distribution) cable with concentric neutral construction is the standard for direct buried underground electric service in utility distribution systems across North America. The concentric neutral design uses helically applied copper wires around the insulated conductor to simultaneously serve as the system neutral, shielding layer, and fault current return path — eliminating the need for a separate neutral conductor in direct buried applications. Available in 15kV and 25kV voltage classes with XLPE or TR-XLPE (Tree-Retardant Cross-Linked Polyethylene) insulation per ICEA S-97-682 and RUS specifications. Jacketed concentric neutral (JCN) constructions provide additional corrosion protection for coastal, highly conductive soil, and stray current environments. The preferred cable for utility cooperatives, municipal utilities, and IOUs deploying underground distribution.

90°C Normal Operation	130°C Emergency Overload	250°C Short-Circuit Fault	1,000 lbs/ft Max Sidewall Pressure
Direct Burial CN Construction	TR-XLPE / XLPE Insulation	15kV / 25kV Voltage	RUS Approved Standard

## APPLICATIONS

- Utility underground residential and commercial distribution service
- Rural electric cooperative underground network construction
- Municipal utility underground conversion from overhead lines
- Subdivision and planned community underground electric distribution
- Padmount transformer primary feed in residential and commercial areas
- Underground service lateral — utility pole to meter base

## KEY SPECIFICATIONS

- Concentric neutral (CN): copper wires serve as shield, neutral, and fault return
- Jacketed CN (JCN) and unjacketed CN available — JCN for corrosive soil environments
- TR-XLPE (Tree-Retardant XLPE) insulation — extended service life in wet environments
- 15kV and 25kV voltage classes per ICEA S-97-682 and RUS Bulletin 1728F-U1
- Full and 1/3 concentric neutral configurations — selectable for system design
- Black LLDPE outer jacket for JCN constructions — UV and moisture resistant
- Conductor sizes: #2 AWG through 1000 kcmil stranded aluminum or copper
- Compatible with standard utility compression and mechanical connectors

## TECHNICAL SPECIFICATIONS

Parameter	15kV CN (TR-XLPE)	25kV CN (TR-XLPE)
Voltage Rating	15kV / 110kV BIL	25kV / 150kV BIL
Insulation Type	TR-XLPE	TR-XLPE
Insulation Thickness	175 mils	260 mils
Neutral Construction	Concentric Cu wire	Concentric Cu wire
Jacket (JCN)	Black LLDPE	Black LLDPE
Conductor Material	Al or Cu stranded	Al or Cu stranded
Standard	ICEA S-97-682 / RUS	ICEA S-97-682 / RUS