

PAYTON XLPE (Self-Supporting)

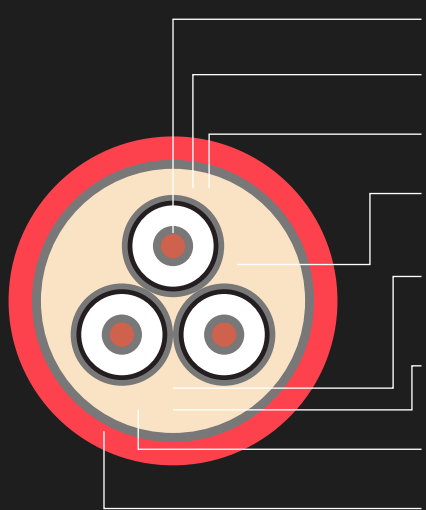
Portable power cable for use in mines



GENERALITIES

Mainly designed for primary energy supply in mines and industrial networks which are typically installed as fixed cables. Its robust design makes it a valid alternative for use in extreme applications, suitable to be self-supporting from the surface when lowered down a vertical shaft or a borehole. Additionally, the construction can incorporate double armour in order to increase resistance to torsional stresses.

CABLE DESIGN



- / CONDUCTOR**
Circular compacted copper (class 2).
- / CONDUCTOR SCREEN**
Extruded semiconducting compound. (Bonded to the insulation and applied simultaneously with the insulation).
- / INSULATION**
Extruded cross linked polyethylene (XLPE).
- / INSULATION SCREEN**
Extruded semiconducting compound. (Applied simultaneously with the insulation).
- / METALLIC SHIELD**
Annealed copper wires. (Designed to provide not less than 50% electrical conductance of one associated power conductor).
- / SEPARATION SHEATH**
Extruded PVC compound.
- / ARMOUR**
Galvanized steel wires. (Electrical conductance is not considered)
- / OUTER SHEATH**
TPO-HFFR (Thermoplastic polyolefin - Halogen Free Flame Retardant).

APPROVALS
AS/NZS 1972
IEC 60502-2

KEY PERFORMANCE ATTRIBUTES

- / High mechanical resistance
- / Excellent dielectric properties
- / Wide temperature range of continuous operation (-25°C to +90°C)
- / Good chemical exposure resistance
- / Flame retardant

ON-LINE CONTROL DEVICES

- / Spark tester
- / Center view
- / Thickness measurer

TECHNICAL DATA - Voltage level (U₀/U) = 8,7/15 kV

| Nominal Area mm ² | Conductor Diameter (approx) mm | Cable Diameter (approx) mm | Nominal Weight (approx) kg/km | Max. Suspended Length (armour) m | Bending Radius (minimum) | | Electrical Resistance (maximum) | | Inductance mH/km | Capacitance µF/km | Short Circuit current (Phase Cond.) kA | Ampacity (90° in conductor) | |
|---------------------------------|--------------------------------------|----------------------------------|-------------------------------------|--|-----------------------------|-------------------|------------------------------------|--------------------------------|---------------------|----------------------|--|--------------------------------|-----------------------|
| | | | | | (during installation) mm | (installed) mm | DC (20°C) (maximum) Ω/km | AC (90°C) (maximum) Ω/km | | | | direct buried (90°C) A | in air (30°C) A |
| 35 | 7.05 | 66.4 | 7267 | 404 | 1659 | 996 | 0.524 | 0.668 | 0.404 | 0.182 | 5.0 | 154 | 172 |
| 50 | 8.15 | 69.2 | 8039 | 383 | 1729 | 1038 | 0.387 | 0.493 | 0.387 | 0.198 | 7.2 | 181 | 205 |
| 70 | 9.90 | 73.4 | 9344 | 354 | 1834 | 1101 | 0.268 | 0.342 | 0.365 | 0.225 | 10.0 | 220 | 253 |
| 95 | 11.65 | 77.5 | 10764 | 328 | 1937 | 1162 | 0.193 | 0.247 | 0.348 | 0.252 | 13.6 | 263 | 307 |
| 120 | 13.05 | 82.4 | 13101 | 373 | 2058 | 1235 | 0.153 | 0.196 | 0.338 | 0.273 | 17.2 | 298 | 352 |
| 150 | 14.40 | 85.7 | 14480 | 352 | 2142 | 1285 | 0.124 | 0.159 | 0.329 | 0.294 | 21.5 | 332 | 397 |
| 185 | 16.15 | 89.7 | 16234 | 328 | 2241 | 1345 | 0.0991 | 0.1275 | 0.319 | 0.321 | 26.5 | 374 | 453 |
| 240 | 18.65 | 95.7 | 19320 | 300 | 2392 | 1435 | 0.0754 | 0.0976 | 0.307 | 0.358 | 34.3 | 431 | 529 |



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