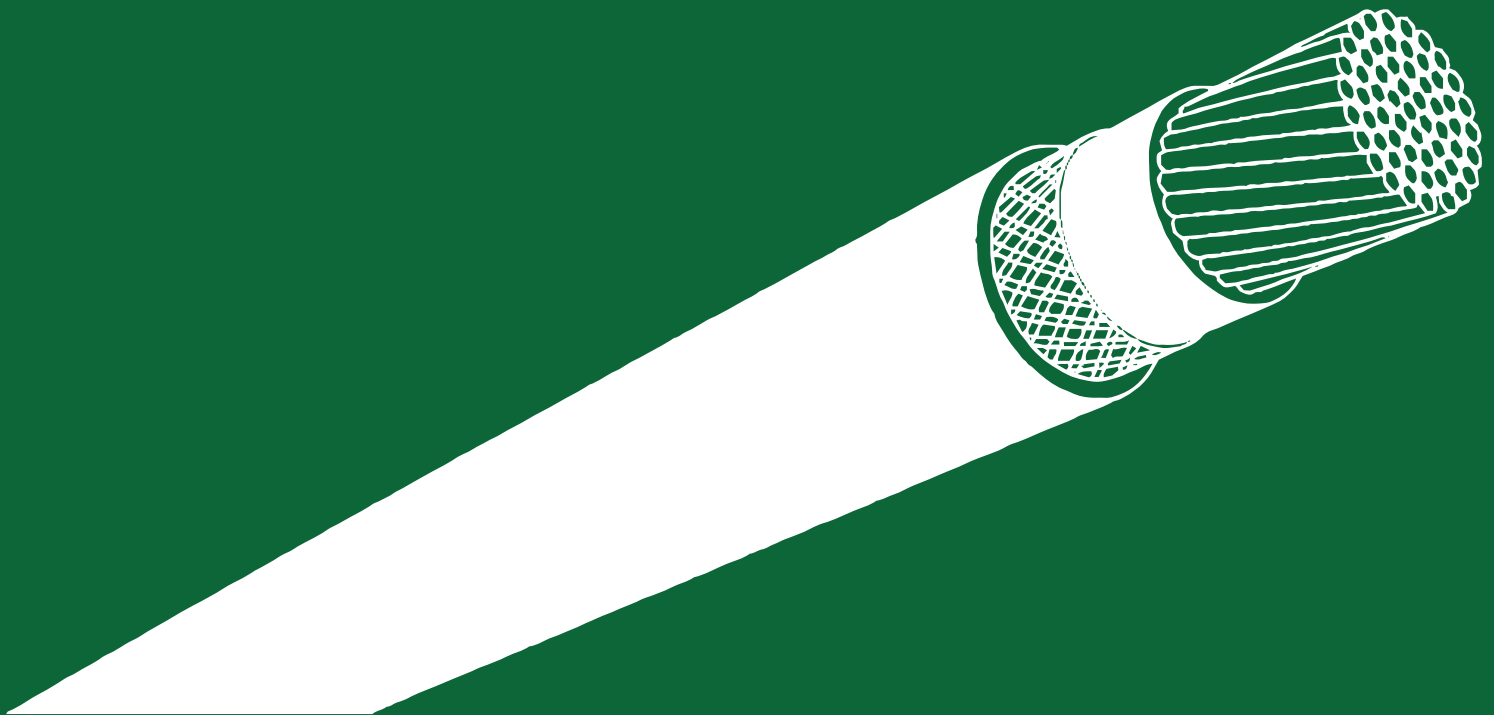


TIKA

C A B L E

Building & Construction



Description

Building and construction cables are the most widely used cables in any catalog, found in every residential, commercial, and institutional building. This category focuses on low voltage (0.6/1kV and below) cables for fixed installation, delivering power from the building's main distribution board to final circuits — lighting, power sockets, air conditioning, lifts, and all electrical equipment.

Products include armoured cables (XLPE/SWA/PVC) for main feeders and underground service entrances, unarmoured cables for indoor risers and tray installations, flexible single-core cables for panel wiring, and twin & earth cables for final residential circuits. These cables are designed for long service life, fire safety, and ease of installation by electricians.

Typical applications:

Residential housing and apartments

Office buildings and commercial centers

Schools, hospitals, and government buildings

Shopping malls and hotels

Industrial buildings and warehouses

Specification

XLPE/PVC/SWA/PVC Armoured Cable (NYY / NYCY)

This 0.6/1kV armoured power cable is the workhorse of building electrical distribution. It features a stranded copper or aluminium conductor, XLPE insulation for high current-carrying capacity and thermal stability, an inner bedding, a steel wire armour (SWA) layer providing exceptional mechanical protection against impact, crushing, and rodent attack, and a durable PVC outer sheath. This cable is designed for fixed installation in harsh environments — directly buried underground, in concrete, or on exposed cable trays where mechanical damage is a risk. It is the standard choice for main building feeders, underground service entrances, and supply to heavy equipment.

XLPE/PVC Unarmoured Cable (NYA / NAYY)

This unarmoured version of the building power cable is intended for indoor fixed installation where mechanical protection is provided by conduit, trunking, or cable trays. The cable features a stranded copper or aluminium conductor, XLPE insulation, and a PVC outer sheath. Without the steel armour, it is lighter, more flexible, and easier to terminate than its armoured counterpart. Common applications include main distribution boards to sub-boards, riser cables in apartment buildings, and feeder cables in commercial buildings where the cable is protected within building structure.

PVC/PVC Single Core Cable (6491X / H07V-K)

This flexible single-core cable is the standard for internal wiring of switchboards, control panels, and electrical enclosures. The cable features a Class 5 stranded annealed copper conductor for flexibility, PVC insulation, and a PVC sheath. Rated at 450/750V, it is suitable for fixed protected installation inside conduits, on cable trays, or within the wiring channels of electrical panels. Electricians favor this cable for its flexibility, ease of stripping and terminating, and reliable performance. It is commonly used for panel-to-device wiring, control circuits, and internal connections within electrical distribution boards.

PVC/PVC Twin & Earth Cable

This flat twin and earth cable is the standard fixed wiring cable for residential and light commercial buildings. It features two insulated solid copper conductors (live and neutral) plus an uninsulated bare copper earth conductor, all laid flat and sheathed in PVC. The flat profile allows easy clipping to walls and joists, while the solid conductors provide secure termination into socket outlets, light switches, and consumer units. Rated at 300/500V, this cable is used for final circuits — lighting, power sockets, air conditioning units, and water heaters — in houses, apartments, and small offices throughout Southeast Asia.

PVC/SWA/PVC Armoured Cable

This 0.6/1kV armoured cable is an economical alternative to XLPE-insulated cables for general building applications. It features a stranded copper or aluminium conductor, PVC insulation, steel wire armour (SWA) for mechanical protection, and a PVC outer sheath. While the PVC insulation offers lower current rating compared to XLPE, this cable remains a popular choice for non-critical feeders where budget is a primary consideration and ambient temperatures are moderate. Typical applications include basement main feeders, external lighting supplies, and general building power where fire performance requirements are standard.



XLPE Insulated PVC Sheathed Armoured Cable



XLPE Insulated PVC Sheathed Cable



PVC Insulated PVC Non-Sheathed Cable



PVC Insulated PVC Sheathed Armoured Cable

Overhead Conductors

Parameter	XLPE/SWA/PVC (NYY/NYCY)	XLPE/PVC Unarmoured (NYA/NAYY)	PVC/PVC Single Core (6491X)	Twin & Earth Cable
Voltage Rating	0.6/1kV	0.6/1kV	450/750V	300/500V
Conductor	Class 2 stranded copper or aluminium	Class 2 stranded copper or aluminium	Class 5 flexible stranded copper	Class 1 solid copper
Conductor Cross-section	1.5mm ² – 400mm ²	1.5mm ² – 400mm ²	1.0mm ² – 240mm	1.0mm ² – 240mm
Number of Cores	1, 2, 3, 4, 5 core (or multicore)	1, 2, 3, 4, 5 core (or multicore)	Single core	2 core + bare earth (Twin & Earth)
Insulation	XLPE (type GP8 or GP7)	XLPE (type GP8 or GP7)	PVC (type TI1)	PVC (type TI1)
Insulation Thickness	IEC 60502-1 Table 5	IEC 60502-1 Table 5	IEC 60227 Table 2	IEC 60227 Table 2
Core Identification	Color coded (brown/black/grey/blue) or numbers	Color coded or numbers	Color coded	Brown (live), Blue (neutral), Bare (earth)
Bedding	PVC (type BS 7655)	None	None	None
Armour	Steel wire armour (SWA), galvanized	None	None	None
Armour Coverage	≥90%	N/A	N/A	N/A
Sheath	PVC (type TM1 or ST2)	PVC (type TM1 or ST2)	PVC (type TM1)	PVC (type TM1)
Sheath Color	Black (standard) or grey	Black or grey	Any color (brown/blue/grey/yel- low-green typical)	White or grey
Max Conductor Temp (normal)	90°C (XLPE)	90°C (XLPE)	70°C (PVC)	70°C (PVC)
Max Short Circuit Temp	250°C (XLPE)	250°C (XLPE)	160°C (PVC)	160°C (PVC)
Standards	IEC 60502-1, MS 1058	IEC 60502-1, MS 1058	IEC 60227, BS 6004	BS 6004, IEC 60227
Certification Options	SIRIM (MS), TIS, SNI	SIRIM (MS), TIS, SNI	SIRIM (MS), TIS, SNI	SIRIM (MS), TIS, SNI

