

1. Applications

For indoor or outdoor installation in the open-air in-tray, trough, and conduit or for direct burial in free-draining soil or inside duct where no mechanical damage is to be expected. Power cable for utilities low-voltage underground distribution systems and in commercial buildings, industrial plants, power stations and substations. For systems operating at not more than 0.6 kV between a conductor to earth or 1 kV between conductors at a maximum conductor temperature of 90 °C for continuous normal operation and 250 °C for short circuit.

Reference Standards and documents

The cables covered by this specification manufactured and tested as per the following references:

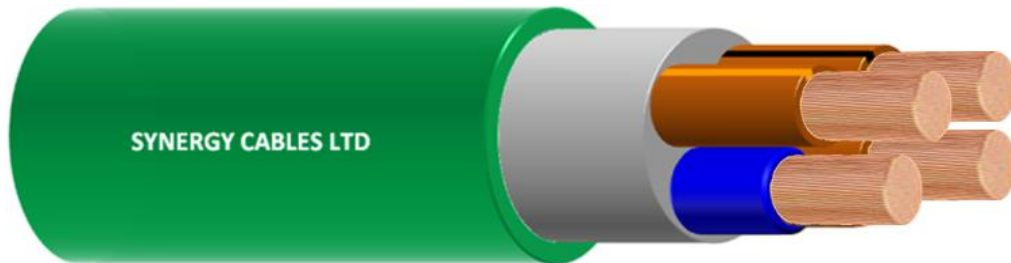
2.1	Conforms to IEC 60502-1 Standard: <i>“Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um = 1,2 kV) up to 30 kV (Um = 36 kV)” – “Part 1: Cables for rated voltages of 1 kV (Um = 1,2 kV) and 3 kV (Um = 3,6 kV)”</i> .
2.2	Conforms to SI 1516-1 Standard: <i>“Extruded solid dielectric insulated power cables for rated voltages from 1 kV to 30 kV”</i> .
2.3	Conforms to IEC 60228 Standard: <i>“Conductors of insulated cables”</i>
2.4	Conforms to European Union Regulation (EC) No. 1907/2006, concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (<i>REACH Regulation</i>).
2.5	Conforms to EU Directive No. 2002/95/CE on Restriction on Hazardous Substances, (<i>RoHS Directive</i>).
2.6	Conforms to IEC 60332-1 (<i>Flame propagation test</i>)

2. Low-Voltage Cables Construction

A copper class 5 stranded conductor has an extruded cross-linked polyethylene (XLPE) colored insulation applied around the conductor.

The insulation colors are as per **Table 201** from **Standard of Israel 1516-1**: Brown – for phase, Blue – for neutral. Yellow/Green – for grounding.

The cores twisted together and covered with an extruded inner covering. A green PVC UV-Resistant outer sheath with printed marking extruded overall.



Construction and Dimensional Data

Catalog number	Conductor cross-sectional area	Nominal		Minimum at any point	Approximate		Minimum bending radius	Max. conductor resistance at 20°C	Short circuit rating, 1sec (1)	Current rating (2)		Voltage drop a.c. (5)	
		Conductor diameter	Insulation thickness	Sheath thickness	Outer diameter	Cable weight				In Air (3)	Buried (4)	Single-phase	Three-phase
181300615	3x6	3.2	0.7	1.24	15.5	380	155	3.30	0.83	50	41	-	7.29
181400615	4x6	3.2	0.7	1.24	16.5	435	165	3.30	0.83	50	41	-	7.29

Remarks:

1 – Short circuit current rating calculated considering adiabatic rise of the conductor temperature from 90°C up to 250°C;

2 – Current rating, as per Israeli Electrical Code (קובץ תקנות חשמל);
 - Since the conductors is class 5, a derating factor of 0.965 was applied;

3 – Current rating for cable in free-air, as per Israeli Electrical Code (קובץ תקנות חשמל), table 90.7 for three-phase system:
 - One cable, air ambient temperature = 35°C, protected against direct sun radiation (shaded);

4 – Current rating for direct-buried cable, as per Israeli Electrical Code (קובץ תקנות חשמל), table 90.6 for three-phase system:
 - One cable, ambient soil temperature = 30°C, native soil resistivity = 2.5 K*m/w, burial depth = 0.8 m, without additional heat sources in the vicinity;

5 – Voltage-drop – calculated for a working temperature of 90°C, a system frequency of 50 Hz and a power factor = 1.0.



Rated Voltage
0.6/1 kV



Conductor Flexibility –
Stranded CL. 5



Minimum Bending Radius
during Pull
10 x D



Maximum Conductor
Temperature in
Service 90°C



UV-Resistant



Lead Free



Flame Retardant
IEC 60332 - 1