

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.

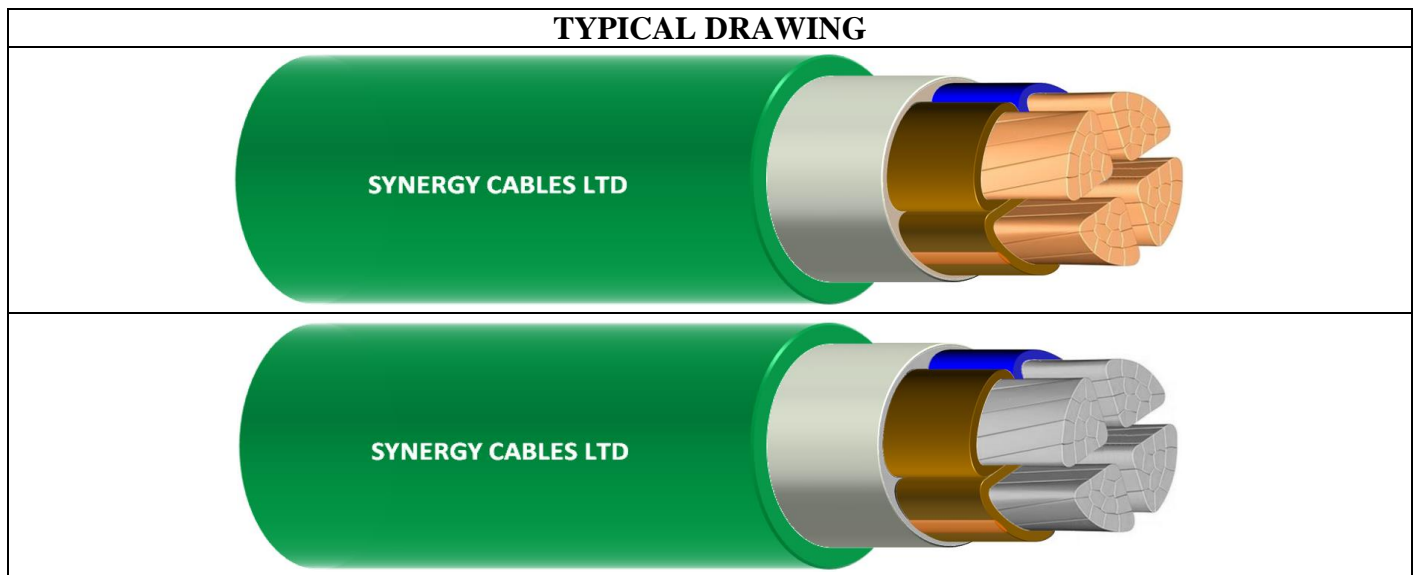
2. Reference Standards and documents

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>)

3. Low-Voltage Cables Construction

A copper or aluminum compacted, shaped stranded conductors, have an extruded cross-linked polyethylene (XLPE) colored insulation, applied around the conductor. The cores twisted together and covered with an extruded inner covering. A green PVC UV-Resistant outer sheath with printed marking, assessed by using the Arc Xenon test as per *UL 1581*, *UL 2556* extruded overall.



4. Low-Voltage Cable Data

4.1 N2XY FR1 UV FOUR CORE SECTOR-SHAPED COPPER CONDUCTOR

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 ac (5)	
		Insulation thickness	Assembly diameter	Sheath thickness	Outer diameter	Cable weight				In Air (3)	Buried (4)	Single phase	Three phase
	mm ²	mm	mm	mm	mm	kg/km	mm	Ω/km	kA	A		mV/A/m	
18109696UV	4 x 35	0.9	21.0	1.24	25.5	1,610	385	0.524	5.0	152	113	-	1.16
18109695UV	4 x 35G												
18110606UV	4 x 50	1.0	24.0	1.32	28.5	2,160	430	0.387	7.1	184	134	-	0.856
18110605UV	4 x 50G												
18110996UV	4 x 70	1.1	27.0	1.40	32.0	3,000	480	0.268	10.0	236	166	-	0.598
18110995UV	4 x 70G												
18102994UV	4 x 95	1.1	31.0	1.48	36.0	4,075	540	0.193	13.6	286	196	-	0.429
18102995UV	4 x 95G												
18110396UV	4 x 120	1.2	34.0	1.56	39.5	5,110	595	0.153	17.1	332	223	-	0.341
18110395UV	4 x 120G												
18110796UV	4 x 150	1.4	38.5	1.72	44.5	6,255	670	0.124	21.4	383	252	-	0.278
18110795UV	4 x 150G												
1810986UV	4 x 185	1.6	42.0	1.80	48.0	7,820	720	0.0991	26.4	438	283	-	0.223
1810985UV	4 x 185G												
18119497UV	4 x 240	1.7	48.7	2.04	55.5	10,125	835	0.0754	34.3	516	326	-	0.172
18119696UV	4 x 240G												

1. Short-circuit current calculated for adiabatic heating considering a temperature rise from 90°C up to 250°C in 1.0 sec.
2. Current rating based on the value listed in Israeli Electrical Code 2014, for a conductor working temperature of 90°C load factor LF = 1.0 (100%)
3. Current rating for one cable in free air, ambient temperature = 35°C, as per table 90.7 from Israeli Electrical Code.
4. Current rating for one cable in buried duct as per table 90.6 from Israeli Electrical Code, duct buried at 0.8m depth, ambient temperature = 30°C, in soil having thermal resistivity of 2.5 K*m/W.
5. Calculated for one cable, conductor temperature = 90°C, System frequency = 50 Hz, load power factor (cos φ) = 1.0
Note: * - G - means a grounding core.

4.2 NA2XY FR1 UV FOUR CORE SECTOR-SHAPED ALUMINUM CONDUCTOR

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 ac (5)	
		Insulation thickness	Assembly diameter	Sheath thickness	Outer diameter	Cable weight				In Air (3)	Buried (4)	Single phase	Three phase
	mm ²	mm	mm	mm	mm	kg/km	mm	Ω/km	kA	A		mV/A/m	
33709996UV	4 x 35	0.9	21.0	1.24	25.5	780	385	0.868	3.3	115	87	-	1.93
33709995UV	4 x 35G												
33710096UV	4 x 50	1.0	24.0	1.32	28.5	970	430	0.641	4.7	140	104	-	1.42
33710095UV	4 x 50G												
33711296UV	4 x 70	1.1	27.0	1.40	32.0	1,330	480	0.443	6.6	180	128	-	0.98
33711295UV	4 x 70G												
33712096UV	4 x 95	1.1	31.0	1.48	36.0	1,720	540	0.320	9.0	218	153	-	0.71
33712095UV	4 x 95G												
33713296UV	4 x 120	1.2	34.0	1.56	39.5	2,105	595	0.253	11.3	252	173	-	0.56
33713295UV	4 x 120G												
33714396UV	4 x 150	1.4	38.5	1.72	44.5	2,610	670	0.206	14.2	292	195	-	0.46
33714395UV	4 x 150G												
33715396UV	4 x 185	1.6	42.0	1.80	48.0	3,185	720	0.164	17.5	333	219	-	0.366
33715395UV	4 x 185G												
33716196UV	4 x 240	1.7	48.7	2.04	55.5	4,125	835	0.125	22.7	393	253	-	0.280
33716195UV	4 x 240G												

1. Short-circuit current calculated for adiabatic heating considering a temperature rise from 90°C up to 250°C in 1.0 sec.
2. Current rating based on the value listed in Israeli Electrical Code 2014, for a conductor working temperature of 90°C load factor LF = 1.0 (100%)
3. Current rating for one cable in free air, ambient temperature = 35°C, as per table 90.7 from Israeli Electrical Code.
4. Current rating for one cable in buried duct as per table 90.6 from Israeli Electrical Code, duct buried at 0.8m depth, ambient temperature=30°C, in soil having thermal resistivity of 2.5 K*m/W.
5. Calculated for one cable, conductor temperature = 90°C, System frequency = 50 Hz, load power factor (cos φ)= 1.0
 Note: * - G - means a grounding core.



Rated Voltage
U_o/U
0.6/1 kV



Conductor Flexibility
Stranded Cl.2



Maximum Conductor Temperature in Service 90°C



Minimum Bending Radius
15(xD)



UV-Resistant



Flame Retardant
IEC 60332 – 1



Lead Free