Synergy Cables Ltd.
Sapirim Industrial Park, 1 Eshel Street P.O.B.102,
Sderot ISRAEL 8701002
TEL 972-8-6809444, FAX 972-8-6890014
http://www.synergy-cables.com

1. Applications

For building wire installed in conduit in dry location and inter-wiring in switch board and control panel.
Suitable for fixed protected installation in, or on, lighting for voltages up to and including 450/750V a.c.

2. Reference Standards and documents

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

2.1	Conforms to IEC 60227-1 Standard: *"Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V".*
2.2	Conforms to IEC 60228 Standard: *"Conductors of insulated cables*
2.4	Conforms to European Union Regulation (EC) No. 1907/2006, concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (*REACH Regulation*).
2.5	Conforms to EU Directive No. 2002/95/CE on Restriction on Hazardous Substances, (*RoHS Directive*).
2.6	Conforms to IEC 60332-3-24 (*Flame propagation test*)

3. Single Core Low-Voltage Cables Construction

A copper, compacted circular stranded conductor has an extruded with polyvinyl chloride (PVC) colored green-and yellow insulation applied around the conductor.
The distribution of the colors for the core colored green-and-yellow shall comply with the following condition (which is in accordance with IEC 60173): for every 15 mm length of core, one of these colors shall cover at least 30 % and not more than 70 % of the surface of the core, the other color covering the remainder.

TYPICAL DRAWING

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4. Low-Voltage Cable Data

4.1 IEC 60227 IEC 01 /FR3 SINGLE CORE COPPER CONDUCTOR

Construction and Dimensional Data

Catalog number	Conductor cross-sectional area	Nominal		Approximate		Minimum bending radius at 20°C	Max. conductor resistance at 20°C	Short circuit rating, 1sec (1)
		Conductor diameter	Insulation thickness	Outer diameter	Cable weight			
	mm²	mm	mm	mm	kg/km	mm	Ω/km	kA
13009745	16	4.7	1.0	6.7	165	40	1.15	1.8
13011145	25	5.9	1.2	8.5	260	50	0.727	2.9
13011845	35	7.0	1.2	9.5	355	55	0.524	4.0
13012745	50	8.3	1.4	11.5	475	70	0.387	5.7
13013545	70	9.9	1.4	13.0	655	80	0.268	8.0
13014045	95	11.7	1.6	15.0	935	90	0.193	10.9
13015145	120	13.2	1.6	16.5	1,165	100	0.153	13.8
13017045	150	14.5	1.8	18.5	1,420	110	0.124	17.2
13017845	185	16.3	2.0	20.5	1,800	125	0.0991	21.2
13018645	240	18.6	2.2	23.0	2,340	140	0.0754	27.6
13019745	300	20.9	2.4	26.0	2,930	155	0.0601	34.5

1. *Short-circuit current calculated for adiabatic heating considering a temperature rise from 70°C up to 160°C in 1.0 sec.*

Rated Voltage 450/750 V

Conductor Flexibility Stranded Cl.2

Maximum Conductor Temperature in Service 70°C

Minimum Bending Radius 6(xD)

Flame Retardant IEC 60332 – 3-24

Lead Free