



PRODUCT RANGE

- * Single core unsheathed flexible cable from 0.5 sqmm to 240 mm with copper conductor and type D insulation properties.
- * Multi core sheathed 2 core upto and including 35 mm and 3 core upto and including 35 mm with copper conductor with type A insulation and type sheathing category
- * copper electrolytic grade as flexibility class 1, 2 & 5.
- * Insulation: PVC types D of IS for maximum temperature 70 C PVC Type C of IS : 5831-1984 for Conductor Temperature 85 degree C For Single Core Cables Colour of Insulation cable for fixed installation Single core Wire & Cables: Red, Yellow, Blue, Black, Grey, Green, White or any colour as per customer's requirement. PVC types D for maximum 0 conductor temperature 70 C . PVC Type for Conductor Temperature 85 degree C For Multi Core Cables
- * For Multicore Flexible Cables: Colour of Insulation Flexible Wires, Cables & Cords Two Core Cables: Red & Black Three Core Cables: Red, Yellow & Blue Four Core Cables: Red, Yellow, Blue & Black Five Core Cables: Red, Yellow, Blue, Black & Grey Sheath PVC Type ST-1/ST-3 For conductor temperature 70 degree C. for Conductor Temperature 090 C.
- * Outer Sheath Non Weatherproof Cables : Black or any colour as per Customer's requirement Weatherproof Cables :Black only
- * Tolerance on Thickness of Insulation: The smallest of the measured values of thickness of insulation shall not fall below the nominal value specified in the relevant tables by more than $(0.1\text{mm} + 0.1t_l)$ where t_l = nominal Thickness of insulation in mm.
- * Tolerance on Thickness of Sheath: The smallest of the measured values of thickness of sheath shall not fall below the nominal value specified in the relevant tables by more than $(0.1\text{mm} + 0.15t_s)$ where t_s = Nominal Thickness of Sheath in mm.
- * Laying up: The cores for 2,3,4 upto 61 core cables are to be laid together with a suitable right hand lay.

Power Cable Selection:

The following factors are important for selecting the suitable cable construction Products described in this catalog are standard types and in accordance with the recommendation of IEC and CES publications wherever applicable

- Voltage designation.
- Load factor.
- Required load
- Level of short circuit current .
- Environmental conditions.
- Laying conditions.

Solid wire

Available in deference sizes

1.5mm²

2.5mm²

4mm²

6mm²

10mm²



*:Solid Conducto

** :Stranded Conductor

Technical Data

Max. operating temperature:70°C

Max .short circuit temperature: | 60°C(max.5sec.) Rated voltage :

300/500 V

450/7Construction



Standards Applied : CES standard
-IEC 60227

Application

In dry rooms, switch and distribution boards, for laying in conduit on and under plaster and on insulating supports above plaster.

DIMENSIONANDWEIGHTS				ELECTRICALPROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity(A)	
mm ²	mm	kg/km	m	Ω/km	Ingroundat20°C	Inairat30°C
*0,5	2,1	9	100	36,0	-	9
*0,75	2,3	12	100	24,5	-	15
*1	2,5	15	100	18,1	11	19
*1,5	2,8	21	100	12,1	15	24
*2,5	3,3	35	100	7,41	20	32
*4	3,8	49	100	4,61	25	42
*6	4,3	68	100	3,08	33	54
*10	6,0	114	100	1,83	45	73
**16	7,0	170	1000	1,15	61	98
**25	8,5	265	1000	0,727	83	129
**35	9,5	376	1000	0,524	103	158
**50	11,0		1000	0,387	132	198



② Flexible wire

k: Flexible conductor

standards:CES standard

Technical Data

Max . operating temperature :90°C
 Max.shortcircuittemperature: 160°C
 (max.5sec.)
 Rated voltage : 300/500 V
 450/750V

Application

For protected installation and light fitting .Also for in conduit, on and under plaster.

*:300/500V(H05V2-K,IEC60227)

Construction

① Flexible copper conductor

② PVC Insulation (90c)

DIMENSIONANDWEIGHTS				ELECTRICALPROPERTIES		
Nominal Cross Section	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	DC Conductor Resistance at 20°C Max	Current Carrying Capacity(A)	
mm ²	mm	kg/km	m	Ω/km	Ingroundat20°C	Inairat30°C
0,5*	2,1	10	100	39,0	-	12
0,75*	2,3	13	100	26,0	-	18
1*	2,5	16	100	19,5	12	22
1,5	3,0	21	100	13,3	17	26
2,5	3,6	33	100	7,98	22	35
4	4,2	50	100	4,95	28	46
6	4,8	68	100	3,30	36	59
10	6,5	114	100	1,91	50	80
16	8,0	176	100	1,21	50	80
25	10,0	259	1000	0,780	67	108
35	11,0	372	1000	0,554	91	142

Multi Core Insulated and Sheathed-Circular Cable

Application: PVC insulated cables intended for electrical power, lighting and internal wiring

Specifications



Type	:	Cu/PVC/PVC
Standard	:	ICS,CES
Nominal Voltage	:	300/500V
Conductor	:	Class 2 Annealed Copper
Insulation	Material	:PVCTII
	Colour	:Refer last page-“CABLE CORE COLOURS”
Sheathing	Material	:PVCTMI
	Colour	:Not Specified

Nominal Cross sectional Area a	No.&Dia.of wires	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Sheathing Thickness	Mean Overall Diameter		Minimum Insulation Resistance at 70°C	Max.d.c. Resistance at 20 °C
					Lower Limit	Upper Limit		
mm ²	x/mm	mm	Mm	mm	mm		MΩ.km	Ω/km
1.5	30/0.26	0.7	0.4	1.2	8.4	10.5	0.010	12.1
2.5	50/0.26	0.8	0.4	1.2	9.6	12.0	0.009	7.41
4	56/0.31	0.8	0.4	1.2	10.5	13.0	0.0077	4.61
6	84/0.31	0.8	0.4	1.2	11.5	14.0	0.0065	3.08
10	140/0.31	1.0	0.6	1.4	15.0	17.5	0.0065	1.83
16	126/0.41	1.0	0.6	1.4	16.5	20.0	0.0052	1.15
25	196/0.41	1.2	0.8	1.4	20.5	24.0	0.0050	0.727
35	276/0.41	1.2	1.0	1.6	23.0	27.5	0.0044	0.524

Multi Core Flexible PVC Sheathed cables

Two core:- three core four core five core ground neutral



S/no	Nominal cross sectional area mm ²	No & diameter of each strand	Nominal conductor diameter (mm)	Maximum dc resistance at 20°c ohm/km	Insulation		Sheath		Maximum insulation resistance at 70°c Mohm.km	Cable approximate weight (kg/kg)
					Average thickness (mm)	Mean overall diameter (mm)	Average thickness (mm)	Mean overall diameter (mm)		
Two cores										
1	0.5	16/0.21	0.9	39	0.5	2.0_2.4	0.6	5.4_6.8	0.012	46
2	0.75	24/0.21	1.1	26	0.6	2.2_2.6	0.8	5.7_7.2	0.011	55
3	1	32/0.21	1.3	19.5	0.6	2.5_2.9	0.8	5.9_7.5	0.010	65
4	1.5	30/0.26	1.6	13.3	0.7	2.8_3.4	0.8	6.8_8.6	0.010	88
5	2.5	50/0.26	2.01	7.98	0.8	3.4_4.1	1	8.4_10.4	0.009	139
6	4	56/0.31	2.65	4.95	0.8	3.9_4.8	1.1	10.0_13.0	0.007	185
7	6	84/0.31	3.3	3.3	0.8	4.4_5.3	1.2	11.0_14.0	0.006	224.5
8	10	140/0.31	4.2	1.91	1	5.7_6.8	1.4	13.5_17.5	0.0056	345.2
9	16	126/0.41	5.2	1.21	1	6.7_8.1	1.4	15.5_20.0	0.0046	478.9
10	25	196/0.41	7.5	0.78	1.2	8.4_10.2	1.4	18.5_24.0	0.0044	671
11	35	276/0.41	9.25	0.554	1.2	9.7_11.7	1.6	21.0_27.5	0.0038	928.1
Three cores										
1	0.5	16/0.21	0.9	39	0.5	2.0_2.4	0.6	5.0_6.3	0.012	55
2	0.75	24/0.21	1.1	26	0.6	2.2_2.6	0.8	6.0_6.7	0.011	70
3	1	32/0.21	1.3	19.5	0.6	2.5_2.9	0.8	6.3_8.0	0.010	78
4	1.5	30/0.26	1.6	13.3	0.7	2.8_3.4	0.9	7.4_9.4	0.010	108
5	2.5	50/0.26	2.01	7.98	0.8	3.4_4.1	1.1	9.2_11.4	0.009	163
6	4	56/0.31	2.65	4.95	0.8	3.9_4.8	1.2	10.5_13.5	0.007	227
7	6	84/0.31	3.3	3.3	0.8	4.4_5.3	1.4	12.0_15.5	0.006	283
8	10	140/0.31	4.2	1.91	1	5.7_6.8	1.4	14.5_19.0	0.0056	436.5
9	16	126/0.41	5.2	1.21	1	6.7_8.1	1.4	16.5_21.5	0.0046	626.5

10	25	196/0.41	7.5	0.78	1.2	8.4_10.2	1.6	20.5_26.0	0.0044	883.7
11	35	276/0.41	9.25	0.554	1.2	9.7_11.7	1.6	22.0_29.0	0.0038	1249.1
Four cores										
1	0.5	16/0.21	0.9	39	0.5	2.0_2.4	0.6	6.0_7.5	0.012	70
2	0.75	24/0.21	1.1	26	0.6	2.2_2.6	0.8	6.6_8.3	0.011	82
3	1	32/0.21	1.3	19.5	0.6	2.5_2.9	0.9	7.1_9.0	0.010	100
4	1.5	30/0.26	1.6	13.3	0.7	2.8_3.4	1.0	8.4_10.5	0.010	134
5	2.5	50/0.26	2.01	7.98	0.8	3.4_4.1	1.1	10.1_12.5	0.009	201
6	4	56/0.31	2.65	4.95	0.8	3.9_4.8	1.4	12.0_15.0	0.007	269
7	6	84/0.31	3.3	3.3	0.8	4.4_5.3	1.4	13.0_17.0	0.006	359
8	10	140/0.31	4.2	1.91	1	5.7_6.8	1.4	16.0_20.5	0.0056	556
9	16	126/0.41	5.2	1.21	1	6.7_8.1	1.4	18.0_23.5	0.0046	805
10	25	196/0.41	7.5	0.78	1.2	8.4_10.2	1.6	22.5_28.5	0.0044	1142
11	35	276/0.41	9.25	0.554	1.2	9.7_11.7	1.6	24.5_32.0	0.0038	1619
Five cores										
1	0.5	16/0.21	0.9	39	0.5	2.0_2.4	0.7	6.5_8.0	0.012	54
2	0.75	24/0.21	1.1	26	0.6	2.2_2.6	0.9	7.4_9.3	0.011	107
3	1	32/0.21	1.3	19.5	0.6	2.5_2.9	0.9	7.8_9.8	0.010	145
4	1.5	30/0.26	1.6	13.3	0.7	2.8_3.4	1.1	9.3_11.6	0.010	205
5	2.5	50/0.26	2.01	7.98	0.8	3.4_4.1	1.2	11.2_13.9	0.009	290
6	4	56/0.31	2.65	4.95	0.8	3.9_4.8	1.4	13.0_17.0	0.007	410
7	6	84/0.31	3.3	3.3	0.8	4.4_5.3	1.4	14.5_18.5	0.006	559
8	10	140/0.31	4.2	1.91	1	5.7_6.8	1.4	17.5_22.0	0.0056	818
9	16	126/0.41	5.2	1.21	1	6.7_8.1	1.6	20.5_26.0	0.0046	1158
10	25	196/0.41	7.5	0.78	1.2	8.4_10.2	1.6	24.5_31.5	0.0044	1761
11	35	276/0.41	9.25	0.554	1.2	9.7_11.7	1.6	27.0_35.0	0.0038	2378

BASIC ELECTRIC WIRE & CABEL INFORMATION DATA

1. Single core non – sheathed cable with rigid conductor for general purpose (solid)(60227 IEC-01) 450/750 V

NO	Nominal conductor area (mm ²)	Diameter of conductor (mm ²)	Diameter over insulation (mm ²)	Maximum conductor resistance per km @20 ⁰ c ohm	Approximate weight kg/km
1	1.5	1.35 – 1.38	2.6 - 3.2	12.5	21
2	2.5	1.76 – 1.78	3.2 – 3.9	7.41	35
3	4	2.24 – 2.55	3.6 – 4.4	4.46	49
4	6	2.75 – 3.12	4.1 – 5.0	3.08	63
5	10	3.3 – 4.4	5.3 – 6.4	1.83	114

2. single-core non-sheathed cable with flexible conductor for general purpose (60227 – IEC 02) 450/750 V

NO	Nominal conductor area (mm ²)	Diameter of conductor (mm)	Diameter over insulation (mm)	Maximum conductor resistance per km @20 ⁰ c ohm	Approximate weight kg/km
1	1.5	1.4 – 2	2.8 - 3.4	12.1	21
2	2.5	1.8 – 2.5	3.4 – 4.1	7.4	35
3	4	2.3 – 3.2	3.9 – 4.8	4.61	49
4	6	2.8 – 3.7	4.4 – 5.3	3.08	68
5	10	3.7 – 4.8	5.7 – 6.8	1.83	114
6	16	4.7 – 6.1	6.7 – 8.1	1.15	170
7	25	6 – 7.8	8.4 – 10.2	0.727	265
8	35	7.3 – 9.3	9.7 – 11.7	0.524	376

Remark:-First measure the wire pay equivalent to the result.
:-First measure the wire Pay If fit your requirement



