

**SINGLE CORE/MULTICORE FLEXIBLE CABLES AS PER IS 694/1990 VOLTAGE
GRADE UPTO 1100 VOLTS**

Area Sq. mm		0.5	0.75	1.0	1.5	2.5	4.0	6.0	10.0	16.0	25.0	35.0	50.0
Conductor	No. & Size of Wire (Nom.) mm	16/.2	24/.2	32/.2	30/.25 OR 48/.2	50/.25 OR 80/.2	56/.3	84/.3	80/.4 OR 140/.3	126/.4	196/.4	276/.4	396/.4
	Max Resistance @ 20 ° C Ohm/Km	39.0	26.0	19.5	13.3	7.98	4.95	3.30	1.91	1.21	0.780	0.554	0.386
	Current Rating DC or AC	4	7	12	15	20	27	35	46	62	80	102	138
Insulation	Thickness (Nom.) mm	0.6	0.6	0.6	0.6	0.7	0.8	0.8	1.0	1.0	1.2	1.2	1.4
Single Core Unsheathed	Overall Diameter (mm)	2.30	2.50	2.75	2.95	3.65	4.30	5.30	6.8	8.2	10.0	11.2	13.5
Single Core Sheathed	Sheath Thickness (Nom.) mm	0.9	0.9	0.9	0.9	1.0	1.0						
	Overall Diameter (Approx.) mm	4.1	4.35	4.5	4.75	5.65	6.4						
Twin Flat Sheathed	Overall Width mm	4.2	4.45										
	Overall Height mm	6.50	7.00										
2 Core	Sheath Thickness (Nom.) mm	1.0	1.0	1.0	1.0	1.1	1.1						
	Overall Diameter (Approx.) mm	6.6	7.0	7.5	8.0	9.5	11.00						
3 Core	Sheath Thickness (Nom.) mm	1.0	1.0	1.0	1.0	1.1	1.1						
	Overall Diameter (Approx.) mm	7.0	7.60	7.90	8.50	10.20	11.70						
4 Core	Sheath	1.0	1.0	1.0	1.0	1.1	1.1						

	Thickness (Nom.) mm												
	Overall Diameter (Approx.) mm	7.60	8.25	8.60	9.50	11.05	12.80						
Overall Diameter (Approx.) mm	8.30	9.10	9.60	10.3	11.7	13.95							

Note : Sheath thickness given are nominal, and overall diameters given are approximate.

The conductor strand diameters are in line with IS : 8130/1984.

The no. of wires indicated are approximate and diameter of strands is nominal and shall be such that it satisfies the requirements as per IS 694/1990. The conductor strand size and conductor resistance requirements as per IS 8130 will be satisfied.

FLEXIBLE MULTICORE CABLES (6 CORES TO 19 CORES) GENERALLY CONFORMING TO IS 694/1990 VOLTAGE GRADE UPTO 1100 VOLTS CORES

CORES

AREA		Sq. mm	0.5	0.75	1.0	1.5	2.5	4.0
6	SHEATH THICKNESS(Nom.)	mm	0.9	1.0	1.0	1.0	1.1	1.2
	OVERALL DIAMETER (Approx.)	mm	8.85	9.80	10.25	11.00	13.30	15.70
7	SHEATH THICKNESS(Nom.)	mm	0.9	1.0	1.0	1.0	1.1	1.2
	OVERALL DIAMETER (Approx.)	mm	8.85	9.80	10.25	11.00	13.30	15.70
8	SHEATH THICKNESS(Nom.)	mm	1.0	1.0	1.0	1.1	1.2	1.3
	OVERALL DIAMETER (Approx.)	mm	9.55	10.40	10.85	11.90	14.35	16.90
10	SHEATH THICKNESS(Nom.)	mm	1.0	1.1	1.1	1.1	1.3	1.4
	OVERALL DIAMETER (Approx.)	mm	11.35	12.55	13.15	14.15	17.35	20.40
12	SHEATH THICKNESS(Nom.)	mm	1.0	1.1	1.1	1.1	1.3	1.4
	OVERALL DIAMETER (Approx.)	mm	11.70	13.00	13.55	14.60	17.90	21.10
14	SHEATH THICKNESS(Nom.)	mm	1.1	1.1	1.1	1.2	1.3	1.4
	OVERALL DIAMETER (Approx.)	mm	12.55	13.65	14.30	15.60	18.90	22.20

16	SHEATH THICKNESS(Nom.)	mm	1.1	1.2	1.2	1.2	1.4	1.5
	OVERALL DIAMETER (Approx.)	mm	13.30	14.70	15.40	16.55	20.25	23.70
19	SHEATH THICKNESS(Nom.)	mm	1.1	1.2	1.3	1.3	1.4	1.5
	OVERALL DIAMETER (Approx.)	mm	14.10	15.55	16.50	17.75	21.45	25.00

SINGLE CORE HEAVY DUTY FLEXIBLE CABLES GENERALLY CONFORMING TO IS 694/1990 VOLTAGE GRADE UPTO 1100 VOLTS

AREA		Sq.mm	70.0	95.0	120.0	150.0	185.0	240.0
CONDUCTOR	NO.& SIZE OF WIRE	No./mm.	360/.5	475/.5	608/.5	750/.5	925/.5	1221/.5
	MAX. RES @ 20Deg.C	Ohm/Km	0.272	0.206	0.161	0.129	0.106	0.0801
	CURRENT DC/AC	Amps.	214	254	300	340	390	460
INSULATION	THICKNESS(Nom.)	mm	1.80	1.90	2.10	2.10	2.50	2.50
	O.D.(Approx.)	mm	16.15	18.75	21.25	22.25	25.50	28.50

CABLES UPTO 150 Sq.mm CAN ALSO BE SUPPLIED AS PER IS 2465/1984 WITH ISI MARK.

THREE & FOUR CORE HEAVY DUTY FLEXIBLE CABLES FOR VOLTAGE GRADE UPTO 1100 VOLTS

AREA		Sq.mm	6.0	10.0	16.0	25.0	35.0	50.0	70.0	95.0	120.0
CONDUCTOR	NO.& SIZE OF WIRE	mm.	84/.3	140/.3 or 80/.4	226/.3 or 126/.4	354/.3 or 196/.4	495/.3 or 276/.4	703/.3 or 396/.4	360/.5	475/.5	608/.5
	MAX.RES.	Ohm/Km.	3.3	1.91	1.21	0.78	0.554	0.386	0.272	0.206	0.161
	CURRENT	Amps.	31	42	57	72	91	120	165	200	225
INSULATION	THICKNESS	mm.	0.8	1.0	1.0	1.2	1.2	1.4	1.4	1.6	1.6
SHEATH 3-CORE	THICKNESS (Nom.)	mm	1.20	1.30	1.30	1.50	1.60	1.60	1.80	1.80	2.00
	O.D (Approx.)	mm	14.05	18.00	20.60	25.12	28.40	32.87	37.78	43.55	47.95
SHEATH 4-CORE	THICKNESS (Nom.)	mm	1.50	1.50	1.50	1.50	1.60	1.80	2.00	2.00	2.00
	O.D	mm	15.80	19.00	23.00	28.00	31.44	36.87	41.93	48.81	53.30

(Approx.)

COLOUR CODING**TYPE**

	COLOURS - CORE	COLOURS - SHEATH
Single Core Unsheathed (SC UNSH)	Red; Yellow; Blue; Black	
Single Core Sheathed (SC SH)	Black	White or Black
Twin Twisted	Red & Black	
Twin Parallel	White or Grey	
Twin Flat Sheathed (TF SH)	Red & Black	Black & Grey
2 Core Round Sheathed (2 Cr Rd)	Red & Black	Black & Grey
3 Core round Sheathed (3 Cr Rd)	Red; Black & Yellow/Green for earth	Black or Grey
4 Core Round Sheathed (4 Cr Rd)	Red; Yellow, Blue & Yellow /Green for earth	Black or Grey
5 Core Round Sheathed (5 Cr Rd)	Red; yellow, Blue, Black & Grey	Black or Grey

Cables can be offered to British or equivalent standards. Specifications for a representative single core range are given below :

SINGLE CORE UNSHEATHED CABLES, 450/750V DC AND 600/1000 V AC

Conductor Cross Section mm	Radial Thickness of insulation (Nom.) mm	Cables with stranded conductor (H07V-R) Conductor construction No./size of wire mm	Cables with stranded conductor (H07V-R) Cable OD (maximum) mm	Cables with flexible conductor (H07V-K) Conductor construction No./size of wire mm	Cables with flexible conductor (H07V-K) Cable OD (maximum) mm
0.5	0.6	7/.30	2.6	16/.2*	2.6
0.75	0.6	7/.37	2.8	24/.2*	2.8
1.0	0.6	7/.44	3.0	32/.2*	3.0
1.5	0.7	7/.53	3.5	30/.25	3.5
2.5	0.8	7/.67	4.2	50/.25	4.2
4.0	0.8	7/.85	4.8	56/.3	4.8
6.0	0.8	7/1.04	5.4	84/.3	6.4
10.0	1.0	7/1.35	6.8	80/.4	7.6
16.0	1.0	7/1.70	8.0	126/.4	8.8

25.0	1.2	7/2.14	9.8	196/.4	11.0
35.0	1.2	19/1.53	11.0	276/.4	12.5
50.0	1.4	19/1.78	13.0	396/.4	14.5
70.0	1.4	19/2.14	15.0	360/.5	17.0
95.0	1.6	19/2.52	17.0	475/.5	19.0
120.0	1.6	37/2.03	19.0	608/.5	21.0
150.0	1.8	37/2.25	21.0	756/.5	23.5
185.0	2.0	37/2.52	23.5	925/.5	26.0
240.0	2.2	61/2.25	26.5	1221/.5	29.5

* These sizes are as per BS : 6500 (harmonised code HO5 V-K), others are as per BS 6004.

Notes :

1. **Standard conductors are Class 2 type, flexible conductors are Class 5 type as per BS 6360.**
2. **Cables upto and including 10.0 sq.mm. can be offered with rigid / solid Class 1 type conductors.**
3. **On specific request, cables of sizes 6.0 sq.mm. and above can be offered with Class 6 extra flexible conductors as per BS : 6360.**

Other types of cables offered to overseas market include :

- Multicore cables with stranded (Class 2), flexible (Class 6) conductors.
- Single and multicore cables with PVC double sheath.
- 3 core, PVC insulated and PVC flat-sheath cables and PVC insulated winding wires for submersible pumps, 4 core flat cables also available.
- Flexible auto cables as per BS 6862 and heavy duty flexible cables for automobiles.