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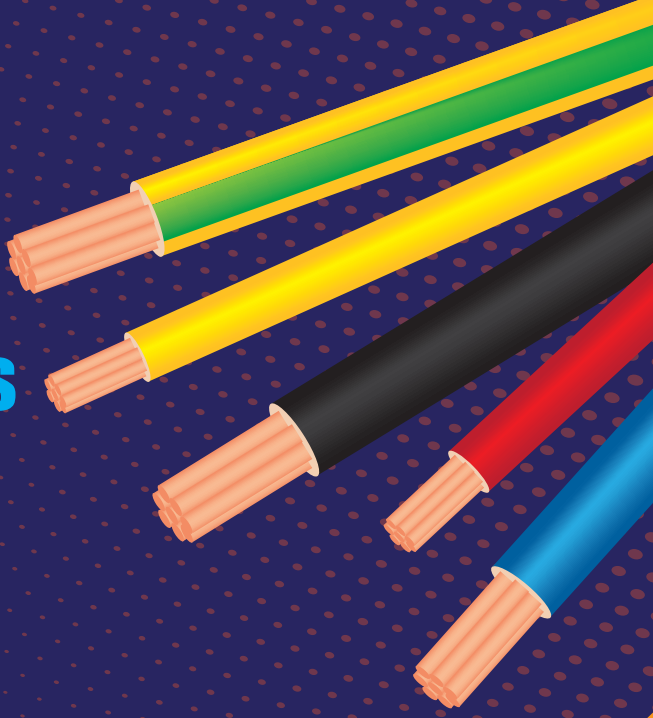
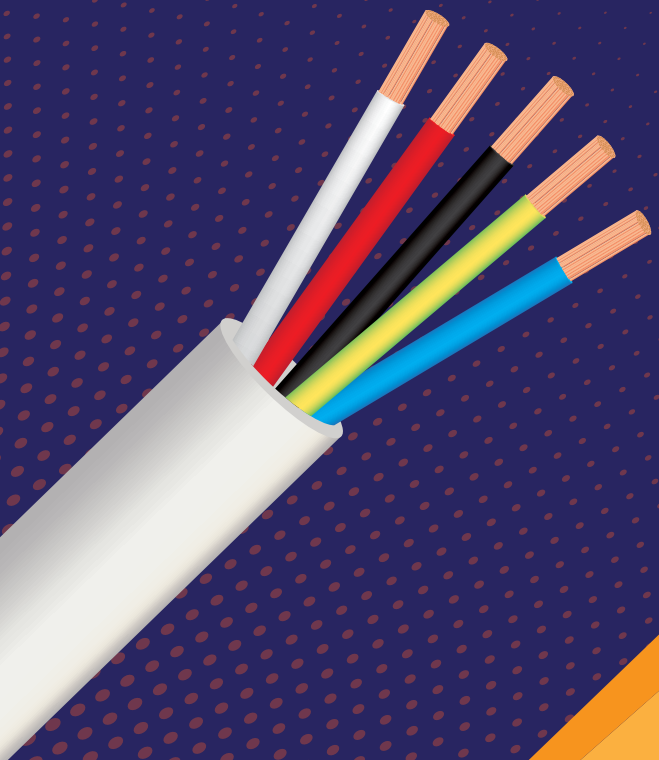
PVC/LSZH Insulated Cables





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Introduction

"FEDERAL CABLES" (Fedcab) is part of Federal group of companies established in the year 1999. We are proud partners to the various energy needs of Middle east through different sectors. **Fedcab's** manufacturing facility is located in Abu Dhabi, UAE with state of the art machineries and integrated technical expertise. Apart from cables, Federal manufactures power and distribution transformers, bus ducts and switchgear Panels.

Fedcab current range of cables include XLPE, PVC, LSZH and HO7RN-F insulation conforming to international standards such as BS, IEC, VDE, GOST or any other standard that may be desired by a client.

Product Range

- **HO7V-R, stranded Class 2 copper conductor, PVC insulated as per BS EN 50525-2-31/ BS 6004 & IEC60227-3.**
- **HO7Z-R, stranded Class 2 copper conductor, LSZH insulated as per BS EN 50525-3-41**
- **HO7V-K, flexible Class 5 copper conductor, PVC insulated as per BS EN 50525-2-31/ BS6004.**
- **HO7V-U, solid Class 1 copper conductor, PVC insulated as per BS EN 50525-2-31/ BS6004.**
- **HO5VV-F, flexible Class 5 copper conductor, PVC insulated and PVC sheathed multi-core cables as per BS EN 50525-2-11/BS6500.**

These cables consists of bare copper conductor, PVC/LSZH insulated solid, stranded or flexible conductors used as power supply cables for fixed protected installations for lighting in buildings, wiring appliances, control gear etc. The voltage range is 450/750 V AC or 600/1000 V AC (when used in fixed installation with mechanical protection) with sizes ranging from 1.5mm2 to 630mm2 single core. Multicore cables have rated voltage 300/500 V and sizes ranging from 0.75mm2 to 4mm 2, 3, 4 and 5 core.

These cables can also be supplied for 105°C continuous operation applications with suitable PVC insulation and sheath.

Technical Advisory Services

Fedcab has a dedicated technical advisory team to assist customers in choosing the apt product technically suitable for their requirements.

Quality Standard

Quality Management System Certified to ISO 9001

Fedcab's Quality Management System conforming to ISO 9001:2015 is certified by TUV NORD Germany.

Certification to the ISO 9001 standard demonstrates that Fedcab has documented procedures to ensure and demonstrate full compliance with all requirements of the standard and that these procedures are followed by every department in the company, thus ensuring that goods leaving **Fedcab's** factory are of the best quality and meet customer's requirements in every respect.

Fedcab is committed to supply best quality products which it articulates with the slogan "Quality Unmatched". Fedcab cables are type tested at DEKRA Certification B.V, The Netherlands as below.

Environmental Management System Certified to ISO 14001

Fedcab's Environmental Management System conforms to the ISO 14001:2015 International Environmental Management Standard and is certified by TUV NORD, Germany.

Certification to the ISO 14001:2015 International standard shows that Fedcab has a well defined structure and established working practices aimed at limiting its impact on the environment. Measurement and monitoring of effects, issuing work instructions, training of personnel and taking corrective actions are all essential elements to limiting the impact on the environment. Fedcab has set improvement targets to reduce the significant environmental impacts associated with its activities and thus ensuring sustainability.

Occupational Health & Safety Management system certified to ISO 45001-2018

Fedcab is ISO 45001 certified, an internationally accepted Standard for occupational health and safety management systems. This certification demonstrates Fedcab's adherence to sound occupational health & safety practices.

Manufacturing, Inhouse Testing & Quality Measures

Fedcab takes utmost care while manufacturing its products. We have the latest plant and equipment from manufacturers such as **Niehoff-Germany, Rosendhal-Austria and Royle systems-USA**. We have online diameter gauges from BETA Lasermike, USA, Sikora, Germany and state of the art cable quicke optical non-contact measurement system from Sweden. We have online high voltage testing facility on our extrusion lines. Entire production process is carried out in-house and quality checks are carried out at each stage of production right from raw material to the finished product. We procure raw materials from best available sources which qualify to our in-house quality standards.

Federal Cables have most modern and fully equipped laboratory for testing materials and finished cables. Raw materials, in process materials and finished cables are all tested as per well documented quality norms. The laboratory is manned by engineers and managers having rich experience. We have complete facility for testing cables for fire performance, flame retardance, low smoke and halogen free characteristics etc.

Final testing is done according to the requirement of the various specifications, ensuring full compliance and long term product reliability. In addition to all electrical testing, all cables are subjected to stringent physical and mechanical testing. We have complete Type Testing facility for all types of cables that we produce.




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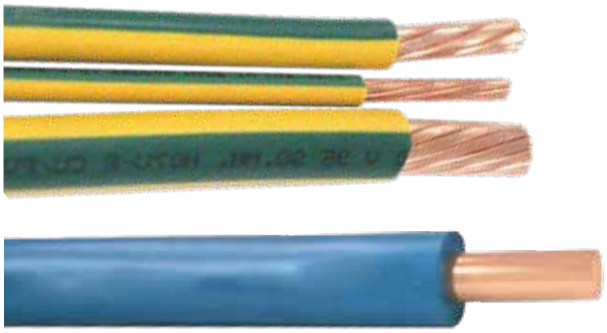
Fedcab 450/750V, single core HO7V-R and HO7V-U cables as per BS EN 50525-2-31/ BS 6004 and IEC-60227-3



Cable Construction

1. Conductor

Stranded bare copper class 2 conductor to BS EN 60228 for H07V-R type and Solid bare copper class 1 conductor to BS EN 60228 for H07V-U type.

2. Insulation

Polyvinyl chloride, PVC grade Type TI 1 to BS 7655 or EN 50363-3 suitable for maximum operating temperature 70°C and PVC grade Type TI 3 to BS 7655 or EN 50363-3 suitable for maximum operating temperature 90°C.

3. Core identification

Color codes as per BS EN 50525-2-31 / BS 6004 : Black, Blue, Brown, Grey, Red, White, Green-Yellow. Cables with other colors also can be manufactured up on request.

4. Installation

In conduits, ducts, fastened to insulated supports, in covered and dry places.

Characteristics

Rated Voltage Uo/U	450/750V
Minimum internal bending radius	
Bending radius up to 10 mm cable dia.	3D
Above 10 mm and less than 25 mm	4D
Above 25 mm (D is cable diameter)	6D
Max Conductor Temperature at the end of short circuit	160°C
Max. continuous conductor temperature in service	70°C (for TI 1 insulation) 90°C (for TI 3 insulation) 105°C (for intermittent use)

Dimensions and Weights

Nominal Size (mm^2)	Class of Conductor	Nominal Insulation Thickness (mm)	Maximum overall diameter (mm)	Maximum Conductor Resistance at 20°C (Ω/Km)	Minimum insulation Resistance (MΩ.km)	Approximate Weight (Kg/km)	Standard packing length
1.5	1	0.7	3.2	12.1	0.011	22	100 Yards
1.5	2	0.7	3.3	12.1	0.010	22	100 Yards
2.5	1	0.8	3.9	7.41	0.010	34	100 Yards
2.5	2	0.8	4.0	7.41	0.0099	34	100 Yards
4	2	0.8	4.6	4.61	0.008 2	49	100 Yards
6	2	0.8	5.2	3.08	0.007 0	66	100 Yards
10	2	1.0	6.7	1.83	0.006 7	112	1000 m
16	2	1.0	7.8	1.15	0.005 6	172	1000 m
25	2	1.2	9.7	0.727	0.005 3	265	1000 m
35	2	1.2	10.9	0.542	0.004 6	350	1000 m
50	2	1.4	12.8	0.387	0.004 6	480	1000 m
70	2	1.4	14.6	0.268	0.004 0	680	1000 m
95	2	1.6	17.1	0.193	0.003 9	930	1000 m
120	2	1.6	18.8	0.153	0.003 5	1160	1000 m
150	2	1.8	20.9	0.124	0.003 5	1430	1000 m
185	2	2.0	23.3	0.0991	0.003 5	1770	1000 m
240	2	2.2	26.6	0.0754	0.003 4	2330	1000 m
300	2	2.4	29.6	0.0601	0.003 3	2890	500 m
400	2	2.6	33.2	0.0470	0.003 1	3690	500 m
500	2	2.8	36.9	0.0366	0.003 0	4710	500 m
630	2	2.8	41.1	0.0283	0.002 7	6030	500 m

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Single Core PVC Insulated Non-Sheathed Cables - Cables in conduit on a wall or celing or in trunking (Referance method 3)

Conductor Cross Sectional Area (mm^2)	Current carrying Capacities (amperes)		Volt Drop (mV/A/m)		Conductor Cross Sectional Area (mm^2)	Current carrying Capacities (amperes)		Volt Drop (mV/A/m)					
	2 Cables Single Phase ac or dc	3 or 4 Cables Single Phase ac	2 Cables Single Phase ac	3 or 4 Cables three Phase ac		2 Cables Single Phase ac or dc	3 or 4 Cables Single Phase ac	2 Cables Single Phase ac			3 or 4 Cables three Phase ac		
								r	x	z	r	x	z
1	13.5	12	44	38	50	151	134	0.95	0.30	1.00	0.81	0.26	0.85
1.5	17.5	15.5	29	25	70	192	171	0.65	0.29	0.72	0.56	0.25	0.61
2.5	24	21	18	15	95	232	207	0.49	0.28	0.56	0.42	0.24	0.48
4	32	28	11	9.5	120	269	239	0.39	0.27	0.47	0.33	0.23	0.41
6	41	36	7.3	6.4	150	300	262	0.31	0.27	0.41	0.27	0.23	0.36
					185	341	296	0.25	0.27	0.37	0.22	0.23	0.32
10	57	50	4.4	3.8	240	400	346	0.196	0.26	0.33	0.17	0.23	0.29
16	76	68	2.8	2.4	300	458	394	0.160	0.26	0.31	0.14	0.23	0.27
*25	101	89	1.8	1.55	400	546	467	0.130	0.26	0.29	0.12	0.22	0.25
*35	125	110	1.3	1.10	500	626	533	0.110	0.26	0.28	0.10	0.22	0.25
					630	720	611	0.094	0.25	0.27	0.08	0.22	0.24

Note :

1. Current ratings mentioned above are at maximum continuous operating temperature of 70°C and ambient air temperature 30°C.
2. Voltage drop of 25 mm2 and 35 mm2 are based on total impedence 'Z' only. For 'r' and 'x' data, please refer to IEE wiring regulations.

Current ratings pertaining to cables or cable conduits totally surrounded by thermally insulating material are not included in the above tables. For such situations, in the absence of precise information, a rating factor of 0.5 may be applied to the appropriable current ratings.

For multi core cables, current ratings of cables installed in thermally, insulated ceilings but in contact with a thermally conductive surface on one side are stated. For similar information applicable to single core cables, reference should be made to the IEE wiring Regulations 17th Edition.

Fedcab 450/750V, single core LSZH H07Z-R cables as per BS EN 50525-3-41 / BS 7211

Cable Construction

1. Conductor

Stranded bare copper class 2 conductor BS EN 60228 for H07Z-R type BS EN 60228.

2. Insulation

Type EI-5 to BSEN50363-5 applied around the conductor for maximum operating temperature 90°C.

3. Core identification

Color codes as per BSEN 50525-3-41: Black, Blue, Brown, Grey, Red, White, Green-Yellow. Cables with other colors also can be manufactured up on request.

4. Installation

In conduits, ducts, fastened to insulated supports, in covered and dry places.

Characteristics

Rated Voltage Uo/U	450/750V
Minimum internal bending radius	
Bending radius up to 10 mm cable dia.	3D
Above 10 mm and less than 25 mm	4D
Above 25 mm (D is cable diameter)	6D
Max. continuous conductor temperature in service	90°C

Dimensions and Weights

Nominal Size (mm^2)	Class of Conductor	Nominal Insulation Thickness (mm)	Maximum overall diameter (mm)	Maximum Conductor Resistance at 20°C (Ω/Km)	Minimum insulation Resistance (MΩ.km)	Approximate Weight (Kg/km)	Standard packing length
1.5	1	0.7	3.2	12.1	0.011	22	100 Yards
1.5	2	0.7	3.3	12.1	0.010	22	100 Yards
2.5	1	0.8	3.9	7.41	0.010	34	100 Yards
2.5	2	0.8	4.0	7.41	0.0099	34	100 Yards
4	2	0.8	4.6	4.61	0.008 2	49	100 Yards
6	2	0.8	5.2	3.08	0.007 0	66	100 Yards
10	2	1.0	6.7	1.83	0.006 7	112	1000 m
16	2	1.0	7.8	1.15	0.005 6	172	1000 m
25	2	1.2	9.7	0.727	0.005 3	265	1000 m
35	2	1.2	10.9	0.542	0.004 6	350	1000 m
50	2	1.4	12.8	0.387	0.004 6	480	1000 m
70	2	1.4	14.6	0.268	0.004 0	680	1000 m
95	2	1.6	17.1	0.193	0.003 9	930	1000 m
120	2	1.6	18.8	0.153	0.003 5	1160	1000 m
150	2	1.8	20.9	0.124	0.003 5	1430	1000 m
185	2	2.0	23.3	0.0991	0.003 5	1770	1000 m
240	2	2.2	26.6	0.0754	0.003 4	2330	1000 m
300	2	2.4	29.6	0.0601	0.003 3	2890	500 m
400	2	2.6	33.2	0.0470	0.003 1	3690	500 m
500	2	2.8	36.9	0.0366	0.003 0	4710	500 m
630	2	2.8	41.1	0.0283	0.002 7	6030	500 m

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Single Core LSZH Insulated Non-Sheathed Cables - Cables in conduit on a wall or celing or in trunking (Referance method 3)

Conductor Cross Sectional Area (mm^2)	Current carrying Capacities (amperes)		Volt Drop (mV/A/m)		Conductor Cross Sectional Area (mm^2)	Current carrying Capacities (amperes)		Volt Drop (mV/A/m)					
	2 Cables Single Phase ac or dc	3 or 4 Cables Single Phase ac	2 Cables Single Phase ac	3 or 4 Cables three Phase ac		2 Cables Single Phase ac or dc	3 or 4 Cables Single Phase ac	2 Cables Single Phase ac			3 or 4 Cables three Phase ac		
								r	x	z	r	x	z
1	17	15	46	40	50	198	175	1.00	0.29	1.05	0.86	0.155	0.87
1.5	23	20	31	27	70	253	222	0.70	0.28	0.75	0.59	0.150	0.61
2.5	31	28	19	16	95	306	269	0.51	0.27	0.58	0.43	0.145	0.45
4	42	37	12	10	120	354	312	0.41	0.26	0.48	0.34	0.140	0.37
6	54	48	7.9	6.8	150	393	342	0.33	0.26	0.43	0.28	0.140	0.31
					185	449	384	0.27	0.26	0.37	0.22	0.140	0.26
10	75	50	4.7	4.0	240	528	450	0.21	0.26	0.33	0.170	0.140	0.22
16	100	88	2.9	2.5	300	603	514	0.175	0.25	0.31	0.140	0.140	0.195
*25	133	117	1.9	1.6	400	683	584	0.140	0.25	0.29	0.110	0.135	0.175
*35	164	144	1.35	1.15	500	783	666	0.120	0.25	0.28	0.090	0.135	0.160
					630	900	764	0.100	0.25	0.27	0.074	0.135	0.150

Note :

1. Current ratings mentioned above are at maximum continuous operating temperature of 90°C and ambient air temperature 30°C.
2. Voltage drop of 25 mm2 and 35 mm2 are based on total impedence 'Z' only. For 'r' and 'x' data, please refer to IEE wiring regulations.

Rating Factors for ambient temperature other then 30°C, the tabulated current ratings should be adjusted by factors as follows:

Ambient temperature °C		25	30	35	40	45	50	55	60	65	70	75	80	85
Overload protection affortded by device other then semi-enclosed fuse to BS 3036	Heat resisting PVC (90°C)[2]	1.03	1.0	0.97	0.94	0.91	0.87	0.84	0.80	0.76	0.71	0.61	0.50	0.35
	Ordinary PVC (70°C)	1.03	1.0	0.94	0.87	0.79	0.71	0.61	0.50	0.35				
Semi-enclosed fuse to BS 3036 (formerly coarse excess current protection)	Heat resisting PVC (90°C)[2]	1.03	1.0	0.97	0.94	0.91	0.87	0.84	0.80	0.76	0.72	0.68	0.63	0.49
	Ordinary PVC (70°C)	1.03	1.0	0.97	0.94	0.91	0.87	0.84	0.69	0.48				

Correction factors for groups of cables

Method of Installation		Correction factor												
		Number of ciruits or multicore cables												
		2	3	4	5	6	7	8	9	10	12	14	16	18	20
Enclosed in conductor trunking (Method 3 ot 4) or bunched and clipped directly to non metalic suface (method 1)		0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.48	0.45	0.43	0.41	0.39	0.38
Single layer clipped to a non-metalic surface (Method -1)	Touching	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70						
	Spaced*	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Single layer single core on a perforated metal cable tray. Vertical or horizontal (Method 11)	Touching	0.86	0.81	0.77	0.75	0.74	0.73	0.73	0.72	0.71	0.70				
	Spaced*	0.91	0.89	0.88	0.87	0.87									
Single layer single core on a perforated metal cable tray. touching(Method 11)	Horizontal	0.90	0.85												
	Vertical	0.85													
Single layer Multicore touching on ledder supports (Method 13)		0.86	0.82	0.80	0.79	0.78	0.78	0.78	0.77						

* 'Spaced' means a clearance between adjacent surfaces of at least one cable diameter (D), Where the horizontal clearances between adjacent cables exceeds 2D no correction factor need be applied.

Notes:

1. The factors in the table are applicable to groups of cables all of one size. The value of current derived from application for the appropriate factors is the maximum continuous current to be carried by any of the cables in the group.

2. If, due to known operating conditions, a cable is expected to carry not more than 30% of its grouped rating, It may be ignored for the purpose of obtaining the rating factor for the rest of the group.

FedCab 450/750V, HO7V-K single core flexible cables as per BS EN 50525-2-31/ BS 6004

Cable Construction

1. Conductor

Bare copper class 5 flexible conductor to BSEN 60228

2. Insulation

Polyvinyl chloride, PVC grade Type TI 1 to BS 7655 or EN 50363-3 suitable for maximum operating temperature 70°C and PVC grade Type TI 3 to BS 7655 or EN 50363-3 suitable for maximum operating temperature 90°C.

3. Core identification

Color codes as per BS EN 50525-2-31 / BS 6004 : Black, Blue, Brown, Grey, Red, White, Green-Yellow. Cables with other colors also can be manufactured up on request.

Temperature range : -15°C to 70°C

Characteristics

Rated Voltage Uo/U	450/750V
Minimum internal bending radius	
Bending radius up to 10 mm cable dia.	3D
Above 10 mm and less than 25 mm	4D
Above 25 mm (D is cable diameter)	6D
Max Conductor Temperature at the end of short circuit	160°C
Max. continuous conductor temperature in service	70°C (for TI 1 insulation) 90°C (for TI 3 insulation) 105°C (for intermittent use)

Dimensions and Other Parameters

Nominal Size (mm^2)	Nominal Insulation Thickness (mm)	Maximum overall diameter (mm)	Maximum Conductor Resistance at 20°C (Ω/Km)	Minimum insulation Resistance (MΩ.km)	Single phase current rating at 30°C air temp. (Amp)	Approximate Weight (Kg/km)	Standard packing length
1.5	0.7	3.4	13.3	0.010	16	22	100 Yards
2.5	0.8	4.1	7.98	0.0095	22	34	100 Yards
4	0.8	4.8	4.95	0.0078	30	49	100 Yards
6	0.8	5.3	3.30	0.0068	38	68	100 Yards
10	1.0	6.8	1.91	0.0065	55	113	1000 m
16	1.0	8.1	1.21	0.0053	72	168	1000 m
25	1.2	10.2	0.780	0.0050	94	260	1000 m
35	1.2	11.7	0.554	0.0043	122	353	1000 m
50	1.4	13.9	0.386	0.0042	151	500	1000 m
70	1.4	16	0.272	0.0036	189	690	1000 m
95	1.6	18.2	0.206	0.0036	217	920	1000 m
120	1.6	20.2	0.161	0.0032	256	1160	1000 m
150	1.8	22.5	0.129	0.0032	288	1450	1000 m
185	2.0	24.9	0.106	0.0032	319	1770	1000 m
240	2.2	28.4	0.0801	0.0031	376	2330	1000 m
300	2.4	30.0	0.0641	0.0030	429	2900	1000 m

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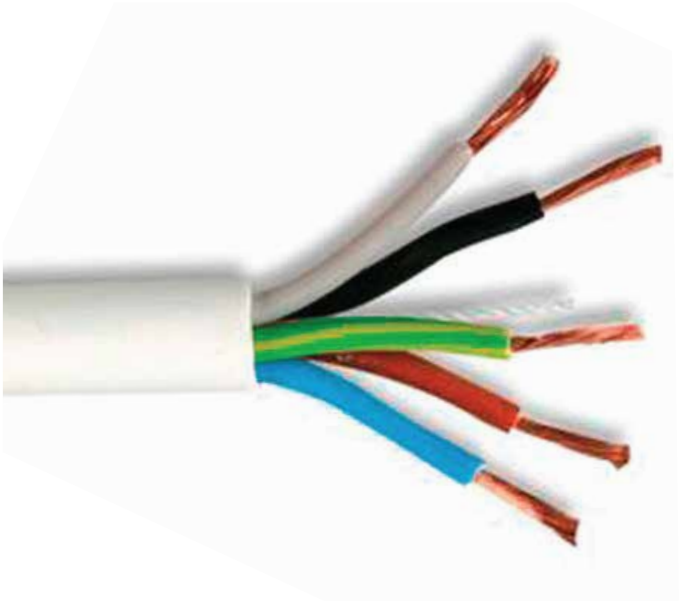
Fedcab Flexible Cu/PVC/PVC Class 5 HO5VV-F & H05V2V2-F 300/500V Cables as per BS EN 50525-2-11/BS 6500



APPLICATION

Power supply for household appliances and accessories like Fan, Air Conditioner, Washing Machine etc.

Construction

1. Conductor

Stranded bare copper class 5 to BS EN 60228

2. Insulation

Polyvinyl chloride, PVC Type TI 2 to BS 7655 or EN 50363-3 suitable for maximum operating temperature 70°C and PVC Type TI 3 to BS 7655 or EN 50363-3 suitable for maximum operating temperature 90°C

3. Outersheath

Polyvinyl Chloride, PVC Type TM 2 to EN 50363-4-1 suitable for 70°C operating temperature and PVC Type TM 3 to EN 50363-4-1 suitable for 90°C operating temperature . Standard outer sheath colour is white.

Color Codes

1. **Single Core Cables**

   Single Phase: Brown (Live), Blue (Neutral), Green / Yellow (Earth)

   Three Phase: Brown, Black & Grey (Live), Blue (Neutral), Green/Yellow (Earth)

2. **Multi Core Cables**

Two Cores	:	Blue & Brown
Three Cores	:	Blue,Brown & Green/Yellow
For Cores	:	Brown,Black,Grey& Green/Yellow or Brown,Black,Blue& Green/Yellow
Five Cores	:	Brown, Black, Blue, Grey & Green/Yellow

Installations

In conduit, ducts, fastened to insulated supports, in covered and dry places.

Characteristics

Rated Voltage Uo/U	300/500V
Bending Factor when laying	6D
Max Conductor Temperature at the end of short circuit	160°C
Max. continuous conductor temperature in service	70°C (for TI 1 insulation) 90°C (for TI 3 insulation) 105 C (for intermittent use)

DIMENSIONS & WEIGHTS

Nominal Size (mm^2)	Nominal Insulation Thickness (mm)	Nominal Sheath Thickness (mm)	Overall Diameter		Maximum Conductor Resistance at 20° C (Ω/Km)	Minimum insulation Resistance (MΩ.km)	Approximate Weight (Kg/km)
			Min (mm)	Max (mm)			
2X0.75	0.6	0.8	5.7	7.2	26	0.011	61
2X1.0	0.6	0.8	5.9	7.5	19.5	0.010	65
2X1.5	0.7	0.8	6.8	8.6	13.3	0.010	87
2X2.5	0.8	1.0	8.4	10.6	7.98	0.0095	133
2X4.0	0.8	1.1	9.7	12.1	4.95	0.0078	178
3X0.75	0.6	0.8	6.0	7.6	26	0.011	72
3X1.0	0.6	0.8	6.3	8.0	19.5	0.010	78
3X1.5	0.7	0.9	7.4	9.4	13.3	0.010	110
3X2.5	0.8	1.1	9.2	11.4	7.98	0.0095	167
3X4.0	0.8	1.2	10.5	13.1	4.95	0.0078	228
4X0.75	0.6	0.8	6.6	8.3	26	0.011	86
4X1.0	0.6	0.9	7.1	9.0	19.5	0.010	97
4X1.5	0.7	1.0	8.4	10.5	13.3	0.010	137
4X2.5	0.8	1.1	10.1	12.5	7.98	0.0095	209
4X4.0	0.8	1.2	11.5	14.3	4.95	0.0078	279
5X0.75	0.6	0.9	7.4	9.3	26	0.011	108
5X1.0	0.6	0.9	7.8	9.8	19.5	0.010	118
5X1.5	0.7	1.1	9.3	11.6	13.3	0.010	171
5X2.5	0.8	1.2	11.2	13.9	7.98	0.0095	256
5X4.0	0.8	1.4	13.0	16.1	4.95	0.0078	357

Fedcab multicore flexible cords H03VV-F & H03V2V2-F (Cu/PVC/PVC) 300/300 V as per BS EN 50525-2-11/BS 6500

Nominal Size (mm^2)	Nominal Insulation Thickness (mm)	Nominal Sheath Thickness (mm)	Overall Diameter		Maximum Conductor Resistance at 20° C (Ω/Km)	Minimum insulation Resistance (MΩ.km)	Approximate Weight (Kg/km)
			Min (mm)	Max (mm)			
2X0.5	0.5	0.6	4.6	5.9	39	0.011	38
2X0.75	0.5	0.6	4.9	6.3	26	0.010	47
3X0.5	0.5	0.6	4.9	6.3	39	0.011	45
3X0.75	0.5	0.6	5.2	6.7	26	0.010	56
4X0.5	0.5	0.6	5.4	6.9	39	0.011	55
4X0.75	0.5	0.6	5.7	7.3	26	0.010	70

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Panel Wires

Fedcab 600/1000 Volt, single core Panel wires as per BS 6231, Type CK

APPLICATION

In wiring of switch, control, metering, relay and instrumentation panels of power switchgear, internal connections in rectifier equipment and its motor starters and controllers.

Construction

1. Conductor

Stranded bare copper flexible Class 5 conductor to BS EN 60228. Tinned copper conductor also can be offered on request.

2. Insulation

Polyvinyl chloride, PVC grade Type TI 3 to BS 7655 or EN 50363-3 suitable for maximum operating temperature 90°C and special PVC suitable for 105°C application can also be supplied.

3. Outersheath

Colors Red, Black, Blue, Brown, Grey, White, Green-Yellow or other colors as per customer request can be supplied.

Characteristics

Rated Voltage Uo/U	600/1000 Volt
Bending radius up to 10 mm cable dia.	3D
Above 10 mm and less than 25 mm	4D
Above 25 mm (D is cable diameter)	6D
Max Conductor Temperature at the end of short circuit	160°C
Max. continuous conductor temperature in service	90°C (for TI 3 insulation) 105°C (for intermittent use)

DIMENSIONS and WEIGHTS

Nominal Size (mm^2)	Nominal Insulation Thickness (mm)	Maximum overall diameter (mm)	Maximum Conductor Resistance at 20°C (Ω/Km)	Current rating* (Single phase) (A)	Approximate Weight (Kg/km)	Standard packing length
0.5	0.8	2.6	39	11.5	11	100 Yards
0.75	0.8	2.8	26	16	13	100 Yards
1	0.8	3.0	19.5	19	16	100 Yards
1.5	0.8	3.2	13.3	24	21	100 Yards
2.5	0.8	3.7	7.98	32	31	100 Yards
4	0.8	4.2	4.95	43	45	100 Yards
6	0.8	4.9	3.30	56	63	100 Yards
10	1.0	6.2	1.91	79	108	100 Yards
16	1.0	7.3	1.21	105	172	1000 m
25	1.2	8.8	0.780	141	165	1000 m
35	1.2	10.0	0.554	178	250	1000 m
50	1.4	11.8	0.386	217	340	1000 m
70	1.4	14.0	0.272	276	678	1000 m
95	1.6	15.6	0.206	337	895	1000 m
120	1.6	17.3	0.161	400	1140	1000 m
150	1.8	19.3	0.129	457	1420	1000 m
185	2.0	21.5	0.106	526	1740	1000 m
240	2.2	24.6	0.0801	634	2290	1000 m

•Current rating at 30°C ambient temperature.

DERATING FACTORS FOR CHANGE IN AMBIENT TEMPERATURE:						
Ambient temperature	25°C	30°C	35°C	40°C	45°C	50°C
Factor	1.02	1.00	0.96	0.91	0.87	0.82

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