

INDUSTIAL CABLES



MESLATM
WIRE & CABLE

MESLA WIRE & CABLE SDN. BHD
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CORPORATE PROFILE

Mesla Wire & Cable Sdn. Bhd. is a prominent cable manufacturing factory situated in Melaka, Malaysia. Founded in 2014, and we underwent a rebranding in 2020, adopting the name Mesla Wire & Cable Sdn Bhd. a private entity of Malaysia

Mesla Wire & Cable has solidified its presence in the market over the past decade, specializing in the production of high-quality cables to meet various industrial and commercial needs.

Throughout its operational history, Mesla Wire & Cable has consistently demonstrated a commitment to excellence in manufacturing, innovation, and customer satisfaction. The company's state-of-the-art facilities, coupled with a dedicated team of professionals, enable it to produce a wide range of cables that adhere to stringent quality standards.

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600/1000V 90°C /105°C SINGLECORELSHFF FLEXIBLE WIRE



APPLICATION

This cable is suitable for installation in switch cabinets, appliances and devices for communication technologies, household appliances and construction of generation, and transformers, machine construction, railway technologies and particularly suitable for internal wiring of rail vehicles.

CONSTRUCTION

Fine copper strands (tinned or plain) acc. to BS 6360, IEC 60228, VDE 0295, class 5

Low smoke halogen free compound (LSHF) insulation

Insulation Colour: Brown, Blue, Green/Yellow, Grey, Black

TECHNICAL DATA

Rated voltage: 600/1000V

Test voltage: 3500V

Temperature: 90°C / 105°C

Bending radius: 4 X Ø (for OD ≤ 25mm)

6 X Ø (for OD > 25mm)

Reference standard: IEC 60332-1 & BS 4066 Part 1 (Flame Retardant)

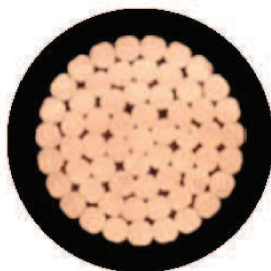
IEC 60332-3-22, BS 4066 Part 3 & BS EN50525-3-41 (Fire Retardant on bunched Cables)

IEC 60754 & BS 6425 (Halogen Free properties)

IEC 61034 & BS 7622 (Low Smoke Emission)

No. of cores x Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)	No. of cores x Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
1x0.5	2.6	11	1x25	9.7	305
1x0.75	2.8	14	1x35	11.1	404
1x1.0	2.9	16	1x50	13.6	576
1x1.5	3.2	23	1x70	15.4	765
1x2.5	3.6	35	1x95	17.6	1052
1x4	4.2	51	1x120	19.5	1261
1x6	4.8	71	1x150	21.9	1567
1x10	6.1	131	1x185	23.5	1892
1x16	7.2	199	1x240	27.2	2538

600/1000V 90°C SINGLE CORE LSHF FRT WIRE



APPLICATION

This cable is mainly used in power station, mass transit underground passenger systems, airports, petrochemical plants, hotels, hospitals and high-rise buildings.

CONSTRUCTION

Copper strands (tinned or plain) acc. to BS 6360, IEC 60228, VDE 0295, class 2

Low smoke halogen free compound (LSHF) insulation

Insulation Colour: Brown, Blue, Green/Yellow, Grey, Black

TECHNICAL DATA

Rated voltage: 600/1000 V

Test voltage: 3500 V

Temperature: 90°C

Bending radius: 4 X Ø (for OD ≤ 25mm)

6 X Ø (for OD > 25mm)

Reference standard: IEC 60332-1 & BS 4066 Part 1 (Flame Retardant)

IEC 60332-3-22 & BS 4066 Part 3 (Fire Retardant on bunched Cables)

IEC 60754 & BS 6425 (Halogen Free properties)

IEC 61034 & BS 7622 (Low Smoke Emission)

No. of cores x Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)	No. of cores x Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
1x1.5	3.1	23	1x70	14.5	720
1x2.5	3.7	35	1x95	16.0	995
1x4	4.2	51	1x120	18.5	1200
1x6	4.8	71	1x150	20.0	1520
1x10	6.1	131	1x185	22.5	1880
1x16	7.2	185	1x240	25.0	2485
1x25	9.0	285			
1x35	10.5	380			
1x50	12.5	525			

300/500V & 450/750V, 70°C/90°C SINGLE CORE PVC FLEXIBLE WIRE H05V-K / H05V2-K & H07V-K / H07V2-K



APPLICATION

For indoor fixed installations in dry locations in electrical equipment, switchboards and distributors. Should be installed in surface mounted or embedded conduits, for protected fixed installations in or on lighting fittings. Suitable for installations in machines for nominal voltages up to 1.000 V alternating current or up to 750 V to earth direct current. Cannot be used for installations under the wall surface.

CONSTRUCTION

Fine copper strands acc. to BS 6360, IEC 60228, VDE 0295, class 5

PVC insulation

Insulation Colour: Brown, Blue, Green/Yellow, Grey, Black

TECHNICAL DATA

Rated voltage: H05V-K / H05V2-K 300/500V & H07V-K / H07V2-K 450/750

Test voltage: H05V-K / H05V2-K 2000 V & H07V-K / H07V2-K 2500 V

Temperature: 70°C for H05V-K & H07V-K and 90°C for H05V2-K & H07V2-K

Min. Bending radius: 4 X Ø (for OD ≤ 25mm)

6 X Ø (for OD > 25mm)

Reference standard: DIN VDE 0281 -3 HD 21.3 S3 and IEC 60227 -3 and IEC 60332-1

No. of cores x Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)	No. of cores x Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
H05V-K / H05V2-K			1x16	6.7-8.2	170
1x0.50	2.1-2.6	8	1x25	8.4-10.3	260
1x0.75	2.2-2.8	12	1x35	9.7-11.8	360
1x1.00	2.4-2.9	14	1x50	11.5-13.9	515
H07V-K / H07V2-K			1x70	13.2-16.1	710
1x1.5	2.8-3.5	20	1x95	15.1-18.3	940
1x2.5	3.4-4.2	32	1x120	16.7-20.3	1180
1x4	3.9-4.9	46	1x150	18.6-22.6	1481
1x6	4.4-5.4	65	1x185	25.0	2040
1x10	5.7-6.9	113	1x240	27.0	2620

JV-R, 90°C XLPE INSULATED PVC SHEATHED FLEXIBLE POWER CABLES

transmission of reliability & brightness



APPLICATION

Special Designed for general use in dry, humid and wet locations, for indoor and outdoor use, for agricultural applications.

CONSTRUCTION

Fine copper strands, acc.to IEC 60228, class 5

Cross-Linked Polyethylene (XLPE) insulated

Insulation Colour:

- 1 core – Natural
- 2 cores – blue, brown
- 3 cores – green/yellow, brown, blue or Brown, Black, Grey, Blue
- 4 cores – green/yellow, brown, black, grey, or Brown, Black, Grey,
- 5 cores – green/yellow, blue, brown, black, grey
- 6 cores & above – green/yellow & black with printed number PVC jacketed

Jacket Colour: Black

TECHNICAL DATA

Rated voltage: 600/1000V

Test voltage: 3500V AC

Temperature : -15°C to 90°C

Fixed bending radius: 4 x Ø (for OD ≤ 25mm)

6 X Ø (for OD > 25mm)

Reference standard: IEC 60502-1, IEC 60332-1

JV-R, 90°C XLPE INSULATED PVC SHEATHED FLEXIBLE POWER CABLES

No. of cores x Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
1x1.5		
1x2.5	6.7	54
1x4.0	6.7	70
1x6.0	7.3	90
1x10	8.2	133
1x16	9.2	189
1x25	11.0	284
1x35	12.1	381
1x50	13.8	517
1x70	15.7	712
1x95	17.6	923
1x120	19.2	1165
1x150	21.5	1446
1x185	23.9	1748
1x240	26.9	2280
1x300	29.6	2829
1x400	33.8	3731
1x500	37.4	4776
1x630	42.7	6276
2x1.5	8.2	90
2x2.0	9.2	120
2x4.0	10.3	161
2x6.0	11.3	211
2x10	13.2	316
2x16	14.9	450
3G1.5	8.9	108
3G2.0	9.8	144
3G4.0	11.0	198
3G6.0	12.1	263
3G10	14.3	405

No. of cores x Nominal Area (mm ²)	Outer diameter approx. (mm)	Cable Weight Approx. (kg/km)
3x16	16.4	593
3x25	21.3	975
3x35	24.1	1319
3x50	27.8	1812
3x70	30.8	2463
4G1.5	9.7	129
4G2.5	10.7	175
4G4.0	12.0	243
4G6.0	13.4	328
4G10	15.7	505
4x16	18.2	749
4x25	24.1	1245
4x35	26.3	1671
4x50	31.3	2313
4x70	36.1	3204
4x95	40.2	4126
4x120	44.6	5245
4x150	49.8	6573
4x185	56.1	8050
4x240	64.5	10695
5G1.5	10.4	153
5G2.5	11.6	213
5G4.0	13.2	298
5G6.0	14.7	403
5G10	17.2	624
5G16	20.2	931
5G25	25.6	1555
5G35	29.3	2076
5G50	34.5	2878

TECHNICAL DATA



Copper Conductor Resistance (mm²)

Nominal cross-sectional area	Minimum number of wires in the conductor	Maximum diameter of wires in the conductor		Maximum resistance of conductor at 20°C (Ohm/km)			
		Class 5	Class 6	Class 2		Class 5 & Class 6	
(mm ²)	Class 2	(mm)	(mm)	Plain copper	Tinned copper	Plain copper	Tinned copper
0.5	7	0.21	0.16	36	36.7	39	40.1
0.75	7	0.21	0.16	24.5	24.8	26	26.7
1	7	0.21	0.16	18.1	18.2	19.5	20
1.5	7	0.26	0.16	12.1	12.2	13.3	13.7
2.5	7	0.26	0.16	7.41	7.56	7.98	8.21
4	7	0.31	0.16	4.61	4.70	4.95	5.09
6	7	0.31	0.21	3.08	3.11	3.3	3.39
10	7	0.41	0.21	1.83	1.84	1.91	1.95
16	7	0.41	0.21	1.15	1.16	1.21	1.24
25	7	0.41	0.21	0.727	0.734	0.78	0.795
35	7	0.41	0.21	0.524	0.529	0.554	0.565
50	19	0.41	0.31	0.387	0.391	0.386	0.393
70	19	0.51	0.31	0.268	0.270	0.272	0.277
95	19	0.51	0.31	0.193	0.195	0.206	0.210
120	37	0.51	0.31	0.153	0.154	0.161	0.164
150	37	0.51	0.31	0.124	0.126	0.129	0.132
185	37	0.51	0.41	0.0991	0.1	0.106	0.108
240	61	0.51	0.41	0.0754	0.0762	0.0891	0.0817
300	61	0.51	0.41	0.0601	0.0607	0.0641	0.0654
400	61	0.51		0.0470	0.0475	0.0486	
500	61	0.61		0.0366	0.0369	0.0384	
630	91	0.61		0.0283	0.0286	0.0287	
800	91			0.0221	0.0224		
1000	91			0.0176	0.0177		

TECHNICAL DATA



Current Carrying Capacity (amperes)

Cable Types : Single Core PVC Flexible Wire HO5V-K / HO5V2-K
AND HO7V-K / HO7V2-K

Conductor cross-sectional area mm ²	Max. Current Rating at 40°C ambient air temperature and 25°C ambient soil temperature			
	unenclosed (A)	spaced	unenclosed spaced from surface (A)	unenclosed touching surface (A)
1	17		17	13
1.5	21		21	17
2.5	29		28	22
4	38		38	30
6	49		48	38
10	69		67	54
16	91		88	71
25	121		115	94
35	150		143	117
50	189		179	147
70	238		224	185
95	287		269	223
120	341		317	265
150	393		365	306
185	450		416	351
240	541		498	422
300	624		571	486
400	752		682	583
500	876		787	675
630	1036		914	785

Notes :

HO5V2-K AND HO7V2-K cables may be operated up to the maximum permissible temperatures 90°C provided that the cables is installed in manner that is not subjected to or is protected against severe mechanical pressure at temperature higher than 70°C

TECHNICAL DATA



Current Carrying Capacity (amperes)

Cable Types : Single Core LSHF/XLPE insulated, Sheathed and unsheathed Flexible Cable

Conductor cross-sectional area mm ²	Max. Current Rating at 40°C ambient air temperature and 25°C ambient soil temperature			
	unenclosed (A)	spaced	unenclosed spaced from surface (A)	unenclosed touching surface (A)
1	21		21	16
1.5	26		26	20
2.5	35		34	27
4	46		46	36
6	59		58	46
10	83		81	64
16	110		106	85
25	147		141	114
35	183		174	141
50	231		218	178
70	292		274	225
95	351		328	271
120	418		389	322
150	483		448	373
185	555		512	428
240	668		613	515
300	772		705	594
400	933		843	715
500	1090		975	830
630	1288		1135	969

Cable operating temperature also varies according to the prevailing ambient temperature. These cables are designed to give optimum performance up to an operating temperature of 90°C for PVC insulated wires and 105°C for LSHF insulated wires at an ambient temperature of 40°C.

Conductor temperature °C	Ambient Temperature								
	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C
105°C	1.07	1.04	1.0	0.96	0.93	0.89	0.85	0.8	0.76
90°C	1.10	1.05	1.0	0.94	0.88	0.81	0.73	0.65	0.57

Cable Types : Single Core and Multicore
Installation Conditions : In Air or in Wiring Enclosure

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TECHNICAL DATA



Derating Factors For Circuits

Cable Types : Single Core

Installation Conditions : In Trays, Racks, Cleats or other supports in Air

1	2	3	4	5	6	7	8
Item No.	Installation		Number of tiers or rows of cable supports	Arrangements Of cables in a circuit	Derating factors		
					Number of circuits per tier or row		
					1	2	3
1	Unperforated Tray		1	2 or 3 cables in horizontal formation	0.95	0.85	0.84
2			2		0.92	0.83	0.79
3			3		0.91	0.82	0.76
4	Perforated Trays		1	2 or 3 cables in horizontal formation	0.97	0.89	0.87
5			2		0.94	0.85	0.81
6			3		0.93	0.84	0.79
7	Ladder Supports Racks and Cleats		1	2 or 3 cables in horizontal formation	1.00	0.95	0.94
8			2		0.95	0.90	0.88
9			3		0.95	0.89	0.85
10	Vertical Perforated Trays		1	2 or 3 cables in vertical formation	0.94	0.85	—
11			2		0.92	0.83	—
12	Unperforated Trays		1	2 or 3 cables in horizontal formation	0.98	0.96	0.94
13			2		0.95	0.91	0.87
14			3		0.94	0.90	0.85
15	Perforated Trays		1	2 or 3 cables in horizontal formation	1.00	0.98	0.96
16			2		0.97	0.93	0.89
17			3		0.96	0.92	0.86
18	Ladder Supports		1	2 or 3 cables in horizontal formation	1.00	1.00	1.00
19			2		0.97	0.95	0.93
20			3		0.97	0.94	0.90
21	Vertical Perforated Trays		1	2 or 3 cables in vertical formation	1.00	0.91	0.89
22			2		1.00	0.90	0.86

TECHNICAL DATA



Three Phase Voltage Drop (V_c) At 50 Hz

Cable Types : Single Core Insulated And Sheathed Copper Conductors Laid In Trefoil

1	2	3	4	5	6	7	8	9	10	11
Conductor size mm ²	Three phase voltage drop (V_c) at 50Hz, mV/A.m									
	Conductor temperature °C									
	45		60		75		90		110	
	Max.	0.8 p.f.	Max.	0.8 p.f.	Max.	0.8 p.f.	Max.	0.8 p.f.	Max.	0.8 p.f.
1	40.3	—	42.5	—	44.7	—	46.8	—	49.7	—
1.5	25.9	—	27.3	—	28.6	—	30.0	—	31.9	—
2.5	14.1	—	14.9	—	15.6	—	16.4	—	17.4	—
4	8.77	—	9.24	—	9.71	—	10.2	—	10.8	—
6	5.86	—	6.18	—	6.49	—	6.81	—	7.23	—
10	3.49	—	3.67	—	3.86	—	4.05	—	4.30	—
16	2.20	—	2.31	—	2.43	—	2.55	—	2.70	—
25	1.40	—	1.47	—	1.54	—	1.62	—	1.72	—
35	1.01	—	1.07	—	1.12	—	1.17	—	1.24	—
50	0.757	—	0.795	—	0.834	—	0.872	—	0.924	—
70	0.537	—	0.563	—	0.589	—	0.615	—	0.650	—
95	0.402	—	0.420	—	0.439	—	0.457	—	0.481	—
120	0.332	—	0.345	—	0.359	—	0.373	—	0.392	—
150	0.284	—	0.295	—	0.305	—	0.316	—	0.331	—
185	0.245	0.245	0.253	0.253	0.261	—	0.269	—	0.280	—
240	0.211	0.208	0.216	0.214	0.221	0.220	0.227	0.226	0.235	0.234
300	0.191	0.185	0.195	0.190	0.198	0.195	0.202	0.199	0.208	0.206
400	0.175	0.166	0.178	0.169	0.181	0.173	0.183	0.176	0.187	0.181
500	0.165	0.150	0.166	0.153	0.168	0.156	0.170	0.158	0.172	0.162
630	0.155	0.138	0.156	0.140	0.157	0.142	0.159	0.144	0.160	0.146

TECHNICAL DATA



Three Phase Voltage Drop (V_c) At 50 Hz

Cable Types : Single Core Insulated And Sheathed Copper Conductors Laid Flat Touching Or In A Wiring Enclosure

1	2	3	4	5	6	7	8	9	10	11
Conductor size mm ²	Three phase voltage drop (V_c) at 50Hz, mV/A.m									
	Conductor temperature °C									
	45		60		75		90		110	
	Max.	0.8 p.f.	Max.	0.8 p.f.	Max.	0.8 p.f.	Max.	0.8 p.f.	Max.	0.8 p.f.
1	40.3	—	42.5	—	44.7	—	46.8	—	49.7	—
1.5	25.9	—	27.3	—	28.6	—	30.0	—	31.9	—
2.5	14.1	—	14.9	—	15.6	—	16.4	—	17.4	—
4	8.77	—	9.24	—	9.71	—	10.2	—	10.8	—
6	5.86	—	6.18	—	6.49	—	6.81	—	7.23	—
10	3.49	—	3.68	—	3.86	—	4.05	—	4.30	—
16	2.20	—	2.32	—	2.43	—	2.55	—	2.71	—
25	1.40	—	1.47	—	1.55	—	1.62	—	1.72	—
35	1.02	—	1.07	—	1.12	—	1.18	—	1.25	—
50	0.763	—	0.801	—	0.840	—	0.878	—	0.929	—
70	0.545	—	0.571	—	0.597	—	0.623	—	0.657	—
95	0.413	—	0.431	—	0.449	—	0.467	—	0.491	—
120	0.345	—	0.358	—	0.371	—	0.385	—	0.403	—
150	0.299	0.299	0.309	—	0.319	—	0.330	—	0.344	—
185	0.262	0.261	0.270	0.269	0.277	0.277	0.285	0.285	0.296	0.296
240	0.230	0.224	0.235	0.230	0.240	0.236	0.245	0.242	0.252	0.250
300	0.212	0.201	0.215	0.206	0.219	0.211	0.222	0.215	0.227	0.222
400	0.198	0.181	0.200	0.185	0.202	0.189	0.205	0.192	0.208	0.197
500	0.188	0.166	0.190	0.169	0.191	0.172	0.193	0.174	0.195	0.178
630	0.179	0.153	0.180	0.155	0.181	0.157	0.182	0.159	0.184	0.162

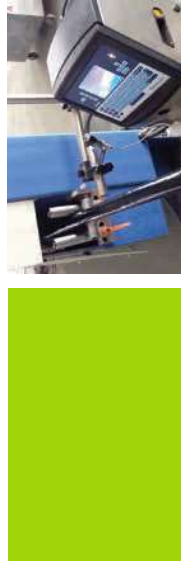
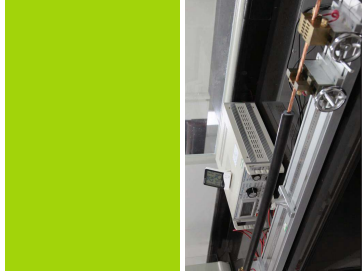
CORPORATE PROFILE

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Supplied DC power flexible
cable and high temperature
EPDM cable to Malaysia
JH1Data centre



Supplied shielded control cables in
Singapore 230KV sub-station.



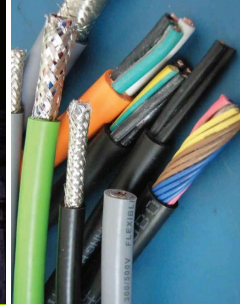
Supplied high temperature Low
Smoke Halogen Free control panel
wires to Singapore Mass Rapid
Transit station



Supplied NBR rubber flexible cable
to Data Centre in Philippines



FLEXIBLE CABLES



MESLA WIRE & CABLE SDN. BHD

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