



THE UNYIELDING BACKBONE
OF YOUR FIRE SYSTEM
FIRE SURVIVAL CABLES

REACH | ROHS | CE | CPR Compliant

APPLICATION

The cable is designed to have a robust halogen free construction which is suitable to operate up to 1100V of applications. This cable is suitable for a wiring installation supplying all critical loads requiring supply integrity for required time period under fire situation. They ensure continued operation of the vital circuits in the event of the fire outbreak.

STANDARD

IS 17505-1

Inline with the requirements of National Electrical Code of India (NEC) 2023

IS 17505-1



CM/L-7300131007

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Coimbatore: 09344 155 100, **Guwahati:** 07227 004 919, **Indore:** 0731-4001768, **Jaipur:** 0141 - 2741417, **Jalandhar:** 0181 - 500 3394,
Ernakulam: 0484 - 2378 782, **Kolkata:** 033 - 6607 1233, **Lucknow:** 0522 - 3516 188 / 89, **Madurai:** 0452 - 4370 340, **New Delhi:** 011 - 4303 8395
/ 2735 5477 / 78, **Pune:** 08956 811 100, **Raipur:** 0771 - 2971 518, **Rajkot:** 09327 722 501, **Sonipat:** 0130 - 2986 986, **Secunderabad:** 040 - 2780
4098, **Silvassa:** 0260 - 2641 333, **Surat:** 09376 507 543, **Trichy:** 0431 - 4540 363

TECHNICAL DATA

Voltage Rating: 1100 Vac and 1500 Vdc

Operating Temperature Range: -5°C to 90°C (fixed installation)

Minimum Bending Radius: 12 x overall cable diameter

CABLE CONSTRUCTION

Conductor: Electrolytic Annealed Plain / Tinned Copper (Class 1/2) as per IS 8130

Primary Insulation: Mica Tape Layer (s)

Secondary Insulation: Cross linked PE (XLPE) / Cross linked HFFR.

Core Colours:

1 Core - Red, Black, Yellow, Blue or Natural

2 Core - Red & Black

3 Core - Red, Yellow & Blue

4 Core - Red, Yellow, Blue & Black

5 Core - Red, Yellow, Blue, Black & Grey

6 Core and above are number coded

Inner Sheath: Thermoplastic HFFR

Heat Barrier Tape (Optional): Glass Fibre tape

Armour: Galvanized round wire for multicore & Non-Magnetic wires for single core

Sheath: Thermoplastic HFFR (HFS-TP 90) / Cross linked HFFR (HFS-XL 90).

PROPERTIES

- Halogen Free Construction
 - Non-Toxic & Non-Corrosive
 - Self extinguishing and Flame Retardant
 - Maintains long term circuit integrity
 - F3 / F30 / F60 / F120 FWS Compliant
- (F - Fire, W - Water and S - Mechanical Shock)

CABLE TECHNICAL DATA

Please complete the part numbers for these cables by adding the suffix (in place of 'z') for the sheath colour required :

1 - Black, 7 - Red.

VARIANT WITH CROSS LINKED POLYETHYLENE (XLPE) INSULATION

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050101009z	1	16	1	12	279.9	1.15	104	102	106
10050102009z	1	25	1.2	14	403.0	0.727	130	115	145
10050103009z	1	35	1.2	15	506.3	0.524	155	140	175
10050104009z	1	50	1.3	18	682.6	0.387	185	165	215
10050105009z	1	70	1.4	20	952.1	0.268	225	200	270
10050106009z	1	95	1.4	22	1212.6	0.193	265	235	330
10050107009z	1	120	1.5	24	1609.7	0.153	300	265	380
10050108009z	1	150	1.7	25	1761.9	0.124	335	300	430
10050109009z	1	185	1.9	28	2145.8	0.0991	380	335	495
10050110009z	1	240	2	31	2741.0	0.0754	435	385	590
10050111009z	1	300	2.1	34	3409.2	0.0601	490	430	670
10050112009z	1	400	2.4	37	4262.1	0.047	550	480	780

Note: While ordering single core, colour to be mentioned along with the part code

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050113009z	2	1.5	0.7	15	370.2	12.1	33	25	29
10050114009z	2	2.5	0.7	17	524.2	7.41	43	33	39
10050115009z	2	4	0.7	18	594.8	4.61	51	37	44
10050116009z	2	6	0.7	20	781.4	3.08	63	46	56
10050117009z	2	10	0.7	22	914.3	1.83	88	62	75
10050118009z	2	16	0.7	21	1005.7	1.15	113	81	98
10050119009z	2	25	0.9	24	1329.5	0.727	144	109	131
10050120009z	2	35	0.9	26	1586.0	0.524	175	125	150
10050121009z	2	50	1	28	1926.0	0.387	206	161	194
10050122009z	2	70	1.1	31	2483.7	0.268	256	203	244
10050123009z	2	95	1.1	35	3301.3	0.193	300	239	288
10050124009z	2	120	1.2	38	3947.3	0.153	344	275	331
10050125009z	2	150	1.4	41	4704.4	0.124	388	316	381
10050126009z	2	185	1.6	45	5614.6	0.0991	438	364	438
10050127009z	2	240	1.7	49	6987.1	0.0754	506	425	512
10050128009z	2	300	1.8	55	8852.0	0.0601	562	482	581
10050129009z	2	400	2	60	10848.5	0.047	612	549	662

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050130009z	3	1.5	0.7	15	391.9	12.1	25	19	22
10050131009z	3	2.5	0.7	18	579.0	7.41	35	32	33
10050132009z	3	4	0.7	19	712.0	4.61	44	37	39
10050133009z	3	6	0.7	21	879.5	3.08	55	47	50
10050134009z	3	10	0.7	23	1067.2	1.83	74	61	67
10050135009z	3	16	0.7	23	1214.8	1.15	94	78	85
10050136009z	3	25	0.9	26	1631.6	0.727	120	100	125
10050137009z	3	35	0.9	27	1977.8	0.524	145	120	155
10050138009z	3	50	1	30	2459.4	0.387	170	145	190
10050139009z	3	70	1.1	34	3394.0	0.268	210	175	235
10050140009z	3	95	1.1	38	4321.1	0.193	250	210	290
10050141009z	3	120	1.2	41	5216.4	0.153	285	240	330
10050142009z	3	150	1.4	45	6198.7	0.124	315	270	375
10050143009z	3	185	1.6	49	7531.1	0.0991	355	300	435
10050144009z	3	240	1.7	55	9853.2	0.0754	410	350	510
10050145009z	3	300	1.8	60	11920.6	0.0601	460	390	590
10050146009z	3	400	2	66	14679.5	0.047	520	440	670

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050147009z	3.5	25	0.9	28	1810.0	0.727	120	100	125
10050148009z	3.5	35	0.9	30	2220.0	0.524	145	120	155
10050149009z	3.5	50	1	33	2850.0	0.387	170	145	190
10050150009z	3.5	70	1.1	38	3875.0	0.268	210	175	235
10050151009z	3.5	95	1.1	41	4880.0	0.193	250	210	290
10050152009z	3.5	120	1.2	45	5980.0	0.153	285	240	330
10050153009z	3.5	150	1.4	50	7300.0	0.124	315	270	375
10050154009z	3.5	185	1.6	55	8080.0	0.0991	355	300	435
10050155009z	3.5	240	1.7	62	11500.0	0.0754	410	350	510
10050156009z	3.5	300	1.8	67	13800.0	0.0601	460	390	590
10050157009z	3.5	400	2	74	16300.0	0.047	520	440	670

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050158009z	4	1.5	0.7	17	548.8	12.1	25	19	22
10050159009z	4	2.5	0.7	19	698.8	7.41	35	32	33
10050160009z	4	4	0.7	21	866.3	4.61	44	37	39
10050161009z	4	6	0.7	22	1003.5	3.08	55	47	50
10050162009z	4	10	0.7	24	1247.5	1.83	74	61	67
10050163009z	4	16	0.7	26	1512.8	1.15	94	78	85
10050164009z	4	25	0.9	30	2105.9	0.727	120	100	125
10050165009z	4	35	0.9	32	2573.1	0.524	145	120	155
10050166009z	4	50	1	36	3434.5	0.387	170	145	190
10050167009z	4	70	1.1	41	4507.9	0.268	210	175	235
10050168009z	4	95	1.1	45	5676.0	0.193	250	210	290
10050169009z	4	120	1.2	49	6888.9	0.153	285	240	330
10050170009z	4	150	1.4	55	8691.4	0.124	315	270	375
10050171009z	4	185	1.6	60	10496.4	0.0991	355	300	435
10050172009z	4	240	1.7	68	13827.0	0.0754	410	350	510
10050173009z	4	300	1.8	74	16613.5	0.0601	460	390	590
10050174009z	4	400	2	82	20465.7	0.047	520	440	670

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050175009z	7	1.5	0.7	20	854.4	12.1	21	16	18
10050176009z	12	1.5	0.7	24	1188.6	12.1	17	13	15
10050177009z	16	1.5	0.7	26	1390.0	12.1	16	12	14
10050178009z	19	1.5	0.7	27	1530.2	12.1	15	11	13
10050179009z	27	1.5	0.7	32	1986.4	12.1	13	10	12
10050180009z	37	1.5	0.7	36	2669.4	12.1	11	9.5	10.5

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050181009z	7	2.5	0.7	22	956.2	7.41	27	21	15
10050182009z	12	2.5	0.7	27	1335.5	7.41	23	19.5	20.5
10050183009z	16	2.5	0.7	29	1552.2	7.41	20	18	19
10050184009z	19	2.5	0.7	31	1768.9	7.41	19	15	17
10050185009z	27	2.5	0.7	37	2519.9	7.41	17	14.5	14
10050186009z	37	2.5	0.7	41	3103.7	7.41	14.5	12.5	13

Variant with Cross Linked Halogen Free Flame Retardant (XL-HFFR) insulation

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050101006z	1	16	1.2	13	306.4	1.15	104	102	106
10050102006z	1	25	1.3	14	428.6	0.727	130	115	145
10050103006z	1	35	1.3	17	577.1	0.524	155	140	175
10050104006z	1	50	1.4	18	715.1	0.387	185	165	215
10050105006z	1	70	1.5	21	998.9	0.268	225	200	270
10050106006z	1	95	1.5	22	1259.4	0.193	265	235	330
10050107006z	1	120	1.7	24	1534.2	0.153	300	265	380
10050108006z	1	150	1.9	26	1845.5	0.124	335	300	430
10050109006z	1	185	2.1	28	2239.7	0.0991	380	335	495
10050110006z	1	240	2.1	31	2837.9	0.0754	435	385	590
10050111006z	1	300	2.3	34	3545.2	0.0601	490	430	670
10050112006z	1	400	2.6	37	4420.6	0.047	550	480	780

Note: While ordering single core, colour to be mentioned along with the part code

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050113006z	2	1.5	0.8	16	496.7	12.1	33	25	29
10050114006z	2	2.5	0.8	17	555.6	7.41	43	33	39
10050115006z	2	4	0.8	19	661.3	4.61	51	37	44
10050116006z	2	6	0.8	21	805.6	3.08	63	46	56
10050117006z	2	10	0.9	23	986.4	1.83	88	62	75
10050118006z	2	16	0.9	22	1061.0	1.15	113	81	98
10050119006z	2	25	1	24	1408.0	0.727	144	109	131
10050120006z	2	35	1	26	1671.7	0.524	175	125	150
10050121006z	2	50	1.1	28	2026.1	0.387	206	161	194
10050122006z	2	70	1.2	32	2604.2	0.268	256	203	244
10050123006z	2	95	1.25	35	3419.9	0.193	300	239	288
10050124006z	2	120	1.4	38	4146.8	0.153	344	275	331
10050125006z	2	150	1.6	42	4940.8	0.124	388	316	381
10050126006z	2	185	1.8	46	5916.1	0.0991	438	364	438
10050127006z	2	240	1.8	51	7720.1	0.0754	506	425	512
10050128006z	2	300	2	55	9234.8	0.0601	562	482	581
10050129006z	2	400	2.2	61	11302.6	0.047	612	549	662

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050130006z	3	1.5	0.8	17	546.9	12.1	25	19	22
10050131006z	3	2.5	0.8	18	617.4	7.41	35	32	33
10050132006z	3	4	0.8	20	811.1	4.61	44	37	39
10050133006z	3	6	0.8	22	928.5	3.08	55	47	50
10050134006z	3	10	0.9	24	1137.5	1.83	74	61	67
10050135006z	3	16	0.9	23	1284.6	1.15	94	78	85
10050136006z	3	25	1	26	1712.5	0.727	120	100	125
10050137006z	3	35	1	28	2066.3	0.524	145	120	155
10050138006z	3	50	1.1	31	2563.3	0.387	170	145	190
10050139006z	3	70	1.2	35	3527.5	0.268	210	175	235
10050140006z	3	95	1.25	38	4469.8	0.193	250	210	290
10050141006z	3	120	1.4	42	5424.6	0.153	285	240	330
10050142006z	3	150	1.6	46	6465.9	0.124	315	270	375
10050143006z	3	185	1.8	52	8278.9	0.0991	355	300	435
10050144006z	3	240	1.8	56	10156.1	0.0754	410	350	510
10050145006z	3	300	2	61	12319.6	0.0601	460	390	590
10050146006z	3	400	2.2	68	15875.8	0.047	520	440	670

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050147006z	3.5	25	1	28	1950.0	0.727	120	100	125
10050148006z	3.5	35	1	30	2375.0	0.524	145	120	155
10050149006z	3.5	50	1.1	34	3060.0	0.387	170	145	190
10050150006z	3.5	70	1.2	38	4085.0	0.268	210	175	235
10050151006z	3.5	95	1.25	42	5120.0	0.193	250	210	290
10050152006z	3.5	120	1.4	47	6520.0	0.153	285	240	330
10050153006z	3.5	150	1.6	51	7700.0	0.124	315	270	375
10050154006z	3.5	185	1.8	57	7660.0	0.0991	355	300	435
10050155006z	3.5	240	1.8	62	12100.0	0.0754	410	350	510
10050156006z	3.5	300	2	68	14752.0	0.0601	460	390	590
10050157006z	3.5	400	2.2	76	18560.0	0.047	520	440	670

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050158006z	4	1.5	0.8	18	643.0	12.1	25	19	22
10050159006z	4	2.5	0.8	20	802.5	7.41	35	32	33
10050160006z	4	4	0.8	22	920.4	4.61	44	37	39
10050161006z	4	6	0.8	23	1061.8	3.08	55	47	50
10050162006z	4	10	0.9	25	1332.7	1.83	74	61	67
10050163006z	4	16	0.9	27	1618.8	1.15	94	78	85
10050164006z	4	25	1	30	2200.4	0.727	120	100	125
10050165006z	4	35	1	33	2695.0	0.524	145	120	155
10050166006z	4	50	1.1	37	3588.6	0.387	170	145	190
10050167006z	4	70	1.2	41	4669.4	0.268	210	175	235
10050168006z	4	95	1.25	46	5906.7	0.193	250	210	290
10050169006z	4	120	1.4	52	7679.5	0.153	285	240	330
10050170006z	4	150	1.6	56	9059.5	0.124	315	270	375
10050171006z	4	185	1.8	62	10991.4	0.0991	355	300	435
10050172006z	4	240	1.8	69	14224.7	0.0754	410	350	510
10050173006z	4	300	2	75	17214.8	0.0601	460	390	590
10050174006z	4	400	2.2	83	21257.9	0.047	520	440	670

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050175006z	7	1.5	0.8	22	955.4	12.1	21	16	18
10050176006z	12	1.5	0.8	26	1348.9	12.1	17	13	15
10050177006z	16	1.5	0.8	28	1597.9	12.1	16	12	14
10050178006z	19	1.5	0.8	30	1788.8	12.1	15	11	13
10050179006z	27	1.5	0.8	35	2490.5	12.1	13	10	12
10050180006z	37	1.5	0.8	39	3081.7	12.1	11	9.5	10.5

Part Number	No. of Cores	*Nominal Cross Sectional Area (mm ²)	Nom. Insulation Thickness (mm)	Approx. Overall Dia. (mm)	Approx. Cable Weight (kg/km)	DC Conductor Resistance at 20°C (Ω / km)	Current Rating (Amps.)		
							Ground at 30°C	Duct at 30°C	Air at 30°C
10050181006z	7	2.5	0.8	25	1028.1	7.41	27	21	15
10050182006z	12	2.5	0.8	29	1460.4	7.41	23	19.5	20.5
10050183006z	16	2.5	0.8	33	1650.0	7.41	20	18	19
10050184006z	19	2.5	0.8	35	1927.6	7.41	19	15	17
10050185006z	27	2.5	0.8	38	2745.9	7.41	17	14.5	14
10050186006z	37	2.5	0.8	42	3425.1	7.41	14.5	12.5	13

* up to 6 Sq mm circular stranded
10 Sq. mm stranded circular compacted
16 Sq. mm above stranded shaped compacted.

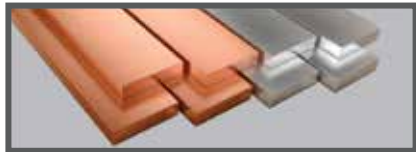
Note: The cable is also available with class 1 solid conductor.

Inhouse FWS Test Setup as per IS 17505-1





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