

Polycab offers a comprehensive range of HFFR industrial cable conforming to IS 17048 standard.



These are low voltage cable of 1100 V grade and widely used in building, Hospitals, Industrial parks and schools for major power supply. This cable is designed to use in conduit and for fixed protected installation. This is also suitable to use high rise buildings, hospitals, and offices where Smoke emission and toxic fume create a potential risk to life as well as the lifesaving equipment.

These are available as multicore cable with thermoplastic HFFR or cross-linked thermoset HFFR compound having temperature rating of 70° C to 90°C.

Conductor: High conductivity annealed plain bunched/stranded copper conductor produced in-house from state-of-the art machine.

Insulation: In-house developed high insulation resistance thermoplastic or cross linked halogen free compound.

Sheath: The insulated cores are laid up to form circular core assembly, sheathing is provided with specially formulated thermoplastic or cross linked halogen free compound to facilitate stripping and withstand mechanical abrasion while in use.

Polycab assures the highest quality standard in every product by having stringent quality control with requisite testing which are applied at every single stage from raw material to finished goods.

The construction is based on the application and requirement of the user against IS 17048:2018.



[POLYCAB HFFR-01ZZ-K/03XZZ-K - Industrial Cable, 1100 V AC](#)



[POLYCAB HFFR-04XZZ-K/04XZZZ-K - Industrial Cable, 1100 V AC](#)



[POLYCAB HFFR-04XZZ-R/04XZZZ-R - Industrial Cable, 1100 V AC](#)



[POLYCAB HFFR-01ZZ-R/03XZZ-R - Industrial Cable, 1100 V AC](#)



[POLYCAB HFFR-04XZZ-K/04XZXZ-K MC - Industrial cable, 1100 V AC](#)



[POLYCAB HFFR-01ZZ-K/03XZZ-K MC - Industrial Cable, 1100 V AC](#)



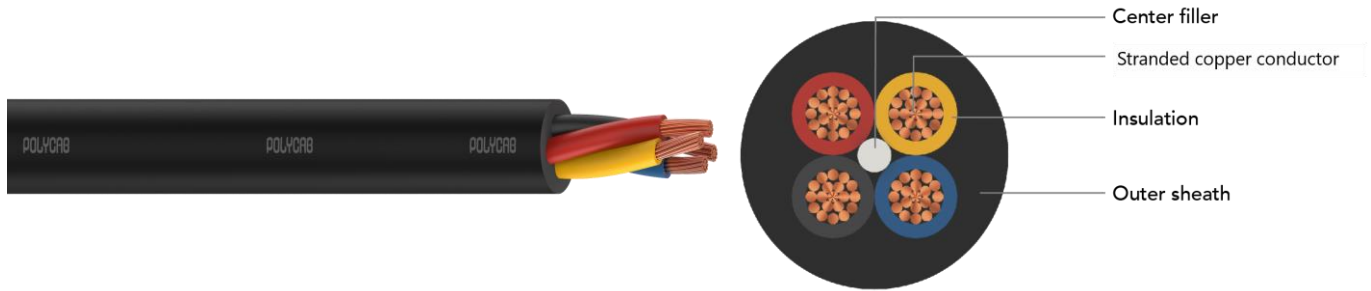
[POLYCAB HFFR-01Z-K/03XZ-K FLAT & TWISTED - Industrial Cables, 1100 V AC](#)



[POLYCAB HFFR-04XZ FLAT & TWISTED - Industrial Cable, 1100 V AC](#)

POLYCAB HFFR-01ZZ-R/03XZZ-R

Industrial Cable, 1100 V AC



Application

POLYCAB HFFR-01ZZ-R/03XZZ-R, insulated and sheathed with halogen free flame retardant thermoplastic or cross linked halogen free flame retardant thermosetting compound confirming to IS 17048 is suitable to use in electric power and lighting for indoor use in AC single phase or three phase (earthed or unearthed) systems with rated voltage up to and including 1100 V. This cable is also suitable for DC systems with rated voltage up to and including 1500 V to earth.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to 70°C

Construction

- Stranded bare or tinned copper conductor as per IS 8130, class 2
- Insulated with Halogen free flame retardant compound type HFI TP 70 or Cross linked halogen free flame retardant compound type HFI-XL 70 (HFFR) to IS 17048
- Sheathed with Halogen free flame retardant compound type HFS TP 70 or cross linked Halogen free flame retardant compound type HFS-XL 70 (HFFR) to IS 17048

Core Identification

Two core	Red, Black
Three core	Red, Yellow, Blue
Four core	Red, Yellow, Blue, Black
Five core	Black with white numbering

Bending Radius

Fixed installation	6 x Overall diameter
Occasional	8 x Overall diameter

Standard and References

IS 8130:2013
IS 17048:2018
IEC 60332-1-2

Compliance

Conductor resistance	- IS 8130
Insulation resistance	- IS 17048:2018
Oxygen Index	> 31% As per ASTM D2863
Smoke emission test	< 6% As Per ASTM D2843
Acid gas Generation	- <0.0 As per IEC 60754-1
Under fire condition	- Resist as per EN 60332-1-2

Approval



OUR ACCREDITATION



POLYCAB HFFR-01ZZ-R/03XZZ-R

Industrial Cable, 1100 V AC

Product Code	Conductor size	Nominal insulation thickness	Overall dia. (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDBS09CLUALS002C001S	2 x 1	0.6	7.32	91
LDBS09CLUALS002C1.5S	2 x 1.5	0.7	8.38	124
LDBS09CLUALS002C2.5S	2 x 2.5	0.8	9.82	176
LDBS09CLUALS002C004S	2 x 4	0.8	10.96	235
LDBS09CLUALS002C006S	2 x 6	0.8	12.24	307
LDBS09CLUALS002C010S	2 x 10	1	15.10	483
LDBS09CLUALS002C016S	2 x 16	1	17.20	671
LDBS09CLUALS002C025S	2 x 25	1.2	20.84	1015
LDBS09CLUALS002C035S	2 x 35	1.2	23.32	1322
LDBS09CLUALS002C050S	2 x 50	1.4	27.70	1874
LDBS09CLUALS003C001S	3 x 1	6	31.04	1663
LDBS09CLUALS003C1.5S	3 x 1.5	0.7	8.86	157
LDBS09CLUALS003C2.5S	3 x 2.5	0.8	10.40	224
LDBS09CLUALS003C004S	3 x 4	0.8	11.63	304
LDBS09CLUALS003C006S	3 x 6	0.8	13.00	400
LDBS09CLUALS003C010S	3 x 10	1	16.07	637
LDBS09CLUALS003C016S	3 x 16	1	18.54	906
LDBS09CLUALS003C025S	3 x 25	1.2	22.45	1378
LDBS09CLUALS003C035S	3 x 35	1.2	25.11	1802
LDBS09CLUALS003C050S	3 x 50	1.4	29.612	2540
LDBS09CLUALS003C070S	3 x 70	1.4	33.376	3366
LDBS09CLUALS003C095S	3 x 95	1.6	38.528	4535
LDBS09CLUALS003C120S	3 x 120	1.6	42.2056	5575
LDBS09CLUALS004C001S	4 x 1	6	34.4892	2169
LDBS09CLUALS004C1.5S	4 x 1.5	0.7	9.8358	202
LDBS09CLUALS004C2.5S	4 x 2.5	0.8	11.3362	284
LDBS09CLUALS004C004S	4 x 4	0.8	12.9156	396
LDBS09CLUALS004C006S	4 x 6	0.8	14.2224	513
LDBS09CLUALS004C010S	4 x 10	1	17.841	831
LDBS09CLUALS004C016S	4 x 16	1	20.382	1174
LDBS09CLUALS004C025S	4 x 25	1.2	24.9444	1805
LDBS09CLUALS004C035S	4 x 35	1.2	27.9032	2363
LDBS09CLUALS004C050S	4 x 50	1.4	32.919	3336
LDBS09CLUALS004C070S	4 x 70	1.4	37.312	4446
LDBS09CLUALS004C095S	4 x 95	1.6	42.836	5965
LDBS09CLUALS004C120S	4 x 120	1.6	46.9322	7338

OUR ACCREDITATION



POLYCAB HFFR-01ZZ-R/03XZZ-R

Industrial Cable, 1100 V AC

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area mm ²	Reference method B (enclosed in conduit on a wall or in trunking etc)		Reference method C (clipped direct)		Reference method E (in free air or on a perforated cable tray horizontal or vertical)		Maximum DC conductor resistance at 20°C Ω/km
	1 two core cable single phase ac or dc Amp.	1 three core cable or 1 four core cable three phase ac Amp.	1 two core cable single phase ac or dc Amp.	1 three core cable or 1 four core cable three phase ac Amp.	1 two core cable single phase ac or dc Amp.	1 three core cable or 1 four core cable three phase ac Amp.	
1	11	10	13	12	15	13	18.1
1.5	14	13	17	15	19	16	12.1
2.5	20	17	23	21	26	22	7.41
4	26	23	31	28	35	30	4.61
6	33	30	40	36	44	37	3.08
10	45	40	55	50	61	52	1.83
16	60	54	74	66	82	70	1.15
25	78	70	97	84	104	88	0.727
35	97	86	120	104	129	110	0.524
50	116	103	146	125	157	133	0.387
70	146	130	185	160	202	171	0.268
95	175	156	224	194	245	207	0.193
120	202	179	260	225	285	240	0.153

Air Ambient temperature: 40°C

Conductor operating temperature: 70°C

The above table is in accordance with BS 7671(4D2A)

De-Rating Factor

De-rating factor for 70°C thermoplastic or thermosetting insulated cable

Ambient Temperature	35°C	40°C	45°C	50°C	55°C	60°C	65°C
De-Rating Factor	1.08	1	0.91	0.82	0.7	0.57	0.4

Note:

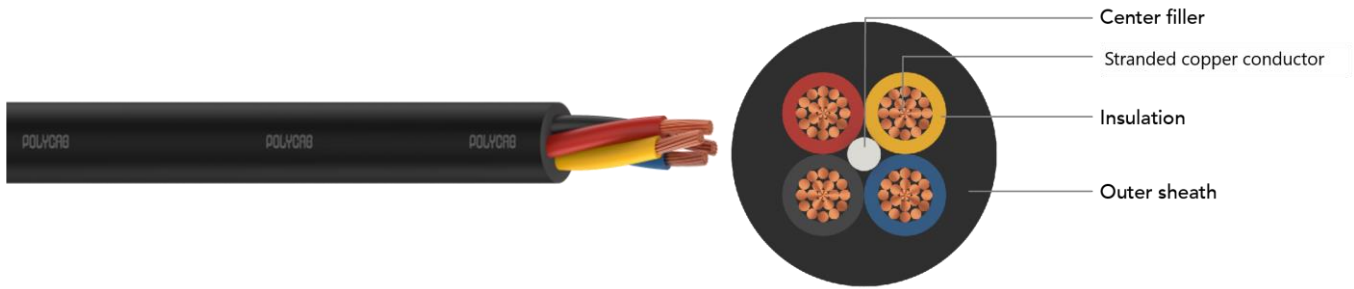
Sheathing with cross linked halogen free flame retardant HFS XL 70 available on demand

OUR ACCREDITATION



POLYCAB HFFR-04XZZ-R/04XZXZ-R

Industrial Cable, 1100 V AC



Application

POLYCAB HFFR-04XZZ-R/04XZXZ-R, insulated and sheathed with halogen free flame retardant thermoplastic or cross linked halogen free flame retardant thermosetting compound conforming to IS 17048 is suitable to use in electric power and lighting for indoor use in AC single phase or three phase (earthed or unearthed) systems with rated voltage up to and including 1100 V. This cable is also suitable for DC systems with rated voltage up to and including 1500 V to earth.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to 90°C

Construction

- Stranded bare or tinned copper conductor as per IS 8130, class 2
- Insulated with Cross linked halogen free flame retardant compound type HFI-XL 90 (HFFR) to IS 17048
- Sheathed with Halogen free flame retardant compound type HFS TP 90 or cross linked Halogen free flame retardant compound type HFS-XL 90 (HFFR) to IS 17048

Core Identification

Two core	Red, Black
Three core	Red, Yellow, Blue
Four core	Red, Yellow, Blue, Black
Five core	Black with white numbering

Bending Radius

Fixed installation	6 x Overall diameter
Occasional	8 x Overall diameter

Standard and References

IS 8130:2013
IS 17048:2018
IEC 60332-1-2

Compliance

Conductor resistance	- IS 8130
Insulation resistance	- IS 17048:2018
Oxygen Index	> 31% As per ASTM D2863
Smoke emission test	< 6% As Per ASTM D2843
Acid gas Generation	- <0.0 As per IEC 60754-1
Under fire condition	- Resist as per EN 60332-1-2

Approval



OUR ACCREDITATION



Industrial Cable, 1100 V AC

Product Code	Conductor size	Nominal insulation thickness	Overall dia. (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDBS09CLUALS002C001S	2 x 1	0.6	7.32	91
LDBS09CLUALS002C1.5S	2 x 1.5	0.7	8.38	124
LDBS09CLUALS002C2.5S	2 x 2.5	0.8	9.82	176
LDBS09CLUALS002C004S	2 x 4	0.8	10.96	235
LDBS09CLUALS002C006S	2 x 6	0.8	12.24	307
LDBS09CLUALS002C010S	2 x 10	1	15.10	483
LDBS09CLUALS002C016S	2 x 16	1	17.20	671
LDBS09CLUALS002C025S	2 x 25	1.2	20.84	1015
LDBS09CLUALS002C035S	2 x 35	1.2	23.32	1322
LDBS09CLUALS002C050S	2 x 50	1.4	27.70	1874
LDBS09CLUALS003C001S	3 x 1	6	31.04	1663
LDBS09CLUALS003C1.5S	3 x 1.5	0.7	8.86	157
LDBS09CLUALS003C2.5S	3 x 2.5	0.8	10.40	224
LDBS09CLUALS003C004S	3 x 4	0.8	11.63	304
LDBS09CLUALS003C006S	3 x 6	0.8	13.00	400
LDBS09CLUALS003C010S	3 x 10	1	16.07	637
LDBS09CLUALS003C016S	3 x 16	1	18.54	906
LDBS09CLUALS003C025S	3 x 25	1.2	22.45	1378
LDBS09CLUALS003C035S	3 x 35	1.2	25.11	1802
LDBS09CLUALS003C050S	3 x 50	1.4	29.612	2540
LDBS09CLUALS003C070S	3 x 70	1.4	33.376	3366
LDBS09CLUALS003C095S	3 x 95	1.6	38.528	4535
LDBS09CLUALS003C120S	3 x 120	1.6	42.2056	5575
LDBS09CLUALS004C001S	4 x 1	6	34.4892	2169
LDBS09CLUALS004C1.5S	4 x 1.5	0.7	9.8358	202
LDBS09CLUALS004C2.5S	4 x 2.5	0.8	11.3362	284
LDBS09CLUALS004C004S	4 x 4	0.8	12.9156	396
LDBS09CLUALS004C006S	4 x 6	0.8	14.2224	513
LDBS09CLUALS004C010S	4 x 10	1	17.841	831
LDBS09CLUALS004C016S	4 x 16	1	20.382	1174
LDBS09CLUALS004C025S	4 x 25	1.2	24.9444	1805
LDBS09CLUALS004C035S	4 x 35	1.2	27.9032	2363
LDBS09CLUALS004C050S	4 x 50	1.4	32.919	3336
LDBS09CLUALS004C070S	4 x 70	1.4	37.312	4446
LDBS09CLUALS004C095S	4 x 95	1.6	42.836	5965
LDBS09CLUALS004C120S	4 x 120	1.6	46.9322	7338

OUR ACCREDITATION



Industrial Cable, 1100 V AC

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance

Nominal cross sectional area mm ²	Reference Method B (enclosed in conduit on a wall or in trunking etc.)		Reference Method C (clipped direct)		Reference Method E (free air or on a perforated cable tray etc horizontal or vertical)		Maximum DC conductor resistance at 20°C Ω/km
	1 two-core cable*, single-phase a.c. or d.c. Amp.	1 three-or four-core cable*, three-phase a.c. Amp.	1 two-core cable*, single-phase a.c. or d.c. Amp.	1 three-or four-core cable*, three-phase a.c. Amp.	1 two-core cable*, single-phase a.c. or d.c. Amp.	1 three-or four-core cable*, three-phase a.c. Amp.	
	1	17	15	19	14	21	
1.5	22	19.5	24	22	26	23	12.1
2.5	30	26	33	30	36	32	7.41
4	40	35	45	40	49	42	4.61
6	51	44	58	52	63	54	3.08
10	69	60	80	71	86	75	1.83
16	91	80	107	96	115	100	1.15
25	119	105	138	119	149	127	0.727
35	146	128	171	147	185	158	0.524
50	175	154	209	179	225	192	0.387
70	221	194	269	229	289	246	0.268
95	265	233	328	278	352	298	0.193
120	305	268	382	322	410	346	0.153

Air Ambient temperature: 30°C

Conductor operating temperature: 90°C

The above table is in accordance with BS 7671(Table 4E2A)

De-Rating Factor

De-rating factor for 90°C thermosetting insulated cable

Air Temperature	35°C to 50°C	55°C	60°C	65°C	70°C
De-Rating Factor	1	0.96	0.83	0.67	0.47

Note:

Sheathing with cross linked halogen free flame retardant HFS XL 90 available on demand.



Industrial Cable, 1100 V AC



Application

POLYCAB HFFR-01ZZ-K/03XZZ-K, insulated and sheathed with halogen free flame retardant thermoplastic or cross linked halogen free flame retardant thermosetting compound confirming to IS 17048 is suitable to use in electric power and lighting for indoor use in AC single phase or three phase (earthed or unearthed) systems with rated voltage up to and including 1100 V. This cable is also suitable for DC systems with rated voltage up to and including 1500 V to earth.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to 70°C

Construction

- Bare or tinned bunched copper conductor as per IS 8130, class 5
- Insulated with halogen free flame retardant compound type HFI TP 70 or cross linked halogen free flame retardant compound type HFI-XL 70 (HFFR) to IS 17048
- Sheathed with halogen free flame retardant compound type HFS TP 70 or cross linked halogen free flame retardant compound type HFS-XL 70 (HFFR) to IS 17048

Core Identification

Two core	Red, Black
Three core	Green/Yellow, Red, Black or Red, Yellow, Blue
Four core	Green/Yellow, Red, Yellow, Blue or Red, Yellow, Blue, Black
Five core	Green/Yellow, Yellow, Blue, green, white or Red, yellow, Blue, Black, grey

Bending Radius

Fixed installation	6 x Overall diameter
Occasional	8 x Overall diameter

Standard and References

IS 8130:2013
IS 17048:2018
IEC 60332-1-2

Compliance

Conductor resistance	- IS 8130
Insulation resistance	- IS 17048:2018
Oxygen Index	> 31% As per ASTM D2863
Smoke emission test	< 6% As Per ASTM D2843
Acid gas Generation	- <0.0 As per IEC 60754-1
Under fire condition	- Resist as per EN 60332-1-2

Approval



OUR ACCREDITATION



Industrial Cable, 1100 V AC

Product Code	Construction	Nominal insulation thickness	Overall diameter (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDIS09CLUALS002C0.5S	2 x 0.5	0.6	6.0	54
LDIS09CLUALS002C.75S	2 x 0.75	0.6	6.4	64
LDIS09CLUALS002C001S	2 x 1	0.6	6.8	73
LDIS09CLUALS002C1.5S	2 x 1.5	0.6	7.3	90
LDIS09CLUALS002C2.5S	2 x 2.5	0.7	8.8	135
LDIS09CLUALS002C004S	2 x 4	0.8	10.7	222
LDIS09CLUALS002C006S	2 x 6	0.8	12.0	293
LDIS09CLUALS002C010S	2 x 10	1	14.8	461
LDIS09CLUALS002C016S	2 x 16	1	16.9	644
LDIS09CLUALS002C025S	2 x 25	1.2	20.5	954
LDIS09CLUALS002C035S	2 x 35	1.2	23.0	1260
LDIS09CLUALS002C050S	2 x 50	1.4	27.0	1767
LDIS09CLUALS002C070S	2 x 70	1.4	30.7	2371
LDIS09CLUALS002C095S	2 x 95	1.6	34.8	3089
LDIS09CLUALS002C120S	2 x 120	1.6	38.2	3824
LDIS09CLUALS002C150S	2 x 150	1.8	42.5	4744
LDIS09CLUALS002C185S	2 x 185	2	46.9	5781
LDIS09CLUALS002C240S	2 x 240	2.2	53.2	7545
LDIS09CLUALS002C300S	2 x 300	2.4	60.5	9893
LDIS09CLUALS003C0.5S	3 x 0.5	0.6	6.4	62
LDIS09CLUALS003C.75S	3 x 0.75	0.6	6.8	75
LDIS09CLUALS003C001S	3 x 1	0.6	7.2	87
LDIS09CLUALS003C1.5S	3 x 1.5	0.6	7.8	107
LDIS09CLUALS003C2.5S	3 x 2.5	0.7	9.4	163
LDIS09CLUALS003C004S	3 x 4	0.8	11.4	286
LDIS09CLUALS003C006S	3 x 6	0.8	12.8	381
LDIS09CLUALS003C010S	3 x 10	1	15.8	606
LDIS09CLUALS003C016S	3 x 16	1	18.3	868
LDIS09CLUALS003C025S	3 x 25	1.2	21.8	1277
LDIS09CLUALS003C035S	3 x 35	1.2	24.6	1697
LDIS09CLUALS003C050S	3 x 50	1.4	29.0	2407
LDIS09CLUALS003C070S	3 x 70	1.4	32.8	3223
LDIS09CLUALS003C095S	3 x 95	1.6	37.5	4231
LDIS09CLUALS003C120S	3 x 120	1.6	41.3	5276

OUR ACCREDITATION



Industrial Cable, 1100 V AC

Product Code	Construction n x mm ²	Nominal insulation thickness mm	Overall diameter (Approx.) mm	Weight (Approx.) kg/km
LDIS09CLUALS004C0.5S	4 x 0.5	0.6	6.9	74
LDIS09CLUALS004C.75S	4 x 0.75	0.6	7.4	90
LDIS09CLUALS004C001S	4 x 1	0.6	7.8	105
LDIS09CLUALS004C1.5S	4 x 1.5	0.6	8.7	137
LDIS09CLUALS004C2.5S	4 x 2.5	0.7	10.3	202
LDIS09CLUALS004C004S	4 x 4	0.8	12.6	372
LDIS09CLUALS004C006S	4 x 6	0.8	14.0	488
LDIS09CLUALS004C010S	4 x 10	1	17.5	790
LDIS09CLUALS004C016S	4 x 16	1	20.3	1134
LDIS09CLUALS004C025S	4 x 25	1.2	24.3	1672
LDIS09CLUALS004C035S	4 x 35	1.2	27.3	2225
LDIS09CLUALS004C050S	4 x 50	1.4	32.2	3156
LDIS09CLUALS004C070S	4 x 70	1.4	36.7	4253
LDIS09CLUALS004C095S	4 x 95	1.6	41.8	5581
LDIS09CLUALS004C120S	4 x 120	1.6	45.9	6933
LDIS09CLUALS004C150S	4 x 150	1.8	51.0	8600
LDIS09CLUALS004C185S	4 x 185	2	56.2	10478
LDIS09CLUALS004C240S	4 x 240	2.2	64.0	13738
LDIS09CLUALS004C300S	4 x 300	2.4	72.7	18030
LDIS09CLUALS005C0.5S	5 x 0.5	0.6	7.5	75
LDIS09CLUALS005C.75S	5 x 0.75	0.6	8.1	92
LDIS09CLUALS005C001S	5 x 1	0.6	8.7	112
LDIS09CLUALS005C5.5S	5 x 1.5	0.6	9.5	141
LDIS09CLUALS005C2.5S	5 x 2.5	0.7	11.2	208
LDIS09CLUALS005C004S	5 x 4	0.8	13.8	318

OUR ACCREDITATION



Industrial Cable, 1100 V AC

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area mm ²	Reference Method B (enclosed in conduit on a wall or in trunking etc.)		Reference Method C (clipped direct)		Reference Method E (free air or on a perforated cable tray etc, horizontal or vertical)		Max. DC conductor resistance at 20°C Ω/km
	1 two-core cable* single-phase a.c. or d.c. Amp.	1 three-core cable* or 1 four-core cable, three-phase a.c. Amp.	1 two-core cable* single-phase a.c. or d.c. Amp.	1 three-core cable* or 1 four-core cable, three-phase a.c. Amp.	1 two-core cable* single-phase a.c. or d.c. Amp.	1 three-core cable* or 1 four-core cable, three-phase a.c. Amp.	
1	11	10	12	11	14	12	19.5
1.5	14	12	16	14	18	15	13.3
2.5	19	17	22	20	25	21	7.98
4	25	22	30	26	33	28	4.95
6	31	28	38	34	42	36	3.3
10	43	38	52	47	58	50	1.91
16	57	51	70	63	78	66	1.21
25	76	68	95	81	100	85	0.78
35	94	84	116	100	125	106	0.554
50	112	100	142	122	152	129	0.386
70	142	122	180	155	196	165	0.272
95	170	151	218	188	238	201	0.206
120	196	174	252	219	277	233	0.161
150	218	190	290	252	320	269	0.129
185	248	215	331	288	366	307	0.106
240	290	251	389	340	434	363	0.0801
300	332	286	447	392	500	419	0.0641

Air Ambient temperature: 40°C, Conductor operating temperature: 70°C

The above table is in accordance with BS 7671(Table 4D2A)

De-Rating Factor

De-rating factor for various ambient temperature other than 40°C.

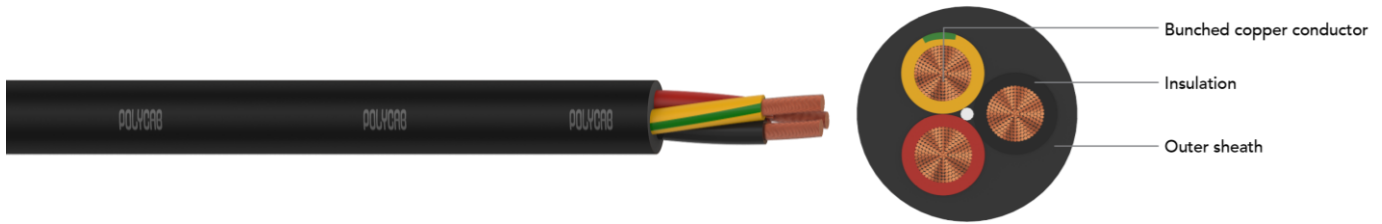
Ambient Temperature	35°C	40°C	45°C	50°C	55°C	60°C	65°C
De-Rating Factor	1.08	1	0.91	0.82	0.7	0.57	0.4

Note: Sheathing with cross linked halogen free flame retardant HFS XL 70 available on demand.

OUR ACCREDITATION



Industrial Cable, 1100 V AC



Application

POLYCAB HFFR-04XZZ-K/04XZZXZ-K, insulated and sheathed with halogen free flame retardant thermoplastic or cross linked halogen free flame retardant thermosetting compound confirming to IS 17048 is suitable to use in electric power and lighting for indoor use in AC single phase or three phase (earthed or unearthed) systems with rated voltage up to and including 1100 V. This cable is also suitable for DC systems with rated voltage up to and including 1500 V to earth.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to 70°C

Construction

- Bare or tinned bunched copper conductor as per IS 8130, class 5
- Insulated with cross linked halogen free flame retardant compound HFI-XL 90 (HFFR) to IS 17048
- Sheathed with halogen free flame retardant compound HFS TP 90 or cross linked halogen free flame retardant HFS-XL 90 (HFFR) to IS 17048

Core Identification

Two core Red, Black
Three core Green/Yellow, Red, Black or Red, Yellow, Blue
Four core Green/Yellow, Red, Yellow, Blue or Red, Yellow, Blue, Black
Five core Green/Yellow, Yellow, Blue, green, white or Red, yellow, Blue, Black, grey

Bending Radius

Fixed installation 6 x Overall diameter
Occasional 8 x Overall diameter

Standard and References

IS 8130:2013
IS 17048:2018
IEC 60332-1-2

Compliance

Conductor resistance - IS 8130
Insulation resistance - IS 17048:2018
Oxygen Index > 31% As per ASTM D2863
Smoke emission test < 6% As Per ASTM D2843
Acid gas Generation - <0.0 As per IEC 60754-1
Under fire condition - Resist as per EN 60332

Approval



OUR ACCREDITATION



Industrial Cable, 1100 V AC

Product code	Construction	Nominal insulation thickness	Overall dia. (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDIS09CLUALS002C0.5S	2 x 0.5	0.6	6.0	54
LDIS09CLUALS002C.75S	2 x 0.75	0.6	6.4	64
LDIS09CLUALS002C001S	2 x 1	0.6	6.8	73
LDIS09CLUALS002C1.5S	2 x 1.5	0.6	7.3	90
LDIS09CLUALS002C2.5S	2 x 2.5	0.7	8.8	135
LDIS09CLUALS002C004S	2 x 4	0.8	10.7	222
LDIS09CLUALS002C006S	2 x 6	0.8	12.0	293
LDIS09CLUALS002C010S	2 x 10	1	14.8	461
LDIS09CLUALS002C016S	2 x 16	1	16.9	644
LDIS09CLUALS002C025S	2 x 25	1.2	20.5	954
LDIS09CLUALS002C035S	2 x 35	1.2	23.0	1260
LDIS09CLUALS002C050S	2 x 50	1.4	27.0	1767
LDIS09CLUALS002C070S	2 x 70	1.4	30.7	2371
LDIS09CLUALS002C095S	2 x 95	1.6	34.8	3089
LDIS09CLUALS002C120S	2 x 120	1.6	38.2	3824
LDIS09CLUALS002C150S	2 x 150	1.8	42.5	4744
LDIS09CLUALS002C185S	2 x 185	2	46.9	5781
LDIS09CLUALS002C240S	2 x 240	2.2	53.2	7545
LDIS09CLUALS002C300S	2 x 300	2.4	60.5	9893
LDIS09CLUALS003C0.5S	3 x 0.5	0.6	6.4	62
LDIS09CLUALS003C.75S	3 x 0.75	0.6	6.8	75
LDIS09CLUALS003C001S	3 x 1	0.6	7.2	87
LDIS09CLUALS003C1.5S	3 x 1.5	0.6	7.8	107
LDIS09CLUALS003C2.5S	3 x 2.5	0.7	9.4	163
LDIS09CLUALS003C004S	3 x 4	0.8	11.4	286
LDIS09CLUALS003C006S	3 x 6	0.8	12.8	381
LDIS09CLUALS003C010S	3 x 10	1	15.8	606
LDIS09CLUALS003C016S	3 x 16	1	18.3	868
LDIS09CLUALS003C025S	3 x 25	1.2	21.8	1277
LDIS09CLUALS003C035S	3 x 35	1.2	24.6	1697
LDIS09CLUALS003C050S	3 x 50	1.4	29.0	2407
LDIS09CLUALS003C070S	3 x 70	1.4	32.8	3223
LDIS09CLUALS003C095S	3 x 95	1.6	37.5	4231
LDIS09CLUALS003C120S	3 x 120	1.6	41.3	5276

OUR ACCREDITATION



Industrial Cable, 1100 V AC

Product code	Construction	Nominal insulation thickness	Overall dia. (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDIS09CLUALS004C0.5S	4 x 0.5	0.6	6.9	74
LDIS09CLUALS004C.75S	4 x 0.75	0.6	7.4	90
LDIS09CLUALS004C001S	4 x 1	0.6	7.8	105
LDIS09CLUALS004C1.5S	4 x 1.5	0.6	8.7	137
LDIS09CLUALS004C2.5S	4 x 2.5	0.7	10.3	202
LDIS09CLUALS004C004S	4 x 4	0.8	12.6	372
LDIS09CLUALS004C006S	4 x 6	0.8	14.0	488
LDIS09CLUALS004C010S	4 x 10	1	17.5	790
LDIS09CLUALS004C016S	4 x 16	1	20.3	1134
LDIS09CLUALS004C025S	4 x 25	1.2	24.3	1672
LDIS09CLUALS004C035S	4 x 35	1.2	27.3	2225
LDIS09CLUALS004C050S	4 x 50	1.4	32.2	3156
LDIS09CLUALS004C070S	4 x 70	1.4	36.7	4253
LDIS09CLUALS004C095S	4 x 95	1.6	41.8	5581
LDIS09CLUALS004C120S	4 x 120	1.6	45.9	6933
LDIS09CLUALS004C150S	4 x 150	1.8	51.0	8600
LDIS09CLUALS004C185S	4 x 185	2	56.2	10478
LDIS09CLUALS004C240S	4 x 240	2.2	64.0	13738
LDIS09CLUALS004C300S	4 x 300	2.4	72.7	18030
LDIS09CLUALS005C0.5S	5 x 0.5	0.6	7.5	75
LDIS09CLUALS005C.75S	5 x 0.75	0.6	8.1	92
LDIS09CLUALS005C001S	5 x 1	0.6	8.7	112
LDIS09CLUALS005C5.5S	5 x 1.5	0.6	9.5	141
LDIS09CLUALS005C2.5S	5 x 2.5	0.7	11.2	208
LDIS09CLUALS005C004S	5 x 4	0.8	13.8	318

OUR ACCREDITATION



Industrial Cable, 1100 V AC

Electrical characteristics

Current carrying capacity and maximum DC resistance.

Nominal cross-sectional area mm ²	Reference method B (enclosed in conduit on a wall or in trunking etc)		Reference method C (clipped direct)		Reference method E (free air or on a perforated cable tray etc horizontal or vertical)		Maximum DC conductor resistance at 20°C Ω/km
	1 two core cable single phase ac or dc Amp.	1 three or four core cable three phase ac Amp.	1 two core cable single phase ac or dc Amp.	1 three or four core cable three phase ac Amp.	1 two core cable single phase ac or dc Amp.	1 three or four core cable three phase ac Amp.	
0.5	5	4	5	5	-	-	39
0.75	9	8	10	9	-	-	26
1	15	13	16	15	18	16	19.5
1.5	19	17	21	19	22	20	13.3
2.5	26	22	29	26	31	28	7.98
4	35	30	39	35	42	36	4.95
6	44	38	50	45	54	47	3.3
10	60	52	69	61	74	65	1.91
16	79	69	93	83	99	86	1.21
25	105	93	122	105	132	112	0.78
35	129	113	151	130	163	139	0.554
50	154	136	184	158	199	169	0.386
70	195	171	237	202	255	217	0.272
95	234	206	290	245	311	263	0.206
120	269	237	337	284	362	305	0.161
150	295	265	389	327	418	352	0.129
185	339	300	447	374	478	403	0.106
240	405	351	529	441	566	475	0.0801
300	470	402	612	508	654	548	0.0641

Ambient temperature: 40°C, Conductor operating temperature: 90°C

The above table is in accordance with BS 7671(Table 4E2A)

De-Rating Factor

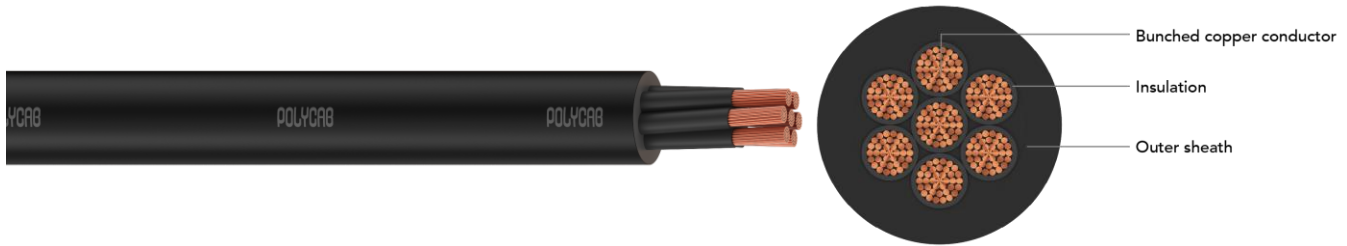
De-rating factor for various ambient temperature.

Air Temperature	35°C to 50°C	55°C	60°C	65°C	70°C
De-Rating Factor	1	0.96	0.83	0.67	0.47

Note: sheathing with halogen free flame retardant HFS XL 90 available on demand

OUR ACCREDITATION

Industrial Cable, 1100 V AC



Application

POLYCAB HFFR-01ZZ-K/03XZZ-K MC, insulated and sheathed with halogen free flame retardant thermoplastic or cross linked halogen free flame retardant thermosetting compound confirming to IS 17048 is suitable to use in electric power and lighting for indoor use in AC single phase or three phase (earthed or unearthed) systems with rated voltage up to and including 1100 V. This cable is also suitable for DC systems with rated voltage up to and including 1500 V to earth.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to 70°C

Construction

- Bare or tinned bunched copper conductor as per IS 8130, class 5
- Insulated with halogen free flame retardant compound type HFI TP 70 or cross linked halogen free flame retardant compound type HFI-XL 70 (HFFR) to IS 17048
- Sheathed with halogen free flame retardant compound type HFS TP 70 or cross linked halogen free flame retardant compound type HFS-XL 70 (HFFR) to IS 17048

Core Identification

Black with white numbering

Bending Radius

Fixed installation 6 x Overall diameter
Occasional 8 x Overall diameter

Standard and References

IS 8130:2013
IS 5831:1984
IEC 60332-1-2

Compliance

Conductor resistance	- IS 8130
Insulation resistance	- IS 17048:2018
Oxygen Index	> 31% As per ASTM D2863
Smoke emission test	< 6% As Per ASTM D2843
Acid gas Generation	- <0.0 As per IEC 60754-1
Under fire condition	- Resist as per EN 60332-1-2

Approval



OUR ACCREDITATION



Industrial Cable, 1100 V AC

Product Code	Conductor size n x mm ²	Nominal insulation thickness mm	Overall diameter (Approx.) mm	Weight (Approx.) kg/km
LDIS09CLUALS006C0.5S	6 x 0.5	0.6	8.1	86
LDIS09CLUALS006C.75S	6 x 0.75	0.6	9.0	111
LDIS09CLUALS006C001S	6 x 1	0.6	9.5	130
LDIS09CLUALS006C1.5S	6 x 1.5	0.6	10.3	164
LDIS09CLUALS006C2.5S	6 x 2.5	0.7	12.4	251
LDIS09CLUALS006C004S	6 x 4	0.8	14.9	375
LDIS09CLUALS007C0.5S	7 x 0.5	0.6	8.1	95
LDIS09CLUALS007C.75S	7 x 0.75	0.6	9.0	123
LDIS09CLUALS007C001S	7 x 1	0.6	9.5	145
LDIS09CLUALS007C1.5S	7 x 1.5	0.6	10.3	184
LDIS09CLUALS007C2.5S	7 x 2.5	0.7	12.4	282
LDIS09CLUALS007C004S	7 x 4	0.8	14.9	423
LDIS09CLUALS008C0.5S	8 x 0.5	0.6	9.3	113
LDIS09CLUALS008C.75S	8 x 0.75	0.6	10.0	140
LDIS09CLUALS008C001S	8 x 1	0.6	10.6	165
LDIS09CLUALS008C1.5S	8 x 1.5	0.6	11.7	216
LDIS09CLUALS008C2.5S	8 x 2.5	0.7	14.2	329
LDIS09CLUALS008C004S	8 x 4	0.8	16.9	492
LDIS09CLUALS009C0.5S	9 x 0.5	0.6	10.0	126
LDIS09CLUALS009C.75S	9 x 0.75	0.6	11.0	161
LDIS09CLUALS009C001S	9 x 1	0.6	11.7	190
LDIS09CLUALS009C1.5S	9 x 1.5	0.6	12.7	240
LDIS09CLUALS009C2.5S	9 x 2.5	0.7	15.6	376
LDIS09CLUALS009C004S	9 x 4	0.8	18.6	560
LDIS09CLUALS010C0.5S	10 x 0.5	0.6	10.4	137
LDIS09CLUALS010C.75S	10 x 0.75	0.6	11.5	175
LDIS09CLUALS010C001S	10 x 1	0.6	12.2	207
LDIS09CLUALS010C1.5S	10 x 1.5	0.6	13.2	263
LDIS09CLUALS010C2.5S	10 x 2.5	0.7	16.3	411
LDIS09CLUALS010C004S	10 x 4	0.8	19.4	614
LDIS09CLUALS011C0.5S	11 x 0.5	0.6	10.4	145
LDIS09CLUALS011C.75S	11 x 0.75	0.6	11.5	187
LDIS09CLUALS011C001S	11 x 1	0.6	12.2	221
LDIS09CLUALS011C1.5S	11 x 1.5	0.6	13.2	282
LDIS09CLUALS011C2.5S	11 x 2.5	0.7	16.3	442
LDIS09CLUALS011C004S	11 x 4	0.8	19.4	662
LDIS09CLUALS012C0.5S	12 x 0.5	0.6	10.8	156
LDIS09CLUALS012C.75S	12 x 0.75	0.6	11.8	200
LDIS09CLUALS012C001S	12 x 1	0.6	12.6	237

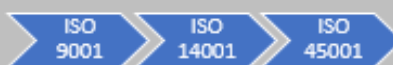
OUR ACCREDITATION



Industrial Cable, 1100 V AC

Product Code	Conductor size	Nominal insulation thickness	Overall diameter (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDIS09CLUALS012C1.5S	12 x 1.5	0.6	13.7	304
LDIS09CLUALS012C2.5S	12 x 2.5	0.7	16.8	477
LDIS09CLUALS012C004S	12 x 4	0.8	20.1	715
LDIS09CLUALS013C0.5S	13 x 0.5	0.6	11.3	167
LDIS09CLUALS013C.75S	13 x 0.75	0.6	12.4	215
LDIS09CLUALS013C001S	13 x 1	0.6	13.2	255
LDIS09CLUALS013C1.5S	13 x 1.5	0.6	14.6	335
LDIS09CLUALS013C2.5S	13 x 2.5	0.7	17.7	513
LDIS09CLUALS013C004S	13 x 4	0.8	21.1	770
LDIS09CLUALS014C0.5S	14 x 0.5	0.6	11.5	182
LDIS09CLUALS014C.75S	14 x 0.75	0.6	12.4	227
LDIS09CLUALS014C001S	14 x 1	0.6	13.2	269
LDIS09CLUALS014C1.5S	14 x 1.5	0.6	14.6	354
LDIS09CLUALS014C2.5S	14 x 2.5	0.7	17.7	544
LDIS09CLUALS014C004S	14 x 4	0.8	21.1	818
LDIS09CLUALS015C0.5S	15 x 0.5	0.6	12.1	194
LDIS09CLUALS015C.75S	15 x 0.75	0.6	13.3	249
LDIS09CLUALS015C001S	15 x 1	0.6	14.1	295
LDIS09CLUALS015C1.5S	15 x 1.5	0.6	15.4	378
LDIS09CLUALS015C2.5S	15 x 2.5	0.7	18.9	592
LDIS09CLUALS015C004S	15 x 4	0.8	22.5	887
LDIS09CLUALS016C0.5S	16 x 0.5	0.6	12.1	203
LDIS09CLUALS016C.75S	16 x 0.75	0.6	13.3	261
LDIS09CLUALS016C001S	16 x 1	0.6	14.1	310
LDIS09CLUALS016C1.5S	16 x 1.5	0.6	15.4	397
LDIS09CLUALS016C2.5S	16 x 2.5	0.7	18.9	622
LDIS09CLUALS016C004S	16 x 4	0.8	22.5	935
LDIS09CLUALS017C0.5S	17 x 0.5	0.6	12.8	215
LDIS09CLUALS017C.75S	17 x 0.75	0.6	14.0	276
LDIS09CLUALS017C001S	17 x 1	0.6	14.8	329
LDIS09CLUALS017C1.5S	17 x 1.5	0.6	16.4	430
LDIS09CLUALS017C2.5S	17 x 2.5	0.7	19.9	661
LDIS09CLUALS017C004S	17 x 4	0.8	23.8	993
LDIS09CLUALS018C0.5S	18 x 0.5	0.6	12.8	223
LDIS09CLUALS018C.75S	18 x 0.75	0.6	14.0	288
LDIS09CLUALS018C001S	18 x 1	0.6	15.0	351
LDIS09CLUALS018C1.5S	18 x 1.5	0.6	16.4	449

OUR ACCREDITATION



Industrial Cable, 1100 V AC

Product Code	Conductor size	Nominal insulation thickness	Overall diameter (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDIS09CLUALS018C2.5S	18 x 2.5	0.7	19.9	692
LDIS09CLUALS018C004S	18 x 4	0.8	23.8	1041
LDIS09CLUALS019C0.5S	19 x 0.5	0.6	12.8	232
LDIS09CLUALS019C.75S	19 x 0.75	0.6	14.0	299
LDIS09CLUALS019C001S	19 x 1	0.6	15.0	365
LDIS09CLUALS019C1.5S	19 x 1.5	0.6	16.4	469
LDIS09CLUALS019C2.5S	19 x 2.5	0.7	19.9	722
LDIS09CLUALS019C004S	19 x 4	0.8	23.8	1089
LDIS09CLUALS020C0.5S	20 x 0.5	0.6	13.7	252
LDIS09CLUALS020C.75S	20 x 0.75	0.6	14.9	324
LDIS09CLUALS020C001S	20 x 1	0.6	16.1	393
LDIS09CLUALS020C1.5S	20 x 1.5	0.6	17.5	503
LDIS09CLUALS020C2.5S	20 x 2.5	0.7	21.2	773
LDIS09CLUALS020C004S	20 x 4	0.8	25.4	1161
LDIS09CLUALS021C0.5S	21 x 0.5	0.6	13.7	261
LDIS09CLUALS021C.75S	21 x 0.75	0.6	14.9	335
LDIS09CLUALS021C001S	21 x 1	0.6	16.1	407
LDIS09CLUALS021C1.5S	21 x 1.5	0.6	17.5	523
LDIS09CLUALS021C2.5S	21 x 2.5	0.7	21.2	803
LDIS09CLUALS021C004S	21 x 4	0.8	25.4	1209
LDIS09CLUALS022C0.5S	22 x 0.5	0.6	14.4	274
LDIS09CLUALS022C.75S	22 x 0.75	0.6	15.7	352
LDIS09CLUALS022C001S	22 x 1	0.6	16.9	428
LDIS09CLUALS022C1.5S	22 x 1.5	0.6	18.5	549
LDIS09CLUALS022C2.5S	22 x 2.5	0.7	22.4	843
LDIS09CLUALS022C004S	22 x 4	0.8	26.8	1269
LDIS09CLUALS023C0.5S	23 x 0.5	0.6	14.4	282
LDIS09CLUALS023C.75S	23 x 0.75	0.6	15.7	363
LDIS09CLUALS023C001S	23 x 1	0.6	16.9	442
LDIS09CLUALS023C1.5S	23 x 1.5	0.6	18.5	568
LDIS09CLUALS023C2.5S	23 x 2.5	0.7	22.4	874
LDIS09CLUALS023C004S	23 x 4	0.8	26.8	1317
LDIS09CLUALS024C0.5S	24 x 0.5	0.6	15.1	296
LDIS09CLUALS024C.75S	24 x 0.75	0.6	16.5	380
LDIS09CLUALS024C001S	24 x 1	0.6	17.7	462
LDIS09CLUALS024C1.5S	24 x 1.5	0.6	19.4	594

OUR ACCREDITATION



Industrial Cable, 1100 V AC

Product Code	Conductor size	Nominal insulation thickness	Overall dia. (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDIS09CLUALS024C2.5S	24 x 2.5	0.7	23.5	914
LDIS09CLUALS024C004S	24 x 4	0.8	28.2	1376
LDIS09CLUALS025C0.5S	25 x 0.5	0.6	15.1	304
LDIS09CLUALS025C.75S	25 x 0.75	0.6	16.5	391
LDIS09CLUALS025C001S	25 x 1	0.6	17.7	477
LDIS09CLUALS025C1.5S	25 x 1.5	0.6	19.4	613
LDIS09CLUALS025C2.5S	25 x 2.5	0.7	23.5	945
LDIS09CLUALS025C004S	25 x 4	0.8	28.2	1424
LDIS09CLUALS030C0.5S	30 x 0.5	0.6	16.1	361
LDIS09CLUALS030C.75S	30 x 0.75	0.6	17.5	455
LDIS09CLUALS030C001S	30 x 1	0.6	18.8	555
LDIS09CLUALS030C1.5S	30 x 1.5	0.6	20.5	717
LDIS09CLUALS030C2.5S	30 x 2.5	0.7	24.9	1110
LDIS09CLUALS030C004S	30 x 4	0.8	29.9	1678

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area mm ²	Reference method B (enclosed in conduit on a wall or in trunking etc)		Reference method C (clipped direct)		Reference method E (in free air or on a perforated cable tray horizontal or vertical)		Maximum DC conductor resistance 20°C Ω/km
	1 two core cable single phase ac or dc Amp.	1 three core cable or 1 four core cable three phase ac Amp.	1 two core cable single phase ac or dc Amp.	1 three core cable or 1 four core cable three phase ac Amp.	1 two core cable single phase ac or dc Amp.	1 three core cable or 1 four core cable three phase ac Amp.	
0.5	4	3.6	4	3.6	-	-	39
0.75	7	6	7	6	-	-	26
1	11	10	12	11	14	12	19.5
1.5	14	12	16	14	18	15	13.3
2.5	19	17	22	20	25	21	7.98
4	25	22	30	26	33	28	4.95

Ambient temperature: 40°C, Conductor operating temperature: 70°C, the above table is in accordance with BS 7671(4D2A)

De-Rating Factor

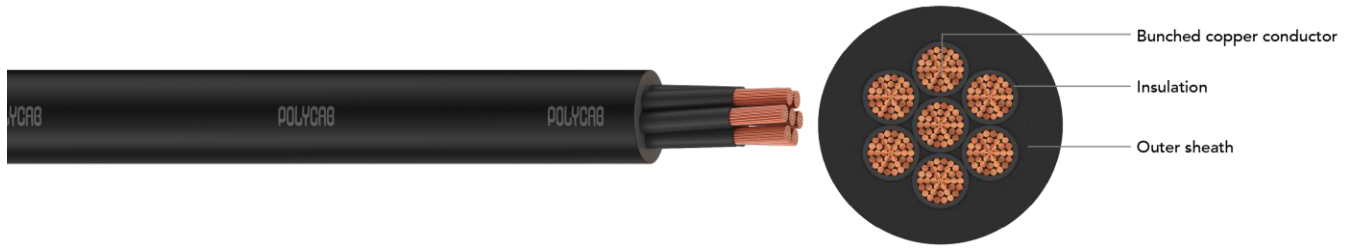
De-rating factor for various ambient temperature

Ambient Temperature	35°C	40°C	45°C	50°C	55°C	60°C	65°C
De-Rating Factor	1.08	1	0.91	0.82	0.7	0.57	0.4

OUR ACCREDITATION



Industrial cable, 1100 V AC



Application

POLYCAB HFFR-04XZZ-K/04XZZXZ-K MC flexible cable insulated and sheathed with halogen free flame retardant thermoplastic or cross linked halogen free flame retardant thermosetting compound confirming to IS 17048 is suitable to use in electric power and lighting for indoor use in AC single phase or three phase (earthed or unearthed) systems with rated voltage up to and including 1100 V. This cable is also suitable for DC systems with rated voltage up to and including 1500 V to earth.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to 90°C

Construction

- Bare or tinned bunched copper conductor as per IS 8130, class 5
- Insulated with cross linked halogen free flame retardant compound type HFI-XL 90 (HFFR) to IS 17048
- Sheathed with halogen free flame retardant HFS TP 90 or cross linked halogen free flame retardant compound type HFS-XL 90 (HFFR) to IS 17048

Standard and References

IS 8130:2013
IS 5831:1984
IEC 60332-1-2

Compliance

Conductor resistance	- IS 8130
Insulation resistance	- IS 17048:2018
Oxygen Index	> 31% As per ASTM D2863
Smoke emission test	< 6% As Per ASTM D2843
Acid gas Generation	- <0.0 As per IEC 60754-1
Under fire condition	- Resist as per EN 60332-1-2

Approval



Core Identification

Black with white numbering

Bending Radius

Fixed installation 6 x Overall diameter
Occasional 8 x Overall diameter

OUR ACCREDITATION



Industrial cable, 1100 V AC

Product Code	Conductor size n x mm ²	Nominal insulation thickness mm	Overall diameter (Approx.) mm	Weight (Approx.) kg/km
LDIS09CLUALS006C0.5S	6 x 0.5	0.6	8.1	86
LDIS09CLUALS006C.75S	6 x 0.75	0.6	9.0	111
LDIS09CLUALS006C001S	6 x 1	0.6	9.5	130
LDIS09CLUALS006C1.5S	6 x 1.5	0.6	10.3	164
LDIS09CLUALS006C2.5S	6 x 2.5	0.7	12.4	251
LDIS09CLUALS006C004S	6 x 4	0.8	14.9	375
LDIS09CLUALS007C0.5S	7 x 0.5	0.6	8.1	95
LDIS09CLUALS007C.75S	7 x 0.75	0.6	9.0	123
LDIS09CLUALS007C001S	7 x 1	0.6	9.5	145
LDIS09CLUALS007C1.5S	7 x 1.5	0.6	10.3	184
LDIS09CLUALS007C2.5S	7 x 2.5	0.7	12.4	282
LDIS09CLUALS007C004S	7 x 4	0.8	14.9	423
LDIS09CLUALS008C0.5S	8 x 0.5	0.6	9.3	113
LDIS09CLUALS008C.75S	8 x 0.75	0.6	10.0	140
LDIS09CLUALS008C001S	8 x 1	0.6	10.6	165
LDIS09CLUALS008C1.5S	8 x 1.5	0.6	11.7	216
LDIS09CLUALS008C2.5S	8 x 2.5	0.7	14.2	329
LDIS09CLUALS008C004S	8 x 4	0.8	16.9	492
LDIS09CLUALS009C0.5S	9 x 0.5	0.6	10.0	126
LDIS09CLUALS009C.75S	9 x 0.75	0.6	11.0	161
LDIS09CLUALS009C001S	9 x 1	0.6	11.7	190
LDIS09CLUALS009C1.5S	9 x 1.5	0.6	12.7	240
LDIS09CLUALS009C2.5S	9 x 2.5	0.7	15.6	376
LDIS09CLUALS009C004S	9 x 4	0.8	18.6	560
LDIS09CLUALS010C0.5S	10 x 0.5	0.6	10.4	137
LDIS09CLUALS010C.75S	10 x 0.75	0.6	11.5	175
LDIS09CLUALS010C001S	10 x 1	0.6	12.2	207
LDIS09CLUALS010C1.5S	10 x 1.5	0.6	13.2	263
LDIS09CLUALS010C2.5S	10 x 2.5	0.7	16.3	411
LDIS09CLUALS010C004S	10 x 4	0.8	19.4	614
LDIS09CLUALS011C0.5S	11 x 0.5	0.6	10.4	145
LDIS09CLUALS011C.75S	11 x 0.75	0.6	11.5	187
LDIS09CLUALS011C001S	11 x 1	0.6	12.2	221
LDIS09CLUALS011C1.5S	11 x 1.5	0.6	13.2	282
LDIS09CLUALS011C2.5S	11 x 2.5	0.7	16.3	442
LDIS09CLUALS011C004S	11 x 4	0.8	19.4	662
LDIS09CLUALS012C0.5S	12 x 0.5	0.6	10.8	156
LDIS09CLUALS012C.75S	12 x 0.75	0.6	11.8	200
LDIS09CLUALS012C001S	12 x 1	0.6	12.6	237

OUR ACCREDITATION



Industrial cable, 1100 V AC

Product Code	Conductor size	Nominal insulation thickness	Overall diameter (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDIS09CLUALS012C1.5S	12 x 1.5	0.6	13.7	304
LDIS09CLUALS012C2.5S	12 x 2.5	0.7	16.8	477
LDIS09CLUALS012C004S	12 x 4	0.8	20.1	715
LDIS09CLUALS013C0.5S	13 x 0.5	0.6	11.3	167
LDIS09CLUALS013C.75S	13 x 0.75	0.6	12.4	215
LDIS09CLUALS013C001S	13 x 1	0.6	13.2	255
LDIS09CLUALS013C1.5S	13 x 1.5	0.6	14.6	335
LDIS09CLUALS013C2.5S	13 x 2.5	0.7	17.7	513
LDIS09CLUALS013C004S	13 x 4	0.8	21.1	770
LDIS09CLUALS014C0.5S	14 x 0.5	0.6	11.5	182
LDIS09CLUALS014C.75S	14 x 0.75	0.6	12.4	227
LDIS09CLUALS014C001S	14 x 1	0.6	13.2	269
LDIS09CLUALS014C1.5S	14 x 1.5	0.6	14.6	354
LDIS09CLUALS014C2.5S	14 x 2.5	0.7	17.7	544
LDIS09CLUALS014C004S	14 x 4	0.8	21.1	818
LDIS09CLUALS015C0.5S	15 x 0.5	0.6	12.1	194
LDIS09CLUALS015C.75S	15 x 0.75	0.6	13.3	249
LDIS09CLUALS015C001S	15 x 1	0.6	14.1	295
LDIS09CLUALS015C1.5S	15 x 1.5	0.6	15.4	378
LDIS09CLUALS015C2.5S	15 x 2.5	0.7	18.9	592
LDIS09CLUALS015C004S	15 x 4	0.8	22.5	887
LDIS09CLUALS016C0.5S	16 x 0.5	0.6	12.1	203
LDIS09CLUALS016C.75S	16 x 0.75	0.6	13.3	261
LDIS09CLUALS016C001S	16 x 1	0.6	14.1	310
LDIS09CLUALS016C1.5S	16 x 1.5	0.6	15.4	397
LDIS09CLUALS016C2.5S	16 x 2.5	0.7	18.9	622
LDIS09CLUALS016C004S	16 x 4	0.8	22.5	935
LDIS09CLUALS017C0.5S	17 x 0.5	0.6	12.8	215
LDIS09CLUALS017C.75S	17 x 0.75	0.6	14.0	276
LDIS09CLUALS017C001S	17 x 1	0.6	14.8	329
LDIS09CLUALS017C1.5S	17 x 1.5	0.6	16.4	430
LDIS09CLUALS017C2.5S	17 x 2.5	0.7	19.9	661
LDIS09CLUALS017C004S	17 x 4	0.8	23.8	993
LDIS09CLUALS018C0.5S	18 x 0.5	0.6	12.8	223
LDIS09CLUALS018C.75S	18 x 0.75	0.6	14.0	288
LDIS09CLUALS018C001S	18 x 1	0.6	15.0	351
LDIS09CLUALS018C1.5S	18 x 1.5	0.6	16.4	449

OUR ACCREDITATION



Industrial cable, 1100 V AC

Product Code	Conductor size	Nominal insulation thickness	Overall diameter (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDIS09CLUALS018C2.5S	18 x 2.5	0.7	19.9	692
LDIS09CLUALS018C004S	18 x 4	0.8	23.8	1041
LDIS09CLUALS019C0.5S	19 x 0.5	0.6	12.8	232
LDIS09CLUALS019C.75S	19 x 0.75	0.6	14.0	299
LDIS09CLUALS019C001S	19 x 1	0.6	15.0	365
LDIS09CLUALS019C1.5S	19 x 1.5	0.6	16.4	469
LDIS09CLUALS019C2.5S	19 x 2.5	0.7	19.9	722
LDIS09CLUALS019C004S	19 x 4	0.8	23.8	1089
LDIS09CLUALS020C0.5S	20 x 0.5	0.6	13.7	252
LDIS09CLUALS020C.75S	20 x 0.75	0.6	14.9	324
LDIS09CLUALS020C001S	20 x 1	0.6	16.1	393
LDIS09CLUALS020C1.5S	20 x 1.5	0.6	17.5	503
LDIS09CLUALS020C2.5S	20 x 2.5	0.7	21.2	773
LDIS09CLUALS020C004S	20 x 4	0.8	25.4	1161
LDIS09CLUALS021C0.5S	21 x 0.5	0.6	13.7	261
LDIS09CLUALS021C.75S	21 x 0.75	0.6	14.9	335
LDIS09CLUALS021C001S	21 x 1	0.6	16.1	407
LDIS09CLUALS021C1.5S	21 x 1.5	0.6	17.5	523
LDIS09CLUALS021C2.5S	21 x 2.5	0.7	21.2	803
LDIS09CLUALS021C004S	21 x 4	0.8	25.4	1209
LDIS09CLUALS022C0.5S	22 x 0.5	0.6	14.4	274
LDIS09CLUALS022C.75S	22 x 0.75	0.6	15.7	352
LDIS09CLUALS022C001S	22 x 1	0.6	16.9	428
LDIS09CLUALS022C1.5S	22 x 1.5	0.6	18.5	549
LDIS09CLUALS022C2.5S	22 x 2.5	0.7	22.4	843
LDIS09CLUALS022C004S	22 x 4	0.8	26.8	1269
LDIS09CLUALS023C0.5S	23 x 0.5	0.6	14.4	282
LDIS09CLUALS023C.75S	23 x 0.75	0.6	15.7	363
LDIS09CLUALS023C001S	23 x 1	0.6	16.9	442
LDIS09CLUALS023C1.5S	23 x 1.5	0.6	18.5	568
LDIS09CLUALS023C2.5S	23 x 2.5	0.7	22.4	874
LDIS09CLUALS023C004S	23 x 4	0.8	26.8	1317
LDIS09CLUALS024C0.5S	24 x 0.5	0.6	15.1	296
LDIS09CLUALS024C.75S	24 x 0.75	0.6	16.5	380
LDIS09CLUALS024C001S	24 x 1	0.6	17.7	462
LDIS09CLUALS024C1.5S	24 x 1.5	0.6	19.4	594

OUR ACCREDITATION



Industrial cable, 1100 V AC

Product Code	Conductor size	Nominal insulation thickness	Overall diameter (Approx.)	Weight (Approx.)
	n x mm ²	mm	mm	kg/km
LDIS09CLUALS024C2.5S	24 x 2.5	0.7	23.5	914
LDIS09CLUALS024C004S	24 x 4	0.8	28.2	1376
LDIS09CLUALS025C0.5S	25 x 0.5	0.6	15.1	304
LDIS09CLUALS025C.75S	25 x 0.75	0.6	16.5	391
LDIS09CLUALS025C001S	25 x 1	0.6	17.7	477
LDIS09CLUALS025C1.5S	25 x 1.5	0.6	19.4	613
LDIS09CLUALS025C2.5S	25 x 2.5	0.7	23.5	945
LDIS09CLUALS025C004S	25 x 4	0.8	28.2	1424
LDIS09CLUALS030C0.5S	30 x 0.5	0.6	16.1	361
LDIS09CLUALS030C.75S	30 x 0.75	0.6	17.5	455
LDIS09CLUALS030C001S	30 x 1	0.6	18.8	555
LDIS09CLUALS030C1.5S	30 x 1.5	0.6	20.5	717
LDIS09CLUALS030C2.5S	30 x 2.5	0.7	24.9	1110
LDIS09CLUALS030C004S	30 x 4	0.8	29.9	1678

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross-sectional area mm ²	Reference method B (enclosed in conduit on a wall or in trunking etc)		Reference method C (clipped direct)		Reference method E (free air or on a perforated cable tray etc horizontal or vertical)		Maximum DC conductor resistance at 20°C Ω/km
	1 two core cable single phase ac or dc	1 three or four core cable three phase ac	1 two core cable single phase ac or dc	1 three or four core cable three phase ac	1 two core cable single phase ac or dc	1 three or four core cable three phase ac	
	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	
0.5	5	4	5	5	-	-	39
0.75	9	8	10	9	-	-	26
1	15	13	16	15	18	16	19.5
1.5	19	17	21	19	22	20	13.3
2.5	26	22	29	26	31	28	7.98
4	35	30	39	35	42	36	4.95

Ambient temperature: 40°C, Conductor operating temperature: 90°C

The above table is in accordance with BS 7671(Table 4E2A)

De-Rating Factor

De-rating factor for various ambient temperature.

Air Temperature	35°C to 50°C	55°C	60°C	65°C	70°C
De-Rating Factor	1	0.96	0.83	0.67	0.47

OUR ACCREDITATION

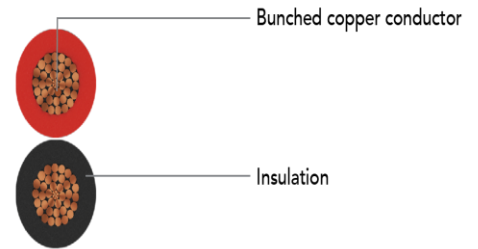


Industrial Cables, 1100 V AC

Twin Parallel



Twin Twisted



Application

POLYCAB HFFR-01Z-K/03XZ-K FLAT & TWISTED, insulated with thermoplastic or cross-linked halogen free thermosetting compound conforming to IS 17048 is suitable to use in electric power and lighting for indoor use in AC single phase systems with rated voltage up to and including 1100 V.

Voltage Rating

1100 V

Operation Temperature

Max.: 70°C

Construction

- Bare or tinned bunched copper conductor as per IS 8130, class 5
- Insulated with halogen free flame retardant compound type HFI TP 70 or cross-linked halogen free flame retardant compound type HFI-XL 70 (HFFR) to IS 17048

Core Identification

Red and Black

Bending Radius

Fixed installation 6 x Overall diameter
Occasional 4 x Overall diameter

Standard and References

IS 8130:2013
IS 17048:2018
IEC 60332-1-2

Compliance

Conductor resistance - IS 8130
Insulation resistance - IS 17048:2018
Oxygen Index > 31% As per ASTM D2863
Smoke emission test < 6% As Per ASTM D2843
Acid gas Generation - <0.0 As per IEC 60754-1
Under fire condition - Resist as per EN 60332

Approval



OUR ACCREDITATION



Industrial Cables, 1100 V AC

Twin Twisted cable				
Product Code	Conductor size n x mm ²	Nominal insulation thickness mm	Overall dia. (Approx.) mm	Weight (Approx.) kg/km
TTIS09CLUALS002C0.5S	2 x 0.5	0.6	4.2 x 2.1	17
TTIS09CLUALS002C.75S	2 x 0.75	0.6	4.6 x 2.3	23
TTIS09CLUALS002C001S	2 x 1	0.6	5 x 2.5	28
TTIS09CLUALS002C1.5S	2 x 1.5	0.6	5.5 x 2.8	38
TTIS09CLUALS002C2.5S	2 x 2.5	0.7	6.8 x 3.4	61
TTIS09CLUALS002C004S	2 x 4	0.8	8.1 x 4.1	90
Twin Parallel cable				
Product Code	Conductor size n x mm ²	Nominal insulation thickness mm	Overall dimension (Approx.) mm	Weight (Approx.) kg/km
TFIS09CLUALS002C0.5S	2 x 0.5	0.6	4.2 x 2.1	17
TFIS09CLUALS002C.75S	2 x 0.75	0.6	4.6 x 2.3	23
TFIS09CLUALS002C001S	2 x 1	0.6	5 x 2.5	28
TFIS09CLUALS002C1.5S	2 x 1.5	0.6	5.5 x 2.8	38
TFIS09CLUALS002C1.5S	2 x 2.5	0.7	6.8 x 3.4	61
TFIS09CLUALS002C004S	2 x 4	0.8	8.1 x 4.1	90

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross-sectional area mm ²	Current rating dc OR single phase ac , OR Three phase ac Amp.	Maximum DC conductor resistance at 20°C Ω/km
0.5	4	39
0.75	7	26
1	11	19.5
1.5	14	13.3
2.5	19	7.98
4	26	4.95

Air Ambient temperature: 40°C

Conductor operating temperature: 70°C

The above table is in accordance with IS 3961

De-Rating Factor

De-rating factor for various ambient temperature.

Ambient temperature	30°C	35°C	40°C	50°C	55°C
De-Rating Factor	1.09	1.04	1	0.77	0.54

OUR ACCREDITATION



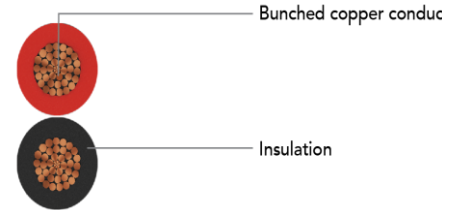
POLYCAB HFFR-04XZ FLAT & TWISTED

Industrial Cable, 1100 V AC

Twin Parallel



Twin Twisted



Application

POLYCAB HFFR-04XZ FLAT & TWISTED Cords insulated with halogen free flame retardant thermoplastic or cross-linked halogen free flame retardant thermosetting compound confirming to IS 17048 is suitable to use in electric power and lighting for indoor use in AC single phase systems with rated voltage up to and including 1100 V.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to 90°C

Construction

- Bare or tinned bunched copper conductor as per IS 8130, class 5
- Insulated with cross linked halogen free flame retardant compound type HFI-XL 90 (HFFR) to IS 17048

Core Identification

Red and Black

Bending Radius

Fixed installation 6 x Overall diameter
Occasional 4 x Overall diameter

Standard and References

IS 8130:2013
IS 17048:2018
IEC 60332-1-2

Compliance

Conductor resistance - IS 8130
Insulation resistance - IS 17048:2018
Oxygen Index > 31% As per ASTM D2863
Smoke emission test < 6% As Per ASTM D2843
Acid gas Generation - <0.0 As per IEC 60754-1
Under fire condition - Resist as per EN 60332

Approval



OUR ACCREDITATION



Industrial Cable, 1100 V AC

Twin Twisted cable				
Product Code	Conductor size n x mm ²	Nominal insulation thickness mm	Overall dia. (Approx.) mm	Weight (Approx.) kg/km
TTIS09CLUALS002C0.5S	2 x 0.5	0.6	4.2 x 2.1	17
TTIS09CLUALS002C.75S	2 x 0.75	0.6	4.6 x 2.3	23
TTIS09CLUALS002C001S	2 x 1	0.6	5 x 2.5	28
TTIS09CLUALS002C1.5S	2 x 1.5	0.6	5.5 x 2.8	38
TTIS09CLUALS002C2.5S	2 x 2.5	0.7	6.8 x 3.4	61
TTIS09CLUALS002C004S	2 x 4	0.8	8.1 x 4.1	90
Twin Parallel cable				
Product Code	Conductor size n x mm ²	Nominal insulation thickness mm	Overall dimension (Approx.) mm	Weight (Approx.) kg/km
TFIS09CLUALS002C0.5S	2 x 0.5	0.6	4.2 x 2.1	17
TFIS09CLUALS002C.75S	2 x 0.75	0.6	4.6 x 2.3	23
TFIS09CLUALS002C001S	2 x 1	0.6	5 x 2.5	28
TFIS09CLUALS002C1.5S	2 x 1.5	0.6	5.5 x 2.8	38
TFIS09CLUALS002C1.5S	2 x 2.5	0.7	6.8 x 3.4	61
TFIS09CLUALS002C004S	2 x 4	0.8	8.1 x 4.1	90

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area mm ²	Current-carrying capacity	Maximum DC conductor resistance at 20°C Ω/km
	Single-phase a.c. Amp.	
0.5	5	39
0.75	9	26
1	14	19.5
1.5	18	13.3
2.5	24	7.98
4	33	4.95

Maximum conductor operating temperature 90°C

Ambient temperature 40°C

De-Rating Factor

De-rating factor for various ambient temperature.

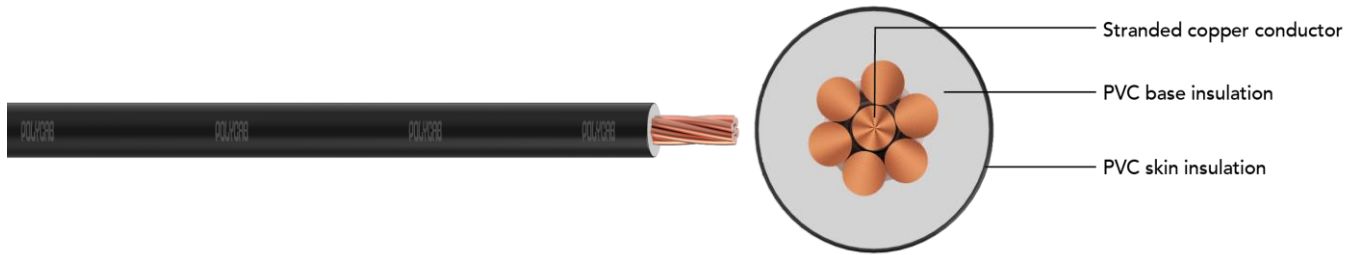
Air Temperature	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C	85°C
De-Rating Factor	0.94	0.89	0.83	0.77	0.70	0.63	0.54	0.44	0.31

OUR ACCREDITATION



POLYCAB HFFR-01Z-R/03XZ-R SC

Industrial cable, 1100 V AC



Application

POLYCAB HFFR-01Z-R/03XZ-R SC, insulated with halogen free flame retardant thermoplastic compound or cross-linked halogen free flame retardant thermoset compound having low smoke emission and corrosive gases when exposed to fire condition. This cable is designed to use in conduit and for fixed protected installation. This is also suitable to use high rise buildings, hospitals, and offices where Smoke emission and toxic fume create a potential risk to life as well as the lifesaving equipment.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to + 70° C

Construction

- Annealed stranded bare or tinned copper conductor as per IS 8130, class 2
- Insulated with halogen free flame retardant compound type HFI-TP 70 or cross-linked halogen free flame retardant compound type HFI-XL 70 as per IS 17048

Core Identification

Red/Black/Blue/Yellow/White/Grey.

Bending Radius

Fixed installation – 6 x Overall Dia.

Standard and References

IS 8130
IS 17048
IEC 60332-1-2

Test Voltage

3000V AC at room temperature

Compliance

Oxygen Index	> 31%	As per ASTM D2863
Smoke emission test	< 6%	As Per ASTM D2843
Acid gas Generation	- <0.0	As per IEC 60754-1
Under fire condition	-	As per EN 60332

Approval



OUR ACREDITATION



ISO
9001

ISO
14001

ISO
45001

NABL

ABS

IRS

POLYCAB HFFR-01Z-R/03XZ-R SC

Industrial cable, 1100 V AC

Product Code	Nominal cross-sectional area mm ²	Insulation thickness mm	Overall Diameter (Approx.) mm	Weight (Approx.)
LDIS09CLUALS001C001S	1	0.7	2.67	15
LDIS09CLUALS001C1.5S	1.5	0.7	3.00	21
LDIS09CLUALS001C2.5S	2.5	0.8	3.62	32
LDIS09CLUALS001C004S	4	0.8	4.19	49
LDIS09CLUALS001C006S	6	0.8	4.74	68
LDIS09CLUALS001C010S	10	1.0	6.07	113
LDIS09CLUALS001C016S	16	1.0	7.13	171
LDIS09CLUALS001C025S	25	1.2	8.85	269
LDIS09CLUALS001C035S	35	1.2	10.00	364
LDIS09CLUALS001C050S	50	1.4	11.25	452
LDIS09CLUALS001C070S	70	1.4	13.53	707
LDIS09CLUALS001C095S	95	1.6	15.72	960
LDIS09CLUALS001C120S	120	1.6	17.28	1198
LDIS09CLUALS001C150S	150	1.8	19.34	1498
LDIS09CLUALS001C185S	185	2.0	21.47	1847
LDIS09CLUALS001C240S	240	2.2	24.30	2387
LDIS09CLUALS001C300S	300	2.4	27.06	2979
LDIS09CLUALS001C400S	400	2.6	30.84	3930
LDIS09CLUALS001C500S	500	2.8	34.36	4926
LDIS09CLUALS001C630S	630	2.8	37.90	6154

OUR ACCREDITATION



POLYCAB HFFR-01Z-R/03XZ-R SC

Industrial cable, 1100 V AC

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area mm ²	Reference method B (enclosed in conduit on a wall or in trunking etc)		Reference method C (clipped direct)		Reference method F (in free air or on a perforated cable tray horizontal or vertical)					Maximum DC conductor resistance at 20°C Ω/km
	2 cables single phase AC or DC Amp.	3 or 4 cables three phase AC Amp.	2 cables single phase AC or DC flat and touching Amp.	3 or 4 cables three phase AC flat and touching or trefoil Amp.	Touching			Spaced by one meter		
					2 cables single phase AC or DC flat Amp.	3 cables three phase AC flat Amp.	3 cables three phase AC trefoil Amp.	2 cables ,single-phase AC or DC or 3 cables three phase AC flat		
								Horizontal Amp.	Vertical Amp.	
1	12	10	13	12	-	-	-	-	-	18.1
1.5	15	13	17	16	-	-	-	-	-	12.1
2.5	21	18	23	22	-	-	-	-	-	7.41
4	28	24	32	29	-	-	-	-	-	4.61
6	36	31	41	37	-	-	-	-	-	3.08
10	50	44	57	51	-	-	-	-	-	1.83
16	66	59	76	69	-	-	-	-	-	1.15
25	88	77	99	90	114	99	96	127	113	0.727
35	109	96	123	112	141	124	119	157	141	0.524
50	131	117	158	145	171	151	145	191	171	0.387
70	167	149	204	186	218	196	188	244	221	0.268
95	202	180	247	227	264	239	230	297	271	0.193
120	234	208	287	264	306	279	268	345	315	0.153
150	261	228	331	304	353	324	310	397	365	0.124
185	297	258	379	348	403	371	356	453	418	0.0991
240	348	301	448	411	475	441	422	535	495	0.0754
300	398	343	517	474	547	511	488	617	573	0.0601
400	475	406	604	552	656	599	571	741	692	0.047
500	545	464	689	629	755	686	652	854	800	
630	626	532	786	719	874	787	744	990	931	

Ambient temperature: 40°C

Conductor operating temperature: 70°C

The above table is in accordance with BS 7671(Table 4D1A)

De-Rating Factor

De-rating factor for various ambient temperature other than 40°C.

Ambient Temperature	45°C	50°C	55°C	60°C	65°C
De-Rating Factor	0.91	0.82	0.71	0.58	0.41

Note:

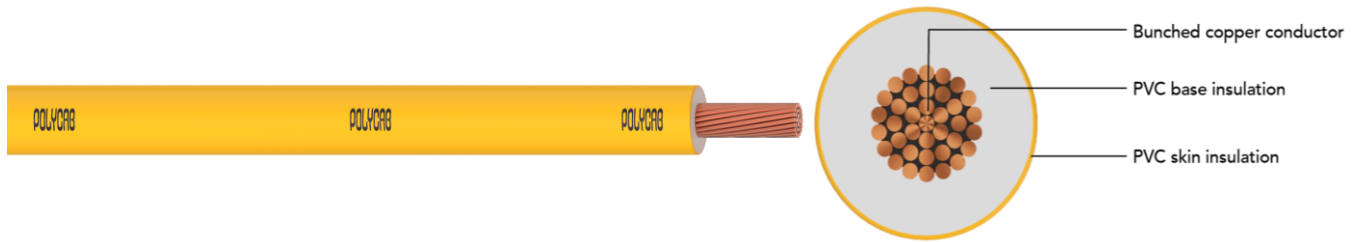
Cable with HFI XL-70 insulation available on demand

OUR ACCREDITATION



POLYCAB HFFR-01Z-K/03XZ-K SC

Industrial cable, 1100 V AC



Application

POLYCAB HFFR-01Z-K/03XZ-K SC, insulated with cross linked halogen free flame retardant compound thermoplastic or cross linked thermoset compound having low smoke emission and corrosive gases when exposed to fire condition. This cable is designed to use in conduit and for fixed protected installation. This is also suitable to use high-rise buildings, hospitals, and offices where Smoke emission and toxic fume create a potential risk to life as well as the lifesaving equipment.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to + 70° C

Construction

- Annealed bare or tinned bunched copper conductor as per IS 8130, class 5
- Insulated with halogen free flame retardant compound type HFI-TP 70 or cross linked halogen free flame retardant compound type HFI-XL 70 as per IS 17048

Core Identification

Red/Black/Blue/Yellow/White/Grey/Green-Yellow

Bending Radius

Fixed 4 x Overall Diameter
Occasional 6 x Overall Diameter

Standard and References

IS 8130
IS 17048
IEC 60332-1-2

Test Voltage

3000V AC at room temperature

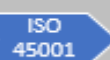
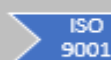
Compliance

Oxygen Index	> 31%	As per ASTM D2863
Smoke emission test	< 6%	As Per ASTM D2843
Acid gas Generation	- <0.0	As per IEC 60754-1
Under fire condition	- Resist	as per EN 60332-1-2

Approval



OUR ACCREDITATION



POLYCAB HFFR-01Z-K/03XZ-K SC

Industrial cable, 1100 V AC

Product Code	Nominal cross sectional area mm ²	insulation thickness mm	Overall Diameter (Approx.) mm	Weight (Approx.) Kg/km
LDIS09CLUALS001C0.5S	0.5	0.6	2.11	9
LDIS09CLUALS001C.75S	0.75	0.6	2.32	11
LDIS09CLUALS001C001S	1	0.6	2.49	14
LDIS09CLUALS001C1.5S	1.5	0.6	2.76	19
LDIS09CLUALS001C2.5S	2.5	0.7	3.42	31
LDIS09CLUALS001C04S	4	0.8	4.07	45
LDIS09CLUALS001C006S	6	0.8	4.62	64
LDIS09CLUALS001C010S	10	1	5.92	106
LDIS09CLUALS001C016S	16	1	6.97	162
LDIS09CLUALS001C025S	25	1.2	8.53	245
LDIS09CLUALS001C035S	35	1.2	9.71	338
LDIS09CLUALS001C050S	50	1.4	11.58	486
LDIS09CLUALS001C070S	70	1.4	13.25	672
LDIS09CLUALS001C095S	95	1.6	15.21	888
LDIS09CLUALS001C120S	120	1.6	16.81	1123
LDIS09CLUALS001C150S	150	1.8	18.77	1397
LDIS09CLUALS001C185S	185	2	20.75	1705
LDIS09CLUALS001C240S	240	2.2	23.70	2253
LDIS09CLUALS001C300S	300	2.4	27.07	2982

OUR ACREDITATION



POLYCAB HFFR-01Z-K/03XZ-K SC

Industrial cable, 1100 V AC

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area mm ²	Reference method B (enclosed in conduit on a wall or in trunking etc)		Reference method C (clipped direct)		Reference method F (in free air or on a perforated cable tray horizontal or vertical)					Maximum DC conductor resistance at 20°C Ω/km
	2 cables single phase AC or DC Amp.	3 or 4 cables three phase AC Amp.	2 cables single phase AC or DC flat and touching Amp.	3 or 4 cables three phase AC flat and touching or trefoil Amp.	Touching			Spaced by one meter		
					2 cables single phase AC or DC flat Amp.	3 cables three phase AC flat Amp.	3 cables three phase AC trefoil Amp.	2 cables ,single-phase AC or DC or 3 cables three phase AC flat		
								Hori zontal Amp.	Verti cal Amp.	
0.5	4	3.6	4.6	4	-	-	-	-	-	39
0.75	7	6	8	7	-	-	-	-	-	26
1	11	10	13	12	-	-	-	-	-	19.5
1.5	14	13	17	15	-	-	-	-	-	13.3
2.5	20	17	22	21	-	-	-	-	-	7.98
4	26	23	31	27	-	-	-	-	-	4.95
6	34	30	39	36	-	-	-	-	-	3.3
10	47	41	54	49	-	-	-	-	-	1.91
16	63	56	72	65	-	-	-	-	-	1.21
25	85	75	96	88	111	96	93	123	110	0.78
35	105	93	119	109	137	121	116	153	137	0.554
50	127	113	154	141	165	147	141	185	166	0.386
70	162	144	197	181	212	190	182	237	214	0.272
95	196	175	240	220	257	232	223	288	262	0.206
120	227	202	278	256	297	271	260	334	305	0.161
150	253	221	322	295	343	314	300	385	354	0.129
185	288	250	368	338	391	360	345	440	405	0.106
240	338	292	435	398	461	428	409	519	480	0.0801
300	387	332	501	460	531	495	473	598	556	0.0641

The ambient temperature is 40°C.

Conductor operating temperature 70°C.

The above table is in accordance with the BS 7671(Table 4D1A)

De-Rating Factor

De-rating factor for 70°C thermoplastic or thermosetting insulated cable

Ambient Temperature	35°C	40°C	45°C	50°C	55°C	60°C	65°C
De-Rating Factor	1.08	1	0.91	0.82	0.7	0.57	0.4

Note:

Cable with HFI XL-70 insulation is available on demand.

OUR ACCREDITATION



POLYCAB HFFR-04XZ-R SC

Industrial cable, 1100 V AC



Application

POLYCAB HFFR-04XZ-R SC, insulated with cross linked halogen free flame retardant compound having low smoke emission and corrosive gases when exposed to fire condition. This cable is designed to use in conduit and for fixed protected installation. This is also suitable to use high rise buildings, hospitals, and offices where Smoke emission and toxic fume create a potential risk to life as well as the lifesaving equipment.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to + 90° C

Construction

- Annealed stranded bare or tinned copper conductor as per IS 8130, class 2
- Insulated with cross linked halogen free flame retardant (HFFR) compound type HFI-XL 90 to IS 17048

Core Identification

Red/Black/Blue/Yellow/White/Grey.

Bending Radius

Fixed 4 x Overall Diameter
Occasional 6 x Overall Diameter

Standard and References

IS 8130
IS 17048
IEC 60332-1-2

Test Voltage

3000V AC at room temperature

Compliance

Oxygen Index	31%	As per ASTM D2863
Smoke emission test	< 6%	As Per ASTM D2843
Acid gas Generation	<0.0	As per IEC 60754-1
Test on vertical flame	as per IEC 60332-1-2	

Approval



OUR ACCREDITATION



POLYCAB HFFR-04XZ-R SC

Industrial cable, 1100 V AC

Product Code	Nominal cross sectional area mm ²	Insulation thickness mm	Overall Diameter (Approx.) mm	Weight (Approx.)
LDIS09CLUALC001C001S	1	0.7	2.67	15
LDIS09CLUALC001C1.5S	1.5	0.7	3.00	21
LDIS09CLUALC001C2.5S	2.5	0.8	3.62	32
LDIS09CLUALC001C004S	4	0.8	4.19	49
LDIS09CLUALC001C006S	6	0.8	4.74	68
LDIS09CLUALC001C010S	10	1.0	6.07	113
LDIS09CLUALC001C016S	16	1.0	7.13	171
LDIS09CLUALC001C025S	25	1.2	8.85	269
LDIS09CLUALC001C035S	35	1.2	10.00	364
LDIS09CLUALC001C050S	50	1.4	11.25	452
LDIS09CLUALC001C070S	70	1.4	13.53	707
LDIS09CLUALC001C095S	95	1.6	15.72	960
LDIS09CLUALC001C120S	120	1.6	17.28	1198
LDIS09CLUALC001C150S	150	1.8	19.34	1498
LDIS09CLUALC001C185S	185	2.0	21.47	1847
LDIS09CLUALC001C240S	240	2.2	24.30	2387
LDIS09CLUALC001C300S	300	2.4	27.06	2979
LDIS09CLUALC001C400S	400	2.6	30.84	3930
LDIS09CLUALC001C500S	500	2.8	34.36	4926
LDIS09CLUALC001C630S	630	2.8	37.90	6154

OUR ACREDITATION



POLYCAB HFFR-04XZ-R SC

Industrial cable, 1100 V AC

Electrical Characteristics

Current carrying capacity and Max. DC conductor resistance.

Nominal cross-sectional area mm ²	Reference Method B (enclosed in conduit on a wall or in trunking etc.)		Reference method C (clipped direct)		Reference Method F (in free air or on a perforated cable tray etc horizontal or vertical etc.)			Reference Method G (in free air)		Max. DC conductor resistance at 20°C
	2 cables, single-phase a.c. or d.c.	3 or 4 cables, three-phase a.c.	2 cables single phase ac or dc flat and touching	3 or 4 cables three phase ac flat and touching or trefoil	Touching			Spaced by one cable diameter		
					2 cables, single-phase a.c. or d.c. flat	3 cables, three-phase a.c. flat	3 cables, three-phase a.c. trefoil	2 cables, single-phase a.c. or d.c. or 3 cables three-phase a.c. flat	Hori zontal	
Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	
1	15.5	14	17	16	-	-	-	-	13	18.1
1.5	21	18	23	21	-	-	-	-	17	12.1
2.5	28	38	31	28	-	-	-	-	24	7.41
4	38	34	42	37	-	-	-	-	32	4.61
6	49	44	54	49	-	-	-	-	41	3.08
10	68	60	74	67	-	-	-	-	56	1.83
16	91	80	99	90	-	-	-	-	74	1.15
25	121	106	130	118	147	123	166	147	96	0.727
35	149	131	160	147	182	154	206	183	119	0.524
50	180	159	207	190	220	188	250	224	144	0.387
70	230	202	267	244	282	244	321	289	182	0.268
95	278	245	323	297	343	298	391	354	219	0.193
120	322	284	376	345	398	349	455	413	253	0.153
150	358	311	433	397	459	404	525	480	289	0.124
185	409	349	496	455	523	464	602	551	329	0.0991
240	480	410	586	537	618	552	711	654	386	0.0754
300	549	468	676	620	713	640	821	758	442	0.0601
400	622	531	790	722	855	749	987	917	-	0.047
500	713	606	901	823	986	861	1140	1064	-	0.0366
630	819	695	1028	940	1141	990	1323	1239	-	0.0283

The ambient temperature is 40°C.

Conductor operating temperature 90°C.

The above table is in accordance with Table 4E1A of BS 7671:2018

De-Rating Factor

De-rating factor for 90°C thermosetting insulated cable

Air Temperature	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C	85°C
De-Rating Factor	1.04	1.0	0.95	0.89	0.84	0.82	0.77	0.63	0.55	0.45	0.32

OUR ACCREDITATION



POLYCAB HFFR-04XZ-K SC

Industrial cable, 1100 V AC



Application

POLYCAB HFFR-04XZ-K SC, Single core cable insulated with cross linked halogen free flame retardant compound having low smoke emission and corrosive gases when exposed to fire condition. This cable is designed to use in conduit and for fixed protected installation. This is also suitable to use high rise buildings, hospitals, and offices where Smoke emission and toxic fume create a potential risk to life as well as the lifesaving equipment.

Voltage Rating

1100 V

Operation Temperature

Fixed: -15°C to + 90° C

Construction

- Annealed bare or tinned bunched copper conductor as per IS 8130, class 5
- Insulated with cross linked halogen free flame retardant compound type HFI-XL 90 to IS 17048

Core Identification

Red/Black/Blue/Yellow/White/Grey/Green-Yellow

Bending Radius

Fixed 4 x Overall Diameter
Occasional 6 x Overall Diameter

Standard and References

IS 8130
IS 17048
IEC 60332-1-2

Test Voltage

3000V AC at room temperature

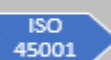
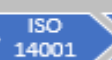
Compliance

Conductor resistance	IS 8130
Insulation resistance	IS 17048:2018
Oxygen Index	31% As per ASTM D2863
Smoke emission test	< 6% As Per ASTM D2843
Acid gas Generation	<0.0 As per IEC 60754-1
Test on vertical flame	Resist as per IEC 60332-1-2

Approval



OUR ACCREDITATION



POLYCAB HFFR-04XZ-K SC

Industrial cable, 1100 V AC

Product Code	Nominal cross-sectional area mm ²	Insulation thickness mm	Overall Diameter (Approx.) mm	Weight (Approx.)
LDIS09CLUALC001C0.5S	0.5	0.6	2.11	9
LDIS09CLUALC001C.75S	0.75	0.6	2.32	11
LDIS09CLUALC001C001S	1	0.6	2.49	14
LDIS09CLUALC001C1.5S	1.5	0.6	2.76	19
LDIS09CLUALC001C2.5S	2.5	0.7	3.42	31
LDIS09CLUALC001C004S	4	0.8	4.07	45
LDIS09CLUALC001C006S	6	0.8	4.62	64
LDIS09CLUALC001C010S	10	1	5.92	106
LDIS09CLUALC001C016S	16	1	6.97	162
LDIS09CLUALC001C025S	25	1.2	8.53	245
LDIS09CLUALC001C035S	35	1.2	9.71	338
LDIS09CLUALC001C050S	50	1.4	11.58	486
LDIS09CLUALC001C070S	70	1.4	13.25	672
LDIS09CLUALC001C095S	95	1.6	15.21	888
LDIS09CLUALC001C120S	120	1.6	16.81	1123
LDIS09CLUALC001C150S	150	1.8	18.77	1397
LDIS09CLUALC001C185S	185	2	20.75	1705
LDIS09CLUALC001C240S	240	2.2	23.70	2253
LDIS09CLUALC001C300S	300	2.4	27.07	2982

OUR ACREDITATION



POLYCAB HFFR-04XZ-K SC

Industrial cable, 1100 V AC

Electrical Characteristics

Current carrying capacity and maximum DC resistance

Nominal cross-sectional area mm ²	Reference method B (enclosed in conduit on a wall or in trunking etc)		Reference method C (clipped direct)		Reference method F (in free air or on a perforated cable tray etc horizontal or vertical etc.) Touching		Reference method G (in free air) spaced by one cable diameter		Maximum DC conductor resistance at 20°C Ω/km
	2 cables single phase ac or dc Amp.	3 or 4 cables three phase ac Amp.	2 cables single phase ac or dc flat and touching Amp.	3 or 4 cables three phase ac flat and touching or trefoil Amp.	2 cables single phase ac or dc flat Amp.	3 cables three phase ac trefoil Amp.	2 cables, single phase ac or dc 3 cables three phase ac flat		
							Horizontal Amp.	Vertical Amp.	
0.5	5	4	5	5	-	-	-	-	39
0.75	9	8	10	9	-	-	-	-	26
1	15	13	16	15	-	-	-	-	19.5
1.5	20	17	22	20	-	-	-	-	13.3
2.5	27	36	29	27	-	-	-	-	7.98
4	36	32	40	35	-	-	-	-	4.95
6	47	41	51	47	-	-	-	-	3.3
10	65	57	70	64	-	-	-	-	1.91
16	86	76	94	86	-	-	-	-	1.21
25	117	103	126	115	142	119	161	142	0.78
35	145	127	155	142	177	149	199	177	0.554
50	175	154	201	184	214	183	243	217	0.386
70	223	196	259	237	274	237	312	281	0.272
95	270	237	313	288	333	290	380	343	0.206
120	312	275	365	335	386	338	441	401	0.161
150	347	302	420	385	445	392	509	465	0.129
185	396	339	481	441	508	450	583	534	0.106
240	466	397	568	521	599	536	689	635	0.0801
300	532	454	656	601	691	621	796	735	0.0641

Air Ambient temperature: 40°C, Conductor operating temperature: 90°C

The above table is in accordance with BS 7671(Table 4E1A)

De-Rating Factor

De-rating factor for various ambient temperature.

Air Temperature	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C	85°C
De-Rating Factor	1.04	1.0	0.95	0.89	0.84	0.82	0.77	0.63	0.55	0.45	0.32

OUR ACCREDITATION

