POLYCAB

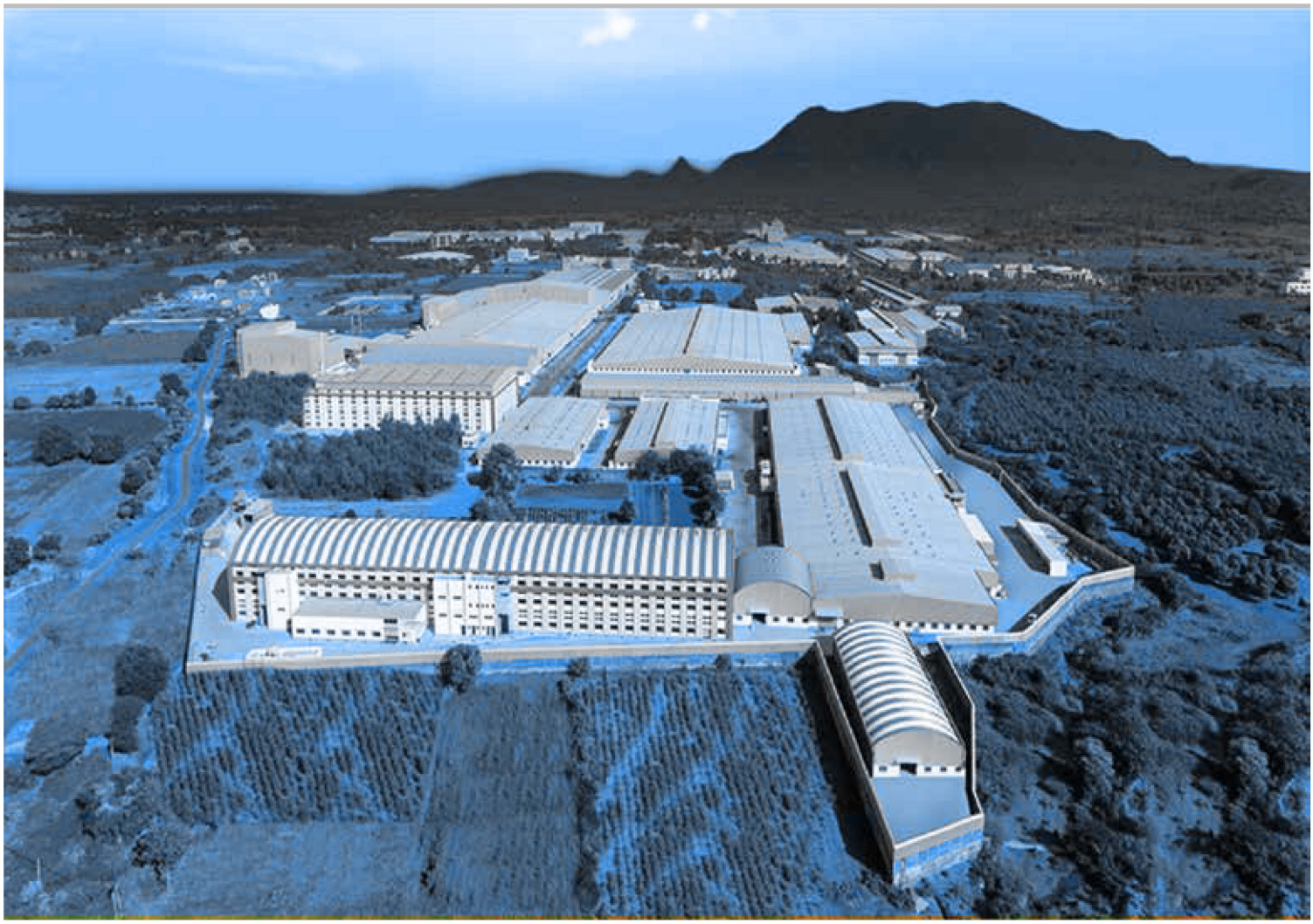
SECURING HOMES AND LIVES

Polycab House Wires Catalogue

FR-LF | FR-LSH POLYCAB GREEN WIRE | HFFR

POLYCAB

Contents



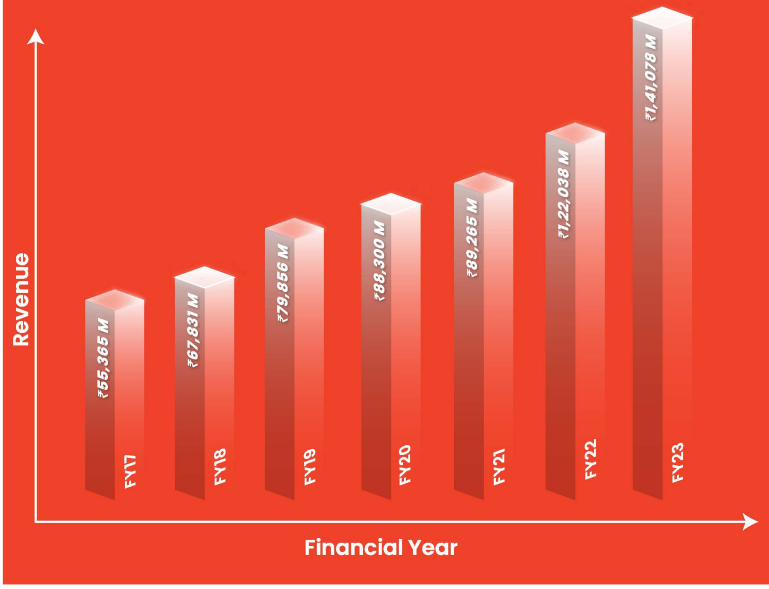
Company Profile

Polycab an **ISO 9001:2015, ISO 14001:2015, ISO 45001:2018** company is India's **No.1 cables & wires manufacturer** with a glorious track record of over 4 decades. Our manufacturing facilities at **Halol (vadodara), Daman, Nashik and Roorkee** in India, address to the specific needs with state-of-the-art machinery and advance technology.

Polycab's turnover has crossed **INR 14100 crore's in the fiscal year 2022-23**. Polycab derives its strength from its customers and those being in sectors like utilities, power generation, transmission & distribution, petroleum & oil refineries, OEMs, EPC Contractors, Steel & Metal, Cement, Chemical, atomic energy, nuclear plants, as well as government and private telecom companies.

POLYCAB OFFERS

- Commercially reasonable prices
- Reliable & consistent quality
- Product development as per market
- A target stocking policy
- Technical support for application



Things you didn't know about Polycab

- Between its facilities in Daman, Halol (vadodara), Nashik and Roorkee the company has **3.5 million square feet of manufacturing space.**
- Polycab manufactures enough cable each year to circumnavigate the earth **three and a half times** and enough wire to go to the moon and come back - four times.
- Polycab has increased its **turnover 100 times** in sixteen years.
- Strong distribution network of **4,300+** authorized dealers

Polycab offers a comprehensive range of building wire in compliance with BIS specification & standard.

These are low voltage wires of 1100 V grade and widely used for wiring in Residential buildings, Hospitals, Industrial parks and Schools where safety is the prime requirement. These wires are available with specially designed thermoplastic PVC compound having temperature ratings from **70° C to 85° C.**

These wires are flame retardant in characteristic and provide extra protection from short circuit and fire. The wires are supplied especially for **indoor application, conduit wiring and surface wiring.**

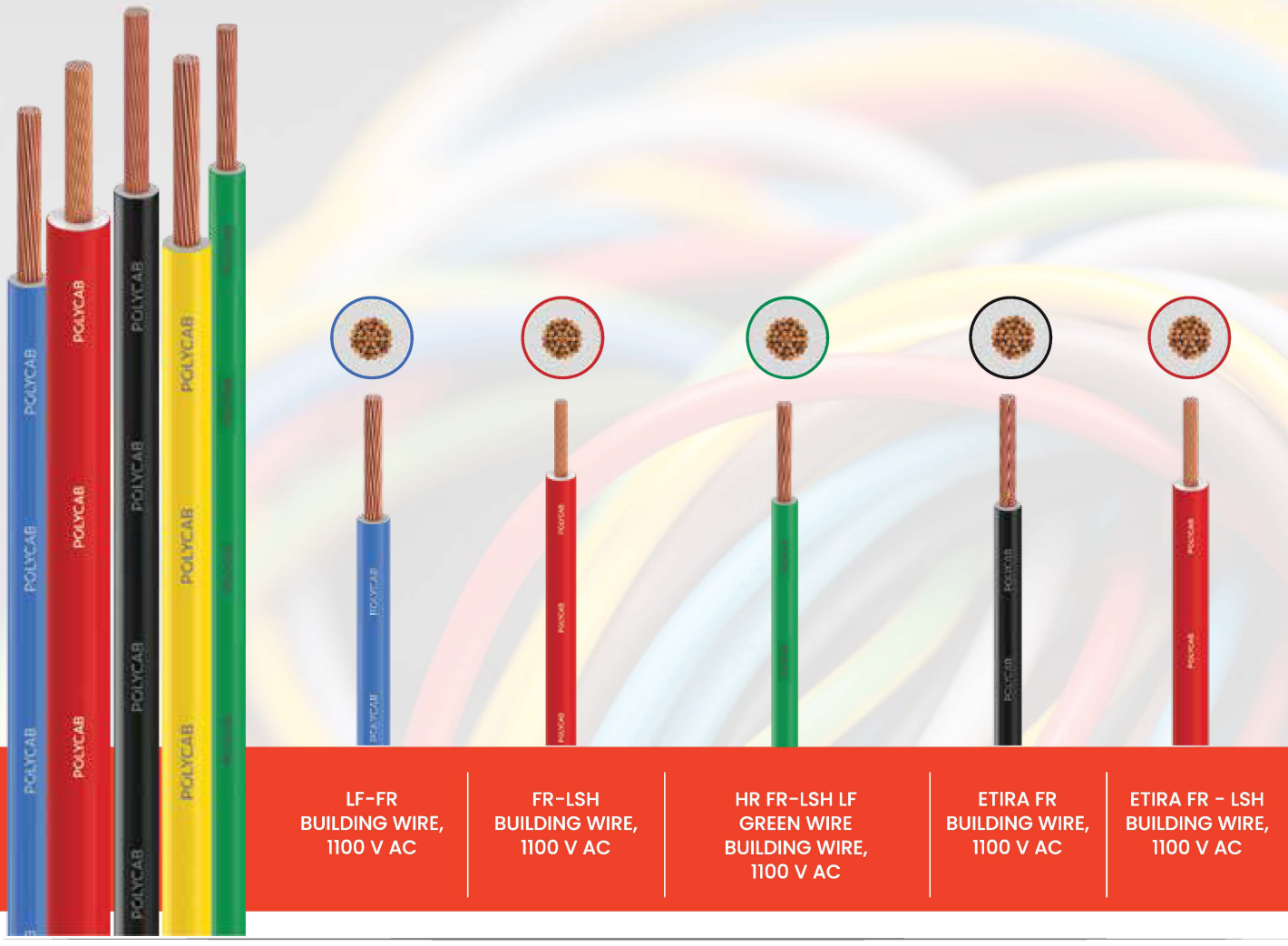
Polycab also offers Green wire, a premium eco-friendly product for additional **safety and green building application.**

All the above products are **RoHS & REACH compliant.**

Conductor: High conductivity annealed plain bunched/stranded copper conductor produced inhouse from state-of-the art multiwire drawing & high speed bunching machine.

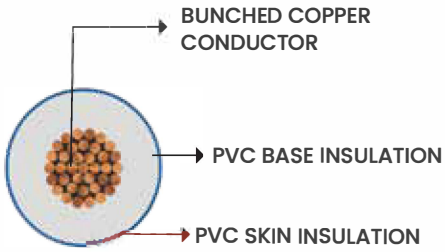
Insulation: Inhouse developed high insulation resistant thermoplastic PVC compound with special properties of **Fire retardancy** and **low smoke**, as well as **low toxicity**.

The construction is based on the application and requirement of the user against IS 694.



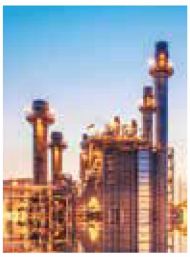
LF-FR BUILDING WIRE, 1100 V AC	FR-LSH BUILDING WIRE, 1100 V AC	HR FR-LSH LF GREEN WIRE BUILDING WIRE, 1100 V AC	ETIRA FR BUILDING WIRE, 1100 V AC	ETIRA FR - LSH BUILDING WIRE, 1100 V AC

LF-FR BUILDING WIRE, 1100 V AC



Application

Polycab LF FR building wire is eco-friendly & suitable for use where high flexibility is of prime importance. This is also suitable for indoor installation in industries, household appliances and building electrification.


Industries


Household Appliances


Building Electrification

Construction

- Annealed stranded or bunched copper conductor as per IS 8130, class 5
- Insulated by PVC Type D with FR properties to IS 5831

Test Voltage

3000 V AC at room temperature

Core Identification

Red / Yellow / Blue / Black / Green / any customise colour

Bending Radii

Fixed installation	6 x Overall Diameter
Occasional	4 x Overall Diameter

Electrical Property

- High insulation resistance
- Higher current carrying capacity
- Electrical energy saving

Salient Features

- Optimised current carrying capacity
- Fire retardant and safe for protection
- Low carbon emission
- Low volatile organic content ensures less contamination
- High conductivity electrolytic copper - energy saving

Mechanical & Physical Properties

- High Flexibility
- Free from hazardous substances
- Resistant to Termite & Rodent
- Resistant to moisture for use in wet area
- High abrasion resistance
- Resistant to Acid & Alkali

Standard and References

IS 8130:2013
IS 5831:1984
IS 694:2010

Voltage Grade

1100 V

Operation Temperature

-15°C to 70°C

Compliance

Conductor resistance test	IS 8130
Flammability	IEC 60332-1
Oxygen index	ASTM D 2863
Temperature index	ASTM D 2863

Product Name	Packing Length (mtr.)	Brand Name
INDUSTRIAL WIRE	180/200/300 mtr. (pouch)	LF FR

Approvals

LF-FR BUILDING WIRE, 1100 V AC

PRODUCT CODE	Nominal cross sectional area	Class of conductor	No. of wire/wire dia.	Nominal insulation thickness	Overall dia. (Approx.)
	mm^2		no./mm	mm	mm
LDIS09CYUAYF001C.75S	0.75	5	24/0.21	0.6	2.25
LDIS09CYUAYF001C001S	1	5	32/0.21	0.6	2.4
LDIS09CYUAYF001C1.5S	1.5	5	30/0.26	0.6	2.86
LDIS09CYUAYF001C2.5S	2.5	5	50/0.26	0.7	3.48
LDIS09CYUAYF001C004S	4	5	56/0.31	0.8	3.95
LDIS09CYUAYF001C006S	6	5	84/0.31	0.8	4.48

*The above values are approximate and subject to standard manufacturing tolerance

Electrical Characteristics

Current carrying capacity and Max. DC conductor resistance

Nominal cross sectional area	Class of conductor	Current carrying capacity 2 cables in single phase		Maximum DC resistance of conductor at 20°C
		Reference Method B (enclosed in conduit on a wall or in trunking etc.)	Reference Method C (clipped direct)	
mm^2		amp.	amp.	Ω/km
0.75	5	7	7.5	26
1	5	11	12	19.5
1.5	5	14	16	13.3
2.5	5	19	22	7.98
4	5	26	29	4.95
6	5	31	37	3.3

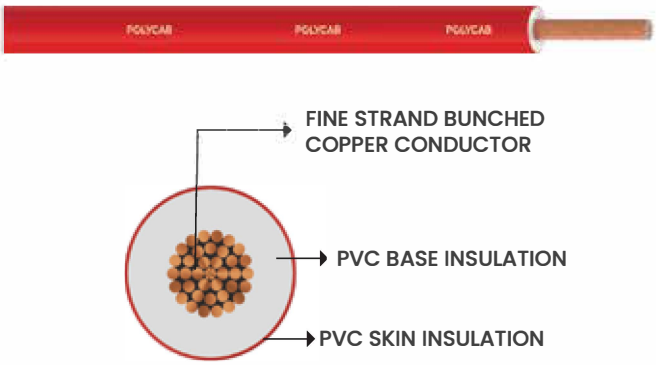
The ambient temperature is 40°C. Conductor operating temperature 70°C.

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

FR-LSH BUILDING WIRE, 1100 V AC

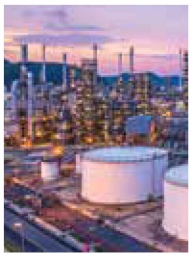


Salient Features

- Optimised current carrying capacity
- Fire retardant and safe for protection
- High conductivity electrolytic copper conductor
- Low emission of smoke
- Low halogen

Application

Polycab FR-LSH building wire is suitable for use where high flexibility & fire safety is of prime importance. This is also suitable for indoor installation in industries, household appliances and building electrification.


Industries


Household Appliances


Building Electrification

Construction

- Annealed stranded or bunched copper conductor as per IS 8130, class 5
- Insulated by PVC Type D with FR-LSH properties to IS 5831

Test Voltage

3000 V AC at room temperature

Bending Radii

Fixed installation	6 x Overall Diameter
Occasional	4 x Overall Diameter

Electrical Property

- High insulation resistance
- Higher current carrying capacity
- High conductivity

Mechanical & Physical Properties

- High Flexibility
- Resistant to Termite & Rodent
- Resistant to moisture for use in wet area
- High abrasion resistance
- Resistant to Acid & Alkali

Standard and References

IS 8130:2013
IS 5831:1984
IS 694:2010

Voltage Grade

1100 V

Operation Temperature

-15°C to 70°C

Core Identification

Red / Yellow / Blue / Black / Green / any customise colour

Compliance

Conductor resistance test	IS 8130
Flammability	IEC 60332-1
Oxygen index	ASTM D 2863
Temperature index	ASTM D 2863
Halogen acid gas generation	IEC 60754-1
Smoke density	ASTM D 2843

Product Name	Packing Length (mtr.)	Brand Name
INDUSTRIAL WIRE	200/300 mtr	FR-LSH

Approvals

FR-LSH BUILDING WIRE, 1100 V AC

PRODUCT CODE	Nominal cross sectional area	Class of conductor	No. of wire/wire dia.	Nominal insulation thickness	Overall dia. (Approx.)
	mm^2		no./mm	mm	mm
LDIS09CYUAYL001C.75S	0.75	5	24/0.21	0.6	2.25
LDIS09CYUAYL001C001S	1	5	32/0.21	0.6	2.4
LDIS09CYUAYL001C1.5S	1.5	5	30/0.26	0.6	2.86
LDIS09CYUAYL001C2.5S	2.5	5	50/0.26	0.7	2.48
LDIS09CYUAYL001C004S	4	5	56/0.31	0.8	3.95
LDIS09CYUAYL001C006S	6	5	84/0.31	0.8	4.48

*The above values are approximate and subject to standard manufacturing tolerance

Electrical characteristics

Current carrying capacity and Max. DC conductor resistance

Nominal cross sectional area	Class of conductor	Current carrying capacity 2 cables in single phase		Maximum DC resistance of conductor at 20°C
		Reference Method B (enclosed in conduit on a wall or in trunking etc.)	Reference Method C (clipped direct)	
mm^2		amp.	amp.	Ω/km
0.75	5	8	8.54	26
1	5	12.7	13.9	19.5
1.5	5	16.2	18.5	13.3
2.5	5	22	25.5	7.98
4	5	31.2	34.8	4.95
6	5	37.2	44.4	3.3

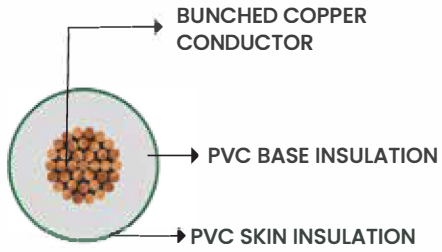
The ambient temperature is 40°C. Conductor operating temperature 85°C.

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

HR FR-LSH LF GREEN WIRE, 1100 V AC



Application

POLYCAB HR FR-LSH LF Green wire is highly eco-friendly & suitable for use in places where extra fire safety and heat resistance is required along with high flexibility. This is also suitable for indoor installation in industries, household appliances and building electrification.


Industries


Household Appliances


Building Electrification

Construction

- Annealed stranded or bunched copper conductor as per IS 8130, class 5
- Insulated by Specially developed in-house compound

Test Voltage

3000 V AC at room temperature

Bending Radii

Fixed installation	6 x Overall Diameter
Occasional	4 x Overall Diameter

Electrical Property

- High insulation resistance
- Higher current carrying capacity
- Electrical energy saving

Salient Features

- Higher current carrying capacity
- High fire retardancy
- Low emission of toxic gases
- Low volatile organic content ensures less contamination
- High conductivity electrolytic copper conductor
- Low carbon emission
- Eco friendly

Mechanical & Physical Properties

- High Flexibility
- Free from hazardous substances
- Resistant to Termite & Rodent
- Resistant to moisture for use in wet area
- Resistant to heat deformation
- Resistant to Acid & Alkali
- Improved life expectancy

Standard and References

IS 8130:2013
IS 5831:1984
IS 694:2010

Voltage Grade

1100 V

Operation Temperature

-15°C to 85°C

Core Identification

Red / Yellow / Blue / Black / Green / any customise colour

Compliance

Conductor resistance test	IS 8130
Flammability	IEC 60332-1
Oxygen index	ASTM D 2863
Temperature index	ASTM D 2863
Halogen acid gas generation	IEC 60754-1
Smoke density	ASTM D 2843

Product Name	Packing Length (mtr.)	Brand Name
Industrial Wire	200/300 mtr	Green Wire
Industrial Wire	180 mtr	HR FR-LSH LF

Approvals

HR FR-LSH LF GREEN WIRE, 1100 V AC

PRODUCT CODE	Nominal cross sectional area	Class of conductor	No. of wire/wire dia.	Nominal insulation thickness	Overall dia. (Approx.)
	mm²		no./mm	mm	mm
LDIS09CYUAYL001C.75S	0.75	5	24/0.2	0.6	2.25
LDIS09CYUAYL001C001S	1	5	32/0.21	0.6	2.4
LDIS09CYUAYL001C1.5S	1.5	5	30/0.26	0.6	2.86
LDIS09CYUAYL001C2.5S	2.5	5	50/0.26	0.7	3.48
LDIS09CYUAYL001C004S	4	5	56/0.31	0.8	3.95
LDIS09CYUAYL001C006	6	5	84/0.31	0.8	4.48

*The above values are approximate and subject to standard manufacturing tolerance

Electrical Characteristics

Current carrying capacity and Max. DC conductor resistance

Nominal cross sectional area	Class of conductor	Current carrying capacity 2 cables in single phase		Maximum DC resistance of conductor at 20°C
		Reference Method B (enclosed in conduit on a wall or in trunking etc.)	Reference Method C (clipped direct)	
mm²		amp.	amp.	Ω/km
0.75	5	8.0	8.54	26
1	5	12.7	13.9	19.5
1.5	5	16.2	18.5	13.3
2.5	5	22.0	25.5	7.98
4	5	31.2	34.8	4.95
6	5	37.2	44.4	3.3

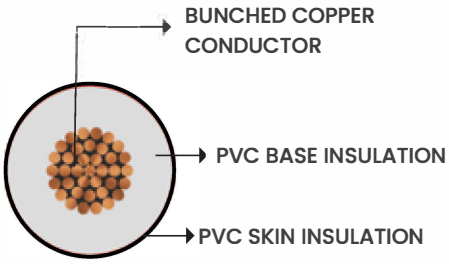
The ambient temperature is 40°C. Conductor operating temperature 85°C.

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	70°C	75°C	80°C
De-Rating Factor	1.05	1	0.94	0.88	0.82	0.75	0.67	0.58	0.47	0.33

ETIRA
FR BUILDING WIRE, 1100 V AC



Application

ETIRA FR wire is suitable for use where high flexibility is of prime importance. This is also suitable for indoor installation in industries, household appliances and building electrification


Industries


Household Appliances


Building Electrification

Construction

- Annealed stranded or bunched copper conductor as per IS 8130, class 5
- Insulated by PVC Type D with FR to IS 5831

Test Voltage

3000 V AC at room temperature

Bending Radii

Fixed installation	6 x Overall Diameter
Occasional	4 x Overall Diameter

Electrical Property

- High insulation resistance
- Higher current carrying capacity

Salient Features

- Optimised current carrying capacity
- Fire retardant and safe for protection
- Low carbon emission
- Low volatile organic content ensures less contamination
- High conductivity electrolytic copper conductor

Mechanical & Physical Properties

- High surface lubrication suitable to conduit wiring
- High Flexibility
- High abrasion resistance
- Resistant to moisture for use in wet area
- Resistant to Acid & Alkali

Standard and References

IS 8130:2013
IS 5831:1984
IS 694:2010

Voltage Grade

1100 V

Operation Temperature

-15°C to 70°C

Core Identification

Red / Yellow / Blue / Black / Green / any customise colour

Compliance

Conductor resistance test	IS 8130
Flammability	IEC 60332-1
Oxygen index	ASTM D 2863
Temperature index	ASTM D2863

Product Name	Packing Length (mtr.)	Brand Name
Etira	200 mtr	Etira

Approvals

ETIRA
FR BUILDING WIRE, 1100 V AC

PRODUCT CODE	Nominal cross sectional area	No. of wire/wire dia.	Nominal insulation thickness	Overall dia. (Approx.)
	mm²	no./mm	mm	mm
LDIS09CYUAYF001C.75S	0.75	24/0.21	0.6	2.25
LDIS09CYUAYF001C001S	1	32/0.21	0.6	2.4
LDIS09CYUAYF001C1.5S	1.5	30/0.26	0.6	2.86
LDIS09CYUAYF001C2.5S	2.5	50/0.26	0.7	3.48
LDIS09CYUAYF001C004S	4	56/0.31	0.8	3.95
LDIS09CYUAYF001C006S	6	84/0.31	0.8	4.48

*The above values are approximate and subject to standard manufacturing tolerance

Electrical characteristics

Current carrying capacity and Max. DC conductor resistance

Nominal cross sectional area	Current carrying capacity 2 cables in single phase		Maximum DC resistance of conductor at 20°C
	Reference Method B (enclosed in conduit on a wall or in trunking etc.)	Reference Method C (clipped direct)	
mm²	amp.	amp.	Ω/km
0.75	7	7.5	26
1	11	12	19.5
1.5	14	16	13.3
2.5	19	22	7.98
4	26	29	4.95
6	31	37	3.3

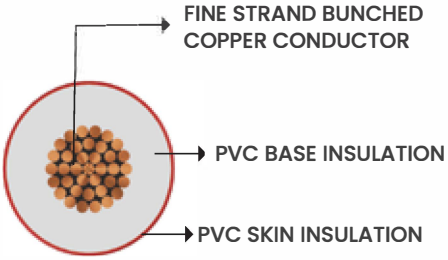
The ambient temperature is 40°C. Conductor operating temperature 70°C.

De-Rating Factor

De-rating factor for various ambient temperature.

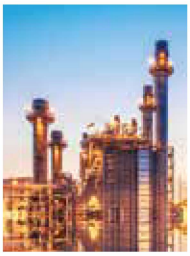
Ambient Temperature	35°C	40°C	45°C	50°C	55°C	60°C	65°C
De-Rating Factor	1.08	1	0.91	0.82	0.7	0.57	0.4

ETIRA
FR-LSH BUILDING WIRE, 1100V AC



Application

ETIRA FR-LSH wire is suitable for use where high flexibility is of prime importance. This is also suitable for indoor installation in industries, household appliances and building electrification.


Industries


Household Appliances


Building Electrification

Construction

- Annealed bunched copper conductor as per IS 8130, class 5
- Insulated by PVC Type D with FR-LSH compound to IS 5831

Test Voltage

3000 V AC at room temperature

Bending Radii

Fixed installation	6 x Overall Diameter
Occasional	4 x Overall Diameter

Electrical Property

- High insulation resistance
- Higher current carrying capacity

Salient Features

- Optimised current carrying capacity
- Fire retardant and safe for protection
- Low carbon emission
- Low emission of toxic gases
- Low volatile organic content ensures less contamination
- High conductivity electrolytic copper conductor

Mechanical & Physical Properties

- High surface lubrication suitable to conduit wiring
- High Flexibility
- High abrasion resistance
- Resistant to moisture for use in wet area
- Resistant to Acid & Alkali

Standard and References

IS 8130:2013
IS 5831:1984
IS 694:2010

Voltage Grade

1100 V

Operation Temperature

-15°C to 70°C

Core Identification

Red / Yellow / Blue / Black / Green / any customise colour

Compliance

Conductor resistance test	IS 8130
Flammability	IEC 60332-1
Oxygen index	ASTM D 2863
Temperature index	ASTM D2863
Halogen acid gas generation	IEC 60754-1
Smoke density	ASTM D2843

Product Name	Packing Length (mtr.)	Brand Name
Etira	200 mtr.	Etira

Approvals

ETIRA
FR-LSH BUILDING WIRE, 1100 V AC

PRODUCT CODE	Nominal cross sectional area	No. of wire/wire dia.	Nominal insulation thickness	Overall dia. (Approx.)
	mm²	no./mm	mm	mm
LDIS09CYUAYL001C.75S	0.75	24/0.21	0.6	2.25
LDIS09CYUAYL001C001S	1	32/0.21	0.6	2.4
LDIS09CYUAYL001C1.5S	1.5	30/0.26	0.6	2.86
LDIS09CYUAYL001C2.5S	2.5	50/0.26	0.7	3.48
LDIS09CYUAYL001C004S	4	56/0.31	0.8	3.95
LDIS09CYUAYL001C006S	6	84/0.31	0.8	4.48

*The above values are approximate and subject to standard manufacturing tolerance

Electrical characteristics

Current carrying capacity and Max. DC conductor resistance

Nominal cross sectional area	Current carrying capacity 2 cables in single phase		Maximum DC resistance of conductor at 20°C
	Reference Method B (enclosed in conduit on a wall or in trunking etc.)	Reference Method C (clipped direct)	
mm²	amp.	amp.	Ω/km
0.75	7	7.5	26
1	11	12	19.5
1.5	14	16	13.3
2.5	19	22	7.98
4	26	29	4.95
6	31	37	3.3

The ambient temperature is 40°C. Conductor operating temperature 70°C.

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

POLYCAB OFFERS A COMPREHENSIVE RANGE OF HFFR BUILDING WIRE CONFORMING TO IS 17048

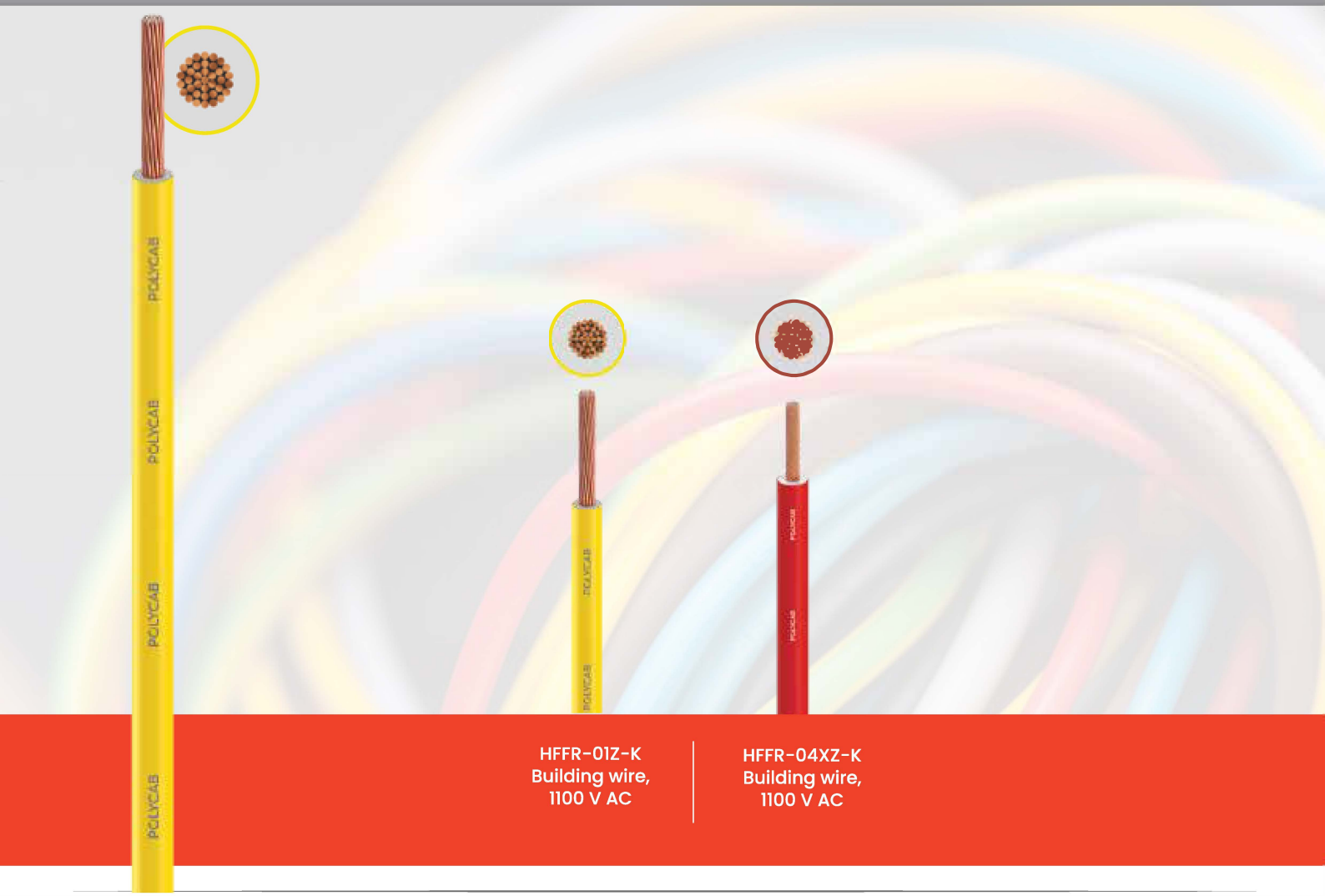
These are low voltage cable of 1100 V grade and widely used for wiring in residential buildings, Hospitals, Industrial parks and schools where safety is the prime requirement. These cables are available with thermoplastic HFFR or cross linked HFFR thermoset compound of temperature rating from 70° C to 90° C.

These wires are halogen free, flame retardant in characteristic and provide extra protection from short circuit and fire. The wires are supplied especially for indoor application and conduit or surface wiring.

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

Insulation: In-house developed high insulation resistant thermoplastic HFFR or cross linked HFFR compound.

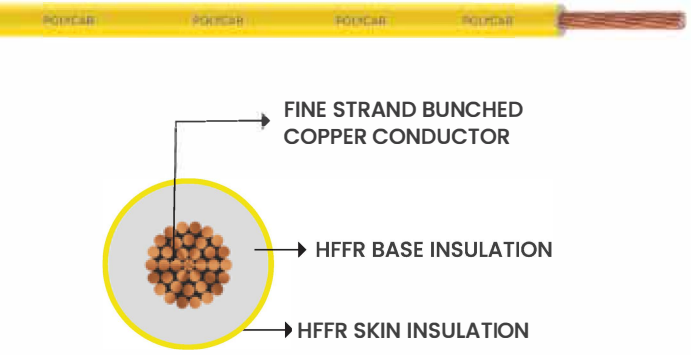
The construction is based on the application and requirement of the user against IS 17048.



HFFR-01Z-K
Building wire,
1100 V AC

HFFR-04XZ-K
Building wire,
1100 V AC

HFFR-01Z-K BUILDING WIRE, 1100 V AC



Application

POLYCAB HFFR-01Z-K, insulated with thermoplastic 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 in high-rise buildings, hospitals, and offices where smoke emission and toxic fume create a potential risk to life as well as the life saving equipment.


High Rise Buildings


Hospitals


Offices

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

Test Voltage

3000 V AC at room temperature

Salient Features

- High Flexibility
- Fire retardant
- Low Smoke emission
- Zero halogen content
- High conductivity electrolytic copper conductor

Standard and References

IS 8130
IS 17048
IEC 60332:1:2

Voltage Grade

1100 V

Operation Temperature

-15°C to 70°C

Core Identification

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

Compliance

Oxygen index	IS 17048/IS 10810-58
Temperature Index	IS 10810-64
Smoke density	IS 10810-63
Assessment of halogen	IS 17048
Flame Retardant test	IS 17048/IS 10810-61

Bending Radii

Fixed installation	6 x Overall Diameter
Occasional	4 x Overall Diameter

Product Name	Packing Length (mtr.)	Brand Name
INDUSTRIAL WIRE	200/300 mtr.	HFFR-01Z-K

Approvals

HFFR-01Z-K BUILDING WIRE, 1100 V AC

PRODUCT CODE	Nominal cross sectional area	Class of conductor	Insulation thickness	Overall dia. (Approx.)	Weight (Approx.)
	mm²		mm	mm	kg/km
LDIS09CLUALS001C0.5S	0.5	5	0.6	2.11	9
LDIS09CLUALS001C.75S	0.75	5	0.6	2.32	11
LDIS09CLUALS001C001S	1	5	0.6	2.49	14
LDIS09CLUALS001C1.5S	1.5	5	0.6	2.76	19
LDIS09CLUALS001C2.5S	2.5	5	0.7	3.42	31
LDIS09CLUALS001C004S	4	5	0.8	4.07	45
LDIS09CLUALS001C006S	6	5	0.8	4.62	64

*The above values are approximate and subject to standard manufacturing tolerance

Electrical Characteristics

Current carrying capacity and Max. DC conductor resistance.

Nominal cross sectional area	Class of conductor	Current carrying capacity 2 cables in single phase		Maximum DC resistance of conductor at 20°C
		Reference Method B (enclosed in conduit on a wall or in trunking etc.)	Reference Method C (clipped direct)	
mm²		amp.	amp.	Ω/km
0.5	5	4	4.6	39
0.75	5	7	8	26
1	5	11.2	12.8	19.5
1.5	5	14.5	16.5	13.3
2.5	5	19.8	22.3	7.98
4	5	26.6	30.6	4.95
6	5	33.9	38.8	3.3

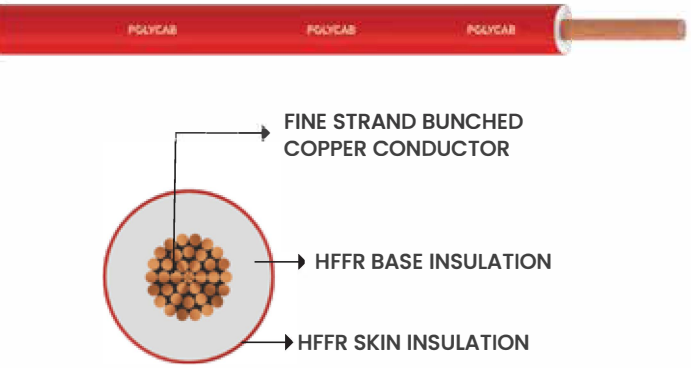
The ambient temperature is 40°C. Conductor operating temperature 70°C.
The above table is in accordance with the BS 7671 (Table 4D1A)

De-Rating Factor

De-rating factor for 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

HFFR-04XZ-K BUILDING WIRE, 1100 V AC



Salient Features

- High Flexibility
- High conductivity electrolytic copper conductor
- Fire retardant
- Low Smoke emission
- Zero halogen content

Standard and References

IS 8130
IS 17048
IEC 60332:1:2

Voltage Grade

1100 V

Operation Temperature

-15°C to 90°C
(Can be performed at 105°C temperature for 5000 hrs)

Core Identification

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

Application

POLYCAB HFFR-04XZ-K, 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 in high rise buildings, hospitals, and offices where smoke emission and toxic fume create a potential risk to life as well as the life saving equipment.


High Rise Buildings


Hospitals


Offices

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-XL90 to IS 17048

Test Voltage

3000 V AC at room temperature

Bending Radii

Fixed installation	6 x Overall Diameter
Occasional	4 x Overall Diameter

Compliance

Conductor resistance test	IS 8130
Insulation resistance	IS 17048:2018
Smoke density	IS 10810-63
Assessment of halogen	IS 17048
Flame Retardant test	IS 17048/IS 10810-61

Product Name	Packing Length (mtr.)	Brand Name
INDUSTRIAL WIRE	200/300 mtr.	HFFR-04-XZ-K

Approvals

HFFR-04XZ-K BUILDING WIRE, 1100 V AC

PRODUCT CODE	Nominal cross sectional area	Class of conductor	Insulation thickness	Overall dia. (Approx.)	Weight (Approx.)
	mm²		mm	mm	kg/km
LDIS09CLUALC001C0.5S	0.5	5	0.6	2.11	9
LDIS09CLUALC001C.75S	0.75	5	0.6	2.32	11
LDIS09CLUALC001C001S	1	5	0.6	2.49	14
LDIS09CLUALC001C1.5S	1.5	5	0.6	2.76	19
LDIS09CLUALC001C2.5S	2.5	5	0.7	3.42	31
LDIS09CLUALC001C004S	4	5	0.8	4.07	45
LDIS09CLUALC001C006S	6	5	0.8	4.62	64

*The above values are approximate and subject to standard manufacturing tolerance

Electrical Characteristics

Current carrying capacity and Max. DC conductor resistance.

Nominal cross sectional area	Class of conductor	Current carrying capacity 2 cables in single phase		Maximum DC resistance of conductor at 20°C
		Reference Method B (enclosed in conduit on a wall or in trunking etc.)	Reference Method C (clipped direct)	
mm²		amp.	amp.	Ω/km
0.5	5	5	5	39
0.75	5	9	10	26
1	5	15	16	19.5
1.5	5	20	22	13.3
2.5	5	27	29	7.98
4	5	36	40	4.95
6	5	47	51	3.3

The ambient temperature is 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.

Ambient 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

POLYCAB

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