FR-LF IS 694 BUILDING WIRE, 1100 V AC

PRODUCT SPECIFICATION

INDOCABLES FR-LF IS 694 BUILDING WIRE, 1100 V AC

FIG. 1 — CONSTRUCTION, CROSS SECTION

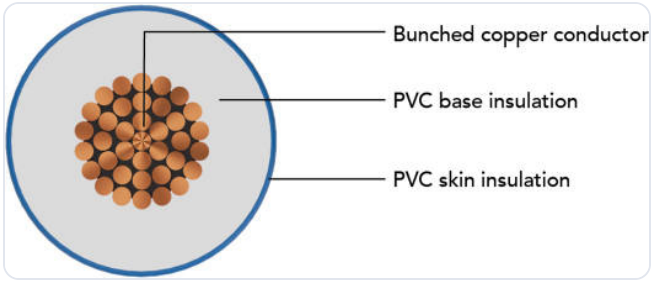

FIG. 2 — SHEATH PRINT AND STRANDING

Images not to scale. Follow table for dimensions

APPLICATION

INDOCABLES FR-LF 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.

CHARACTERISTICS

Voltage Rating	1100 V
Operation Temperature	Fixed: −15 °C to 70 °C
Bending Radii	Fixed installation >6 × Overall Diameter; Occasional >4 × Overall Diameter
Test Voltage	3000 V AC at (20 ± 5) °C
Core Identification	Red / Yellow / Blue / Black / Green / any customized colour

CONSTRUCTION

- Annealed stranded or bunched copper conductor as per IS 8130, class 2 or class 5
- Insulated by PVC Type D with FR-LF compound to IS 5831.

FIRE RETARDANT FR-LF COMPOUND

HIGH FLEXIBILITY CLASS 2 / CLASS 5

FREE FROM HAZARDOUS SUBSTANCES

ISI MARKED ISO 9001 WORKS

ELECTRICAL PROPERTY

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

MECHANICAL & PHYSICAL PROPERTIES

- High Flexibility
- High surface lubrication suitable to conduit wiring
- Free from hazardous substances
- Resistant to Termite & Rodent
- Resistant to moisture for use in wet area

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OUTSTANDING FEATURES

- Optimized current carrying capacity.
- Fire retardant and safe for protection
- Low carbon emission
- Low volatile organic content – less contamination
- High conductivity – Energy saving
- High abrasion resistance
- Resistant to Acid & Alkali

STANDARD FOLLOWS

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

COMPLIANCE

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

WEIGHT AND DIMENSION DATA

PRODUCT CODE	NOMINAL CROSS-SECTIONAL AREA MM²	CLASS OF CONDUCTOR	NO. OF WIRE / WIRE DIA. NO./MM	NOMINAL INSULATION THICKNESS MM	OVERALL DIA. (APPROX.) MM
IC-HW-01-00075-CU-PVC-H07VK-1100-IS694-FRLF	0.75	5	24/0.2	0.6	2.3
IC-HW-01-00100-CU-PVC-H07VR-1100-IS694-FRLF	1	2	14/0.3	0.6	2.5
IC-HW-01-00100-CU-PVC-H07VK-1100-IS694-FRLF	1	5	32/0.2	0.6	2.5
IC-HW-01-00150-CU-PVC-H07VR-1100-IS694-FRLF	1.5	2	22/0.30	0.7	3.0
IC-HW-01-00150-CU-PVC-H07VK-1100-IS694-FRLF	1.5	5	30/0.25	0.6	2.8
IC-HW-01-00250-CU-PVC-H07VR-1100-IS694-FRLF	2.5	2	36/0.30	0.8	3.4
IC-HW-01-00250-CU-PVC-H07VK-1100-IS694-FRLF	2.5	5	50/0.25	0.7	3.6
IC-HW-01-00400-CU-PVC-H07VK-1100-IS694-FRLF	4	5	56/0.3	0.8	4.2
IC-HW-01-00600-CU-PVC-H07VK-1100-IS694-FRLF	6	5	84/0.3	0.8	4.7
IC-HW-01-01000-CU-PVC-H07VK-1100-IS694-FRLF	10	5	80/0.4	1	6.1
IC-HW-01-01600-CU-PVC-H07VK-1100-IS694-FRLF	16	5	126/0.4	1	7.1

ELECTRICAL CHARACTERISTICS

Current carrying capacity and Max. DC conductor resistance.

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NOMINAL CROSS-SECTIONAL AREA MM²	CLASS OF CONDUCTOR	REFERENCE METHOD B (ENCLOSED IN CONDUIT ON A WALL OR IN TRUNKING ETC.) AMP.	REFERENCE METHOD C (CLIPPED DIRECT) AMP.	MAXIMUM DC CONDUCTOR RESISTANCE AT 20 °C Ω/KM
0.75	5	7	7.5	26
1	2	11.6	12.6	18.1
1	5	11	12	19.5
1.5	2	14.7	16.8	12.1
1.5	5	14	16	13.3
2.5	2	20	23.1	7.41
2.5	5	19	22	7.98
4	5	26	29	4.95
6	5	31	37	3.3
10	5	42	51	1.91
16	5	57	68	1.21

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

CERTIFICATIONS & APPROVALS

ISO 9001
Cert. 99 100 22646 (TÜV SÜD)

ISI
Bureau of Indian Standards · CM/L to be confirmed

RoHS
Compliant

REACH
Compliant

Make in India
Manufactured in India

NOTES

Dimensions and current ratings are as tabulated. Ordering requires product code, size, class of conductor and colour.

INTERNAL

FLAGGED FOR THE CODE STEWARD

1. **FRLF is not a registered option.** Tab 5 of the code master lists FR, FRLS, FRLH, ZHFR — no FR-LF. Codes on this sheet are derived to the register's grammar with option FRLF. Add FRLF to `lst_OPT` or confirm the correct existing option.
2. **Voltage grade conflict.** The source sheet states 1100 V AC, so codes here carry `1100`. Every house-wire IS 694 item in the ITEM MASTER is registered at `0450` (450/750 V). Value reproduced as written — not corrected.
3. **1 mm² class 2 has no register entry.** The ITEM MASTER carries H07VR only from 00150 upward; `00100-CU-PVC-H07VR` does not exist in any option variant.
4. **Insulation compound.** Construction text specifies PVC Type D to IS 5831; the register's insulation field offers only PVC (Type A / Type C to IS 5831). Type D is not codeable today.

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5. **Cable render kept.** Fig. 2 sheath reads INDOCABLES, so the original image is retained. Fig. 1 cross section kept as-is.
6. **Make in India mark is low resolution.** The only file in the brand set is 80 × 41 px, which upscales soft at print size. A vector or high-resolution version is needed.

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