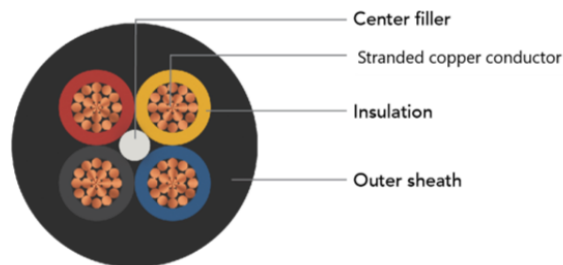


# POLYCAB HFFR-01ZZ -R/03XZZ-R

## Industrial Cable, 1100 V AC



Images not to scale. Follow table for dimensions

### 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.

### CHARACTERISTICS

**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

### OUTSTANDING FEATURES

- Low Smoke
- Halogen Free
- Flame Retardant
- Highly Flexible

### STANDARD FOLLOWS

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

### OUR ACCREDITATIONS



### APPROVAL



### NOTES

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

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### Weight & Dimension Data

Product Code	Conductor size	Nominal insulation thickness	Overall dia. (Approx.)	Weight (Approx.)
	n x mm <sup>2</sup>	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

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Product Code	Conductor size	Nominal insulation thickness	Overall dia. (Approx.)	Weight (Approx.)
	n x mm <sup>2</sup>	mm	mm	kg/km
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

### Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area	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
	1 two core cable single phase ac or dc	1 three core cable or 1 four core cable three phase ac	1 two core cable single phase ac or dc	1 three core cable or 1 four core cable three phase ac	1 two core cable single phase ac or dc	1 three core cable or 1 four core cable three phase ac	
mm <sup>2</sup>	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Ω/km
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

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

