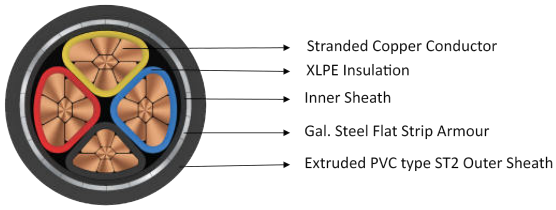
LOW VOLTAGE POWER CABLE · 2XFY MC-3.5 · THREE-AND-A-HALF CORE ARMOURED

650/1100 V AC · 3.5-CORE COPPER

Stranded compacted copper conductor · XLPE insulated · PVC inner sheathed · galvanized steel flat strip armoured · PVC sheathed · conforming to IS 7098-1

650/1100 V	90 °C max.	250 °C	1500 V DC
Voltage rating	Operation temperature	Short-circuit temperature	DC systems to earth

CABLE / SIDE VIEW · INDOCABLES sheath print



CROSS-SECTION · construction callouts

Images not to scale. Follow table for dimensions.

APPLICATION

INDOCABLES 2XFY MC-3.5, Stranded compacted copper conductor, XLPE insulated, PVC inner sheathed, Galvanized Steel Flat strip armour and PVC sheathed confirming to IS 7098-1 is suitable for 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.

CONSTRUCTION

Conductor	Stranded plain compacted sector shaped copper conductor as per IS 8130, class 2
Insulation	Insulated with Cross Linked Polyethylene (XLPE) to IS 7098-1
Inner sheath	Extruded inner sheath with PVC Type ST2/FRLS/FR/LSZH
Armour	Armoured with Galvanized Flat Steel Strip to IS 3975
Outer sheath	Sheathed with Extruded PVC Type ST2/FRLS/FR/LSZH
Core identification	Red, Yellow, Blue and Black
Bending radius	Fixed installation 12 x Overall diameter

OUTSTANDING FEATURES

- High life
- High insulation resistance
- Flame retardant
- Low halogen · Low smoke
- UV resistant

STANDARD FOLLOWS

- IS 8130:2013
- IS 5831:1984
- IS 3975:1979
- IS 7098-1:1988

COMPLIANCE

Conductor resistance	IS 8130:2013
Insulation resistance	IS 7098-1:1988
Flammability test	IEC 60332-1:2015

OUR ACCREDITATIONS & APPROVAL

ISI
Bureau of Indian Standards · CM/L 6200267409

ISO 9001
Cert. 99 100 22646 (TÜV SÜD)

RoHS
Compliant

REACH
Compliant

Make in India
Manufactured in India

Parth Chhaperia +918073533289 **Aryan Chhaperia** +91808810785 **Neelmani Chaudhary** +91 7011005815
cables@micagroup.net

WEIGHT & DIMENSION DATA

Product code	Nominal cross-sectional area n x mm²	Nominal thickness of insulation main/neutral mm	Nominal dimension of armour flat wire mm	Minimum thickness of outer sheath mm	Overall diameter mm	Weight (approx.) kg/km
IC-PW-3H-02500-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x25	0.9/0.7	4x0.8	1.4	21.9	1272
IC-PW-3H-03500-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x35	0.9/0.7	4x0.8	1.4	24.2	1586
IC-PW-3H-05000-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x50	1/0.9	4x0.8	1.4	27.4	2061
IC-PW-3H-07000-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x70	1.1/0.9	4x0.8	1.56	31.5	2831
IC-PW-3H-09500-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x95	1.1/1	4x0.8	1.56	34.8	3686
IC-PW-3H-12000-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x120	1.2/1.1	4x0.8	1.72	38.5	4617
IC-PW-3H-15000-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x150	1.4/1.1	4x0.8	1.72	42.7	5481
IC-PW-3H-18500-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x185	1.6/1.1	4x0.8	1.88	47.2	6830
IC-PW-3H-24000-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x240	1.7/1.2	4x0.8	2.04	52.7	8711
IC-PW-3H-30000-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x300	1.8/1.4	4x0.8	2.2	57.9	10716
IC-PW-3H-40000-CU-2XL-2XFY-1100-IS7098 P1-FRLS	3.5 x400	2/1.6	4x0.8	2.52	65.5	13556

The above data is approximate & subject to manufacturing tolerance. All eleven codes are registered in the Indo Cables Item Master (3H = 3.5 core · CU · 2XL XLPE · 2XFY strip-armoured PVC sheath · 1100 V · IS 7098 Part 1 · FRLS).

NOTES

- Other color also available on request.
- Cable available with anti-rodent & termite

Parth Chhaperia +918073533289 **Aryan Chhaperia** +91808810785 **Neelmani Chaudhary** +91 7011005815
cables@micagroup.net

ELECTRICAL CHARACTERISTICS

Current rating and maximum DC conductor resistance.

Nominal area of conductor mm²	Buried direct in the ground Amp.	In single way ducts Amp.	In air Amp.	Max. DC conductor resistance at 20°C Ω/km
16	95	79	89	1.15
25	122	102	119	0.727
35	146	122	147	0.524
50	173	144	179	0.387
70	212	177	226	0.268
95	254	212	279	0.193
120	287	240	320	0.153
150	321	269	365	0.124
185	362	304	422	0.0991
240	418	352	500	0.0754
300	469	396	574	0.0601
400	528	447	662	0.047

Air ambient temperature **40°C** | Ground ambient temperature **30°C** | Conductor operating temperature **90°C**

The above table is in accordance with IS 3961 (part 6):2016. The 16 mm² row has no matching entry in the weight & dimension table above, which starts at 25 mm² — flagged for check.

Parth Chhaperia +918073533289 **Aryan Chhaperia** +91808810785 **Neelmani Chaudhary** +91 7011005815
cables@micagroup.net

DE-RATING FACTOR

Rating factor for variation in ambient air temperature for cable in free air. Maximum conductor temperature 90°C.

Ambient air temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
De-rating factor	1.14	1.10	1.05	1.00	0.95	0.89	0.84	0.77

Rating factor for variation in ground temperature for direct buried cables. Maximum conductor temperature 90°C.

Ground temperature	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C
De-rating factor	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82

Rating factor for variation in ground temperature for cable in duct. Maximum conductor temperature 90°C.

Ground temperature	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C
De-rating factor	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82

Source gives identical factors for direct-buried and in-duct laying — reproduced as written, flagged for check.

Parth Chhaperia +918073533289 **Aryan Chhaperia** +91808810785 **Neelmani Chaudhary** +91 7011005815
cables@micagroup.net