INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
A2XY MC-3.5 · IS 7098-P1

LV-40
SHEET NO.

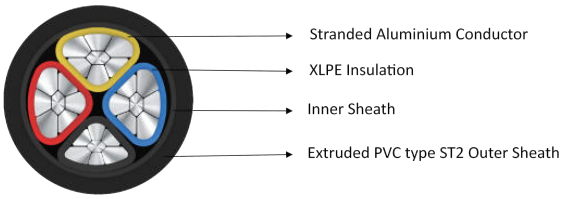
LOW VOLTAGE POWER CABLE · INDOCABLES A2XY MC-3.5 · 3.5 CORE UNARMOURED

650/1100 V AC · 3.5 CORE ALUMINIUM

Stranded compacted aluminium conductor · XLPE insulated · PVC inner sheath · PVC sheathed to IS 7098-1

650/1100 V	90 °C max.	250 °C	1500 V DC	25–500 mm²
Voltage rating	Operation temperature	Short circuit temperature	DC systems, to earth	Size range, 3.5 core

CROSS SECTION · LAYER CALLOUTS



CABLE / SIDE VIEW · INDOCABLES sheath print

Images not to scale. Follow table for dimensions

APPLICATION

INDOCABLES A2XY MC-3.5, Stranded compacted aluminium conductor, XLPE insulated, 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 compacted aluminium 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
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 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

NOTES

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

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WEIGHT & DIMENSION DATA

Product code	Nominal cross-sectional area n x mm²	Class of conductor	Nominal Thickness of Insulation mm	Nominal thickness of outer sheath mm	Overall Diameter mm	Weight (Approx.) kg/km
IC-PW-3H-02500-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 25	Class 2	0.9/0.7	2	21.3	525
IC-PW-3H-03500-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 35	Class 2	0.9/0.7	2	23.6	625
IC-PW-3H-05000-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 50	Class 2	1/0.9	2	26.8	800
IC-PW-3H-07000-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 70	Class 2	1.1/0.9	2.2	31	1100
IC-PW-3H-09500-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 95	Class 2	1.1/1	2.2	34.3	1400
IC-PW-3H-12000-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 120	Class 2	1.2/1.1	2.2	37.5	1650
IC-PW-3H-15000-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 150	Class 2	1.4/1.1	2.4	41	2000
IC-PW-3H-18500-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 185	Class 2	1.6/1.1	2.6	46.5	2550
IC-PW-3H-24000-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 240	Class 2	1.7/1.2	2.8	52.5	3200
IC-PW-3H-30000-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 300	Class 2	1.8/1.4	3	56	4000
IC-PW-3H-40000-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 400	Class 2	2/1.6	3.4	64	5177
IC-PW-3H-50000-AL-2XL-A2XY-1100-IS7098P1-FRLS*	3.5 x 500	Class 2	2.2/1.70	3.6	72.5	6500

The above data is approximate & subject to manufacturing tolerance. Codes read 3H = 3.5 core · AL · 2XL XLPE · A2XY unarmoured, PVC sheathed · 1100 V grade · IS 7098 Part 1 · FRLS. Insulation thickness is given as full core / reduced neutral core, as written in the source.

* All twelve codes are registered in the Item Master (IC1001228–IC1001261) but every row still carries STATUS **DRAFT** — the steward must move them to ACTIVE before quoting.

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ELECTRICAL CHARACTERISTICS

Current carrying capacity 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 §	74	61	69	1.91
25	95	79	93	1.2
35	114	94	114	0.868
50	134	112	138	0.641
70	164	137	175	0.443
95	197	164	216	0.32
120	223	187	249	0.253
150	249	209	284	0.206
185	282	238	329	0.164
240	327	276	392	0.125
300	369	312	452	0.1
400	420	356	526	0.0778
500	478	412	612	0.0605

Air Ambient temperature **40°C** | Ground ambient temperature **30°C** | In accordance with **IS 3961 (part 6):2016**

§ The source carries a 16 mm² current-rating row, but its weight & dimension table and the Item Master both start at 25 mm² for 3.5 core — no dimensions or product code exist for that size. Reproduced as written, flagged for check. ¶ The source cites the flammability test as IEC 60332-1:2015; the companion sheets in this set cite IEC 60332-1-2:2015. Reproduced as written, flagged for check.

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DE-RATING FACTOR

Rating factor for variation in ambient air temperature for cable in free air

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

Maximum conductor temperature 90°C

Rating factor for variation in ground temperature for direct buried cables.

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

Maximum conductor temperature 90°C

Rating factor for variation in ground temperature for cable in duct.

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

Maximum conductor temperature 90°C

The duct table repeats the direct-buried factors column for column in the source — reproduced as written.

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