INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
2XWY MC-2 · IS 7098-P1

LV-60
SHEET NO.

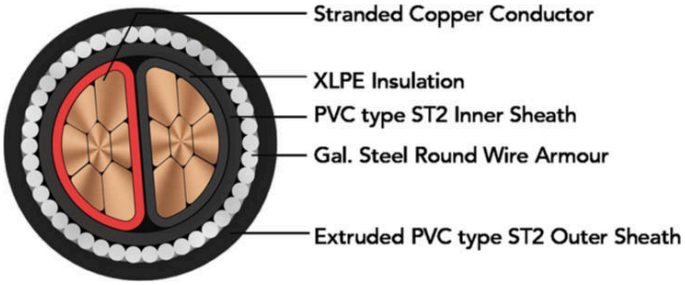
LOW VOLTAGE POWER CABLE · INDOCABLES 2XWY MC-2 IS 7098-P1 · 2 CORE ARMOURED

650/1100 V AC · 2 CORE COPPER

Stranded compacted copper conductor · XLPE insulated · PVC inner sheathed · galvanised steel round wire armoured · PVC sheathed 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 2XWY MC-2, stranded compacted copper conductor XLPE insulated, PVC inner sheathed, Galvanised Steel round wire 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 1&2
Insulation	Insulated with Cross Linked Polyethylene (XLPE) to IS 7098-1
Inner sheath	Extruded inner sheath with PVC Type ST2 to IS 5831
Armour	Armoured with Galvanised Steel round wire to IS 3975
Outer sheath	Sheathed with Extruded PVC Type ST2 to IS 5831
Core identification	Red 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
Insulation resistance	IS 7098-1:1988
Flammability test	IEC 60332-1

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

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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 dimension of armour round wire mm	Minimum thickness of outer sheath mm	Overall diameter mm	Weight (approx.) kg/km
IC-PW-02-00400-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x4	Class 1	0.7	1.4	1.24	14	408
IC-PW-02-00400-CU-2XL-2XWY-1100-IS 7098P1-FRLS *	2 x4	Class 2	0.7	1.4	1.24	14.5	427
IC-PW-02-00600-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x6	Class 1	0.7	1.4	1.24	15	484
IC-PW-02-00600-CU-2XL-2XWY-1100-IS 7098P1-FRLS *	2 x6	Class 2	0.7	1.4	1.24	16	522
IC-PW-02-01000-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x10	Class 2	0.7	1.4	1.24	17.5	665
IC-PW-02-01600-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x16	Class 2	0.7	1.4	1.4	17 †	696.5
IC-PW-02-02500-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x25	Class 2	0.9	1.6	1.4	20	1001.7
IC-PW-02-03500-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x35	Class 2	0.9	1.6	1.4	22	1224.2
IC-PW-02-05000-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x50	Class 2	1	1.6	1.4	24	1520
IC-PW-02-07000-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x70	Class 2	1.1	1.6	1.56	27	2004
IC-PW-02-09500-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x95	Class 2	1.1	2	1.56	30.5	2736
IC-PW-02-12000-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x120	Class 2	1.2	2	1.56	33	3230
IC-PW-02-15000-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x150	Class 2	1.4	2	1.72	36	3876
IC-PW-02-18500-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x185	Class 2	1.6	2	1.88	40	4731
IC-PW-02-24000-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x240	Class 2	1.7	2.5	2.04	42.4	6203
IC-PW-02-30000-CU-2XL-2XWY-1100-IS 7098P1-FRLS	2 x300	Class 2	1.8	2.5	2.2	46.2	7514
IC-PW-02-40000-CU-2XL-2XWY-1100-IS 7098P1-FRLS ‡	2 x400	Class 2	2	2.5	2.36	51.6	9262

The above data is approximate & subject to manufacturing tolerance. Codes read 02 = 2 core · CU · 2XL XLPE · 2XWY round steel wire armoured, PVC sheathed · 1100 V grade · IS 7098 Part 1 · FRLS.

* The code structure carries no conductor-class segment, so the Class 1 and Class 2 rows at 2 x 4 and 2 x 6 resolve to the same Item Master code. Seventeen source rows map to fifteen codes — flagged for the Item Master Steward.

† Source prints the 2 x 16 overall diameter as 17 mm, below the 17.5 mm printed for the smaller 2 x 10 size — reproduced as written, flagged for check.

‡ 2 x 400 is not in the Item Master — the register stops at 300 sq.mm for this family. Code derived from the Indo Cables code structure, flagged for the Item Master Steward.

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ELECTRICAL CHARACTERISTICS

Nominal area of conductor mm^2	Buried direct in the ground Amp.	In single way Ducts Amp.	In air Amp.	Max. DC conductor resistance at 20°C Ω/km
4	54	45	48	4.61
6	67	56	61	3.08
10	89	75	83	1.83
16	115	96	108	1.15
25	147	122	140	0.727
35	176	146	172	0.524
50	208	173	208	0.387
70	253	211	262	0.268
95	302	252	322	0.193
120	340	284	368	0.153
150	379	317	419	0.124
185	425	357	482	0.0991
240	486	409	566	0.0754
300	541	456	644	0.0601
400	602	508	734	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

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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

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