INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
2XWaY / 2XFaY SC · IS 7098-P1

LV-24
SHEET NO.

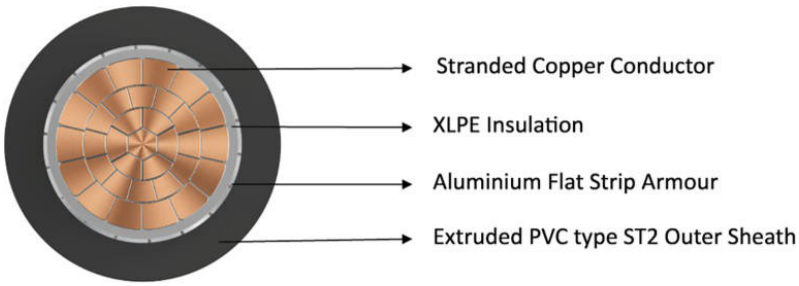
LOW VOLTAGE POWER CABLE · 2XWAY / 2XFAY SC · ARMOURED

650/1100 V · SINGLE-CORE COPPER

Stranded plain compacted copper · XLPE insulated · aluminium round wire or flat strip armour · PVC sheathed · conforming to IS 7098-1

650/1100 V	90 °C max.	250 °C	12 × OD
Voltage rating	Operating temperature	Short-circuit temperature	Bending radius, fixed installation

CABLE / SIDE VIEW · INDOCABLES sheath print



CROSS-SECTION · construction callouts

Images not to scale. Follow table for dimensions.

APPLICATION

INDOCABLES 2XWaY/2XFaY SC, stranded compacted copper conductor, XLPE insulated and PVC sheathed armoured cable 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 copper conductor as per IS 8130, class 2
Insulation	Insulated with Cross Linked Polyethylene (XLPE) to IS 7098-1
Armour	Armoured with Aluminium Round wire/Flat strip armoured
Outer sheath	Sheathed with PVC Type ST2/FRLS /FR/LSZH
Core identification	Red/Black/Yellow/Blue/Natural
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 60332-1-2:2015

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WEIGHT & DIMENSION DATA — 2XWAY ROUND WIRE ARMOUR

Product code	Conductor size n × mm²	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-01-01000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS †	1 × 10	1	1.4	1.24	12	219
IC-PW-01-01600-CU-2XL-2XWaY-1100-IS7098 P1-FRLS †	1 × 16	1	1.4	1.24	13	281
IC-PW-01-02500-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 25	1.2	1.4	1.24	14	390
IC-PW-01-03500-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 35	1.2	1.4	1.24	16	485
IC-PW-01-05000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 50	1.3	1.4	1.24	17	608
IC-PW-01-07000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 70	1.4	1.4	1.24	19	817
IC-PW-01-09500-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 95	1.4	1.6	1.4	22	1102
IC-PW-01-12000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 120	1.5	1.6	1.4	23.5	1339
IC-PW-01-15000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 150	1.7	1.6	1.4	24.5	1615
IC-PW-01-18500-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 185	1.9	1.6	1.4	26.5	1976
IC-PW-01-24000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 240	2	1.6	1.4	29	2508
IC-PW-01-30000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 300	2.1	1.6	1.56	31.5	3078
IC-PW-01-40000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 400	2.4	2	1.56	36	3962
IC-PW-01-50000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 500	2.6	2	1.56	39.5	4969
IC-PW-01-63000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 630	2.8	2	1.72	43	6318
IC-PW-01-80000-CU-2XL-2XWaY-1100-IS7098 P1-FRLS	1 × 800	3.1	2	1.88	48.5	7990
IC-PW-01-100000-CU-2XL-2XWaY-1100-IS7098P1-FRLS	1 × 1000	3.3	2.5	2.04	54	10051

The above data is approximate & subject to manufacturing tolerance. † Code derived from the Indo Cables code structure — not yet present in the Item Master register.

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WEIGHT & DIMENSION DATA — 2XFAY FLAT STRIP ARMOUR

Product code	Conductor size n × mm²	Nominal thickness of insulation mm	Nominal dimension of armour flat wire mm	Minimum thickness of outer sheath mm	Overall diameter mm	Weight (approx.) kg/km
IC-PW-01-09500-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 95	1.4	4x0.8	1.4	18.6	1036
IC-PW-01-12000-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 120	1.5	4x0.8	1.4	20.4	1264
IC-PW-01-15000-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 150	1.7	4x0.8	1.4	22.2	1530
IC-PW-01-18500-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 185	1.9	4x0.8	1.4	24.4	1890
IC-PW-01-24000-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 240	2	4x0.8	1.4	26.6	2404
IC-PW-01-30000-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 300	2.1	4x0.8	1.56	29.6	2974
IC-PW-01-40000-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 400	2.4	4x0.8	1.56	33.2	3726
IC-PW-01-50000-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 500	2.6	4x0.8	1.56	36.7	4770
IC-PW-01-63000-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 630	2.8	4x0.8	1.72	41.2	6070
IC-PW-01-80000-CU-2XL-2XFaY-1100-IS7098 P1-FRLS	1 × 800	3.1	4x0.8	1.88	45.1	7676
IC-PW-01-100000-CU-2XL-2XFaY-1100-IS7098P1-FRLS	1 × 1000	3.3	4x0.8	2.04	50.6	9567

The above data is approximate & subject to manufacturing tolerance. Codes shown are the FRLS sheath variant, registered in the Indo Cables Item Master; the ST2 variant carries the same code with no suffix and the FR variant the –FR suffix.

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ELECTRICAL CHARACTERISTICS

Current carrying capacity and maximum DC conductor resistance (class 2). Air ambient temperature: 40°C. Ground ambient temperature: 30°C.

Nominal cross-sectional area mm^2	Buried direct in the ground		In single way ducts		In air		Max. DC conductor resistance at 20°C Ω/km
	2 single core cables Amp.	3 single core cables Amp.	2 single core cables Amp.	3 single core cables Amp.	2 single core cables Amp.	3 single core cables Amp.	
10	90	77	76	70	83	71	1.83
16	115	98	97	89	108	94	1.15
25	148	126	124	114	144	126	0.727
35	177	150	148	136	176	154	0.524
50	208	177	174	160	212	187	0.387
70	255	216	213	195	269	238	0.268
95	312	260	256	233	340	303	0.193
120	355	295	291	264	396	354	0.153
150	396	329	324	294	450	403	0.124
185	447	371	365	330	519	468	0.0991
240	515	427	420	379	613	553	0.0754
300	576	477	469	422	700	634	0.0601
400	651	537	528	473	813	737	0.047
500	727	598	589	525	930	844	0.0366
630	806	661	651	578	1056	961	0.0283
800	877	721	707	626	1179	1077	0.0221
1000	935	772	751	668	1288	1188	0.0176

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 — 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

OUR ACCREDITATIONS & APPROVAL

ISO 9001
Cert. 99 100 22646 (TÜV SÜD)

ISI
Bureau of Indian Standards · CM/L 6200267409

RoHS
Compliant

REACH
Compliant

Make in India
Manufactured in India

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