INDO CABLES
EVERY CONNECTION MATTERS

PRODUCT DATASHEET
A2XWaY / A2XFaY SC · IS 7098-P1

LV-20
SHEET NO.

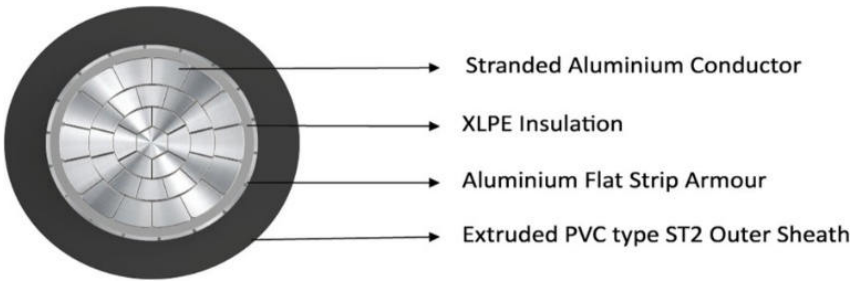
LOW VOLTAGE POWER CABLE · A2XWAY / A2XFAY SC · ARMOURED

650/1100 V · SINGLE-CORE ALUMINIUM

Stranded compacted aluminium · 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 A2XWaY/A2XFaY SC, stranded compacted aluminium 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 compacted Aluminium 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 — A2XWAY 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-AL-2XL-A2XWaY-1100-IS7098P1-FRLS †	1 × 10	1	1.4	1.24	11.35	167
IC-PW-01-01600-AL-2XL-A2XWaY-1100-IS7098P1-FRLS †	1 × 16	1	1.4	1.24	12.5	190
IC-PW-01-02500-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 25	1.2	1.4	1.24	14	247
IC-PW-01-03500-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 35	1.2	1.4	1.24	15	290
IC-PW-01-05000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 50	1.3	1.4	1.24	16.5	342
IC-PW-01-07000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 70	1.4	1.4	1.24	18.5	428
IC-PW-01-09500-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 95	1.4	1.6	1.4	20.2	560
IC-PW-01-12000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 120	1.5	1.6	1.4	22.5	665
IC-PW-01-15000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 150	1.7	1.6	1.4	24	779
IC-PW-01-18500-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 185	1.9	1.6	1.4	26.5	921
IC-PW-01-24000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 240	2	1.6	1.4	29	1121
IC-PW-01-30000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 300	2.1	1.6	1.56	31.5	1349
IC-PW-01-40000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 400	2.4	2	1.56	35.5	1739
IC-PW-01-50000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 500	2.6	2	1.56	39.5	2128
IC-PW-01-63000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 630	2.8	2	1.72	43	2660
IC-PW-01-80000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 800	3.1	2	1.88	47.9	3296.5
IC-PW-01-100000-AL-2XL-A2XWaY-1100-IS7098P1-FRLS	1 × 1000	3.3	2.5	2.04	54.37	4142

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 — A2XFAY 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-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 95	1.4	4x0.8	1.4	18.6	494
IC-PW-01-12000-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 120	1.5	4x0.8	1.4	20.4	589
IC-PW-01-15000-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 150	1.7	4x0.8	1.4	22.5	694
IC-PW-01-18500-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 185	1.9	4x0.8	1.4	24.5	827
IC-PW-01-24000-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 240	2	4x0.8	1.4	26.6	1026
IC-PW-01-30000-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 300	2.1	4x0.8	1.56	29.6	1235
IC-PW-01-40000-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 400	2.4	4x0.8	1.56	33	1548.5
IC-PW-01-50000-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 500	2.6	4x0.8	1.56	36.7	1909.5
IC-PW-01-63000-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 630	2.8	4x0.8	1.72	40.5	2413
IC-PW-01-80000-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 800	3.1	4x0.8	1.72	46	2992.5
IC-PW-01-100000-AL-2XL-A2XFaY-1100-IS7098P1-FRLS	1 × 1000	3.3	4x0.8	1.88	50	3667

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	69	59	58	54	64	55	3.08
16	89	76	75	69	84	72	1.91
25	115	98	96	89	112	98	1.2
35	137	116	115	106	137	119	0.868
50	161	137	135	124	165	145	0.641
70	198	168	165	151	209	185	0.443
95	243	202	199	181	264	235	0.32
120	276	230	226	206	308	276	0.253
150	308	256	252	229	350	314	0.206
185	349	290	285	258	406	366	0.164
240	404	335	329	298	480	434	0.125
300	454	376	369	333	551	500	0.1
400	518	429	421	378	647	589	0.0778
500	588	485	476	426	751	685	0.0605
630	663	546	536	477	868	793	0.0469
800	740	608	596	528	992	907	0.0367
1000	812	665	652	575	1117	1022	0.0291

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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