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Australia Pacific Electric Cables Pty Ltd

Cables Technical Specification - SDI Single Core Flexible Power Cables XLPO (X-HF-110) Insulated/LSZH (HFS-110-TP) sheathed AS/NZS 5000.1

[Cable drawing](#)



[Cable Configuration:](#)

Cu Class 5 / X-HF-110 / HFS-110-TP 0.6/1kV

[Cable Construction:](#)

Conductor: Plain Annealed Copper Class 5 to AS/NZS 1125
Binder Tape: Mylar/Non-woven/Mica/Polyester Tape (where required)
Insulation: X-HF-110 to AS/NZS 3808
Sheath: HFS-110-TP to AS/NZS 3808

[Technical data](#)

Items		Unit	Average Values														
Product code	For Orange sheath	-	FXV010WOHFS110	FXV016WOHFS110	FXV025WOHFS110	FXV035WOHFS110	FXV050WOHFS110	FXV070WOHFS110	FXV095WOHFS110	FXV120WOHFS110	FXV150WOHFS110	FXV185WOHFS110	FXV240WOHFS110	FXV300WOHFS110	FXV400WOHFS110	FXV500WOHFS110	FXV630WOHFS110
	For black sheath	-	FXV010HFS110	FXV016HFS110	FXV025HFS110	FXV035HFS110	FXV050HFS110	FXV070HFS110	FXV095HFS110	FXV120HFS110	FXV150HFS110	FXV185HFS110	FXV240HFS110	FXV300HFS110	FXV400HFS110	FXV500HFS110	FXV630HFS110
Number of Cores		-	Single Core (1C)														
Conductor Cross section Area (CSA)		mm ²	10	16	25	35	50	70	95	120	150	185	240	300	400	500	630
Maximum total number of wires		mm	73	115	179	252	360	545	693	842	1117	1395	1830	2318	2918	3618	4518
Maximum diameter of wires in conductor		mm	0.41	0.41	0.41	0.41	0.41	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Conductor diameter		mm	3.94	5.39	6.68	8.51	10.12	11.55	13.08	14.96	16.60	18.30	21.30	23.60	27.40	30.70	35.50
Binder Tape (overlapping ≥25%)		mm	Mylar/Non-woven/Mica/Polyester Tape (Where required)														
Average Insulation Thickness		mm	0.7	0.7	0.9	0.9	1.0	1.1	1.1	1.2	1.4	1.6	1.7	1.8	2.0	2.2	2.4
Overall Insulation Diameter		mm	5.9	7.4	9.1	10.9	12.7	14.4	15.9	18.0	20.0	22.1	25.3	27.8	32.0	35.7	40.9
Average Sheath Thickness		mm	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.2
Overall Sheath Diameter (±10%)		mm	8.7	10.2	11.9	13.7	15.5	17.2	18.9	21.0	23.2	25.5	28.9	31.6	36.0	39.9	45.5
Cable Gross Mass (±10%)		kg/km	155	229	348	461	600	816	1068	1332	1657	2015	2567	3165	4116	5251	6514
Maximum Conductor DC Resistance @ 20°C		Ω/km	1.91	1.21	0.78	0.554	0.386	0.272	0.206	0.161	0.129	0.106	0.0801	0.0641	0.0486	0.0384	0.0287
Minimum Bending Radius	During installation	mm	52	61	71	82	93	103	113	126	139	153	173	190	216	239	273
	Fixed	mm	35	41	48	55	62	69	76	84	93	102	116	126	144	160	182
Maximum Safe Pulling Tension (Subject to a maximum of 22kN)		kN	0.7	1.12	1.75	2.45	3.5	4.9	6.65	8.4	10.5	12.95	16.8	21.0	22.0	22.0	22.0
Remark:																	

[Colour Identification:](#)

Insulation: White
Sheath: Orange
(Black sheath is optional, used only when requested)

[Electrical Characteristics:](#)

Voltage Rating: 0.6/1kV
HV Test for 5 mins: 3.5kV
Maximum continuous conductor operating temperature: 110°C
Minimum Insulation Resistance constant @20°C: 40GΩ.m
Minimum Insulation Resistance constant @90°C: 0.002GΩ.m

[Operating Temperature:](#)

Conductor: -25°C to 110°C
Short Circuit (5 secs): 250°C
The minimum ambient temperature is 0°C after insulation and only when cables in a fixed position

[Mechanical Characteristics:](#)

Minimum Bending Radius: During installation-6OD, Fixed-4OD
Maximum Safe Pulling Tension: 0.07 x Total Conductor CSA

[Cable Markings:](#)

APEC YEAR X-HF-110/HFS-110-TP ELECTRIC CABLE 0.6/1 KV SIZE SQMM CU AS/NZS 5000.1

[Standard Compliance:](#)

AS/NZS 5000.1 Part 1: For working voltages up to and including 0.6/1 (1.2kV)
AS/NZS 3808 Insulating and sheathing materials for electric cables
AS/NZS 3008 Electrical Installations—Selection of cables-Part 1.1: Cables for alternating voltages up to and including 0.6/1 kV—Typical Australian installation conditions
AS/NZS 1660 Test methods for electric cables, cords and conductors
AS/NZS 1574 Copper and Copper alloys - wire for electrical purposes
AS/NZS 1125 Conductors in insulated electric cables and flexible cords
RoHS Restriction of Hazardous Substances

BRISBANE P 07 3802 3488
F 07 3803 1955
8P Platinum St
Crestmead QLD

BRISBANE SALES P 07 3802 3451

MELBOURNE P 03 9445 1188
F 03 9445 9333
188 Holt Pde
Thornhill VIC

PERTH P 08 9350 1300
F 08 9350 1333
638 Casella Pl
Kewdale WA



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