FLEXIBLE CABLES 0.6/1 kV

XLPE/PVC (SDI) X-90

Application

Flexible single core X-90 XLPE insulated and PVC sheathed cable for mains, submains and subcircuits unenclosed, enclosed in conduit, buried or in underground ducts for building and industrial plants where not subject to mechanical damage. Suitable where space is at a premium and/or where conditions of overload may occur

Approvals

Suitable for fixed applications only in accordance with AS/NZS 3000 + AS/NZS 5000.1

Behaviour in flame and fire:

Flame propagation - AS/NZS 1660.5.6

Temperature range

Maximum operating temperature: +90°C
Minimum operating temperature: -25°C

Minimum bending radius

Installed cables: 4D
During installation: 6D

Resistance to

Chemical exposure: Occasional
Mechanical impact: Light
Water exposure: Occasional condensation
Solar radiation and weather exposure: Occasional

Cable design

Conductor:
Flexible bunched annealed copper conductor to AS/NZS 1125 (Class 5).

Insulation:
X-90 XLPE (Flexible XLPE)
Colour: Natural

Sheath:
5V-90 PVC
Colour: Orange

Installation conditions

In free air
In conduit
In trench
In ground with protection
In duct

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Physical & electrical characteristics

XLPE/PVC (SDI) X-90 / For fixed installation

Product code	Conductor		Cable			Min. installed bending radius mm
	Nominal C.S.A. mm^2	Nominal diameter mm	Nominal insulation thickness mm	Nominal overall diameter mm	Approx. mass kg/100 m	
251CFF90	25	6.5	0.9	11.3	29.1	45
351CFF90	35	7.6	0.9	12.4	38.0	50
501CFF90	50	9.4	1.0	14.4	53.2	60
701CFF90	70	11.1	1.1	16.3	73.2	65
951CFF90	95	12.8	1.1	18.4	94.3	75
1201CFF90	120	14.5	1.2	20.3	118.6	85
1501CFF90	150	16.3	1.4	22.7	147.4	95
1851CFF90	185	18.0	1.6	24.8	178.0	100
2401CFF90	240	20.8	1.7	28.0	231.8	115
3001CFF90	300	23.4	1.8	30.9	288.3	125
4001CFF90	400	26.8	2.0	35.0	376.2	145
5001CFF90	500	30.3	2.2	39.1	474.5	160
6301CFF90	630	35.1	2.4	44.6	628.9	180

XLPE/PVC (SDI) X-90 / Current ratings

Nominal conductor area mm^2	Unenclosed		Buried direct A	Underground wiring enclosure A	Maximum DC Resistance @ 20 °C Ω/KM	Three phase* voltage drop (@ 50Hz & 90 °C) mV/A. m	
	Spaced from Surface A	Touching A				Trefoil	Flat touching
25	121	114	151	109	0.780	1.73	1.74
35	151	141	180	134	0.554	1.24	1.24
50	191	178	214	163	0.386	0.869	0.875
70	241	225	262	203	0.272	0.622	0.630
95	290	271	313	237	0.206	0.483	0.492
120	346	322	356	279	0.161	0.388	0.399
150	400	372	400	316	0.129	0.325	0.338
185	459	427	452	357	0.106	0.280	0.295
240	553	514	523	416	0.0801	0.233	0.251
300	637	591	589	479	0.0641	0.207	0.227
400	764	709	668	554	0.0486	0.183	0.204
500	884	821	752	642	0.0384	0.169	0.192
630	1030	956	843	729	0.0287	0.157	0.181

Note: Refer to Cable Selection in Technical Cable Guide for more information and data based on AS/NZS 3008.1.1.

*To determine the single phase Voltage drop value, the current in the neutral conductor needs to be considered by multiplying the three phase value by 1.155

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