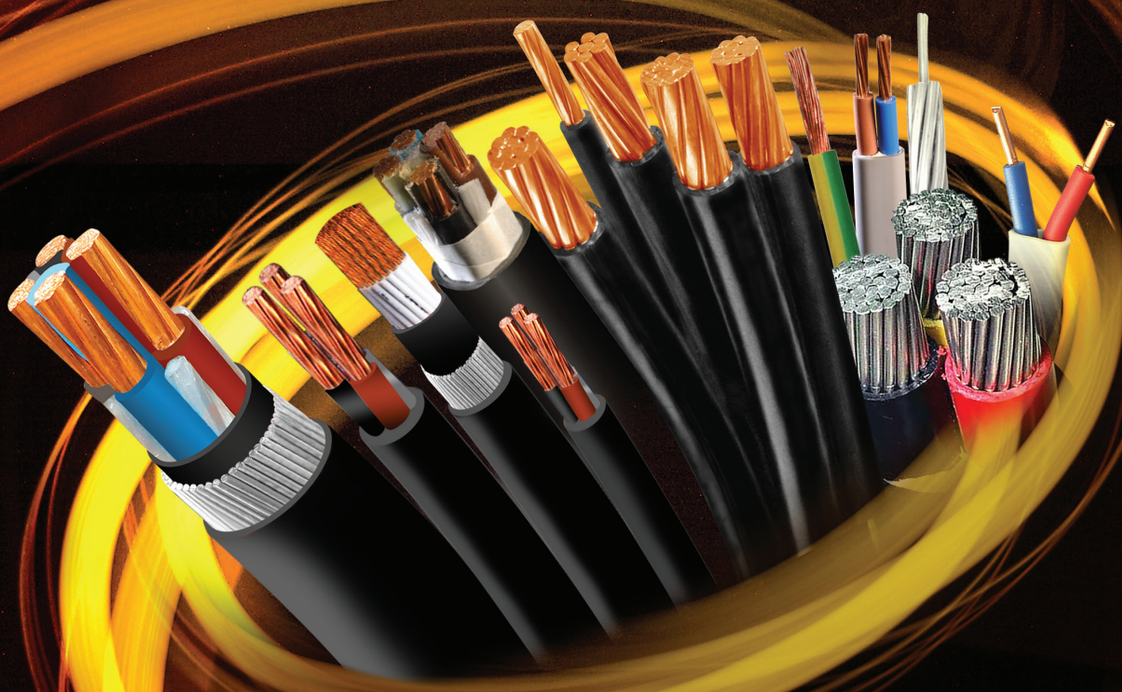
Pacific Cables



PRODUCT CATALOGUE

CONTENT	No

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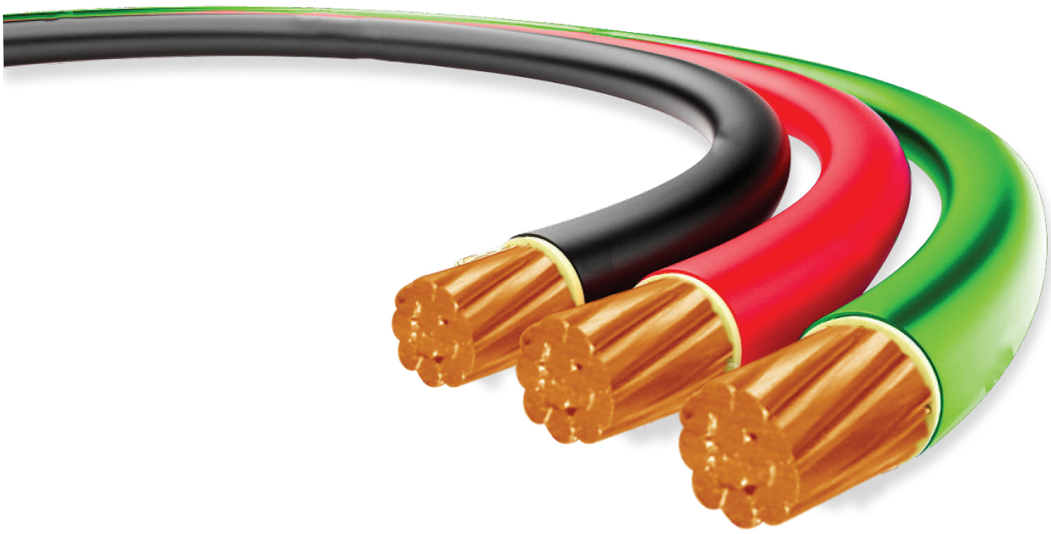


Pacific Cables

Cables PTE Limited has established in Fiji as a leader in the design, development, manufacture, marketing and distribution of copper and aluminium cables for the energy, industrial, and telecommunications sectors in South Pacific Region.

The company manufactures an extensive range of high quality cables for applications in domestic and industrial applications. The portfolio including copper and aluminium electrical cables for domestic as well as industrial applications and aluminium conductor and cables used for power distribution and transmission.

Being quality conscious company, we utilize superior raw materials to enhance our final product quality. With the aim of producing electric cables of high quality and providing the best customer service in the Pacific Region, we manufacture the cables to the Australia and Newzeland standards (AS/NZS) and most stringent industry standards.

PVC CABLES 450/750V

01. SDI SINGLE CORE COPPER

Easy-peel sheath for general wiring, unenclosed, in conduit, buried direct or in underground ducts for domestic, commercial and industrial installations where not subject to mechanical damage. Suitable for glanding

STANDARD	: AS/NZS 5000.2
VOLTAGE	: 450/750 V
CONDUCTOR	: Copper 1-16 mm^2
INSULATION	: PVC, V-90 Black, Red or White
SHEATH	: PVC, 3V -90 White
MAX. OPERATING TEMP.	: 90^0C

Conductor		Overall Diameter		Approx. Mass (kg/km)
mm^2	(No./mm)	Min (mm)	Max (mm)	
1	1/1.13	3.9	4.2	50
1.5	7/0.50	4.3	4.6	60
2.5	7/0.67	5.0	5.3	80
4	7/0.85	5.9	6.2	110
6	7/1.04	6.4	6.8	140
10	7/1.35	7.6	8.1	170
16	7/1.70	8.9	9.4	230

PVC CABLES 450/750V

02. FLAT TPS TWIN CORE COPPER

Easy-peel sheath for general wiring, unenclosed, in conduit, buried direct or in underground ducts for domestic, commercial and industrial installations where not subject to mechanical damage.

STANDARD	: AS/NZS 5000.2
VOLTAGE	: 450/750 V
CONDUCTOR	: Copper 1-16 mm^2
INSULATION	: PVC, V-90 Red & Black or Red & White
SHEATH	: PVC, 3V -90 White
MAX. OPERATING TEMP.	: 90^0C

Insulation Colour	Conductor		Overall Diameter Nominal (mm)	Approx. Mass (kg/km)
	mm^2	(No./mm)		
Red+White	1	1/1.13	4.3X6.5	60
Red+White	1.5	7/0.50	4.9X7.6	80
Red+White	2.5	7/0.67	5.5X9.0	100
Red+White	2.5	1/1.78	5.4X8.6	95
Red+White	4	7/0.85	6.5X10.6	140
Red+Black	10	7/1.35	8.5X14.4	400
Red+Black	16	7/1.70	9.7X16.7	600

PVC CABLES 450/750V

03. FLAT TPS 2 CORE + EARTH COPPER

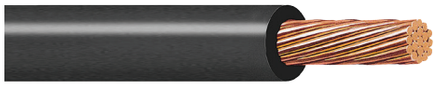
Easy-peel sheath for general wiring, unenclosed, enclosed in conduit, buried direct or in underground ducts for domestic, commercial and industrial installations where not subject to mechanical damage.

STANDARD	AS/NZS 5000.2
VOLTAGE	450/750 V
CONDUCTOR	Copper 1-16 mm^2
INSULATION	PVC, V-90 Red, Black & Green / Yellow
SHEATH	PVC, 3V -90 White
MAX. OPERATING TEMP.	90^0C

Conductor		Overall Diameter Nominal (mm)	Approx. Mass (kg/km)
mm^2	(No./mm)		
1	1/1.13	4.8X9.7	85
1.5	7/0.50	4.7X10.2	115
2.5	1/1.78	5.7X12.4	140
2.5	7/0.67	5.5X12.4	150
4	7/0.85	6.5X14.0	220
6	7/1.04	7.1X15.2	270
10	7/1.35	8.5X18.6	440
16	7/1.70	10.0X21.3	500

PVC CABLES 600/1000 V

04. BUILDING WIRE SINGLE CORE COPPER



For separate earth conductors, For switchboard and control panel wiring. For fixed wiring within other enclosures or apparatus where the cable is not accessible without the use of tools.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Copper 1-500 mm^2
INSULATION	PVC, V-90 Black, Blue, Red, White or Green/ Yellow
MAX. OPERATING TEMP.	90^0C

Conductor		Overall Diameter		Approx. Mass (kg/km)
mm^2	(No./mm)	Min (mm)	Max (mm)	
1	1/1.13	2.7	2.9	20
1.5	7/0.50	3.1	3.3	25
2.5	1/1.78	3.4	3.6	35
2.5	7/0.67	3.6	3.8	35
4	7/0.85	4.5	4.8	55
6	7/1.04	5.1	5.4	70
10	7/1.35	6.0	6.3	120
16	7/1.70	7.1	7.4	180
25	19/1.35	9.1	9.5	285
35	19/1.53	10.1	10.4	370
50	19/1.78	11.6	12.0	515
70	19/2.14	13.4	13.8	730
95	19/2.52	15.6	16.0	980
120	37/2.03	17.4	17.8	1250
150	37/2.25	19.3	19.7	1500
185	37/2.52	21.6	22.0	1900
240	61/2.25	24.7	25.0	2480
300	61/2.52	27.5	28.0	3100
400	61/2.85	30.9	31.5	3950
500	61/3.20	34.4	35.0	4960

PVC CABLES 600/1000 V

05. SDI SINGLE CORE COPPER PVC/PVC

Easy-peel sheath for general wiring, unenclosed in conduit, buried direct or in underground ducts for domestic, commercial and industrial installations where not subject to mechanical damage. Suitable for glanding.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Copper 1-500 mm^2
INSULATION	PVC, V-90 Black, Red or White
SHEATH	PVC, 5V -90 Orange
MAX. OPERATING TEMP.	90 ^0C

Conductor		Overall Diameter		Approx. Mass (kg/km)
mm^2	(No./mm)	Min (mm)	Max (mm)	
1	1/1.13	5.6	6.0	50
1.5	7/0.50	5.9	6.4	60
2.5	7/0.67	6.4	6.8	80
2.5	1/1.78	6.2	6.7	80
4	7/0.85	7.3	7.8	110
6	7/1.04	7.8	8.3	140
10	7/1.35	8.7	9.2	170
16	7/1.70	9.7	10.3	230
25	19/1.35	11.9	12.5	370
35	19/1.53	12.9	13.4	450
50	19/1.78	14.5	15.1	600
70	19/2.14	16.3	16.9	800
95	19/2.52	18.7	19.3	1100
120	37/2.03	20.2	21.5	1300
150	37/2.25	22.4	23.7	1600
185	37/2.52	24.8	26.3	2060
240	61/2.25	28.1	29.7	2550
300	61/2.52	31.1	32.8	3150
400	61/2.85	34.7	36.5	4300
500	61/3.20	38.4	40.4	5300

XLPE CABLES 600/1000 V

06. SINGLE CORE COPPER/XLPE/PVC

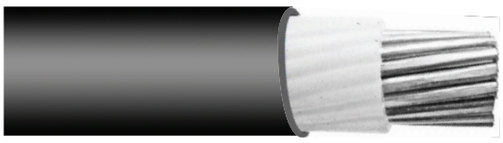
For mains, submains and sub-circuits unenclosed, enclosed in conduit, buried direct or in underground ducts for buildings and industrial plants where not subject to mechanical damage. Suitable where space is at a premium and/or where conditions of overload may occur. Suitable for glanding.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Copper 16-500 mm^2
INSULATION	XLPE, X-90 Natural
SHEATH	PVC, 5V -90 Black
MAX. OPERATING TEMP.	90 ^{0}C

Conductor		Overall Diameter		Approx. Mass (kg/km)
mm^2	(No./mm)	Min (mm)	Max (mm)	
16	7/1.70	9.30	10.36	210
25	19/1.35	11.35	12.35	320
35	19/1.53	12.25	13.25	430
50	19/1.78	13.70	14.70	550
70	19/2.14	15.70	16.70	760
95	19/2.52	17.66	18.66	1040
120	37/2.03	19.61	20.61	1310
150	37/2.25	21.75	22.75	1590
185	37/2.52	24.24	25.24	1980
240	61/2.25	27.25	28.25	2610
300	61/2.52	30.08	31.08	3340
400	61/2.85	33.65	34.65	4250
500	61/3.20	37.40	38.40	5500

XLPE CABLES 600/1000 V

07. SINGLE CORE ALUMINIUM/XLPE/PVC



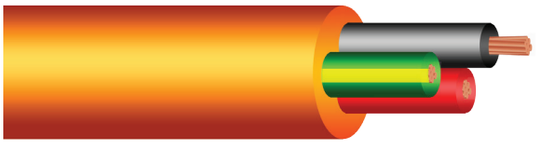
For mains, submains and sub-circuits unenclosed, enclosed in conduit, buried direct or in underground ducts for buildings and industrial plants where not subject to mechanical damage. An aluminium Cable have larger cross section compare to copper conductor to pass the same current but significantly lighter.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Stranded Aluminium (Class 2)
INSULATION MATERIAL	XLPE (X-90) Natural
SHEATHING MATERIAL	5V -90 Black
MAX. OPERATING TEMP.	90 ^{0}C

Product Name	Conductor		Approx. Overall Diameter mm	Approx. Mass kg/km
	No./mm	mm²		
16sqmm AL/XLPE/PVC	7/1.70	16	9.5	116
25sqmm AL/XLPE/PVC	7/2.14	25	11.2	164
35sqmm AL/XLPE/PVC	7/2.52	35	12.4	204
50sqmm AL/XLPE/PVC	19/1.78	50	13.1	230
70sqmm AL/XLPE/PVC	19/2.14	70	15	310
95sqmm AL/XLPE/PVC	19/2.52	95	16.9	400
120sqmm AL/XLPE/PVC	37/2.03	120	18.5	480
150sqmm Al/XLPE/PVC	37/2.25	150	20.4	580
185sqmm AL/XLPE/PVC	37/2.52	185	22.6	730
240sqmm AL/XLPE/PVC	61/2.25	240	25.3	930
300sqmm AL/XLPE/PVC	61/2.52	300	28	1140
400sqmm AL/XLPE/PVC	61/2.85	400	31.5	1450
500sqmm AL/XLPE/PVC	61/3.20	500	35.2	1800

MULTI CORE CIRCULAR UNARMOURED ORANGE - 600/1000V

08. CIRCULAR PVC 2 CORE + EARTH COPPER



For mains, submains and sub-circuits unenclosed, enclosed in conduit, buried direct or in underground ducts for buildings and industrial plants where not subject to mechanical damage. Suitable for glanding.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Copper 1.5-50 mm^2
INSULATION	PVC, V-90 Red ,Black & Green/Yellow
SHEATH	PVC, 5V -90 Orange
MAX. OPERATING TEMP.	90 ^{0}C

Conductor		Overall Diameter		Approx. Mass (kg/km)
mm^2	(No./mm)	Min (mm)	Max (mm)	
1.5	7/0.50	10.3	11.0	160
2.5	7/0.67	11.3	12.0	220
4	7/0.85	12.7	13.5	290
6	7/1.04	13.8	14.5	330
10	7/1.35	15.4	16.4	440
16	7/1.70	17.5	18.5	590
25	19/1.35	21.2	22.9	850
35	19/1.53	22.5	23.5	1090
50	19/1.78	28.0	29.0	1470

Note: Copper 1.5-6mm^2, 450/750V cables also available (AS/NZS 5000.2)

MULTI CORE CIRCULAR UNARMOURED ORANGE - 600/1000V

09. CIRCULAR PVC 3 CORE + EARTH COPPER

For mains, sub-mains and sub-circuits unenclosed, enclosed in conduit, buried direct or in underground ducts for buildings and industrial plants where not subject to mechanical damage. Suitable for glanding.

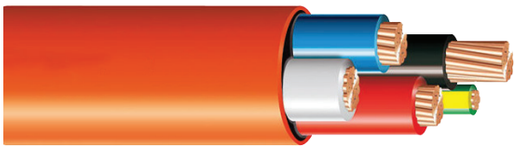
STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Copper 1.5-120 mm^2
INSULATION	PVC, V-90 Red , White, Blue & Green/Yellow
SHEATH	PVC, 5V -90 Orange
MAX. OPERATING TEMP.	90 ^{0}C

Conductor		Overall Diameter		Approx. Mass (kg/km)
mm^2	(No./mm)	Min (mm)	Max (mm)	
1.5	7/0.50	11.1	11.8	190
2.5	7/0.67	12.2	13.0	250
4	7/0.85	13.8	14.6	350
6	7/1.04	15.0	15.8	420
10	7/1.35	17.0	18.0	585
16	7/1.70	19.3	20.3	810
25	19/1.35	23.0	24.1	1150
35	19/1.53	25.8	27.4	1530
50	19/1.78	29.5	31.2	2040
70	19/2.14	34.4	36.2	2960
95	19/2.52	38.7	40.7	3760
120	37/2.03	42.7	44.9	4650

Note: Copper 1.5-6mm^2, 450/750V cables also available (AS/NZS 5000.2)

MULTI CORE CIRCULAR UNARMOURED ORANGE - 600/1000V

10. CIRCULAR PVC 4 CORE + EARTH COPPER



For mains, sub-mains and sub-circuits unenclosed, enclosed in conduit, buried direct or in underground ducts for buildings and industrial plants where not subject to mechanical damage. Suitable for glanding.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Copper 1.5-150 mm^2
INSULATION	PVC, V-90 Red , White, Blue, Black & Green/Yellow
SHEATH	PVC, 5V -90 Orange
MAX. OPERATING TEMP.	90 ^{0}C

Conductor		Overall Diameter		Approx. Mass (kg/km)
mm^2	(No./mm)	Min (mm)	Max (mm)	
1.5	7/0.50	12.1	12.9	230
2.5	7/0.67	13.3	14.1	330
4	7/0.85	15.3	16.2	410
6	7/1.04	16.5	17.4	520
10	7/1.35	18.7	19.8	730
16	7/1.70	21.3	22.4	1040
25	19/1.35	26.2	27.4	1550
35	19/1.53	28.7	30.4	1950
50	19/1.78	33.1	34.9	2630
70	19/2.14	38.5	40.5	3810
95	37/1.78	43.5	45.7	4870
120	37/2.03	48.2	50.6	5490
150	37/2.25	53.5	56.1	7370

Note: Copper 1.5-6mm^2, 450/750V cables also available (AS/NZS 5000.2)

MULTICORE CIRCULAR CONTROL UNARMOURED – 450/750 V

11. CIRCULAR PVC 4 CORE + EARTH – 49 CORE + EARTH 1.5 mm²

For control circuits unenclosed, enclosed in conduit, buried direct or in underground ducts for commercial, industrial, mining and electricity authority systems where not subject to mechanical damage. Suitable for glanding.

STANDARD	AS/NZS 5000.3
VOLTAGE	450/750 V
CONDUCTOR	Copper 1.5 mm²
INSULATION	PVC, V-90 White (with markings) & Green/Yellow
SHEATH	PVC, 5V -90 Black, Orange
MAX. OPERATING TEMP.	90 ºC

Conductor			Overall Diameter		Approx. Mass (kg/km)
Number of Cores	mm²	(No./mm)	Min (mm)	Max (mm)	
5	1.5	7/0.50	13.0	13.9	240
6	1.5	7/0.50	13.0	13.9	280
7	1.5	7/0.50	15.0	16.0	290
10	1.5	7/0.50	16.6	17.6	380
12	1.5	7/0.50	17.4	18.5	440
15	1.5	7/0.50	17.5	18.6	520
20	1.5	7/0.50	22.3	23.6	600
25	1.5	7/0.50	22.8	24.2	730
30	1.5	7/0.50	24.5	25.9	850
40	1.5	7/0.50	28.5	30.2	1090
50	1.5	7/0.50	30.0	31.7	1330

MULTICORE CIRCULAR CONTROL UNARMOURED – 450/750 V

12. CIRCULAR PVC 4 CORE + EARTH – 49 CORE + EARTH 2.5 mm²

For control circuits unenclosed, enclosed in conduit, buried direct or in underground ducts for commercial, industrial, mining and electricity authority systems where not subject to mechanical damage. Suitable for glanding.

STANDARD	AS/NZS 5000.3
VOLTAGE	450/750 V
CONDUCTOR	Copper 2.5 mm²
INSULATION	PVC, V-90 White (with markings) & Green/Yellow
SHEATH	PVC, 5V -90 Black, Orange
MAX. OPERATING TEMP.	90 ⁰C

Conductor			Overall Diameter		Approx. Mass (kg/km)
Number of Cores	mm²	(No./mm)	Min (mm)	Max (mm)	
5	2.5	7/0.67	14.4	15.2	340
6	2.5	7/0.67	14.4	15.2	365
7	2.5	7/0.67	15.4	16.3	410
8	2.5	7/0.67	16.5	17.5	450
10	2.5	7/0.67	18.5	19.5	540
12	2.5	7/0.67	19.4	20.5	620
15	2.5	7/0.67	20.4	21.5	750
20	2.5	7/0.67	25.1	26.4	950
25	2.5	7/0.67	25.6	27.0	1160
30	2.5	7/0.67	27.6	29	1360
40	2.5	7/0.67	32.6	34.3	1770
50	2.5	7/0.67	34.1	35.8	2180

FLEXIBLE CABLE

13. FLEXIBLE CORD PVC TRURIP (TWIN FLEX)

For connection to non metallic appliances where no earth is required and the current drawn is low, e.g table lamps, radios and pendants etc.

STANDARD	AS/NZS 3191
VOLTAGE	250/250 V
CONDUCTOR	Annealed Copper
INSULATION	PVC, V-90 White with Red Strip
MAX. OPERATING TEMP.	75 ^{0}C

Conductor		Overall Diameter		Approx. Mass kg/km
Nominal area mm^2	Number & Diameter of wires (No./mm)	Min (mm) Major X Minor mm	Max (mm) Major X Minor mm	
0.5	16/0.2	5.3X2.5	5.7X2.7	25
0.75	24/0.2	5.7X2.7	6.0X2.9	35

Do not put in direct contact with polystyrene, polyurethane or similar thermal insulation materials.

FLEXIBLE CABLE

14. FLEX ORDINARY DUTY 2C

Can be used in dry and damp situations for double insulated appliances and lumiairies where the cord may be subject to some mechanical stress but not rough usage. Eg : Hand held lamps, office mechines, etc

STANDARD	AS/NZS 3191
VOLTAGE	250/440 V
CONDUCTOR	Copper 1-4 mm^2
INSULATION	PVC, V-90 Blue & Brown
SHEATH	PVC, 5V-90 Black, Grey or White
MAX. OPERATING TEMP.	60 ^{0}C (75 ^{0}C)*

Conductor		Overall Diameter		Approx. Mass kg/km
Nominal area mm^2	Number & Diameter of wires (No./mm)	Minimum mm	Maximum mm	
1	32/0.20	6.6	7.1	70
1.5	30/0.25	7.6	8.1	90
2.5	50/0.25	9.3	9.9	160
4	56/0.30	10.4	10.9	180

NB : We may not stock all sizes in all colour variations.
**90 ^{0}C rating only applicable when used as an interconnecting link in a permant installation, where not subject to flexing.*

FLEXIBLE CABLE

15. FLEX ORDINARY DUTY 3C

Can be used in dry situations for double insulated appliances and lumiairies where the cord may be subject to some mechanical stress but not rough usage. Eg : Hand held lamps, office mechines, etc

STANDARD	AS/NZS 3191
VOLTAGE	250/440 V
CONDUCTOR	Copper 1-4 mm^2
INSULATION	PVC, V-90 Blue ,Brown & Green/ Yellow
SHEATH	PVC, 5V-90 Black, Grey or White
MAX. OPERATING TEMP.	60 ^{0}C (75 ^{0}C)*

Conductor		Overall Diameter		Approx. Mass kg/km
Nominal area mm^2	Number & Diameter of wires (No./mm)	Min (mm) Major X Minor mm	Max (mm) Major X Minor mm	
0.75	24/0.20	6.5	7.1	67
1	32/0.20	7.0	7.5	80
1.5	30/0.25	8.3	8.8	110
2.5	50/0.25	10.1	10.7	155
4	56/0.30	11.3	11.9	230

NB : We may not stock all sizes in all colour variations.
**75 ^{0}C rating only applicable when used as an interconnecting link.*

FLEXIBLE CABLE

16. FLEX ORDINARY DUTY 4C

Suitable for dry and damp sitautions as leads for industrial and office equipment Requiring three phase supply and earth connection. Can be used in locations subject to some mechanical stress but not rough usage. Also suitable as interconnecting links between sections of equipment requiring 4 core cables.

STANDARD	AS/NZS 3191
VOLTAGE	250/440 V
CONDUCTOR	Copper 1.5 -4 mm^2
INSULATION	PVC, V-90 Brown, Blue, Black & Green/ Yellow
SHEATH	PVC, 5V-90 Black, White, Grey
MAX. OPERATING TEMP.	60 ^{0}C (75 ^{0}C)*

Conductor		Overall Diameter		Approx. Mass kg/km
		Min (mm)	Max (mm)	
Nominal area mm^2	"Number & Diameter of wires (No./mm)	Major X Minor mm	Major X Minor mm	
1.5	30/0.25	9.2	9.8	125
2.5	50/0.25	11.1	11.7	220
4	56/0.30	12.4	13.0	275

NB : We may not stock all sizes in all colour variations.
**75 ^{0}C rating only applicable when used as an interconnecting link in a permanent installation, where not subject to flexing.*

FLEXIBLE CABLE

17. FLEX HEAVY DUTY 3 CORE

Sizes 1.0 mm^2 and above can be used for extension leads. Suitable for situations liable to rough usage. Heavy duty cords are desirable for portable tools used for industrial applications and a must for building sites and damp and wet locations such as diaries, commercial laundries etc. Can be used in hazardous areas providing the conductor is not less than 1.5 mm^2

STANDARD	AS/NZS 3191
VOLTAGE	600/1000 V
CONDUCTOR	Copper 1-4 mm^2
INSULATION	PVC, V-90 Blue, Brown & Green/Yellow
SHEATH	PVC, 5V-90 Black
MAX. OPERATING TEMP.	60 ^{0}C (75 ^{0}C)*

Conductor		Overall Diameter		Approx. Mass kg/km
Nominal area mm^2	Number & Diameter of wires (No./mm)	Min (mm) Major X Minor mm	Max (mm) Major X Minor mm	
1	32/0.20	9.1	9.5	120
1.5	30/0.25	10.1	10.5	190
2.5	50/0.25	12.5	13.0	240
4	56/0.30	13.7	14.6	290

NB : We may not stock all sizes in all colour variations.
**75 ^{0}C rating only applicable when used as an interconnecting link in a permanent installation, where not subject to flexing.*

AERIAL CABLE

18. AERIAL TWO CORE PARALLEL WEBBED

Aerial service cable to domestic and small to medium size commercial and industrial installations. Extra UV stability due to increased carbon black sheath.

STANDARD	AS/NZS 5000.1 (for metric sizes only)
VOLTAGE	600/1000 V
CONDUCTOR	Hard drawn Copper
INSULATION	PVC, V-90 Black
MAX. OPERATING TEMP.	75 ^{0}C

Conductor		Cable				Approx. Mass kg/km
		Minimum Overall Diameter (mm)		Maximum Overall Diameter (mm)		
Nominal area mm^2	Number & Diameter of wires (No./mm)	Major X Minor mm	Minor X Minor mm	Major X Minor mm	Minor X Minor mm	
6	7/1.04	10.7	5.1	11.8	5.4	14.7
10	7/1.35	12.6	6.0	13.6	6.3	23.2
16	7/1.70	14.7	7.1	15.8	7.4	35.6

AERIAL CABLE

19. AERIAL TWO CORE TWISTED

Aerial service cable to domestic and small to medium size commercial and industrial installations. Extra UV stability due to increased carbon black sheath.

STANDARD	AS/NZS 5000.1 (for metric sizes only)
VOLTAGE	600/1000 V
CONDUCTOR	Hard drawn Copper
INSULATION	PVC, V-90 Black
MAX. OPERATING TEMP.	75 ^{0}C

Conductor		Cable		
		Overall Diameter (mm)		
Nominal area mm^2	Number & Diameter of wires (No./mm)	Min mm	Max mm	Approx. Mass per 100m kg
6	7/1.04	10.2	10.8	15.0
10	7/1.35	12.01	12.6	23.5
16	7/1.70	14.2	14.8	35.6
25	19/1.35	18.2	19.0	59

AERIAL CABLE

20. AERIAL THREE CORE TWISTED

Aerial service cable to domestic and small to medium size commercial and industrial installations. Extra UV stability due to increased carbon black sheath.

STANDARD	AS/NZS 5000.1 (for metric sizes only)
VOLTAGE	600/1000 V
CONDUCTOR	Hard drawn Copper
INSULATION	PVC, V-90 Black
MAX. OPERATING TEMP.	75 ^{0}C

Conductor		Cable		
		Overall Diameter (mm)		
Nominal area mm^2	Number & Diameter of wires (No./mm)	Min mm	Max mm	Approx. Mass per 100m kg
6	7/1.04	11.0	11.9	22.5
10	7/1.35	13.0	14.0	35.2
16	7/1.70	15.3	16.4	53.3
25	19/1.35	19.7	21.0	89.4

AERIAL CABLE

21. AERIAL FOUR CORE TWISTED

Aerial service cable to domestic and small to medium size commercial and industrial installations. Extra UV stability due to increased carbon black sheath.

STANDARD	AS/NZS 5000.1 (for metric sizes only)
VOLTAGE	600/1000 V
CONDUCTOR	Hard drawn Copper
INSULATION	PVC, V-90 Black
MAX. OPERATING TEMP.	75 ^{0}C

Conductor		Cable		
		Overall Diameter (mm)		
Nominal area mm^2	Number & Diameter of wires (No./mm)	Min mm	Max mm	Approx. Mass per 100m kg
6	7/1.04	12.3	13.2	30.0
10	7/1.35	14.6	15.5	47.0
16	7/1.70	17.1	18.1	71.0
25	19/1.35	22.0	23.2	119

MULTI CORE FIRE RATED POWER CABLE - 600/1000V

22. CIRCULAR 2 CORE + EARTH

Fire rated cable will maintain circuit intergrity and life-saving essential services such as emergency and exit lighting, pump and fans in the event of a fire.

STANDARD	AS/NZS 5000.1, AS/NZS 3013
VOLTAGE	600/1000 V
CONDUCTOR	Copper 1.5-50 mm² (class 2 or Class 5) *Class 5 Conductor cables for Fixed application
INSULATION MATERIAL	X-HF-110 Red, Black & Green
SHEATH MATERIAL	HFS-110-TP Red
MAX. OPERATING TEMP.	110 °C

Conductor		Cable		
		Overall Diameter (mm)		
Nominal area mm²	Number & Diameter of wires (No./mm)	Min mm	Max mm	Approx. Mass (kg/km)
1.5	7/0.50	12.0	12.5	188
2.5	7/0.67	13.1	13.6	245
4	7/0.85	13.9	14.4	291
6	7/1.04	14.7	15.2	345
10	7/1.35	16.4	16.9	483
16	7/1.70	18.3	18.8	634
25	19/1.35	21.3	21.8	916
35	19/1.53	23.2	23.7	1141
50	19/1.78	26.1	26.6	1497

MULTI CORE FIRE RATED POWER CABLE - 600/1000V

23. CIRCULAR 3 CORE + EARTH

Fire rated cable will maintain circuit intergrity and life-saving emergency and exit lighting, pump and fans in the event of a fire.

STANDARD	AS/NZS 5000.1, AS/NZS 3013
VOLTAGE	600/1000 V
CONDUCTOR	Copper 1.5-50 mm² (class 2 or Class 5) *Class 5 Conductor cables for Fixed application
INSULATION MATERIAL	X-HF-110 Red, White, Blue & Green
SHEATH MATERIAL	HFS-110-TP Red
MAX. OPERATING TEMP.	110 ^{0}C

Conductor		Cable		
		Overall Diameter (mm)		
Nominal area mm²	Number & Diameter of wires (No./mm)	Min mm	Max mm	Approx. Mass (kg/km)
1.5	7/0.50	13.0	13.5	209
2.5	7/0.67	14.2	14.7	278
4	7/0.85	15.2	15.7	337
6	7/1.04	16.2	16.7	417
10	7/1.35	18.2	18.7	587
16	7/1.70	20.5	21.0	809
25	19/1.35	24.2	24.7	1209
35	19/1.53	26.4	26.9	1511
50	19/1.78	29.6	30.1	1992

MULTI CORE FIRE RATED POWER CABLE - 600/1000V

24. CIRCULAR 4 CORE + EARTH

Fire rated cable will maintain circuit intergrity and life-saving essential services such as emergency and exit lighting, pump and fans in the event of a fire.

STANDARD	AS/NZS 5000.1, AS/NZS 3013
VOLTAGE	600/1000 V
CONDUCTOR	Copper 1.5-50 mm² (class 2 or Class 5) *Class 5 Conductor cables for Fixed application
INSULATION MATERIAL	X-HF-110 Red, White, Blue, Black & Green
SHEATH MATERIAL	HFS-110-TP Red
MAX. OPERATING TEMP.	110 °C

Conductor		Cable		
		Overall Diameter (mm)		
Nominal area mm²	Number & Diameter of wires (No./mm)	Min mm	Max mm	Approx. Mass (kg/km)
1.5	7/0.50	14.0	14.5	272
2.5	7/0.67	15.4	15.9	355
4	7/0.85	16.5	17.0	425
6	7/1.04	17.8	18.3	515
10	7/1.35	18.6	19.1	698
16	7/1.70	22.6	23.1	1041
25	19/1.35	25.6	26.1	1533
35	19/1.53	28.0	28.5	1913
50	19/1.78	34.2	34.7	2730

PVC CABLES 450/750V

25. FIRE ALARM TWIN FLAT COPPER

Easy-peel sheath for general wiring, unenclosed, in conduit, buried direct or in underground ducts for domestic, commercial and industrial installations where not subject to mechanical damage.

STANDARD	AS/NZS 5000.2
VOLTAGE	450/750 V
CONDUCTOR	Copper 1-16 mm²
INSULATION MATERIAL	V-90 Red, Black or Red, White
SHEATH MATERIAL	3V-90 Red
MAX. OPERATING TEMP.	90°C

Conductor		Cable		
		Overall Diameter (mm)		
Nominal area mm²	Number & Diameter of wires (No./mm)	Min mm	Max mm	Approx. Mass (kg/km)
1	32/0.20	4.3	6.8	56
1.5	7/0.50	4.5	7.2	66
2.5	7/0.67	5.4	8.8	100
4	7/0.85	6.4	10.5	153
6	7/1.04	6.9	11.6	200
10	7/1.35	8.5	14.5	330
16	7/1.70	9.7	16.8	490

SINGLE CABLES 600/1000V

26. RUBBER FLEXIBLE CABLE COPPER

Flexible 110 °C rubber power cable with potential downsizing. Suitable for indoor/outdoor fixed wiring applications including mains, sub-mains and final sub circuits on tray, ladder, in conduit or buried direct.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Copper 6-300 mm² (Class 6)
INSULATION MATERIAL	X-HF-110 Natural
SHEATH MATERIAL	HFS-110-TP Orange / Black
MAX. OPERATING TEMP.	110 °C

Conductor		Cable		
		Overall Diameter (mm)		
Nominal area mm²	Number & Diameter of wires (No./mm)	Min mm	Max mm	Approx. Mass (kg/km)
6	186/0.20	7.4	7.6	117
10	318/0.20	8.4	8.6	164
16	513/0.20	9.4	9.7	233
25	798/0.20	11.1	11.4	342
35	1110/0.20	12.3	12.6	448
50	703/0.30	14.0	14.3	612
70	990/0.30	16.0	16.4	826
95	1340/0.30	18.0	18.4	1090
120	1690/0.30	19.9	20.6	1353
150	2123/0.30	22.2	23.1	1687
185	1470/0.40	24.4	25.2	2062
240	1952/0.40	27.3	28.0	2639
300	2389/0.40	30.1	40.1	3265

INSULATED OVERHEAD CONDUCTORS

27. AERIAL BUNDLE CONDUCTORS (ABC)

ABC Cables are self supporting insulated cables used for low voltage electricity distribution.
ABCs comprise of Three Phase conductors (Aluminium) and a Neutral conductor (Aluminium/Alloy Aluminium) bundled together with or without street lamp wires. The neutral conductor also acts as a messenger or a load bearer.
The conductors are insulated with black UV resistant cross-linked thermosetting polyethylene (XLPE).

STANDARD	AS/NZS 3560.1 or National French Standard NFC 33-209
VOLTAGE	0.6/1.0 KV
CONDUCTOR	Aluminium (Compcted) / Aluminium Alloy (Class 2)
INSULATION MATERIAL	XLPE (X-90UV) Black
MAX. OPERATING TEMP.	90 °C

AS/NZS 3560.1

Item Description	Nominal Diameter of Conductor(mm)			Nominal Diameter over insulation(mm)			Appx. Overall Diameter (mm)	Appx. Mass (kg/km)	
	Phase (Compacted)	Neutral	Street Lamp (compacted)	Phase	Neutral	Street Lamp		without street lamp	with street lamp
2 Core									
2 X 16mm²	4.7	4.7		7.4	7.4		14.8	130	
2 X 25mm²	5.9	5.9		8.6	8.6		17.2	190	
2 X 35mm²	6.9	6.9		9.6	9.6		19.3	250	
2 X 50mm²	8.1	8.1		11.2	11.2		22.3	340	
2 X 95mm²	11.4	11.4		14.9	14.9		29.8	640	
3 Core									
3 X 25mm²	5.9	5.9		8.6	8.6		18.5	290	
3 X 35mm²	6.9	6.9		9.6	9.6		20.8	370	
3 X 50mm²	8.1	8.1		11.2	11.2		24.1	510	
4 Core									
4 X 16mm²	4.7	4.7		7.4	7.4		17.8	270	
4 X 25mm²	5.9	5.9		8.6	8.6		20.8	390	
4 X 35mm²	6.9	6.9		9.6	9.6		23.2	500	
4 X 50mm²	8.1	8.1		11.2	11.2		27	670	
4 X 70mm²	9.7	9.7		12.8	12.8		30.8	930	
4 X 95mm²	11.4	11.4		14.9	14.9		36	1280	
4 X 120mm²	12.9	12.9		16.3	16.3		39.3	1570	
4 X 150mm²	14.2	14.2		17.7	17.7		42.8	1890	
3 Core + Neutral + Street Lamp (Optional) - NFC 33 209									
3X25mm² + 54.6mm² + 16mm²	5.9	9.5	4.8	8.6	12.7	7.2	30	514	580
3X35mm² + 54.6mm² + 16mm²	6.9	9.5	4.8	9.6	12.7	7.2	33	621	687
3X50mm² + 54.6mm² + 16mm²	8.1	9.5	4.8	11.2	12.7	7.2	36	735	802
3X70mm² + 54.6mm² + 16mm²	9.7	9.5	4.8	13.3	12.7	7.2	37.5	976	1042
3X70mm² + 54.6mm² + 25mm²	9.7	9.5	6.0	13.3	12.7	8.8	40	1077	1179
3X70mm² + 70mm² + 16mm²	9.7	10.5	4.8	13.3	13.5	7.2	41	1013	1079
3X95mm² + 70mm² + 16mm²	11.4	10.5	4.8	14.9	13.5	7.2	44	1196	1263
3X120mm² + 70mm² + 16mm²	12.9	10.5	4.8	16.3	13.5	7.2	46	1351	1417
3X120mm² + 95mm² + 16mm²	12.9	12.5	4.8	16.3	15.7	7.2	47	1414	1480
3X150mm2 + 70mm2 + 16mm2	14.2	10.5	4.8	18.0	13.5	7.2	48	1661	1728
3X150mm2 + 95mm2 + 16mm2	14.2	12.5	4.8	18.0	15.7	7.2	49	1724	1791

BARE OVERHEAD CONDUCTORS

28. AAC 1350 – ALL ALUMINIUM CONDUCTORS

These conductors are used in low, medium and high voltage overhead lines for power Transmission. AAC has seen extensive use in urban areas where spans are usually short but high conductivity us required. The excellent corrosion resistance of aluminium has made AAC a conductor of choice in coastal areas.

STANDARD	AS/NZS 1531
CONDUCTOR	Aluminium 1350 (Class 2)

Product Name	Conductor			Approximate Mass kg/km	Calculated breaking load (min.) kN
	No./mm	mm²	Diameter		
LEO	7/2.50	34.4	7.5	94.3	5.7
LEONIDS	7/2.75	41.6	8.3	113.0	6.7
LIBRA	7/3.00	49.5	9.0	135.0	8.0
MARS	7/3.75	77.3	11.3	211.0	11.8
MERCURY	7/4.50	111.0	13.5	304.0	16.9
MOON	7/4.75	124.0	14.3	339.0	18.9
NEPTUNE	19/3.25	158.0	16.3	433.0	24.7
ORION	19/3.50	183.0	17.5	503.0	28.7
PLUTO	19/3.75	210.0	18.8	576.0	31.9
SATURN	37/3.00	262.0	21.0	721.0	42.2
SIRIUS	37/3.25	307.0	22.8	845.0	48.2
TAURUS	19/4.75	337.0	23.8	924.0	51.3
TRITON	37/3.75	409.0	26.3	1,120.0	62.2
TROJANS	61/3.00	431.0	27.0	1,192.0	66.0
URANUS	61/3.25	506.0	29.3	1,400.0	75.2
URSULA	61/3.50	587.0	31.5	1,620.0	87.3
VENUS	61/3.75	673.4	33.8	1,860.0	97.2

BARE OVERHEAD CONDUCTORS

29. AAAC 1120 – ALL ALUMINIUM ALLOY CONDUCTORS

All Aluminium Alloy Conductors (AAAC) are extensively used for primary and secondary transmission in bare overhead distribution and transmission lines and substations where higher span is required. Also, usable in highly polluted industrial areas and coastal regions due to corrosion resistance.

STANDARD	AS/NZS 1531
CONDUCTOR	Aluminium Alloy 1120 (Class 2)

Product Name	Conductor			Approximate Mass kg/km	Calculated breaking load (min.) kN
	No./mm	mm²	Diameter		
CHLORINE	7/2.50	34.4	7.5	94.3	8.2
CHROMIUM	7/2.75	41.6	8.3	113	9.9
FLUORINE	7/3.00	49.5	9	135	11.8
HELIUM	7/3.75	77.3	11.3	212	17.6
HYDROGEN	7/4.50	111	13.5	304	24.3
IODINE	7/4.75	124	14.3	339	27.1
KRYPTON	19/3.25	158	16.3	433	37.4
LUTETIUM	19/3.50	183	17.5	503	41.7
NEON	19/3.75	210	18.8	576	47.8
NITROGEN	37/3.00	262	21	721	62.2
NOBELIUM	37/3.25	307	22.8	845	72.8
OXYGEN	19/4.75	337	23.8	924	73.6
PHOSPHORUS	37/3.75	409	26.3	1120	93.1
RHODIUM	61/3.00	431	27	1192	97
SELENIUM	61/3.25	506	29.3	1400	114
SILICON	61/3.50	587	31.5	1620	127
SULFUR	61/3.75	674	33.8	1860	145

BARE OVERHEAD CONDUCTORS

30. ACSR – ALUMINIUM CONDUCTORS STEEL REINFORCED

ACSR conductors are used as bare overhead transmission and as primary and secondary distribution cable. This wire is suitable for use in all practical spans on wood poles, transmission towers, and other structures. Applications range from long, extra high voltage (EHV) transmission lines to sub-service spans at distribution or utilization voltages on private premises.

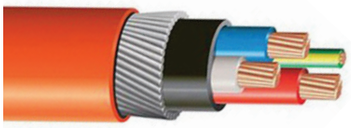
ACSR has a long service record because of its economy, dependability, and strength to weight ratio. The combined light weight and high conductivity of Aluminium with strength of the steel core enables higher tensions, less sag, and longer spans than any alternative.

STANDARD	AS 3607
CONDUCTOR	Aluminium 1350, Galvanaised Steel (Class 2)

Product Name	Conductor				Approximate Mass kg/km	Calculated breaking load (min.) kN
	Aluminium No./mm	Galv. Steel No./mm	mm²	Diameter		
ALMOND	6/2.50	1/2.50	34.4	7.5	119	10.5
APRICOT	6/2.75	1/2.75	41.6	8.3	144	12.6
APPLE	6/3.00	1/3.00	49.5	9	171	14.9
BANANA	6/3.75	1/3.75	77.3	11.3	268	22.7
CHERRY	6/4.75	7/1.60	120.4	14.3	402	33.4
GRAPE	30/2.50	7/2.50	182	17.5	677	63.5
LEMON	30/3.00	7/3.00	262	21	973	90.4
LYCHEE	30/3.25	7/3.25	307	22.8	1140	105
LIME	30/3.50	7/3.50	356	24.5	1320	122
MANGO	54/3.00	7/3.00	431	27	1440	119
ORANGE	54/3.25	7/3.25	506	29.3	1690	137
OLIVE	54/3.50	7/3.50	587	31.5	1960	159

ARMOURED CABLES

31. MULTICORE PVC SWA CIRCULAR 0.6/1KV



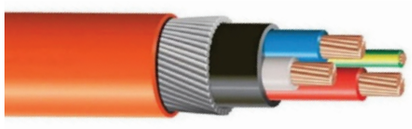
Commonly known as SWA cable, the steel wire armoured cable is a power cable, designed for use in mains supply electricity. Used for underground systems, cable networks, power networks, outdoor and indoor applications, and cable ducting. It has higher insulation resistance, can smoothly travel through gland and can sustain higher impact.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Stranded Copper (Class 2)
INSULATION MATERIAL	PVC - V-90 Red/White/Blue/Black/Green & Yellow
BEDDING MATERIAL	PVC - Black or Orange
ARMOURING MATERIAL	Galvanized Steel
SHEATHING MATERIAL	5V-90 Orange
MAX. OPERATING TEMP.	90 °C

Product Name	Area mm²		Approx. Overall Diameter mm			Approx. Mass kg/km		
	Phase/ Neutral	Earth	2C+E	3C+E	4C+E	2C+E	3C+E	4C+E
1.5sqmm X Core +E Cu/PVC/SWA/PVC	1.5	1.5	15.2	16.1	17	470	520	590
2.5sqmm X Core +E Cu/PVC/SWA/PVC	2.5	2.5	16.9	17.4	18.5	560	630	710
4sqmm X Core +E Cu/PVC/SWA/PVC	4	2.5	17.9	19.2	20.5	670	770	870
6sqmm X Core +E Cu/PVC/SWA/PVC	6	2.5	19.1	20.3	21.9	770	880	1020
10sqmm X Core +E Cu/PVC/SWA/PVC	10	4	21.6	23.2	25.8	940	1110	1450
16sqmm X Core +E Cu/PVC/SWA/PVC	16	6	23.7	26.2	28.4	1170	1560	1840

ARMOURED CABLES

32. MULTICORE XLPE SWA CIRCULAR 0.6/1KV



Commonly known as SWA cable, the steel wire armoured cable is a power cable, designed for use in mains supply electricity. Used for underground systems, cable networks, power networks, outdoor and indoor applications, and cable ducting. It has higher insulation resistance, can smoothly travel through gland and can sustain higher impact.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Stranded Copper (Class 2)
INSULATION MATERIAL	XLPE (X90) Red/White/Blue/Black/Green
BEDDING MATERIAL	PVC - Black or Orange
ARMOURING MATERIAL	Galvanized Steel
SHEATHING MATERIAL	5V-90 Orange
MAX. OPERATING TEMP.	90 °C

Product Name	Area mm²		Approx. Overall Diameter mm		Approx. Mass kg/km	
	Phase/ Neutral	Earth	3C+E	4C+E	3C+E	4C+E
25sqmm X Core +E Cu/XLPE/SWA/PVC	25	6	28.2	30.6	1870	2230
35sqmm X Core +E Cu/XLPE/SWA/PVC	35	10	30.8	33.8	2290	2780
50sqmm X Core +E Cu/XLPE/SWA/PVC	50	16	34.5	38.8	2910	3790
70sqmm X Core +E Cu/XLPE/SWA/PVC	70	25	40	44.1	4060	4930
95sqmm X Core +E Cu/XLPE/SWA/PVC	95	25	44	48.6	5040	6240

ARMOURED CABLES

33. SINGLE CORE XLPE AWA CIRCULAR 0.6/1KV

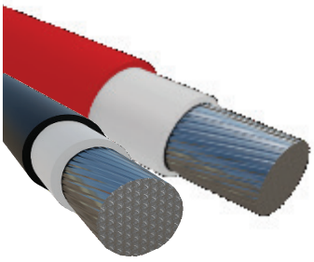
Commonly known as AWA cable, the Aluminium Wire Armoured cable is a power cable, designed for use in mains supply electricity. Used for underground systems, cable networks, power networks, outdoor and indoor applications, and cable ducting. It has higher insulation resistance, can smoothly travel through gland and can sustain higher impact.

STANDARD	AS/NZS 5000.1
VOLTAGE	600/1000 V
CONDUCTOR	Stranded Copper (Class 2)
INSULATION MATERIAL	XLPE (X90) Natural
BEDDING MATERIAL	PVC - Black
ARMOURING MATERIAL	Aluminium
SHEATHING MATERIAL	5V-90 Black
MAX. OPERATING TEMP.	90 °C

Product Name	Area mm²		Approx. Overall Diameter mm	
	Phase/ Neutral	Earth	3C+E	4C+E
70sqmm Cu/XLPE/AWA/PVC	19/2.14	70	20.2	960
95sqmm Cu/XLPE/AWA/PVC	19/2.52	95	22.3	1240
120sqmm Cu/XLPE/AWA/PVC	37/2.03	120	24.2	1510
150sqmm Cu/XLPE/AWA/PVC	37/2.25	150	27.4	1900
185sqmm Cu/XLPE/AWA/PVC	37/2.52	185	30.0	2320
240sqmm Cu/XLPE/AWA/PVC	61/2.25	240	32.8	2930
300sqmm Cu/XLPE/AWA/PVC	61/2.52	300	35.6	3580
400sqmm Cu/XLPE/AWA/PVC	61/2.85	400	40.5	4600
500sqmm Cu/XLPE/AWA/PVC	61/3.20	500	44.2	5770

PHOTOVOLTAIC CABLES

34. SOLAR CABLES



The cable complies with the requirements of 2 Pfg 1169/08.2007, Fire Performance: IEC60332-1, Smoke Density: IEC61034, EN50268-2,
Halogen Acid Gas Emission: IEC60754-1, EN50267-2-1, Certificate: TUV.
These cables are used to interconnect the several components in a photovoltaic system (PV). They are resistant to extreme weather conditions, temperature, and UV.

STANDARD	BS EN 50618
VOLTAGE	1.0/1.0 KV(AC) - 1.5/1.5 KV (DC)
CONDUCTOR	Bunched Tinned Copper (Class 5)
INSULATION MATERIAL & COLOR	Cross Linkable Halogen Free (X90) White/Red/Black
SHEATHING MATERIAL & COLOR	Cross Linkable Low Smoke Zero Halogen UV protected Black other colour as per customer request
TEST VOLTAGE	6.5 KV AC / 15 KV DC (5 Min)
MAX. OPERATING TEMP.	120 °C

mm²	(No./mm)	Nominal Dimension			Approx. Mass (kg/km)	
		Single Core	Two Core (Customized)			
		Diameter (mm)	Height (mm)	Width (mm)	Single Core	Two Core (Customized)
4	56/0.30	5.5	5.5	11.5	70	140
6	84/0.30	6.5	6.5	13.5	90	175

POWER EXTENSION LEADS

35. ORDINARY DUTY LEAD WIRES

Used in domestic extension needs such as home, office, workshops, appliences, IT, entertrainment and many more. Recommonded for shorter extensions and light usage. In emergency, lead can still be pulled apart if required.

STANDARD	AS/NZS 3112, AS/NZS 3120 AS/NZS 3191
VOLTAGE	250/440V
CONDUCTOR	Bunched Copper (Class 5)
INSULATION MATERIAL	V-90 Brown,Blue,Green
SHEATHING MATERIAL	5V-90 White
MAX. OPERATING TEMP.	90 °C

Conductor		Lengths available
mm²	(No./mm)	
1	32/0.20	2m, 3m, 5m, 7m, 10m, 15, 20m, 30m

POWER EXTENSION LEADS

36. HEAVY DUTY LEAD WIRES

Used in domestic extension needs such as home, office, workshops, appliences, IT, entertrainment and many more. Recommonded for Longer extensions and Heavy usage. In emergency, lead can still be pulled apart if required.

STANDARD	AS/NZS 3112, AS/NZS 3120 AS/NZS 3191
VOLTAGE	600/1000V
CONDUCTOR	Bunched Copper (Class 5)
INSULATION MATERIAL	V-90 Brown,Blue,Green
SHEATHING MATERIAL	5V-90 Orange
MAX. OPERATING TEMP.	90 °C

Conductor		Lengths available
mm²	(No./mm)	
1.5	30/0.25	10m, 20m, 25m, 30m, 50m

CURRENT RATINGS

2x1 CORE PVC

Single Phase Current Ratings
Two single core V-90 PVC or PVC/PVC 0.6/1kV cables.
40°C in Air, 25°C in Ground.

Cond. size	Unenclosed space	Spaced from surface	Touching	Enclosed conduit in air	Partially surrounded by thermal insulation	Completely surrounded by thermal insulation	Buried direct	Underground ducts		Single phase voltage drop mV/A.m
mm²										
	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu
1	16	16	13	13	11	6	18	18	21	51.6
1.5	21	21	16	18	14	8	23	23	26	33.0
2.5	30	29	23	24	20	12	32	32	36	18.0
4	40	39	31	32	25	16	41	41	47	11.2
6	51	49	40	41	33	20	52	52	58	7.50
10	69	67	54	54	44	27	69	69	77	4.46
16	92	89	72	70	56	36	122	89	99	2.81
25	124	119	97	94	75	48	158	116	129	1.78
35	153	145	119	112	90	59	190	139	155	1.29
50	187	177	146	138	110	–	225	168	186	0.96
70	238	223	184	170	136	–	277	206	228	0.680
95	295	276	230	212	169	–	332	252	278	0.507
120	344	321	267	242	193	–	378	287	316	0.415
150	395	367	308	282	225	–	424	329	354	0.352
185	459	424	358	320	256	–	480	373	408	0.301
240	549	505	428	381	305	–	556	438	472	0.255
300	636	582	495	–	–	–	628	496	546	0.229
400	744	676	577	–	–	–	713	575	621	0.209
500	867	780	668	–	–	–	805	649	721	0.194

CURRENT RATINGS

2x1 CORE XLPE

Single Phase Current Ratings
Two single core XLPE/PVC 90°C 0.6/1kV cables.
40°C in Air, 25°C in Ground.

Cond. size	Unenclosed space	Spaced from surface	Touching	Enclosed conduit in air	Partially surrounded by thermal insulation	Completely surrounded by thermal insulation	Buried direct	Underground ducts		Single phase voltage drop
mm^2										mV/A.m
	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu
16	112	108	86	84	67	43	139	100	112	2.95
25	151	145	117	113	90	58	179	131	146	1.87
35	186	177	144	135	108	72	215	157	175	1.35
50	228	216	176	166	133	–	255	189	211	1.01
70	291	273	224	204	164	–	313	233	258	0.710
95	361	338	278	255	204	–	375	285	309	0.528
120	422	393	325	292	233	–	427	325	358	0.431
150	486	451	375	329	263	–	480	365	401	0.365
185	565	522	436	387	309	–	543	423	463	0.311
240	678	622	522	461	369	–	630	497	536	0.262
300	787	718	605	–	–	–	711	562	620	0.233
400	923	836	708	–	–	–	808	653	706	0.211
500		966	821	–	–	–	913	739	800	0.196

CURRENT RATINGS

2 CORE PVC

Single Phase Current Ratings
Two core V-90 PVC/PVC 0.6/1kV cables.
40°C in Air, 25°C in Ground.

Cond. size	Unenclosed space	Touching	Enclosed conduit in air round or flat cable		Unenclosed and partially surrounded by thermal insulation	Unenclosed and completely surrounded by thermal insulation	Buried direct	Underground ducts	Single phase voltage drop
mm²									mV/A.m
	Cu	Cu	Cu		Cu	Cu	Cu	Cu	Cu
1.5	19	18	16		14	9	21	21	33.0
2.5	27	26	23		20	13	30	30	18.0
4	37	34	30		27	17	39	39	11.2
6	46	44	39		35	22	50	50	7.50
10	64	60	52		48	30	66	66	4.46
16	85	80	68		64	40	114	86	2.81
25	113	107	90		85	53	147	112	1.78
35	139	131	112		105	65	178	136	1.28
50	170	159	133		127	–	211	162	0.957

CURRENT RATINGS

3 x 1 CORE PVC

Three Phase Current Ratings
Three single core V-90 PVC or PVC/PVC 0.6/1kV cables.
40°C in Air, 25°C in Ground.

Cond. size	Unenclosed space	Spaced from surface	Touching	Enclosed conduit in air	Partially surrounded by thermal insulation	Completely surrounded by thermal insulation	Buried direct	Underground ducts		Three phase voltage drop mV/A.m	
mm^2											
	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu
1	16	14	13	12	10	6	16	16	19	44.7	44.7
1.5	20	17	16	15	12	8	20	20	24	28.6	28.6
2.5	29	25	23	21	17	12	27	27	33	15.6	15.6
4	38	33	31	28	23	16	36	36	43	9.71	9.71
6	49	42	40	35	28	20	45	45	53	6.49	6.49
10	67	58	54	47	37	27	59	59	70	3.86	3.86
16	89	77	72	62	50	36	104	78	90	2.43	2.43
25	120	103	97	81	64	48	134	100	117	1.54	1.55
35	148	127	119	100	80	59	160	122	140	1.12	1.12
50	181	156	146	119	95	-	190	144	168	0.834	0.840
70	230	197	184	152	122	-	233	180	205	0.589	0.597
95	287	246	230	183	147	-	279	217	250	0.439	0.449
120	335	287	267	217	173	-	317	252	283	0.359	0.371
150	385	330	308	244	195	-	356	283	317	0.305	0.368
185	447	383	357	284	227	-	402	325	365	0.261	0.319
240	535	457	426	331	265	-	465	377	422	0.221	0.277
300	620	529	492	388	311	-	524	434	488	0.198	0.240
400	726	615	573	442	353	-	593	492	553	0.181	0.202
500	846	710	661	523	418	-	668	571	641	0.168	0.191

CURRENT RATINGS

3 x 1 CORE XLPE

Three Phase Current Ratings
Three single core XLPE/PVC or X-HF-90 90°C 0.6/1kV cables.
40°C in Air, 25°C in Ground.

Cond. size	Unenclosed space	Spaced	Touching from surface	Enclosed conduit in air	Partially surrounded by thermal insulation	Completely surrounded by thermal insulation	Buried direct	Underground ducts		Three phase voltage drop mV/A mm	
mm²											
	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu
16	108	92	86	72	58	43	117	86	101	2.55	2.55
25	146	125	117	97	77	58	151	113	132	1.62	1.62
35	180	154	144	120	96	72	180	137	158	1.17	1.18
50	221	188	176	143	114	-	214	163	190	0.872	0.876
70	282	240	224	183	146	-	262	203	232	0.615	0.623
95	350	298	278	220	176	-	313	244	276	0.457	0.467
120	410	349	325	261	209	-	356	284	320	0.373	0.385
150	472	403	375	295	236	-	400	320	358	0.316	0.330
185	560	468	435	335	268	-	452	363	413	0.269	0.285
240	660	560	521	399	320	-	523	426	477	0.227	0.245
300	766	648	602	469	375	-	589	491	552	0.202	0.222
400	899	756	702	534	427	-	668	557	626	0.183	0.205
500	1051	874	812	633	506	-	752	648	707	0.170	0.193

CURRENT RATINGS

3 & 4 CORE PVC

Three Phase Current Ratings
Three and four core V-90 PVC/PVC 0.6/1kV cables.
40°C in Air, 25°C in Ground.

Cond. size	Unenclosed space	Touching	Enclosed conduit in air round or flat cable	Unenclosed and partially surrounded by thermal insulation	Unenclosed and completely surrounded by thermal insulation	Buried direct	Underground ducts	Three phase voltage drop
mm^2								mV/A.m
	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu
1.5	16	15	14	12	8	18	18	28.6
2.5	23	22	20	17	11	25	25	15.6
4	31	29	25	23	15	33	33	9.71
6	40	37	33	30	19	42	42	6.49
10	54	51	44	41	25	55	55	3.86
16	72	68	58	54	34	96	73	2.43
25	97	91	76	73	46	125	94	1.54
35	120	112	94	90	56	150	114	1.11
50	146	137	112	109	–	178	136	0.829
70	185	172	142	138	–	219	170	0.583
95	228	213	177	170	–	263	208	0.431
120	265	247	202	198	–	300	237	0.351
150	303	282	228	226	–	336	266	0.296

CURRENT RATINGS

FLEXIBLE CORDS

40°C in Air, 25°C in Ground.

Electrical Data and Current Ratings in accordance with AS/NZS 3008.1.1.

Nominal conductor area	Current carrying capacity	Maximum DC resistance at 20°C	Voltage drop single phase	Three phase
mm^2	A	Ω/km	mV/A	mV/A
		PACW		
0.5	3	39.0	94.9	82.2
0.75	7.5	26.0	63.3	54.8
1.0	10	19.5	47.5	41.1
1.5	15	13.3	32.3	28.0
2.5	20	7.98	19.4	16.8
4.0	25	4.95	12.0	10.4

CURRENT RATINGS

WELDING CABLES

Current carrying capacity, welding applications.

No. cond area	A Maximum duty cycle (AS 1995)							Max. DC resistance at 20°C	Voltage drop mV/A.m	
	10 minute cycle				5 minute cycle					
mm²	100%	60%	30%	25%	60%	30%	25%	mΩ/m	1 phase	3 phase
16	125	129	145	151	137	169	181	1.21	3.10	2.68
25	165	175	206	218	188	239	257	0.780	1.88	1.63
35	205	223	270	288	238	309	334	0.554	1.39	1.20
50	260	289	361	386	308	407	440	0.386	1.05	0.906

CURRENT RATINGS

COPPER AERIAL

PVC Aerial Cables

No. cond. area	Nom and nominal diameter of wires	1 core insulated conductors		2 and 3 core (a) parallel webbed		3 and 4 core (b) twisted		Three phase voltage drop at 50Hz
			1.0m/s		1.0m/s		1.0m/s	
mm^2	no/mm	still air	wind	still air	wind	still air	wind	mV/A.m
6	7/1.04	35	70	30	50	26	48	6.71
10	7/1.35	48	96	40	68	36	65	4.02
16	7/1.70	65	125	52	90	47	85	2.56
25	19/1.35	88	165			63	115	1.67

Note: The current carrying capacities are based on an air ambient temperature of 40°C, a maximum conductor temperature of 75°C and exposure to direct sunlight having an intensity of 1000W/m^2.
The values are based on the use of black PVC.

GENERAL DATA

Minimum size of copper earthing conductors

Nominal area active conductors	For copper active conductors
mm^2	mm^2
1	1.5*
1.5	1.5*
2.5	2.5
4	2.5
6	2.5
10	4
16	6
25	6
35	10
50	16
70	25
95	25
120	35
150	50
185	70
240	95
300	120
400	120
500	120

*Refer Wiring Rules, AS/NZS 3000 regarding 1.5 earthing conductor.

Maximum operating temperatures for various types of cable insulants

Type		Normal use* °C	Max permissible °C
Thermoplastic (PVC)	V-90	75	90
Cross linked polyethylene	X-90	90	90

GENERAL DATA

DC Conductor resistances for insulated cables for fixed installations. Solid, stranded conductors; also refer to AS/NZS 1125.

Nominal conductor area mm^2	Conductor type	Single core or multicore Maximum DC resistance at 20°C Ω/km Plain Copper
0.5	Solid	36.0
1.0*	Solid	18.1
1.0	Stranded	21.2
1.5*	Solid	12.1
1.5	Stranded	13.6
2.5*	Solid	7.41
2.5	Stranded	7.41
4	Stranded	4.61
6	Stranded	3.08
10	Stranded	1.83
16	Stranded	1.15
25	Stranded	0.727
35	Stranded	0.524
50	Stranded	0.387
70	Stranded	0.268
95	Stranded	0.193
120	Stranded	0.153
150	Stranded	0.124
185	Stranded	0.0991
240	Stranded	0.0754
300	Stranded	0.0601
400	Stranded	0.0470
500	Stranded	0.0366**
630	Stranded	0.0283**

*Single strand conductors only (solid).
**Single core values.

GENERAL DATA

USEFUL 3 PHASE FORMULA

$$kW = kVAxpf$$

$$kW = \frac{hpx746}{1000xEff}$$

$$kW = \frac{\text{Line Ampsx Line Voltsx1.732xpf}}{1000}$$

$$kVA = \frac{kW}{pf}$$

$$kVA = \frac{hpx746}{1000xEffxpf}$$

$$kVA = \frac{\text{Line Ampsx Line Voltsx1.732}}{1000}$$

$$\text{Line Amps} = \frac{kWx1000}{\text{Line Voltsx1.732xpf}}$$

$$\text{Line Amps} = \frac{kVAx1000}{\text{Line Voltsx1.732}}$$

$$\text{Line Amps} = \frac{hpx746}{\text{Line Voltsx1.732xEffxpf}}$$

$$\text{Horsepower (hp)} = \frac{kWx1000xEff}{746}$$

$$hp = \frac{kVAx1000xEffxpf}{746}$$

$$hp = \frac{\text{Line Ampsx Line Voltsx1.732xEffxpf}}{746}$$

$$\text{Line Current} = \frac{5}{100}\text{xSupply Voltagex}\frac{1}{\text{Route LengthxVoltage Drop Factor}}$$

GENERAL DATA

Cable minimum installed bending radii

			Factor	
	Type	Voltage	Instal.	During instal.
Fixed wiring	PVC or XLPE			
	(1) Single and Multicore			
	(a) Overall diameter to & including 25mm	0.6/1kV	4	6
	(b) Overall diameter over 25mm	0.6/1kV	6	9
Flexible cords	PVC	250/440V	4	
Welding	PVC	0.6/1kV	6	

Factor x cable overall diameter = minimum internal bending radius.

Motor current table, Amperes (approx.)

Power kW	hp	Single phase 230V	Three phase 400V	Single phase 240V	Three phase 415V
0.37	0.5	4.2	0.9	4.0	0.90
0.55	0.75	5.2	1.3	5.0	1.3
0.75	1	7.2	1.7	6.9	1.7
1.1	1.5	10.0	2.4	9.6	2.3
1.5	2	10.1	3.1	9.7	3.0
2.2	3	13.8	4.6	13.3	4.5
4	5	26.1	7.9	25.0	7.6
5.5	7.5	34.5	11.2	33.0	10.8
7.5	10		14.9		14.4
9.3	12.5		18.7		18.0
11	15		22.4		21.6
15	20		29.9		28.8
18.5	25		38.0		36.6
22	30		44.8		43.2

GENERAL DATA

Number of cables in conduit. Recommended maximum number of thermoplastic insulated unsheathed single core 0.6/1kV copper or aluminium cables permitted in metallic and non-metallic conduit or pipe.

Nominal area mm^2	Nominal size of conduit (mm)													
	16 LD	20 LD	20 HD	25 LD	25 HD	32 LD	32 HD	40 LD	40 HD	50 LD	50 HD	63 LD	63 HD	80 HD
1	7	12	10	21	18	36	33	60	55	96	89	–	–	–
1.5	5	10	8	17	15	30	27	48	45	78	73	129	120	–
2.5	4	7	6	12	11	22	20	36	33	58	54	95	89	–
4	2	4	4	8	7	14	13	23	21	37	34	61	56	120
6	2	3	3	6	5	11	10	18	16	29	27	47	44	93
10	1	2	2	4	4	8	7	13	12	21	19	34	32	67
16	1	2	1	3	3	6	5	9	9	15	14	26	24	51
25	1	1	1	2	2	4	3	6	6	10	9	17	16	34
35	–	1	1	1	1	3	2	5	4	8	7	14	13	27
50	–	1	–	1	1	2	2	3	3	6	5	10	9	20
70	–	–	–	1	1	1	1	3	2	4	4	8	7	15
95	–	–	–	–	–	1	1	2	1	3	3	5	4	10
120	–	–	–	–	–	1	1	1	1	2	2	4	3	8
150	–	–	–	–	–	1	–	1	1	2	1	3	3	6
185	–	–	–	–	–	–	–	1	1	1	1	2	2	5
240	–	–	–	–	–	–	–	1	–	1	1	2	1	4
300	–	–	–	–	–	–	–	–	–	1	1	1	1	3
400	–	–	–	–	–	–	–	–	–	1	–	1	1	2
500	–	–	–	–	–	–	–	–	–	–	–	1	1	2
630	–	–	–	–	–	–	–	–	–	–	–	1	1	1

Notes: 1. For PVC flexible conduits, the recommendations are based on conduits used without fittings or with fittings only at the ends of the conduit run. Where intermediate fittings are used in a run of PVC flexible conduit, an appropriate reduction should be made in the number of cables drawn into the conduit. 2. One earth wire of appropriate size, as determined by the requirements of AS/NZS 3000, may be inserted in all conduits, provided that its insertion does not prevent easy drawing in of cables. 3. Table suitable for use with Pacific Cables manufactured product only.

GENERAL DATA

Number of cables in conduit. Calculated maximum number of thermoplastic insulated and sheathed single core copper cables permitted in metallic and non-metallic conduit or pipe. 1 1.0 to 25mm² 450/750V to AS/NZS 5000.2 1 35 to 630mm² 0.6/1kV to AS/NZS 5000.1.

Nominal area mm²	Nominal size of conduit (mm)								
	20 HD	25 HD	32 HD	40 HD	50 HD	63	80 HD	100 HD	150 HD
1.0	5	9	16	27	43	72	152	–	–
1.5	4	7	13	22	36	59	126	–	–
2.5	3	5	10	16	27	44	93	155	–
4	2	4	7	12	19	32	67	112	–
6	1	3	6	9	16	26	56	93	–
10	1	2	4	7	11	18	40	66	131
16	1	1	3	5	8	14	30	51	100
25	–	1	2	3	5	9	19	32	64
35	–	1	1	2	4	7	16	27	54
50	–	–	1	2	3	6	13	21	42
70	–	–	1	1	3	4	10	17	34
95	–	–	–	1	2	3	7	12	24
120	–	–	–	1	1	3	5	9	19
150	–	–	–	1	1	2	4	8	16
185	–	–	–	–	1	1	4	6	13
240	–	–	–	–	1	1	3	5	10
300	–	–	–	–	–	1	2	4	8
400	–	–	–	–	–	1	2	3	6
500	–	–	–	–	–	–	1	2	5
630	–	–	–	–	–	–	1	2	4

Notes: 1. For PVC flexible conduits, the recommendations are based on conduits used without fittings or with fittings only at the ends of the conduit run. Where intermediate fittings are used in a run of PVC flexible conduit, an appropriate reduction should be made in the number of cables drawn into the conduit. 2. One earth wire of appropriate size, as determined by the requirements of AS/NZS 3000, may be inserted in all conduits, provided that its insertion does not prevent easy drawing in of cables. 3. Table suitable for use with Pacific Cables manufactured product only.

GENERAL DATA

Cables in conduit and pipe – space factors.

One cable in conduit or pipe	50%
Two cables in conduit or pipe	33%
Three or more in conduit or pipe	40%

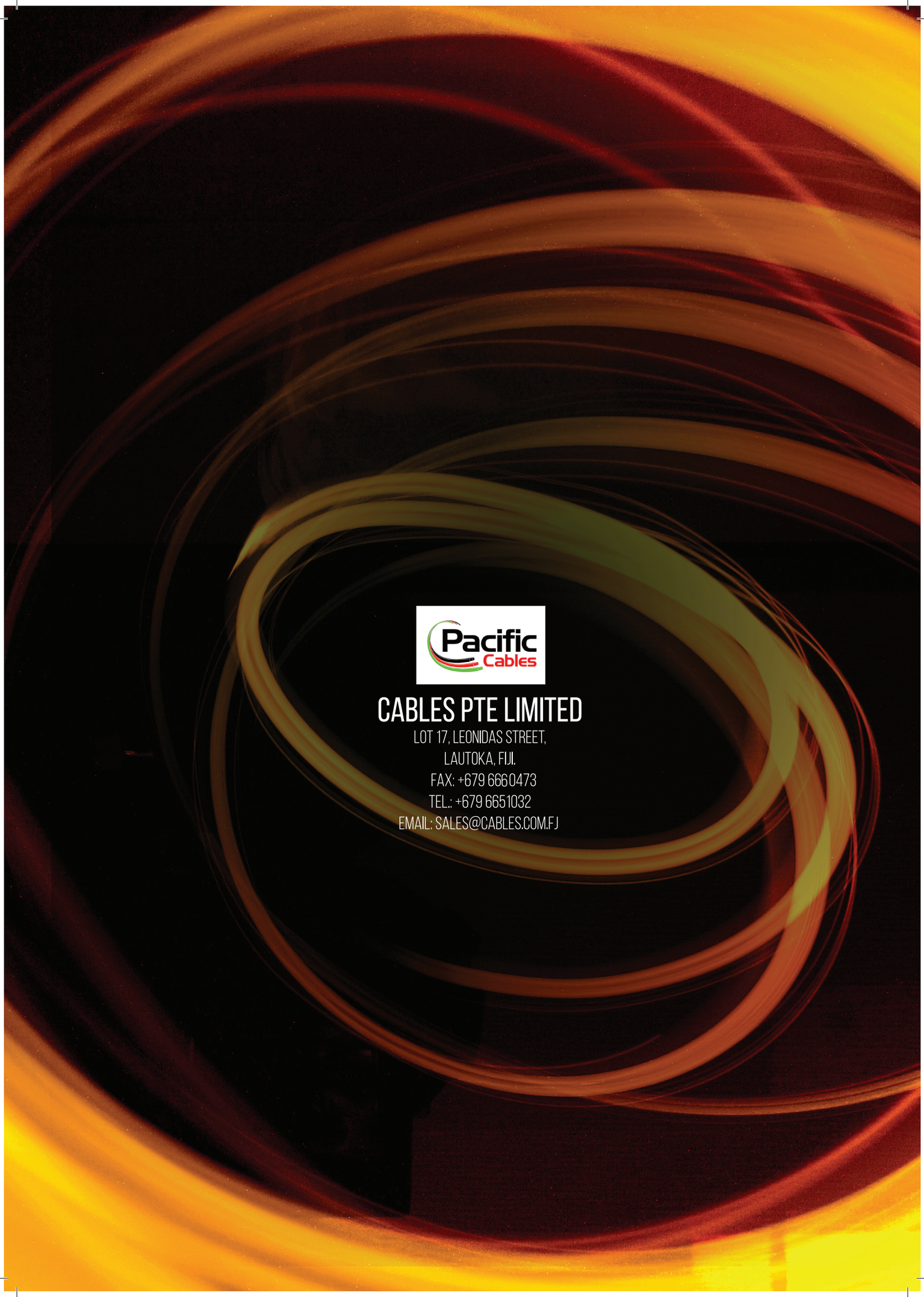
Note: The above values should not be exceeded.

Maximum safe pulling tension.

Conductor area	Maximum tension kN per conductor		Conductor area	Maximum tension kN per conductor	
mm^2	Copper	Aluminium	mm^2	Copper	Aluminium
1.5	0.11	0.08	25	1.75	1.25
2.5	0.18	0.13	35	2.45	1.75
4	0.28	0.20	50	3.50	2.50
6	0.42	0.30	70	4.90	3.50
10	0.70	0.50	95	6.65	4.75
16	1.12	0.80			

(1kN = 102kgf)

NOTES



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