



# NAN

Powering the Future

## able

## hook

## Find what you need

### Disclaimer:

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**NAN**

Enabling the Future

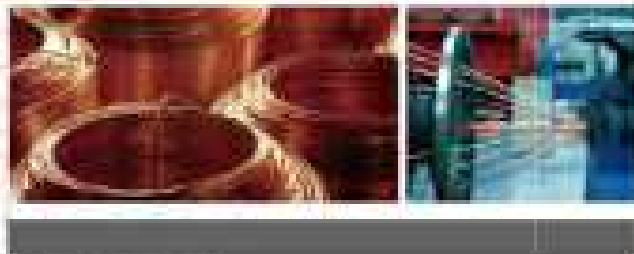
**company  
introduction**

NAN Cables is part of the Nanyang Cable Group

Since its inception in 1985, Nanyang Cable Group's quality first, customer first philosophy is credited for their innovative approach to product development and commitment to excellence, which in turn, has driven the company's remarkable growth and success.



## *NAN Cables Australia*



At NAN Cables we are a group of experienced industry professionals. So, when you need assistance, you will get the answers you need.

We do not compromise on quality so you can be confident that our cables not only comply with Australian standards but will stand the test of time. After all, it is your reputation on the line as well as ours.



*Our experienced team know cable*



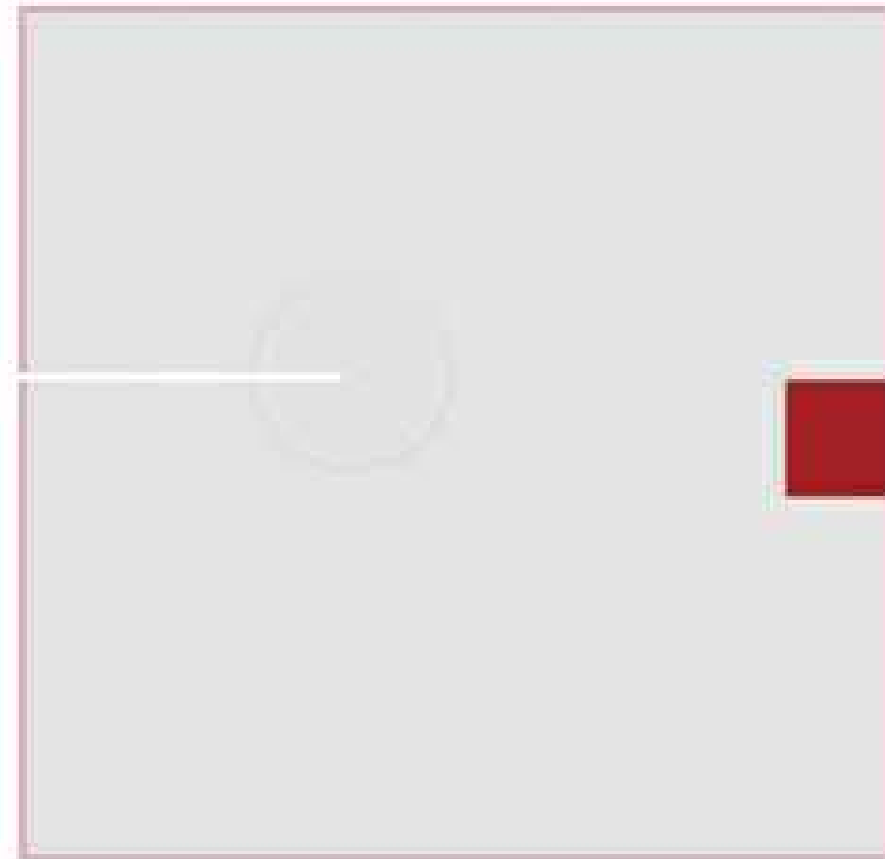
As of January 2018, building wire cable sold in NSW was deemed to be a declared article.

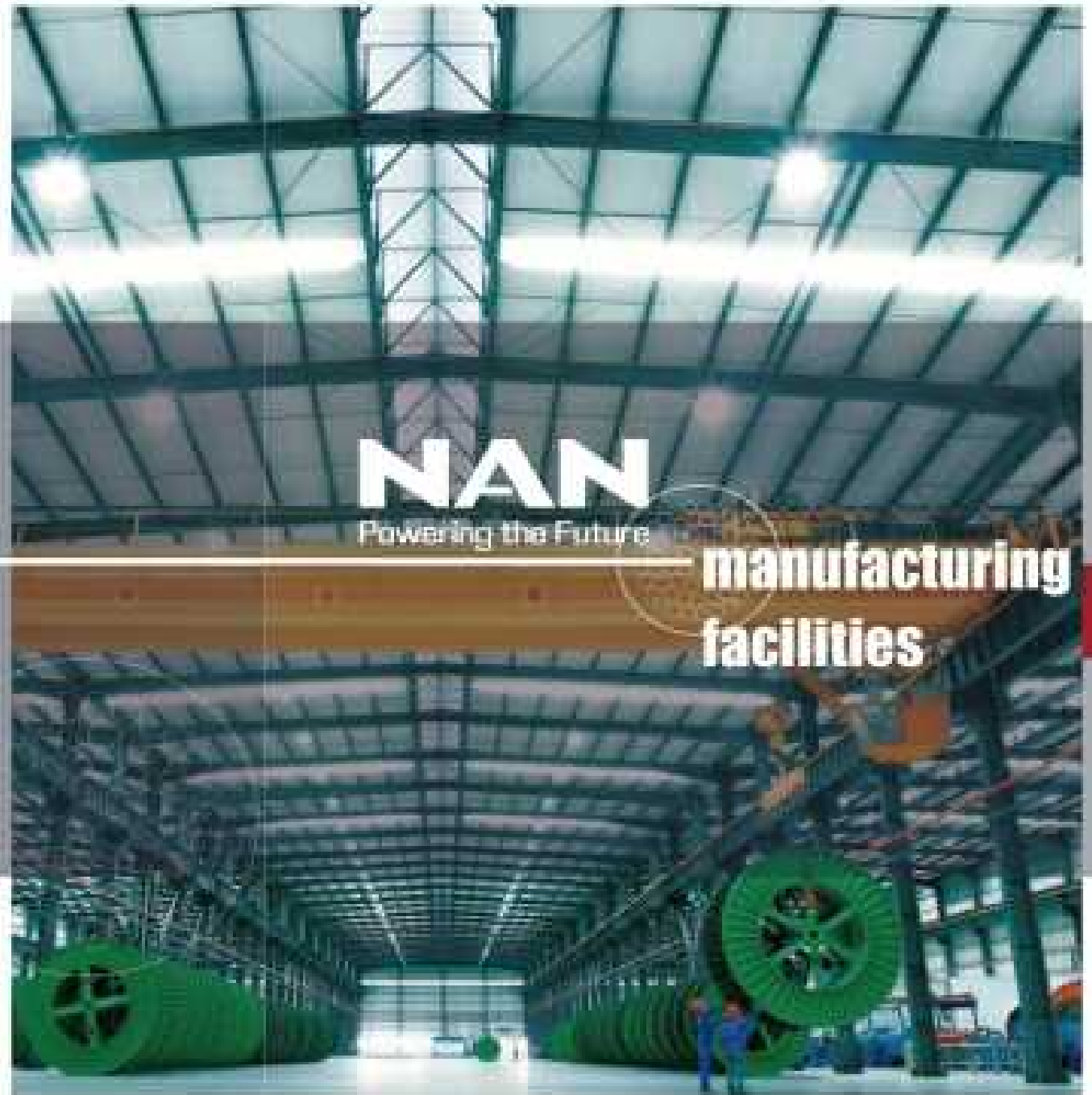
All the cable supplied through distributors in NSW by NAN Australia is compliant with the legislation and has been independently certified.

Applicable NAN cable products have been marked with the regulatory Compliance mark (RCM), which is a legally accepted electrical safety approval mark.



As of June 2018, NAN's low-voltage PVC product range has been certified to be compliant with the Green Building Council of Australia (GBCA) PVC Best Practice Guidelines.





**NAN**

Powering the Future

**manufacturing  
facilities**



## Large modern production plants

...economies of scale and lean manufacturing keep us competitive

Our Centres have four large modern production plants fitted with high quality modern, local and imported state-of-the-art machinery

Our factories collectively cover around 100,000 sqm, 5,000 million in fixed assets and have a production capacity of 11.5 billion.



Our well-equipped, versatile production facilities can reliably produce high quality cable to suit your needs, at globally competitive prices.



## *Low, medium & high-voltage manufacturing*



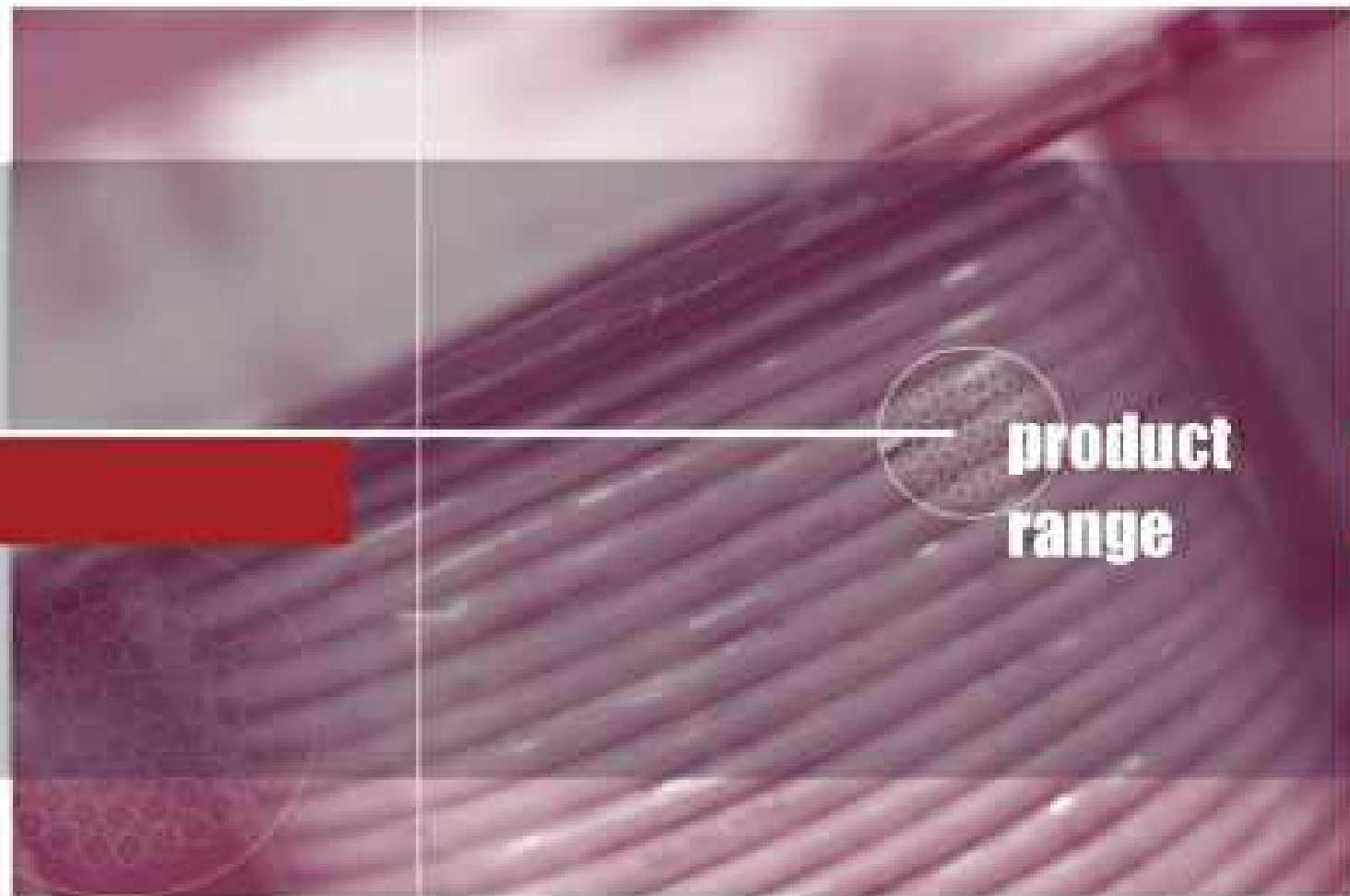
Our manufacturing capabilities include low voltage power and control cables, flexibles, armoured cables, fire performance cables and low smoke, halogen free cables through to high voltage cables up to 500kV.

Our commitment to quality is best exhibited in the NAN Cables R&D facilities, where dedicated teams develop new products and constantly improve our existing range.

## *Quality is the key*

With internationally accredited ISO9001 and ISO14001 Quality and Environmental Management Systems, strict quality control and testing to international standards, nothing leaves our factory without the NAN Cables stamp of approval.





product  
range

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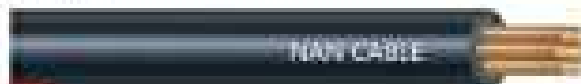
## PVC Building Wire



Single core, copper conductors, 0.6/1kV V-90  
PVC insulated to AS/NZS 5000.1

Product Code	Nominal Conductor Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
PBW913CLVXX	1.5	Stranded Cu	0.8	3.1	2.1
PBW925CLVXX	2.5	Stranded Cu	0.8	3.6	3.3
PBW004CLVXX	4	Stranded Cu	1.0	4.5	5.3
PBW006CLVXX	6	Stranded Cu	1.0	5.0	7.5
PBW010CLVXX	10	Stranded Cu	1.0	6.0	11.6
PBW016CLVXX	16	Stranded Cu	1.0	7.0	17.4
PBW025CLVXX	25	Compact Cu	1.2	8.4	25.9
PBW035CLVXX	35	Compact Cu	1.2	9.4	35.4
PBW050CLVXX	50	Compact Cu	1.4	11.0	47.8
PBW070CLVXX	70	Compact Cu	1.4	12.7	61.1
PBW095CLVXX	95	Compact Cu	1.6	14.7	91.9
PBW120CLVXX	120	Compact Cu	1.6	16.2	115
PBW150CLVXX	150	Compact Cu	1.8	18.1	144
PBW185CLVXX	185	Compact Cu	2.0	20.3	179
PBW240CLVXX	240	Compact Cu	2.2	22.9	230

Note:  
The last two characters "xx" of the product code identify the (color/color)  
BW=Black  
BL=Blue  
DT=Green/Yellow  
RD=Red  
WT=White



## PVC SDI



Single core, copper conductors, 450/750V V-90 PVC insulated,  
3V-90 PVC sheathed to AS/NZS 5000.2

Product Code	Nominal Conductor Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Typ. Sheath Thickness mm	Nom. Overall Dia. mm	Approx. Mass kg/100m
PSD0015LVXX	1.0	Solid Cu	0.6	0.8	4.0	2.8
PSD915CLVXX	1.5	Stranded Cu	0.6	0.8	4.4	3.2
PSD925CLVXX	2.5	Stranded Cu	0.7	0.8	5.0	4.7
PSD004CLVXX	4	Stranded Cu	0.8	0.9	5.9	7.0
PSD006CLVXX	6	Stranded Cu	0.8	0.9	6.4	9.3
PSD010CLVXX	10	Stranded Cu	1.0	0.9	7.8	14.5
PSD016CLVXX	16	Stranded Cu	1.0	1.0	9.0	21.1

Note:  
The last two characters "xx" of the product code identify the (color/color)  
BW=Black Insulation/White Sheath  
RD=Red Insulation/White Sheath  
BL=Red Insulation/Black Sheath



## XLPE/PVC Copper SDI



Single core, copper conductors, 0.6/1kV X-90 XLPE insulated, 5V-90 PVC sheathed to AS/NZS 5000.1

Product Code	Nominal Conductor Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
XSD0160CLVNB	16	Stranded Cu	0.8	1.4	9.4	20.6
XSD0250CLVNB	25	Compact Cu	0.9	1.4	10.6	29.7
XSD0350CLVNB	35	Compact Cu	0.9	1.4	11.6	39.5
XSD0500CLVNB	50	Compact Cu	1.0	1.4	13.0	51.9
XSD0700CLVNB	70	Compact Cu	1.1	1.4	14.9	71.6
XSD0950CLVNB	95	Compact Cu	1.1	1.5	16.7	97.3
XSD1200CLVNB	120	Compact Cu	1.2	1.5	18.4	121
XSD1500CLVNB	150	Compact Cu	1.4	1.6	20.5	151
XSD1850CLVNB	185	Compact Cu	1.6	1.6	22.7	196
XSD2400CLVNB	240	Compact Cu	1.7	2.7	25.3	241
XSD3000CLVNB	300	Compact Cu	1.8	2.8	27.8	300
XSD4000CLVNB	400	Compact Cu	2.0	2.9	31.3	384
XSD5000CLVNB	500	Compact Cu	2.3	2.0	35.0	488
XSD6300CLVNB	630	Compact Cu	2.4	2.2	39.2	622

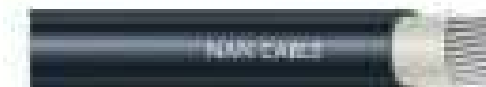


## XLPE/PVC Aluminium SDI



Single core, aluminium conductors, 0.6/1kV X-90 XLPE insulated, 5V-90 PVC sheathed to AS/NZS 5000.1

Product Code	Nominal Conductor Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
XSD0250ALVNB	25	Compact Al	0.9	1.4	10.7	14.7
XSD0350ALVNB	35	Compact Al	0.9	1.4	11.5	18.2
XSD0500ALVNB	50	Compact Al	1.0	1.4	12.9	23.0
XSD0700ALVNB	70	Compact Al	1.1	1.4	14.9	30.8
XSD0950ALVNB	95	Compact Al	1.1	1.5	16.7	40.0
XSD1200ALVNB	120	Compact Al	1.2	1.5	18.4	48.5
XSD1500ALVNB	150	Compact Al	1.4	1.6	20.5	60.2
XSD1850ALVNB	185	Compact Al	1.6	1.6	22.7	73.5
XSD2400ALVNB	240	Compact Al	1.7	1.7	25.3	93.1
XSD3000ALVNB	300	Compact Al	1.8	1.8	27.8	115
XSD4000ALVNB	400	Compact Al	2.0	1.9	31.3	146
XSD5000ALVNB	500	Compact Al	2.2	2.0	35.0	183
XSD6300ALVNB	630	Compact Al	2.4	2.2	39.2	232



## Flexible XLPE/PVC Copper SDI



Single core, copper flexible conductors (class 5), 0.6/1kV X-90 XLPE insulated, SV-90 PVC sheathed to AS/NZS 5000.1

Product Code	Nominal Conductor Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
XSD070FLVNB	70	Cu	1.1	1.5	17.7	77.4
XSD095FLVNB	95	Cu	1.1	1.6	19.5	90.6
XSD120FLVNB	120	Cu	1.2	1.7	21.4	123
XSD150FLVNB	150	Cu	1.4	1.8	23.0	155
XSD185FLVNB	185	Cu	1.6	1.9	24.3	188
XSD240FLVNB	240	Cu	1.7	2.0	27.3	238
XSD300FLVNB	300	Cu	1.8	2.1	30.1	297
XSD400FLVNB	400	Cu	2.0	2.2	34.1	395
XSD500FLVNB	500	Cu	2.1	2.4	37.9	499
XSD630FLVNB	630	Cu	2.4	2.5	42.2	636

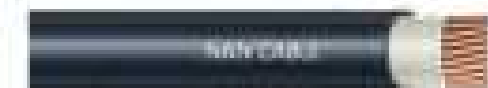


## Flexible 110°C Halogen Free SDI



Single core, copper flexible conductors (class 5), 0.6/1kV X-HF-110 insulated, HFS-110-TP sheathed to AS/NZS 5000.1

Product Code	Nominal Conductor Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
HSD070FLVNB	70	Cu	1.1	1.5	17.7	77.4
HSD095FLVNB	95	Cu	1.1	1.6	18.8	103
HSD120FLVNB	120	Cu	1.2	1.7	20.5	128
HSD150FLVNB	150	Cu	1.4	1.8	23.0	158
HSD185FLVNB	185	Cu	1.6	1.9	25.1	195
HSD240FLVNB	240	Cu	1.7	2.0	28.0	252
HSD300FLVNB	300	Cu	1.8	2.1		
HSD400FLVNB	400	Cu	2.0	2.2		
HSD500FLVNB	500	Cu	2.1	2.4		
HSD630FLVNB	630	Cu	2.4	2.5		





## PVC TPS



2 core, copper conductors, 450/750V V-90 PVC insulated,  
3V-90 PVC sheathed flat cable to AS/NZS 5000.2

Product Code	Nom. Cond. Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
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### 2 Core Active (Red, White cores)

2CA001SLVTP	1.0	Solid Cu	0.6	0.9	6.4 x 4.1	4.1
2CA015SLVTP	1.5	Stranded Cu	0.6	0.9	7.2 x 4.5	6.4
2CA025SLVTP	2.5	Stranded Cu	0.7	1.0	8.7 x 5.4	9.6
2CA004CLVTP	4	Stranded Cu	0.8	1.1	10.4 x 6.3	15.0
2CA006CLVTP	6	Stranded Cu	0.8	1.1	11.3 x 6.8	18.6
2CA010CLVTP	10	Stranded Cu	1.0	1.2	14.4 x 8.4	29.7
2CA016CLVTP	16	Stranded Cu	1.0	1.3	16.8 x 9.6	42.9

### 2 Core (Red, Black Cores)

2CS001SLVTP	1.0	Solid Cu	0.6	0.9	6.4 x 4.1	4.1
2CS015SLVTP	1.5	Stranded Cu	0.6	0.9	7.2 x 4.5	6.4
2CS025SLVTP	2.5	Stranded Cu	0.7	1.0	8.7 x 5.4	9.6
2CS004CLVTP	4	Stranded Cu	0.8	1.1	10.4 x 6.3	15.0
2CS006CLVTP	6	Stranded Cu	0.8	1.1	11.3 x 6.8	18.6
2CS010CLVTP	10	Stranded Cu	1.0	1.2	14.4 x 8.4	29.7
2CS016CLVTP	16	Stranded Cu	1.0	1.3	16.8 x 9.6	42.9



## PVC TPS



2 core & earth, copper conductors, 450/750V V-90 PVC insulated,  
3V-90 PVC sheathed flat cable to AS/NZS 5000.2

Product Code	Nom. Cond. Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Earth Cond. Area mm <sup>2</sup>	Nominal Overall Diameter mm	Approx. Mass kg/100m
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### 2 Core & Earth

2CE001SLVTP	1.0	Solid Cu	0.6	0.9	1.0	4.1 x 6.8	6.8
2CE015SLVTP	1.5	Stranded Cu	0.6	0.9	1.5	9.9 x 4.5	9.9
2CE025SLVTP	2.5	Stranded Cu	0.7	1.0	2.5	12.2 x 5.4	14.5
2CE004CLVTP	4	Stranded Cu	0.8	1.1	2.5	13.8 x 6.3	18.3
2CE006CLVTP	6	Stranded Cu	0.8	1.1	2.5	14.9 x 6.8	22.9
2CE010CLVTP	10	Stranded Cu	1.0	1.2	4.0	18.5 x 8.4	36.1
2CE016CLVTP	16	Stranded Cu	1.0	1.3	6.0	21.3 x 9.6	51.8

### 3 Core & Earth (Blue Sheath for Air Conditioning)

3CE015QLVTE	1.5	Stranded Cu	0.6	0.9	1.5	12.4 x 4.5	11.4
3CE025QLVTE	2.5	Stranded Cu	0.7	1.0	2.5	15.5 x 5.4	18.1



## PVC Circular (450/750V)



2, 3 & 4 core & earth, copper conductors, 450/750KV V-90 PVC insulated, SV-90 PVC sheathed circular cable to AS/NZS 5000.2

Product Code	Nom. Cond. Area	Main Conductor Type	Nominal Insulation Thickness	Nominal Sheath Thickness	Earth Cond. Area	Nominal Overall Diameter	Approx. Mass
	mm <sup>2</sup>		mm	mm	mm <sup>2</sup>	mm	kg/100m

### 2 Core & Earth

2CE915CLVOC	1.5	Stranded Cu	0.6	1.2	1.5	8.9	10.9
2CE925CLVOC	2.5	Stranded Cu	0.7	1.2	2.5	10.4	16.7
2CE004CLVOC	4	Stranded Cu	0.8	1.3	2.5	11.7	21.7
2CE006CLVOC	6	Stranded Cu	0.8	1.3	2.5	12.7	27.2

### 3 Core & Earth

3CE915CLVOC	1.5	Stranded Cu	0.6	1.2	1.5	9.6	13.7
3CE925CLVOC	2.5	Stranded Cu	0.7	1.2	2.5	11.5	21.1
3CE004CLVOC	4	Stranded Cu	0.8	1.3	2.5	12.9	27.6
3CE006CLVOC	6	Stranded Cu	0.8	1.3	2.5	13.9	35.0

### 4 Core & Earth

4CE915CLVOC	1.5	Stranded Cu	0.6	1.2	1.5	10.4	18.4
4CE925CLVOC	2.5	Stranded Cu	0.7	1.2	2.5	12.5	25.4
4CE004CLVOC	4	Stranded Cu	0.8	1.3	2.5	14.3	34.5
4CE006CLVOC	6	Stranded Cu	0.8	1.3	2.5	15.5	44.4



Note:  
Earth cores below 25mm<sup>2</sup> are not compacted.

## PVC Circular (0.6/1kV)



2, 3 & 4 core & earth, copper conductors, 0.6/1KV V-90 PVC insulated, SV-90 PVC sheathed circular cable to AS/NZS 5000.2

Product Code	Nom. Cond. Area	Main Conductor Type	Nominal Insulation Thickness	Nominal Sheath Thickness	Earth Cond. Area	Nominal Overall Diameter	Approx. Mass
	mm <sup>2</sup>		mm	mm	mm <sup>2</sup>	mm	kg/100m

### 2 Core & Earth

2CE915C010C	1.5	Stranded Cu	0.8	1.8	1.5	10.6	15.7
2CE925C010C	2.5	Stranded Cu	0.8	1.8	2.5	11.9	20.8
2CE004C010C	4	Stranded Cu	1.0	1.8	2.5	13.4	26.4
2CE006C010C	6	Stranded Cu	1.0	1.8	2.5	14.0	32.7

### 3 Core & Earth

3CE915C010C	1.5	Stranded Cu	0.8	1.8	1.5	10.8	16.1
3CE925C010C	2.5	Stranded Cu	0.8	1.8	2.5	12.9	23.1
3CE004C010C	4	Stranded Cu	1.0	1.8	2.5	14.6	29.8
3CE006C010C	6	Stranded Cu	1.0	1.8	2.5	15.6	37.7

### 4 Core & Earth

4CE915C010C	1.5	Stranded Cu	0.8	1.8	1.5	12.4	23.0
4CE925C010C	2.5	Stranded Cu	0.8	1.8	2.5	13.9	29.6
4CE004C010C	4	Stranded Cu	1.0	1.8	2.5	15.9	39.1
4CE006C010C	6	Stranded Cu	1.0	1.8	2.5	17.2	50.2



Note:  
Earth cores below 25mm<sup>2</sup> are not compacted.

## XLPE/PVC Circular



2 & 3 core & earth, copper conductors, 0.6/1kV X-90 XLPE insulated, 5V-90 PVC sheathed circular cable to AS/NZS 5000.1

Product Code	Nom. Cond. Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Earth Cond. Area mm <sup>2</sup>	Nom. Overall Dia. mm	Approx. Mass kg/100m
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### 2 Core & Earth

2CE010CLVXC	10	Stranded Cu	0.8	1.5	4	15.0	41.2
2CE016CLVXC	16	Stranded Cu	0.8	1.8	6	17.7	56.7
2CE025CLVXC	25	Compact Cu	0.9	1.8	6	20.1	77.0
2CE035CLVXC	35	Compact Cu	0.9	1.8	10	22.2	104
2CE050CLVXC	50	Compact Cu	1.0	1.8	16	24.9	134

### 3 Core & Earth

3CE010CLVXC	10	Stranded Cu	0.8	1.8	4	16.6	49.9
3CE016CLVXC	16	Stranded Cu	0.8	1.8	6	19.2	70.6
3CE025CLVXC	25	Compact Cu	0.9	1.8	6	21.4	100
3CE035CLVXC	35	Compact Cu	0.9	1.8	10	23.8	135
3CE050CLVXC	50	Compact Cu	1.0	1.8	16	27.0	180
3CE070CLVXC	70	Compact Cu	1.1	1.9	25	31.8	257
3CE095CLVXC	95	Compact Cu	1.1	2.0	25	34.9	337
3CE120CLVXC	120	Compact Cu	1.2	2.1	35	39.1	432
3CE150CLVXC	150	Compact Cu	1.4	2.3	50	43.6	531
3CE185CLVXC	185	Compact Cu	1.6	2.4	70	49.3	684
3CE240CLVXC	240	Compact Cu	1.7	2.4	95	55.1	880
3CE300CLVXC	300	Compact Cu	1.8	2.8	120	60.8	1103



Note:  
Earth cores below 25mm<sup>2</sup> are not compacted.

## XLPE/PVC Circular



4 core & earth, copper conductors, 0.6/1kV X-90 XLPE insulated, 5V-90 PVC sheathed circular cable to AS/NZS 5000.1

Product Code	Nom. Cond. Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Earth Cond. Area mm <sup>2</sup>	Nom. Overall Dia. mm	Approx. Mass kg/100m
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### 4 Core & Earth

4CE010CLVXC	10	Stranded Cu	0.8	1.8	4	18.4	62.1
4CE016CLVXC	16	Stranded Cu	0.8	1.8	6	21.2	89.0
4CE025CLVXC	25	Compact Cu	0.9	1.8	6	23.8	128
4CE035CLVXC	35	Compact Cu	0.9	1.8	10	26.6	172
4CE050CLVXC	50	Compact Cu	1.0	1.9	16	30.4	239
4CE070CLVXC	70	Compact Cu	1.1	2.0	25	35.5	328
4CE095CLVXC	95	Compact Cu	1.1	2.1	25	39.2	434
4CE120CLVXC	120	Compact Cu	1.2	2.3	35	43.9	555
4CE150CLVXC	150	Compact Cu	1.4	2.4	50	49.1	699
4CE185CLVXC	185	Compact Cu	1.6	2.6	70	55.4	874
4CE240CLVXC	240	Compact Cu	1.7	2.8	95	62.2	1110
4CE300CLVXC	300	Compact Cu	1.8	3.0	120	68.4	1410



Note:  
Earth cores below 25mm<sup>2</sup> are not compacted.

## PVC SWA Circular



2 & 3 core & earth, copper conductors, 0.6/1kV V-90  
PVC insulated, PVC bedded, steel wire armoured,  
SV-90 PVC sheathed cable to AS/NZS 5000.1

Product Code	Nom. Cond. Area	Main Conductor Type	Nominal Insulation Thickness	Earth Cond. Area	Nom. Dia. Over Bed.	Nom. Dia. Over Armour	Nom. Overall Dia.	Approx. Mass
	mm <sup>2</sup>		mm	mm <sup>2</sup>	mm	mm	mm	kg/100m

### 2 Core & Earth

2CE915CLV05	1.5	Stranded Cu	0.8	1.5	9.1	10.7	14.9	17.2
2CE925CLV05	2.5	Stranded Cu	0.8	2.5	10.3	11.9	16.1	44.5
2CE904CLV05	4	Stranded Cu	1.0	2.5	11.8	13.4	17.6	53.5
2CE906CLV05	6	Stranded Cu	1.0	2.5	12.9	14.5	18.7	61.2

### 3 Core & Earth

3CE915CLV05	1.5	Stranded Cu	0.8	1.5	9.9	11.5	15.7	41.9
3CE925CLV05	2.5	Stranded Cu	0.8	2.5	11.3	12.9	17.1	50.8
3CE904CLV05	4	Stranded Cu	1.0	2.5	13.0	15.5	19.7	76.3
3CE906CLV05	6	Stranded Cu	1.0	2.5	14.0	16.5	20.7	86



Note:  
Earth cores below 25mm<sup>2</sup> are  
not compacted.

## PVC SWA Circular



4 core & earth, copper conductors, 0.6/1kV V-90  
PVC insulated, PVC bedded, steel wire armoured,  
SV-90 PVC sheathed cable to AS/NZS 5000.1

Product Code	Nom. Cond. Area	Main Conductor Type	Nominal Insulation Thickness	Earth Cond. Area	Nom. Dia. Over Bed.	Nom. Dia. Over Armour	Nom. Overall Dia.	Approx. Mass
	mm <sup>2</sup>		mm	mm <sup>2</sup>	mm	mm	mm	kg/100m

### 4 Core & Earth

4CE915CLV05	1.5	Stranded Cu	0.8	1.5	10.9	12.5	15.6	40.6
4CE925CLV05	2.5	Stranded Cu	0.8	2.5	12.3	13.9	17.0	66.8
4CE904CLV05	4	Stranded Cu	1.0	2.5	14.4	16.9	20.0	80.5
4CE906CLV05	6	Stranded Cu	1.0	2.5	15.4	18.1	22.8	95.1



Note:  
Earth cores below 25mm<sup>2</sup> are  
not compacted.

## XLPE/PVC SWA Circular



2 & 3 core & earth, copper conductors, 0.6/1kV X-90 XLPE insulated, PVC bedded, steel wire armoured, PVC sheathed cable to AS/NZS 5000.1

Product Code	Nom. Cond. Area mm <sup>2</sup>	Main Conductor Type	Nom. Ins. Thick. mm	Earth Cond. Area mm <sup>2</sup>	Nom. Dia. Over Bed mm	Nom. Dia. Over Armour mm	Nom. Overall Dia. mm	Approx. Mass kg/100m
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### 2 Core & Earth

2CE010CLVXS	10	Stranded Cu	0.8	4	13.4	16.3	15.9	81
2CE016CLVXS	16	Stranded Cu	0.8	6	16.1	18.6	21.8	108
2CE025CLVXS	25	Compact Cu	0.9	6	18.1	20.8	25.0	134
2CE035CLVXS	35	Compact Cu	0.9	10	20.8	23.5	27.7	182
2CE050CLVXS	50	Compact Cu	1.0	16	23.2	26.4	30.6	225
2CE070CLVXS	70	Compact Cu	1.1	25	27.3	30.5	34.9	293
2CE095CLVXS	95	Compact Cu	1.1	25	30.5	34.5	39.1	389
2CE120CLVXS	120	Compact Cu	1.2	35	34.4	38.4	43.2	479

### 3 Core & Earth

3CE010CLVXS	10	Stranded Cu	0.8	4	15.1	18.7	22.3	108
3CE016CLVXS	16	Stranded Cu	0.8	6	17.5	20.0	24.3	130
3CE025CLVXS	25	Compact Cu	0.9	6	19.6	22.8	27.0	177
3CE035CLVXS	35	Compact Cu	0.9	10	22.0	25.2	29.4	220
3CE050CLVXS	50	Compact Cu	1.0	16	25.3	28.5	32.9	278
3CE070CLVXS	70	Compact Cu	1.1	25	30.1	34.1	38.9	402
3CE095CLVXS	95	Compact Cu	1.1	25	31.1	37.1	42.1	492
3CE120CLVXS	120	Compact Cu	1.2	35	36.8	40.8	46.0	595
3CE150CLVXS	150	Compact Cu	1.4	50	41.6	46.6	52.3	766
3CE185CLVXS	185	Compact Cu	1.6	70	46.9	51.9	57.7	931
3CE240CLVXS	240	Compact Cu	1.7	95	52.0	57.9	64.1	1180
3CE300CLVXS	300	Compact Cu	1.8	120	58.0	63.0	69.6	1411



Note:  
Earth cores below 25mm<sup>2</sup> are not compacted.

## XLPE/PVC SWA Circular



4 core & earth, copper conductors, 0.6/1kV X-90 XLPE insulated, PVC bedded, steel wire armoured, PVC sheathed cable to AS/NZS 5000.1

Product Code	Nom. Cond. Area mm <sup>2</sup>	Main Conductor Type	Nom. Ins. Thick. mm	Earth Cond. Area mm <sup>2</sup>	Nom. Dia. Over Bed mm	Nom. Dia. Over Armour mm	Nom. Overall Dia. mm	Approx. Mass kg/100m
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### 4 Core & Earth

4CE010CLVXS	10	Stranded Cu	0.8	4	16.8	20.4	24	127
4CE016CLVXS	16	Stranded Cu	0.8	6	19.6	22.8	27.0	169
4CE025CLVXS	25	Compact Cu	0.9	6	22.0	25.2	29.4	214
4CE035CLVXS	35	Compact Cu	0.9	10	24.7	27.9	32.3	268
4CE050CLVXS	50	Compact Cu	1.0	16	28.5	32.5	37.1	365
4CE070CLVXS	70	Compact Cu	1.1	25	33.9	37.9	42.9	489
4CE095CLVXS	95	Compact Cu	1.1	25	37.4	41.4	46.6	607
4CE120CLVXS	120	Compact Cu	1.2	35	42.1	47.1	52.7	792
4CE150CLVXS	150	Compact Cu	1.4	50	47.1	52.1	58.1	952
4CE185CLVXS	185	Compact Cu	1.6	70	53.4	58.4	64.6	1165
4CE240CLVXS	240	Compact Cu	1.7	95	59.8	64.8	71.4	1482
4CE300CLVXS	300	Compact Cu	1.8	120	65.6	70.6	77.6	1762



Note:  
Earth cores below 25mm<sup>2</sup> are not compacted.

## Variable Speed Drive Cables

3 core & 3 earth\*, copper conductors, 0.6/1kV X-90 insulated, PVC bedded, copper-tape screened, black 5V-90 PVC Sheathed to AS/NZS 5000.1

Product Code	Nom. Cond. Area	Main Cond. Type	Nom. Ins. Thick.	Earth Cond. Area	Nom. Diam. Over screen	Nom. Sheath Thick.	Nom. Overall Dia.	Approx. Mass
	mm <sup>2</sup>		mm	mm <sup>2</sup>	mm	mm	mm	kg/100m
VSD0150CLVXB	1.5	Cu	0.7	1 x 2.5	9.1	1.8	12.7	22
VSD0250CLVXB	2.5	Cu	0.7	1 x 2.5	10.2	1.8	14.4	33.1
VSD0040CLVXB	4	Cu	0.7	3 x 2.5	11.3	1.8	14.9	36
VSD0060CLVXB	6	Cu	0.7	3 x 2.5	12.5	1.8	16.1	46.2
VSD0100CLVXB	10	Cu	0.7	3 x 2.5	14.5	1.8	18.1	65.1
VSD0160CLVXB	16	Cu	0.7	3 x 2.5	16.7	1.8	20.3	88.5
VSD0250CLVXB	25	Cu	0.9	3 x 4	20.5	1.8	23.1	126
VSD0350CLVXB	35	Cu	0.9	3 x 6	21.7	1.8	25.3	145
VSD0500CLVXB	50	Cu	1.0	3 x 10	24.7	1.9	27.1	208
VSD0700CLVXB	70	Cu	1.1	3 x 10	29.4	2.0	33.5	279
VSD0950CLVXB	95	Cu	1.1	3 x 16	32.8	2.1	37.1	375
VSD1200CLVXB	120	Cu	1.2	3 x 16	36.5	2.3	43.8	473
VSD1500CLVXB	150	Cu	1.4	3 x 25	41.0	2.4	48.3	589
VSD1850CLVXB	185	Cu	1.6	3 x 25	51.0	2.6	51.0	701



## Flexible Cords - Ordinary Duty PVC



Copper flexible conductors

250/440V V-90 insulated and sheathed

Ordinary duty flexible cord to AS/NZS 3191

Product Code	Nominal Conductor Area mm <sup>2</sup>	Maximum Diameter of Wires mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
<b>2 Core</b>				
2CF075F00GR	0.75	0.21	6.3	8.5
2CF001F00GR	1.0	0.21	6.6	9.5
2CF015F00GR	1.5	0.26	7.5	12.0
2CF025F00GR	2.5	0.26	9.3	17.5
<b>3 Core (2 Core &amp; Earth)</b>				
3CF075F00GR	0.75	0.21	6.6	8.7
3CF001F00GR	1.0	0.21	6.9	9.8
3CF015F00GR	1.5	0.26	8.1	10.9
3CF025F00GR	2.5	0.26	9.9	17.0
3CF004F00GR	4	0.31	11.1	22.5
<b>4 Core (3 Core &amp; Earth)</b>				
4CF075F00GR	0.75	0.21	7.2	9.0
4CF001F00GR	1.0	0.21	7.8	10.0
4CF015F00GR	1.5	0.26	9.2	14.0
4CF025F00GR	2.5	0.26	10.9	20.8
4CF004F00GR	4	0.31	12.1	27.8

**Note:**

Flexible cord core colours are:

2 Core: Brown, Light Blue

3 Core: Brown, Light Blue, Green/Yellow

4 Core: Brown, Light Blue, White, Green/Yellow

Light blue is normally used as a neutral (where applicable)

Sheath colour: Grey



## Flexible Cords - Heavy Duty PVC



Copper flexible conductors

0.6/1kV V-90 insulated and PVC sheathed

Heavy duty flexible cord to AS/NZS 3191

Product Code	Nominal Conductor Area mm <sup>2</sup>	Maximum Diameter of Wires mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
<b>2 Core</b>				
2CF075FH00G	0.75	0.21	8.1	8.5
2CF001FH00G	1.0	0.21	8.3	9.5
2CF015FH00G	1.5	0.26	9.2	12.0
2CF025FH00G	2.5	0.26	11.0	17.5
2CF004FH00G	4	0.31	12.8	25.0
<b>3 Core (2 Core &amp; Earth)</b>				
3CF075FH00G	0.75	0.21	8.7	10.2
3CF001FH00G	1.0	0.21	9.0	11.5
3CF015FH00G	1.5	0.26	10.0	14.5
3CF025FH00G	2.5	0.26	11.8	21.4
3CF004FH00G	4	0.31	14.9	36.0
<b>4 Core (3 Core &amp; Earth)</b>				
4CF075FH00G	0.75	0.21	9.6	12.0
4CF001FH00G	1.0	0.21	10.0	14.0
4CF015FH00G	1.5	0.26	11.1	18.0
4CF025FH00G	2.5	0.26	12.9	26.2
4CF004FH00G	4	0.31	14.9	37.0

**Note:**

Flexible cord core colours are:

2 Core: Brown, Light Blue

3 Core: Brown, Light Blue, Green/Yellow

4 Core: Brown, Light Blue, White, Green/Yellow

Light blue is normally used as a neutral (where applicable)

Sheath colour: Orange



## PVC Control

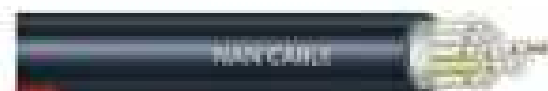
Multicore & earth, copper conductors, 0.6/1kV V-90 PVC insulated (numbered), Black PVC sheathed to AS/NZS 5000.1



Product Code	Number of Cores	Nominal Overall Diameter mm	Approx. Mass kg/100m
<b>1.3mm<sup>2</sup> (7/0.50mm)</b>			
5CE915CLVCC	5+E	13.4	23.1
6CE915CLVCC	6+E	13.4	24.5
8CE915CLVCC	8+E	13.8	30.9
10E915CLVCC	10+E	16.4	36.2
12E915CLVCC	12+E	17.7	41.3
15E915CLVCC	15+E	18.7	48.7
18E915CLVCC	18+E	19.5	51.9
20E915CLVCC	20+E	20.5	61.1
25E915CLVCC	25+E	23.7	73.3
30E915CLVCC	30+E	24.7	85.8
38E915CLVCC	38+E	25.7	98.6
40E915CLVCC	40+E	27.7	113
50E915CLVCC	50+E	30.3	135

### 2.5mm<sup>2</sup> (7/0.67mm)

5CE925CLVCC	5+E	15.1	33.3
6CE925CLVCC	6+E	15.1	34.4
8CE925CLVCC	8+E	17.7	44.1
10E925CLVCC	10+E	18.5	51.9
12E925CLVCC	12+E	19.9	59.8
15E925CLVCC	15+E	21.0	69.5
18E925CLVCC	18+E	22.0	74.1
20E925CLVCC	20+E	23.2	89.1
25E925CLVCC	25+E	25.8	106
30E925CLVCC	30+E	28.1	126
38E925CLVCC	38+E	29.2	146
40E925CLVCC	40+E	31.7	163
50E925CLVCC	50+E	34.6	200



## PVC SWA Control

Multicore & earth, copper conductors, 0.6/1kV V-90 PVC insulated (numbered), PVC bedded, steel wire armoured, Black PVC sheathed to AS/NZS 5000.1



Product Code	Number of Cores	Nominal Diameter Over Bedding mm	Nominal Diameter Over Armour mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
<b>1.3mm<sup>2</sup> (7/0.50mm)</b>					
5CE915CLVCS	5+E	11.8	13.4	17.6	51.2
6CE915CLVCS	6+E	11.8	13.4	17.6	53.0
8CE915CLVCS	8+E	14.1	16.8	20.9	79.4
10E915CLVCS	10+E	14.9	17.4	21.5	85.5
12E915CLVCS	12+E	16.2	18.7	22.8	94.7
15E915CLVCS	15+E	17.1	19.6	23.8	104
18E915CLVCS	18+E	18.0	21.2	25.4	124
20E915CLVCS	20+E	19.0	22.2	26.4	138
25E915CLVCS	25+E	21.1	24.3	28.5	157
30E915CLVCS	30+E	23.2	26.4	30.5	179
38E915CLVCS	38+E	24.3	27.3	31.7	196
40E915CLVCS	40+E	26.2	29.4	33.8	212
50E915CLVCS	50+E	28.9	32.9	37.7	278

### 2.5mm<sup>2</sup> (7/0.67mm)

5CE925CLVCS	5+E	13.3	15.8	20.0	76.2
6CE925CLVCS	6+E	13.3	15.8	20.0	80.4
8CE925CLVCS	8+E	16.1	18.6	22.8	96.0
10E925CLVCS	10+E	16.9	19.4	23.6	107
12E925CLVCS	12+E	18.1	21.5	26.3	135
15E925CLVCS	15+E	19.4	22.6	26.8	148
18E925CLVCS	18+E	20.4	23.6	27.8	156
20E925CLVCS	20+E	21.6	24.8	29.0	173
25E925CLVCS	25+E	24.0	27.2	31.6	201
30E925CLVCS	30+E	26.5	29.7	34.1	229
38E925CLVCS	38+E	27.6	30.8	35.4	255
40E925CLVCS	40+E	30.3	34.3	39.1	312
50E925CLVCS	50+E	33.0	37.0	43.0	362





## Single Core Flexible Fire Rated

Class 5 flexible copper conductors, 0.6/1kV X-HF-110 Insulated, HFS-110-TP sheathed (black) to AS/NZS 5000.1  
W552W rated to AS/NZS 3013

Product Code	Nominal Conductor Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Approx. Mass kg/100m
HSD035BLVNB	35	Flex Cu	0.9	1.4	14.1	43.0
HSD050BLVNB	50	Flex Cu	1.0	1.5	17.9	72.0
HSD070BLVNB	70	Flex Cu	1.1	1.5	20.4	95.2
HSD095BLVNB	95	Flex Cu	1.1	1.6	22.9	124
HSD120BLVNB	120	Flex Cu	1.2	1.7	25.3	147
HSD150BLVNB	150	Flex Cu	1.4	1.8	26.6	177
HSD185BLVNB	185	Flex Cu	1.6	1.9	28.6	206
HSD240BLVNB	240	Flex Cu	1.7	2.0	32.1	272
HSD300BLVNB	300	Flex Cu	1.8	2.1	35.1	325
HSD400BLVNB	400	Flex Cu	2.0	2.2	39.8	414
HSD500BLVNB	500	Flex Cu	2.2	2.4	44.3	517
HSD630BLVNB	630	Flex Cu	2.4	2.6	46.7	653

## 2 & 3 Core & Earth Fire Rated

2 or 3 core & earth, copper conductors, 0.6/1kV X-HF-110 Insulated, Orange HFS-110-TP Sheathed to AS/NZS 5000.1 W552W rated to AS/NZS 3013

Product Code	Nom. Cond. Area mm <sup>2</sup>	Main Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Earth Cond. Area mm <sup>2</sup>	Nom. Overall Dia. mm	Approx. Mass kg/100m
<b>2 Core &amp; Earth</b>							
2CE015BLVXZ	1.5	Cu	0.7	1.8	1.5	13.2	24.3
2CE025BLVXZ	2.5	Cu	0.7	1.8	2.5	14.5	30.6
2CE004BLVXZ	4	Cu	0.7	1.8	2.5	15.7	34.7
2CE006BLVXZ	6	Cu	0.7	1.8	2.5	16.8	41.0
2CE010BLVXZ	10	Cu	0.7	1.8	4	19.0	56.5
2CE016BLVXZ	16	Cu	0.7	1.8	6	21.1	74.9
<b>3 Core &amp; Earth</b>							
3CE013BLVXZ	1.5	Cu	0.7	1.8	1.5	14.5	29.4
3CE025BLVXZ	2.5	Cu	0.7	1.8	2.5	16.0	36.6
3CE004BLVXZ	4	Cu	0.7	1.8	2.5	16.9	42.5
3CE006BLVXZ	6	Cu	0.7	1.8	2.5	18.2	50.4
3CE010BLVXZ	10	Cu	0.7	1.8	4	20.5	72.4
3CE016BLVXZ	16	Cu	0.7	1.8	6	22.9	97.6

## 4 Core & Earth Fire Rated

4 core & earth, copper conductors, 0.6/1kV X-HF-110 insulated, Orange HFS-110-TP Sheathed to AS/NZS 5000.1 W552W rated to AS/NZS 3013

Product Code	Nom. Cond. Area mm <sup>2</sup>	Max. Conductor Type	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm	Earth Cond. Area mm <sup>2</sup>	Nom. Overall Dia. mm	Approx. Mass kg/100m
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### 4 Core & Earth

4CE9558LVXZ	1.5	Cu	0.7	1.8	1.5	15.7	35.2
4CE9258LVXZ	2.5	Cu	0.7	1.8	2.5	17.2	44.6
4CE0048LVXZ	4	Cu	0.7	1.8	2.5	18.5	51.4
4CE0068LVXZ	6	Cu	0.7	1.8	2.5	20.1	63.2
4CE0108LVXZ	10	Cu	0.7	1.8	4	22.6	90.5
4CE0168LVXZ	16	Cu	0.7	1.8	6	25.4	123



Approved products fully compliant with regulatory compliance marks (RCM) as per Fair Trading requirements

Green Star Approved

## current ratings

2 x Single Core (Cu) PVC	53
2 x Single Core (Cu) XLPE	54
2 x Single Core (Al) XLPE	55
3 x Single Core (Cu) PVC	56
3 x Single Core (Cu) XLPE	57
3 x Single Core (Al) XLPE	58
2 Core (Cu) PVC/PVC	59
2 Core (Cu) XLPE/PVC	60
3 & 4 Core (Cu) PVC/PVC	61
3 & 4 Core (Cu) XLPE/PVC	62
Flexible Cords	63

## 2 x Single Core (Cu) PVC

2 single core copper conductor, 450/750V and 0.6/1kV V-90 PVC insulated, PVC sheathed cables based on AS/NZS 3008.1.1



Nom. Core Area (mm <sup>2</sup> )	Overhead				Exposed (mm <sup>2</sup> )	Partially Surrounded by Thermal Insulation	Completely Surrounded by Thermal Insulation	Duct (mm <sup>2</sup> )	Underground Duct	100% (mm <sup>2</sup> )
	Spaced	Spaced	Twisting	Exposed to Sun						



1.5	23	25	35	18	18	14	8	25	28	28	0.84
2.5	30	29	23	13	24	20	12	32	32	36	0.84
4	40	39	15	12	32	25	16	41	42	47	0.73
6	51	49	40	12	41	33	20	52	52	58	0.69
10	69	67	54	10	54	44	27	69	69	77	0.88
16	91	89	72	10	70	59	30	122	89	89	1.43
25	124	119	67	10	94	75	44	158	116	123	1.55
35	159	145	61	10	112	88	54	190	139	155	1.12
50	187	177	56	10	138	100	-	225	158	189	0.840
70	238	223	50	10	179	120	-	277	206	238	0.597
95	295	276	47	10	213	148	-	332	252	276	0.699
120	344	321	46	10	242	169	-	379	287	316	0.971
150	386	367	46	10	283	195	-	424	329	354	0.819
185	459	434	46	10	330	234	-	483	375	408	0.777

## 2 x Single Core (Cu) XLPE

2 single core copper conductor, 0.6/1kV X-90 XLPE insulated, PVC sheathed cables based on AS/NZS 3008.1.1



Nom. Core Area (mm <sup>2</sup> )	Unsheathed		Exposed to Sun	Partially Surrounded by Thermal Insulation	Completely Surrounded by Thermal Insulation	Duct (mm <sup>2</sup> )	Underground Duct	100% (mm <sup>2</sup> )
	Spaced	Spaced from Surface						



1.5	12	10	8	14	12	10	10	10
2.5	15	14	10	13	10	10	10	10
4	20	18	12	16	12	10	10	10
6	24	22	14	19	14	10	10	10
10	32	30	18	25	18	10	10	10
16	42	40	22	33	24	10	10	10
25	55	53	28	43	32	10	10	10
35	70	68	34	56	42	10	10	10
50	90	88	42	73	56	10	10	10
70	115	113	50	96	74	10	10	10
95	145	143	60	125	96	10	10	10
120	180	178	72	162	120	10	10	10
150	220	218	86	207	144	10	10	10
185	270	268	102	270	174	10	10	10
230	330	328	120	354	216	10	10	10
280	400	398	140	460	280	10	10	10
350	490	488	160	594	360	10	10	10
450	600	598	180	768	450	10	10	10
550	720	718	200	1008	600	10	10	10
700	880	878	240	1344	840	10	10	10
900	1100	1098	280	1800	1080	10	10	10

## 2 x Single Core (Al) XLPE

2 single core aluminium conductor, 0.6/1kV X-90 XLPE insulated, PVC sheathed cables based on AS/NZS 3008.1.1



Cable Size (mm <sup>2</sup> )	Unshielded				Shielded (Al/Pb)	Partially Surrounded by Thermal Insulation	Completely Surrounded by Thermal Insulation	Buried (Lead)	Underground (M.A.C.)		Single Phase Voltage Drop (1000V @ 50°C) mV/A/m
	Spaced	Spaced from Surface	Touching	Exposed to Sun					Spaced	Underground	
35	146	137	111	81	108	84	84	107	112	136	1.58
50	177	167	136	99	139	109	109	138	147	169	1.94
70	206	213	174	134	168	127	-	168	181	200	2.00
95	280	261	218	153	198	158	-	201	223	239	0.783
120	328	305	253	178	238	181	-	232	252	278	0.589
150	377	330	301	204	268	204	-	272	283	311	0.481
185	439	386	350	241	300	241	-	321	329	369	0.389
240	517	465	408	281	360	289	-	401	398	437	0.327
300	612	562	473	323	-	-	-	516	468	482	0.281
400	723	660	559	377	-	-	-	618	518	553	0.240
500	850	772	656	438	-	-	-	728	608	633	0.214
630	1001	894	773	513	-	-	-	831	698	740	0.189

## 3 x Single Core (Cu) PVC

3 single core copper conductor, 450/750V and 0.6/1kV V-90 PVC insulated, PVC sheathed cables based on AS/NZS 3008.1.1



Cable Size (mm <sup>2</sup> )	Overhead				Shielded (Al/Pb)	Partially Surrounded by Thermal Insulation	Completely Surrounded by Thermal Insulation	Buried (Lead)	Underground (M.A.C.)		Single Phase Voltage Drop (1000V @ 50°C) mV/A/m
	Spaced	Spaced from Surface	Touching	Exposed to Sun					Spaced	Underground	
16	20	17	18	20	25	21	21	20	20	24	2.84
25	29	25	27	27	31	27	27	27	27	31	2.19
4	36	31	32	38	38	28	28	36	36	41	1.71
6	46	41	41	47	46	34	34	42	42	47	1.38
10	67	58	58	68	67	47	47	58	58	70	1.06
16	88	77	77	92	92	60	60	74	74	81	0.81
25	120	103	103	121	121	74	74	91	91	100	0.62
35	148	127	127	148	148	88	88	107	107	119	0.51
50	180	158	158	181	181	99	99	124	124	137	0.43
70	226	197	197	226	226	123	123	150	150	163	0.36
95	267	246	246	267	267	147	147	176	176	190	0.30
120	316	287	287	316	316	171	171	207	207	221	0.26
150	365	336	336	365	365	195	195	236	236	251	0.23
185	417	381	381	417	417	217	217	263	263	279	0.21

## 3 x Single Core (Cu) XLPE

3 single core copper conductor, 0.6/1kV X-90 XLPE insulated, PVC sheathed cables based on AS/NZS 3008.1.1



Nominal Voltage (kV)	Overhead				Buried (Direct)	Underground			Single Phase Voltage Drop			
	Spaced	Spaced from Surface	Touching	Exposed to Sun		Partially Surrounded by Thermal Insulation	Completely Surrounded by Thermal Insulation	Thick				
									1000V & 600V mV/A			
25	248	25	26	24	27	28	42	227	26	281	0.25	0.25
35	248	25	227	28	27	28	28	221	222	22	0.22	0.22
45	248	24	244	25	28	28	28	220	222	22	0.22	0.22
55	220	28	275	227	24	22	-	224	222	22	0.22	0.22
75	220	28	224	220	22	22	-	220	220	22	0.22	0.22
95	220	22	225	227	22	22	-	222	224	22	0.22	0.22
120	220	22	225	220	22	22	-	220	224	22	0.22	0.22
150	220	22	225	220	22	22	-	220	220	22	0.22	0.22
175	220	22	225	220	22	22	-	220	220	22	0.22	0.22
200	220	22	222	220	22	22	-	220	220	22	0.22	0.22
250	220	22	220	220	22	22	-	220	220	22	0.22	0.22
300	220	22	220	220	22	22	-	220	220	22	0.22	0.22
350	220	22	220	220	22	22	-	220	220	22	0.22	0.22
400	220	22	220	220	22	22	-	220	220	22	0.22	0.22
450	220	22	220	220	22	22	-	220	220	22	0.22	0.22

## 3 x Single Core (Al) XLPE

3 single core aluminium conductor, 0.6/1kV X-90 XLPE insulated, PVC sheathed cables based on AS/NZS 3008.1.1



Nominal Voltage (kV)	Overhead				Buried (Direct)	Underground			Single Phase Voltage Drop			
	Spaced	Spaced from Surface	Touching	Exposed to Sun		Partially Surrounded by Thermal Insulation	Completely Surrounded by Thermal Insulation	Thick				
									1000V & 600V mV/A			
25	248	25	222	28	27	28	28	221	222	22	0.22	0.22
35	220	22	222	22	22	22	-	220	220	22	0.22	0.22
45	220	22	222	22	22	22	-	220	220	22	0.22	0.22
55	220	22	222	22	22	22	-	220	220	22	0.22	0.22
75	220	22	222	22	22	22	-	220	220	22	0.22	0.22
95	220	22	222	22	22	22	-	220	220	22	0.22	0.22
120	220	22	222	22	22	22	-	220	220	22	0.22	0.22
150	220	22	222	22	22	22	-	220	220	22	0.22	0.22
175	220	22	222	22	22	22	-	220	220	22	0.22	0.22
200	220	22	222	22	22	22	-	220	220	22	0.22	0.22
250	220	22	222	22	22	22	-	220	220	22	0.22	0.22
300	220	22	222	22	22	22	-	220	220	22	0.22	0.22
350	220	22	222	22	22	22	-	220	220	22	0.22	0.22
400	220	22	222	22	22	22	-	220	220	22	0.22	0.22
450	220	22	222	22	22	22	-	220	220	22	0.22	0.22

## 2 Core (Cu) PVC/PVC



2 core copper conductor, 450/750V and 0.6/1kV V-90 PVC Insulated, armoured or non-armoured, PVC sheathed based on AS/NZS 3008.1.1

Nom. Core Size (mm <sup>2</sup> )	Overhead			Armoured Cable	Partially Armoured by Thermal Insulation (Armoured)	Completely Armoured by Thermal Insulation (Armoured)	Shielded Cable	Underground Cable	Single Phase Voltage Drop
	Tapered	Troughing	Exposed to Sun						
1.0	16	16	12	17	12	7	17	17	0.26
1.5	19	19	14	19	14	9	21	21	0.30
2.5	27	26	18	26	20	14	28	28	0.40
4	37	34	23	36	27	17	36	36	0.52
6	46	44	28	45	34	22	45	45	0.66

## 2 Core (Cu) XLPE/PVC



2 core copper conductor, 0.6/1kV X-90 XLPE insulated, armoured or non-armoured, PVC sheathed based on AS/NZS 3008.1.1

Nom. Core Size (mm <sup>2</sup> )	Overhead			Armoured Cable	Partially Armoured by Thermal Insulation (Armoured)	Completely Armoured by Thermal Insulation (Armoured)	Shielded Cable	Underground Cable	Single Phase Voltage Drop
	Tapered	Troughing	Exposed to Sun						
1.0	16	16	12	17	12	7	17	17	0.26
1.5	19	19	14	19	14	9	21	21	0.30
2.5	27	26	18	26	20	14	28	28	0.40
4	37	34	23	36	27	17	36	36	0.52
6	46	44	28	45	34	22	45	45	0.66
10	75	71	48	75	58	37	75	75	1.06
16	104	97	63	104	79	49	104	104	1.49
25	140	131	87	140	108	68	140	140	2.14
35	175	161	108	175	133	85	175	175	2.93
50	222	207	140	222	168	113	222	222	3.89
70	280	260	180	280	210	145	280	280	5.09

## 3 & 4 Core (Cu) PVC/PVC



3 & 4 core copper conductor, 450/750V and 0.6/1kV V-90 PVC insulated, armoured or non-armoured, PVC sheathed based on AS/NZS 3008.1.1

Core Size (mm <sup>2</sup> )	Unarmoured Spaced Twisting Exposed to Sun			Unarmoured Twisted		Partially Armoured by Fibrous Insulation, Unarmoured		Fully Armoured by Fibrous Insulation, Armoured		Weight (kg/km)
	3C	4C	3C	4C	3C	4C	3C	4C		
1.5	14	15	12	14	17	17	18	20	20.6	
2.5	24	25	22	24	27	27	29	31	31.5	
4	38	39	34	36	41	41	43	45	45.3	
6	48	49	44	46	51	51	53	55	55.9	

## 3 & 4 Core (Cu) XLPE/PVC



3 & 4 core copper conductor, 0.6/1kV X-90 XLPE insulated, armoured or non-armoured, PVC sheathed based on AS/NZS 3008.1.1

Core Size (mm <sup>2</sup> )	Unarmoured Spaced Twisting Exposed to Sun			Unarmoured Twisted		Partially Armoured by Fibrous Insulation, Unarmoured		Fully Armoured by Fibrous Insulation, Armoured		Weight (kg/km)
	3C	4C	3C	4C	3C	4C	3C	4C		
1.5	14	15	12	14	17	17	18	20	20.6	
2.5	24	25	22	24	27	27	29	31	31.5	
4	38	39	34	36	41	41	43	45	45.3	
6	48	49	44	46	51	51	53	55	55.9	
10	66	67	62	64	71	71	73	75	75.6	
16	88	89	79	82	91	91	93	95	95.9	
25	118	119	104	107	117	117	119	121	121.6	
35	147	148	130	133	143	143	145	147	147.6	
50	188	189	168	171	181	181	183	185	185.6	
70	229	230	207	210	220	220	222	224	224.6	
95	281	282	257	260	270	270	272	274	274.6	
120	338	339	311	314	324	324	326	328	328.6	
150	417	418	385	388	400	400	402	404	404.6	
185	498	499	457	460	472	472	474	476	476.6	
240	617	618	561	564	578	578	580	582	582.6	
300	768	769	700	703	718	718	720	722	722.6	





## Flexible Cords

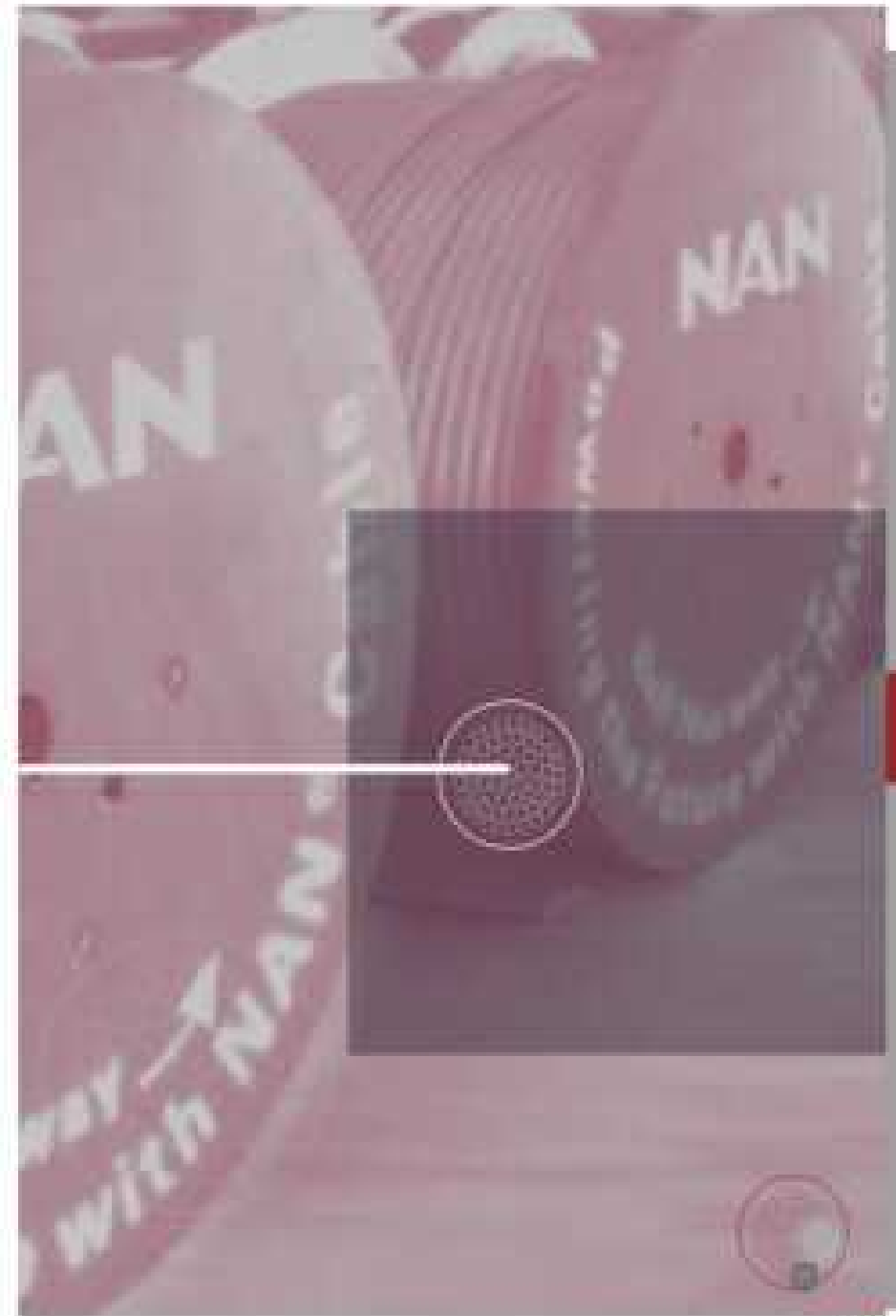
Insulation Type: PVC

Maximum conductor temperature: 60°C

Reference ambient temperature: 25°C in air

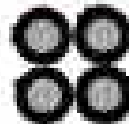
Based on AS/NZS 3008.1.1

Conductor Size (mm)	Current Carrying Capacity (A)	Voltage Drop (mV/A/m)	
		Single Phase	Three Phase
0.50	0.50	80.1	78.2
0.75	0.75	60.3	52.1
1.0	1.00	45.2	39.1
1.5	1.50	30.8	29.7
2.5	2.50	18.5	16.0
4	4.00	11.5	9.92



## low voltage aerial

### **XLPE Insulated**



2, 3 & 4 Core Al Aerial Bundled (ABC)	67
2, 3 & 4 Core Cu Aerial Bundled (ABC)	69

### **PVC Insulated**



Single Core Cu	71
2 Core (Figure 8) Cu	60
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# LV XLPE Aerial Bundled Cables 2, 3 & 4 Core Aluminium



0.6/1kV XLPE (X-90) insulated, aerial bundled cables to AS/NZS 3560.1

## Physical data

Product Code	Nominal Conductor Area	Nominal Conductor Diameter	Average Insulation Thickness	Nominal Diameter Over Insulation	Nominal Diameter Over Laid-up Cores	Approx. mass kg/100m
	mm <sup>2</sup>	mm	mm	mm	mm	

### 2 Core

2AX02SALVAB	25	5.9	1.3	8.5	17.0	193
2AX03SALVAB	35	6.9	1.3	9.5	19.0	264
2AX050ALVAB	50	8.4	1.5	11.4	22.8	348
2AX095ALVAB	95	11.5	1.7	14.9	29.8	645

### 3 Core

3AX02SALVAB	25	5.9	1.3	8.5	18.3	289
3AX03SALVAB	35	6.9	1.3	9.5	20.5	386
3AX050ALVAB	50	8.4	1.5	11.4	24.8	561

### 4 Core

4AX02SALVAB	25	5.9	1.3	8.5	20.5	385
4AX03SALVAB	35	6.9	1.3	9.5	22.9	509
4AX050ALVAB	50	8.4	1.5	11.4	27.5	686
4AX070ALVAB	70	9.9	1.5	12.9	31.7	975
4AX095ALVAB	95	11.5	1.7	14.9	36.0	1280
4AX120ALVAB	120	13.0	1.7	16.4	39.6	1641
4AX150ALVAB	150	14.6	1.7	18.0	43.5	2001

## Electrical properties

Nominal Conductor Area	Continuous Current Carrying Capacity (A)			Fault Current Rating kA for 2s	Min. Breaking Load of Cable kN	Rec. Tension	
	30°C air	2m/s wind	2m/s wind			Highest Everyday Tension kN	Max. Working Tension kN

### 2 Core

25	65	107	121	3.3	7.0	1.16	1.96
35	81	128	147	3.2	9.8	1.76	2.74
50	95	152	181	4.0	14.0	2.52	3.92
95	142	234	278	8.4	16.8	4.70	7.45

### 3 Core

25	60	100	118	3.3	10.3	1.80	2.94
35	76	122	138	3.2	14.7	2.66	4.12
50	89	142	167	4.0	11.0	3.78	5.88

### 4 Core

25	60	100	118	3.3	14.0	2.52	3.92
35	76	122	138	3.2	19.4	3.52	5.49
50	89	142	167	4.0	18.0	3.00	5.34
70	110	175	205	6.6	16.2	7.10	11.0
95	138	218	258	8.5	32.2	6.60	14.5
120	157	255	305	10.7	67.2	13.1	18.8
150	182	294	350	12.8	84.0	15.1	23.5



# LV XLPE Insulated Aerial Bundled Cables 2, 3 & 4 Core Copper



0.6/1kV XLPE (X-90) insulated, aerial bundled cables to  
AS/NZS 3560.1 hard drawn copper conductors

## Physical data

Product Code	Nominal Conductor Area	Nominal Conductor Diameter	Average Insulation Thickness	Nominal Diameter Over Insulation	Nominal Diameter Over Lead- up Cores	Approx. mass
	mm <sup>2</sup>	mm	mm		mm	kg/100m

### 2 Core

2AX006HLVAB	6	3.1	1.3	5.7	11.4	151
2AX010HLVAB	10	4.1	1.3	6.7	13.4	235
2AX016HLVAB	16	5.1	1.3	7.7	15.4	352

### 3 Core

3AX006HLVAB	6	3.1	1.3	5.7	12.3	226
3AX010HLVAB	10	4.1	1.3	6.7	14.4	352
3AX016HLVAB	16	5.1	1.3	7.7	16.6	528

### 4 Core

4AX006HLVAB	6	3.1	1.3	5.7	13.8	301
4AX010HLVAB	10	4.1	1.3	6.7	16.2	470
4AX016HLVAB	16	5.1	1.3	7.5	17.3	682

## Electrical properties

Nominal Conductor Area	Continuous Current Carrying Capacity (A)			Fault Current Rating	Min Breaking Level of Cable kV	Rec. Tension	
	still air	2m/s wind	2m/s wind			Highest Everyday Tension kN	Max. Working Tension kN
mm <sup>2</sup>	still air	2m/s wind	2m/s wind	kA for 1s	kV	kN	kN

### 2 Core

6	58	58	68	2.7	4.80	0.85	1.80
10	50	81	93	1.3	7.82	1.43	2.20
16	65	104	124	2.3	11.7	2.25	3.15

### 3 Core

6	33	58	65	0.7	7.00	1.28	1.88
10	46	75	87	1.3	11.7	2.15	3.30
16	60	98	124	2.3	17.5	3.23	4.98

### 4 Core

6	23	56	65	0.7	8.20	1.85	2.62
10	46	75	87	1.3	13.8	2.80	4.17
16	60	98	124	2.3	23.5	4.24	6.65

### NOTE:

- Voltage drops are single phase for 2 & 3 core cables and three-phase for 4 core cables. Continuous current ratings are based on an ambient temperature of 40°C.
- Maximum conductor temperature at 60°C and solar radiation intensity of 1000W/m<sup>2</sup>. Rating for 2 & 3 core cables are based on all cores fully loaded. Ratings for 4 core cables are based on a lightly loaded neutral. Fault current ratings are based on initial and final conductor temperatures of 80°C and 220°C respectively.



# LV PVC Insulated Aerial Cables Single & 2 Core Copper



0.6/1kV PVC Insulated aerial cables to AS/NZS 5000.1  
hard drawn copper conductors

## Physical data

Product Code	Nominal Conductor Area mm <sup>2</sup>	Nominal Conductor Diameter mm	Average Insulation Thickness mm	Nominal Diameter Over Insulation	Approx. mass kg/100m
--------------	----------------------------------------	-------------------------------	---------------------------------	----------------------------------	----------------------

### Single Core

LAP006H/VAB	6	3.1	1.0	5.1	81
LAP010H/VAB	10	4.1	1.0	6.1	128
LAP016H/VAB	16	5.1	1.0	7.1	183
LAP025H/VAB	25	6.9	1.2	8.8	260
LAP035H/VAB	35	7.7	1.2	10.3	363
LAP050H/VAB	50	8.9	1.4	11.9	514
LAP070H/VAB	70	10.7	1.4	13.7	718

### 2 Core

2FB006H/VAB	6	3.1	1.0	5.0 x 10.4	149
2FB010H/VAB	10	4.1	1.0	6.0 x 12.5	230
2FB016H/VAB	16	5.1	1.0	7.0 x 14.5	350



## Electrical properties

Nominal Conductor Area mm <sup>2</sup>	Continuous Current Carrying Capacity A			Fault Current Rating kA for 1s	Min. Breaking Load of Cable kN	Ret. Tension	
	30°C	35°C	40°C			Highest Everyday Tension kN	Max. Working Tension kN

### Single Core

6	36	32	30	0.8	2.30	0.45	0.68
10	50	45	42	1.0	3.90	0.73	1.14
16	70	63	59	1.4	5.90	1.09	1.67
25	90	80	75	2.1	10.44	1.68	2.59
35	110	98	92	2.4	12.75	2.00	3.05
50	135	120	113	4.8	17.32	3.13	4.85
70	168	148	139	7.0	25.99	4.50	7.01

### 2 Core

6	34	30	28	0.8	4.62	0.62	1.00
10	45	40	37	1.0	7.60	1.40	2.20
16	57	50	46	1.4	11.82	2.15	3.30

### NOTE:

Resistance and voltage drop are based on three cables laid in flat formation spaced 0.4m apart. The values can also be applied to single phase circuits or 3-phase circuits with cables in trefoil formation. For single-phase circuits the voltage drop values should be multiplied by 1.155. Continuous current ratings are based on an ambient temperature of 40°C. Maximum conductor temperature of 75°C and solar radiation intensity of 1000W/m<sup>2</sup>. Fault current ratings are based on initial and final conductor temperatures of 75°C and 100°C respectively.

# LV PVC Insulated Twisted Aerial Cables 3 & 4 Core Copper

0.6/1kV PVC insulated twisted aerial cables to AS/NZS 5000.1  
hard drawn copper conductors



## Physical data

Product Code	Nominal Conductor Area mm <sup>2</sup>	Nominal Conductor Diameter mm	Average Insulation Thickness mm	Nominal Diameter Over Insulation	Approx. mass kg/100m
--------------	----------------------------------------	-------------------------------	---------------------------------	----------------------------------	----------------------

### 3 Core

3AP005HLVAB	6	3.1	1.0	5.3	213
3AP010HLVAB	10	4.1	1.0	6.3	372
3AP015HLVAB	16	5.1	1.0	7.3	558
3AP025HLVAB	25	6.8	1.3	8.4	915

### 4 Core

4AP005HLVAB	6	3.1	1.0	5.3	319
4AP010HLVAB	10	4.1	1.0	6.3	495
4AP015HLVAB	16	5.1	1.0	7.3	717
4AP025HLVAB	25	6.8	1.3	8.4	1218



## Electrical properties

Nominal Conductor Area mm <sup>2</sup>	Continuous Current Carrying Capacity A		Fault Current Rating kA for 1s	Min. Breaking Load of Cable kN	Rec. Tension	
	100% air	2m/s wind			Highest Everyday Tension kN	Max. Working Tension kN

### 3 Core

6	28	50	58	0.6	7.01	1.37	2.98
10	38	68	78	1.0	11.82	2.18	4.30
16	49	88	104	1.7	17.83	3.30	6.99
25	65	118	138	2.7	31.20	5.80	12.75

### 4 Core

6	28	50	88	0.6	9.20	1.68	2.60
10	38	68	78	1.0	15.71	2.80	4.40
16	49	88	104	1.7	25.73	4.10	6.85
25	65	118	138	2.7	41.81	7.50	11.6

### Note

- Resistance and voltage drop are based on three cables laid in flat formation spaced 0.46m apart. The values can also be applied to single-phase circuits or 3 phase circuits with cables in trellis formation. For single-phase circuits the voltage drop values should be multiplied by 1.155. Continuous current ratings are based on an ambient temperature of 40°C. Maximum conductor temperature of 75°C and solar radiation intensity of 1000W/m<sup>2</sup>. Fault current ratings are based on initial and final conductor temperatures of 75°C and 100°C respectively.



general  
information

## general information

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## Core Colours & Sequence

### Standard Core Colours

#### Fixed Wiring

2 Core	Red, Black
2 Core Active	Red, White
2 Core & Earth	Red, Black, Green/Yellow
3 Core Active	Red, White, Blue
3 Core & Earth	Red, White, Blue, Green/Yellow
4 Core	Red, White, Blue, Black
4 Core & Earth	Red, White, Blue, Black, Green/Yellow

#### Note

Black is normally used as neutral

Green/Yellow is always used as earth

#### Flexible Cords (not installed as fixed wiring)

2 Core	Brown, Light Blue
3 Core	Brown, Light Blue, Green/Yellow
4 Core	Brown, Light Blue, White, Green/Yellow
5 Core	Brown, Light Blue, Orange, White, Green/Yellow

#### Note

Light Blue is normally used as neutral

## Insulation & Sheath Materials

### Insulation Compounds

**V-90 PVC** A plasticized compound of polyvinyl chloride that is suitable for operating temperatures up to 90°C<sup>1</sup>. PVC insulation is inherently UV stable and flame retardant. All PVC offered by NAN is lead free and compliant with RoHS requirements.

**K-60 (XLPE)** A cross-linked polyethylene compound suitable for operating temperatures up to 90°C<sup>1</sup>. XLPE materials have excellent dielectric properties and are halogen free.

**K-90UV (XLPE)** A black UV resistant XLPE stabilized with 2% carbon black pigment. Used for aerial unheathed cables.

**K-HF-90** A low-smoke, halogen free insulation compound, used as an alternative to V-90 PVC insulation.

### Sheathing Compounds

**SV-90 PVC** A plasticized compound of polyvinyl chloride specially formulated to allow easy stripping of flat TPS cable. This compound is suitable for temperatures up to 90°C<sup>1</sup>.

**SV-90 PVC** Our standard sheathing grade of plasticized PVC, suitable for operating temperatures up to 90°C<sup>1</sup>. Although PVC is inherently UV stable and flame retardant, its properties can be further enhanced with the addition of UV stabilisers or flame retardants. A flexible grade of this compound is also available for the sheathing of flexible cables.

**HFS-90-TP** A low-smoke, halogen free, flame retardant thermoplastic compound.

<sup>1</sup> Refer to table on Page 81.

## Insulation & Sheath Materials

Maximum Operating Temperature of Insulation		
Insulation Material	Normal Use	Maximum Permissible
V-90 PVC	75	90
X-90 (XLPE)	90	90
X-HF-90	90	90

Note:  
Refer to AS/NZS 3008.1.1:2009 for more detailed explanation of conditions.

## Cable Environment & Selection

### 1 Consider Power Requirements

Selection of conductor size from the range offered in this handbook should be made taking into consideration current carrying capacity requirements and the voltage drop present in the circuit to be installed.

- ☒ The tables contained from page 53 to 63 give the maximum current carrying capacity for a range of cables in various installation configurations. For more detailed information, please refer to AS/NZS 3008.1.1.

### 2 Insulation and Sheath Materials

As per page 80, various insulation and sheath compounds can be selected to suit a range of applications.

- ☒ For standard install, PVC is usually the insulation and sheath choice, as it offers a good combination of low cost and physical properties.
- ☒ Where higher dielectric properties are required, XLPE insulation is the preferred insulation choice.
- ☒ Where it is important to limit exposure to harmful combustion products in the event of fire, low smoke, halogen free materials are recommended for both cable insulation and sheath.

### 3 Consider Environmental and Installation Conditions

NAN low voltage cables can be installed as part of various systems, including (but not limited to), aerial, underground, cable conduit and cable trays. Variations to the standard cable range should be considered to suit particular environment conditions. Such variations include:

- ☒ Steel wire armour for install conditions at risk of mechanical damage.
- ☒ Copper wire or tape screening for install conditions subject to electrical fields.
- ☒ Nylon jacketing or brass tapes to resist termite or rodent attack.
- ☒ Flexible conductors for ease of installation.
- ☒ Low smoke, halogen free cables to limit exposure to hazardous emissions in the event of fire.

Note:  
In all cases, cables should be installed by a licensed electrician in a manner that is compliant with the requirements of AS/NZS 3000.

## Earth Conductor Size

Active Conductor Size	Minimum Earth Size	
	With Copper Active	With Aluminium Active
1	1*	
1.5	1.5*	
2.5	2.5	
4	3.5	
6	2.5	2.5
10	4	2.5
16	6	4
25	6	6
35	10	6
50	16	10
70	25	10
95	25	16
120	35	15
150	50	25
185	70	35
240	95	50
300	120	70
400	120	95
500	120	95
630	120	120

Note:  
Refer to AS/NZS 3000 for restrictions.

## DC Conductor Resistance

DC Conductor Resistance for Fixed Installations		
Conductor Size	Copper	Aluminium
1	31.2 (18.3) <sup>1</sup>	
1.5	23.6	
2.5	7.41	
4	4.61	
6	3.08	
10	2.81	
16	2.15	1.91
25	0.717	1.30
35	0.524	0.868
50	0.387	0.641
70	0.268	0.443
95	0.193	0.320
120	0.151	0.251
150	0.114	0.200
185	0.0991	0.164
240	0.0754	0.125
300	0.0601	0.100
400	0.0470	0.0778
500	0.0366*	0.0605*
630	0.0283*	0.0469*

<sup>1</sup>DC resistance of solid conductor  
\*Single-core cables only

## American Wire Gauge Conversion

AWG	cmil <sup>1</sup>	%cmil <sup>2</sup>	Area (mm <sup>2</sup> )	Diameter <sup>3</sup>
16	2580	2.6	1.3	1.3
14	4110	4.1	2.1	1.6
12	6510	6.5	3.3	2.1
10	10380	10.4	5.3	2.6
8	16510	16.5	8.4	3.3
6	26148	26.2	13.2	4.1
4	41735	41.7	21.2	5.2
2	66361	66.4	33.6	6.5
0 (1/0)	105518	105.5	53.5	8.3
00 (2/0)	133056	133.0	67.4	9.3
000 (3/0)	167780	167.8	85.0	10.4
0000 (4/0)	211506	211.6	107.2	11.7

<sup>1</sup> cmil is the area of a circle with diameter of 1 mil.

1 mil is 1/1000 of an inch = 0.0254mm

<sup>2</sup> 1 % area is 1000 cmil

<sup>3</sup> Diameter given in table is for a solid rod/strand of the conductor area.

The diameter of a stranded conductor will be larger.

## Bending Radius

Cable Type	Insulated	During Installation
Stranded XLPE or PVC	6 x D	9 x D
Steel wire armored	12 x D	18 x D
Copper tape screened	12 x D	18 x D
Nylon covered	20 x D	30 x D
Flexible cords	4 x D	6 x D
V serial	6 x D	9 x D

## 3 Phase Formula

Single Phase	3 Phase
$I = \frac{kW \times 1000}{E \times pf}$	$I = \frac{kW \times 1000}{E \times 1.732 \times pf}$

$kW = \frac{I \times E \times pf}{1000}$	$kW = \frac{I \times E \times 1.732 \times pf}{1000}$
------------------------------------------	-------------------------------------------------------

$I = \frac{kVA \times 1000}{E}$	$I = \frac{kVA \times 1000}{E \times 1.732}$
---------------------------------	----------------------------------------------

$kVA = \frac{I \times E}{1000}$	$kVA = \frac{I \times E \times 1.732}{1000}$
---------------------------------	----------------------------------------------

$I = \frac{hp \times 746}{E \times \%Eff \times pf}$	$I = \frac{hp \times 746}{E \times 1.732 \times \%Eff \times pf}$
------------------------------------------------------	-------------------------------------------------------------------

$hp = \frac{I \times E \times \%Eff \times pf}{746}$	$hp = \frac{I \times E \times 1.732 \times \%Eff \times pf}{746}$
------------------------------------------------------	-------------------------------------------------------------------

And:

$$kW = kVA \times pf$$

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

Where:

E — line voltage (240V for single phase, 415V for 3 phase)

I — line current in AMPS

PF — power factor

%Eff is percentage efficiency

Power Units:

kW — kilowatts

kVA — kilovolt-amps

## Motor Current

Based on Full Load Current for Standard AC Induction Motors

Power (kW)	hp	Single Phase		3 Phase	
		230V	208V	480V	415V
0.37	0.5	2.44	2.34	0.63	0.78
0.56	0.75	3.67	3.53	1.22	1.17
0.75	1.0	4.89	4.68	1.62	1.56
1.1	1.5	7.33	7.03	2.43	2.35
1.3	2.0	9.78	9.37	3.25	3.13
1.9	2.5	12.2	11.7	4.06	3.91
2.2	3.0	14.7	14.1	4.87	4.69
3.0	4.0	19.6	18.7	6.49	6.27
3.7	5.0	24.4	23.4	8.11	7.82
5.6	7.5	38.7	37.3	11.3	10.8
7.5	10	44.1	42.3	14.6	14.1
9.1	12.5	55.1	52.8	18.1	17.6
11.2	15	66.2	63.4	22	21.2
14.9	20	85.2	81.7	28.3	27.3
18.6	25	101	96.7	34.2	32.9
22.4	30	124	118	41	39.5

## Maximum Pulling Tension (kN)

Cond Size	Copper Conductor	Aluminium Conductor
1	0.07	
1.5	0.18	
2.5	0.18	
4	0.28	
6	0.42	
10	0.70	
16	1.1	0.90
25	1.8	1.3
35	2.3	1.8
50	3.5	2.5
70	4.9	3.5
95	6.7	4.8
120	8.4	6.9
150	11	7.5
185	13	9.3
240	17	12
300	21	15
400	25	20
500	25	25
630	25	25

## Cables in Conduit

The number of cables that can be installed in a circular conduit can be calculated using the following equation:

$$\text{Number of cables} = \frac{\text{internal cross sectional area of enclosure}}{\text{cross sectional area of cable}} \times \text{space factor}$$

The space factor to be used is as follows:

For one cable in enclosure:	0.5
For two cables in enclosure:	0.33
For three or more cables in enclosure:	0.4

Alternatively, tables C9 to C11 of AS/NZS 3000 provide a detailed list of the number of cables of each type that can be installed in various types of conduit.

## Cables in Conduit (Continued)

Nom. Area mm <sup>2</sup>	Shielded Cable—Nominal Size of Conduit (mm)											
	Heavy Duty UPVC Conduit							Light Duty Conduit				
	20	25	32	40	50	63	80	20	25	32	40	50
1	37	56	64	66	68	>100	>100	17	21	26	32	36
1.5	6	25	27	45	73	>100	>100	16	21	30	40	46
2.5	6	21	26	33	54	66	>100	7	11	11	20	26
4	4	7	13	21	34	38	>100	6	8	14	23	27
6	3	5	10	16	27	34	34	3	5	11	18	20
10	2	4	7	12	19	32	37	2	4	6	13	21
16	1	3	5	8	14	24	33	2	3	6	9	15
25	1	1	1	6	9	16	24	1	1	4	6	10
35	1	1	2	4	7	14	23	1	1	3	5	8
50	0	1	2	3	5	8	20	1	1	2	4	6
70	0	1	1	2	4	7	13	0	1	2	3	5
95	0	0	1	1	3	6	10	0	0	1	2	4
120	0	0	1	1	3	6	9	0	0	1	2	4
150	0	0	0	1	1	3	6	0	0	1	1	2
185	0	0	0	1	1	2	5	0	0	0	1	1
240	0	0	0	0	1	1	4	0	0	0	1	1
300	0	0	0	0	1	1	3	0	0	0	0	1
400	0	0	0	0	0	1	2	0	0	0	0	1
500	0	0	0	0	0	1	1	0	0	0	0	0
630	0	0	0	0	0	1	1	0	0	0	0	0

## Cables in Conduit (Continued)

Nom. Area mm <sup>2</sup>	Shielded Cable—Nominal Size of Conduit (mm)										
	Heavy Duty UPVC Conduit										
	20	25	32	40	50	63	80	100	125	150	
1	3	3	14	16	48	71	>100	>100	>100	>100	
1.5	4	7	13	21	38	58	>100	>100	>100	>100	
2.5	3	5	10	16	27	44	52	>100	>100	>100	
4	2	4	7	11	19	31	44	>100	>100	>100	
6	1	3	6	9	18	28	35	52	>100	>100	
10	1	2	4	6	11	18	28	43	65	>100	
16	0	1	3	5	9	13	25	40	70	92	
25	0	0	2	3	5	9	18	31	48	62	
35	0	0	1	2	4	7	13	26	38	51	
50	0	0	1	1	3	6	12	21	31	41	
70	0	0	0	1	2	4	9	16	24	31	
95	0	0	0	1	2	4	7	12	18	24	
120	0	0	0	0	1	2	6	10	15	20	
150	0	0	0	0	1	2	5	8	12	16	
185	0	0	0	0	1	2	4	6	10	13	
240	0	0	0	0	0	1	3	5	8	10	
300	0	0	0	0	0	1	2	4	6	8	
400	0	0	0	0	0	0	2	3	5	7	
500	0	0	0	0	0	0	1	2	4	6	
630	0	0	0	0	0	0	1	2	3	4	

## Cables in Tray

Cable Tray Selection						
Manufacturer	Ecystnut	Unistrut	Course	Ecystnut	Unistrut	Course
Product	ET3	ST3	KT3	ET3	ST3	KT3
Tray Depth	47	50	50	85	75	85
Standard Length	3000	3000	3000	3000	3000	3000
Span (mm)	Load Capacity Over Span (kg/m)					
1500	118	140	128.8	227	300	180.0
5000	29	35	38.8	60	80	47.2

Trays are available in 150mm, 300mm, 450mm or 600mm widths.

Most trays are available from the manufacturer in a number of finishes, such as Hot Dip Galvanised, pre-galvanised or powder coated.

\*This information is intended as a guide only. For further information please refer to manufacturers' information. Information on this page is taken from manufacturers' websites. Every effort is made to ensure it is correct at the time of printing.

## Other Cables

NAN also supply a broad range of medium and high voltage cables. A selection of our range is as follows:

### Medium Voltage

- 6.6kV to 33kV cables
- Single core, 3 core, triplex design or aerial design
- aluminium 50mm<sup>2</sup> to 1600mm<sup>2</sup>
- submarine cables
- cables for windfarms

#### OPTIONS:

- PVC, MDPE &/or HDPE jacket;
- copper wire or tape screen;
- Aluminium or steel wire armour;
- nylon 12 for termite protection;
- brass or copper tape;
- anti-termite additives;
- fire-retardant XLPE;
- water-blocking; and
- aluminium-PE laminate moisture barrier.

### High Voltage

- 66kV to 500kV cables.
- Conductors up to 3000 mm<sup>2</sup>.
- Al-PE laminate, corrugated aluminium, corrugated stainless steel or corrugated copper moisture barrier.



## Applicable Standards

AS/NZS 3000 — Wiring Rules.

AS/NZS 3008.1.1 — Electrical Installations— Selection of Cables — Cables for alternating voltages up to and including 0.6/1kV—Typical Australian installation conditions.

AS/NZS 5000.1 — Electrical cables—Polymeric Insulated—For working voltages up to and including 0.6/1 (1.3) kV.

AS/NZS 5000.2 — Electrical cables—Polymeric Insulated—for working voltages up to and including 0.6/1kV.

AS/NZS 3560 — Electrical cables—XLPE Insulated—Aerial bundled—for working voltages up to and including 0.6/1kV.

AS/NZS 3599 — Electrical cables—Aerial bundled—Polymeric insulated— Voltages 6.35/11 (12) kV and 12.7/22 (24) kV.

AS/NZS 3191 — Electric flexible cords.

ASTM 5-76-474 — Neutral-Supported Power Cable Assemblies with Weather-Resistant Extruded Insulation Rated 600 Volts.

AS/NZS 1125 — Conductors in insulated electric cables and flexible cords.

AS/NZS 3808 — Insulating and sheathing materials for electric cables.

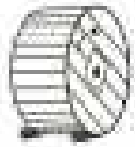
AS/NZS 1860 — Test methods for electric cables, cords and conductors.

AS/NZS 3013 — Electrical Installations—Classification of the fire and mechanical performance of wiring system elements.



# Drum Handling Guide

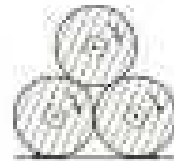
## Storage



Keep the drum standing upright, using wedges in the heels of the flanges.



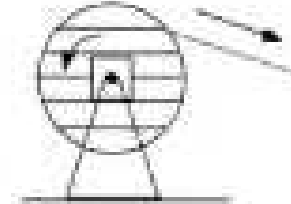
Keep in sequence.



Only drums with protection lagging may be stacked flange on flange. Lower layer to be secured over full drum.



Do not leave drums on their side.

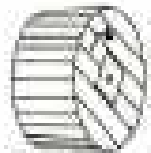


Unwind this way



Never unwind this way

## Transport



Roll the drum in the direction used during cable winding.



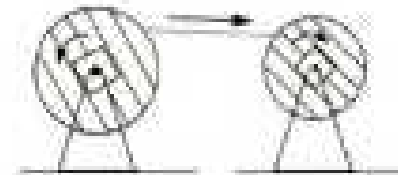
Drums may be lifted either by fork-lift truck or crane with appropriate lifting attachments.



The forks of the truck must be longer than the width of the drum, so that the lagging is not damaged. When moving the drum, tilt the truck mast so that the drum remains in the fork and the points do not touch the ground.

Insufficient raising may cause the drum to be dragged on the ground and damaged or dropped off the fork if the ground surface is uneven. Do not release the drum until the truck has stopped completely. Do not push the drum with the truck.

## Re-Winding

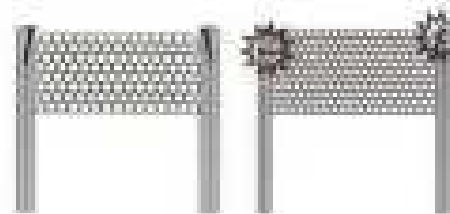


Recommended



Not recommended

## Nail with CAUTION



If the wooden lagging needs to be refastened, the nailing should be done carefully in the middle of the drum flange.







# NAN

Powering the Future

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