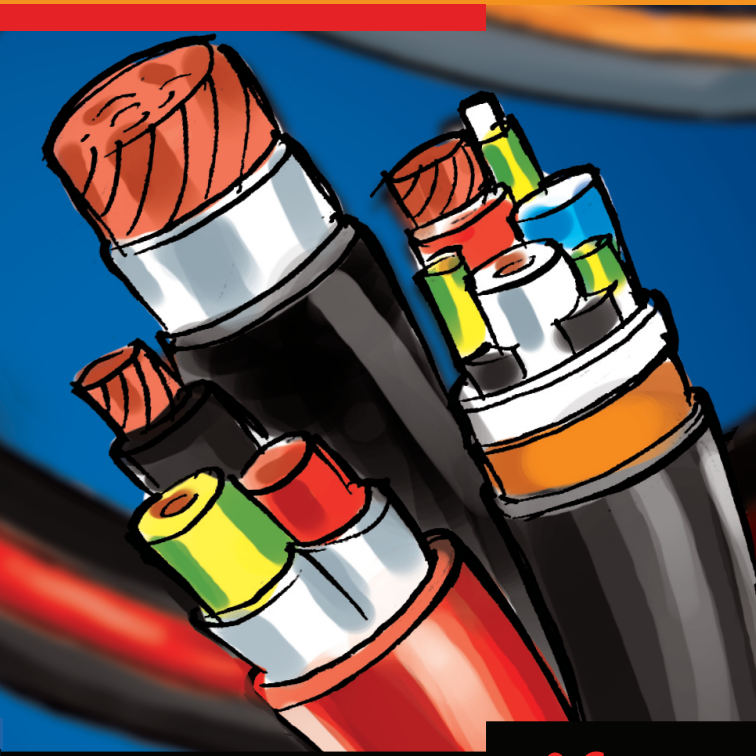
2017 EDITION

THE HANDBOOK

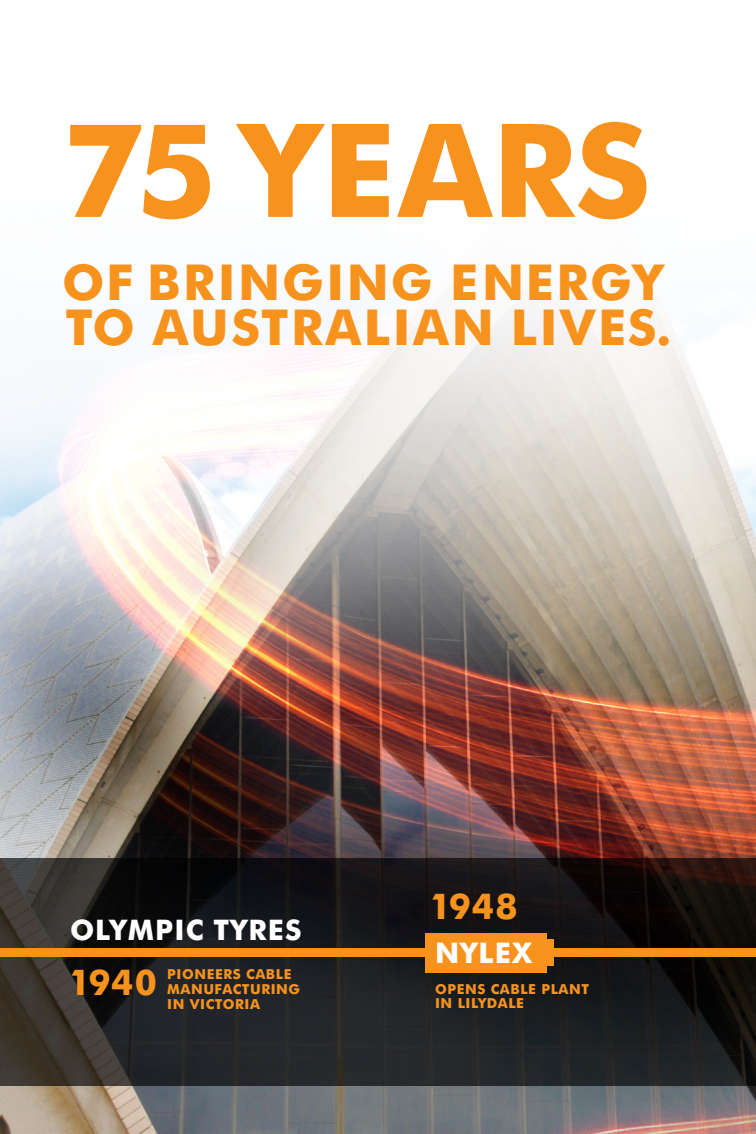


Nexans

Olex

75 YEARS

OF BRINGING ENERGY TO AUSTRALIAN LIVES.



OLYMPIC TYRES

1940 PIONEERS CABLE MANUFACTURING IN VICTORIA

1948

NYLEX

OPENS CABLE PLANT IN LILYDALE

Nexans is recognised worldwide as an expert in the cable industry. Our technological leadership, global foot print and local representation allows us to meet the needs of unique global markets whilst maintaining the highest levels of performance, safety and respect for the environment.

1956 TOTTENHAM PLANT WAS BUILT

Olex

1973 OLYMPIC AND NYLEX MERGE TO FORM OLEX CABLES

2006 OLEX JOINS NEXANS GLOBAL TO FORM NEXANS OLEX

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LOW VOLTAGE

Nexans Polex

FEATURES AND BENEFITS

Nexans Olex PVC Compound (V-90)

Easy strip for fast and consistent stripping

GBCA PVC Best Practice Accredited helping you contribute points to the green star rating of your building

Nexans Olex XLPE

All the benefits of PVC plus:

Thinner and more lightweight

Nexans Olex Aluminium

Lightweight

Easy to handle

Steel Wire Armour

Added mechanical strength

Core Colouring

Easy identification of cores

Labelling

Easy identification of cable make, size, and metre marked for installer record

Filler

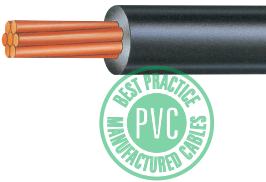
Maintains shape of cable for consistent feel

Tape

Reduced bonding between layers for easy stripping

Nexans Olex has a proud history of cable manufacturing expertise, with more than half a century of experience in the industry. Offering a comprehensive range of low voltage power and control cables, Nexans Olex has the cable you need.

PVC INSULATED



Single core copper conductors, 0.6/1kV V-90
insulated to AS/NZS 5000.1 (unsheathed), 90°C.

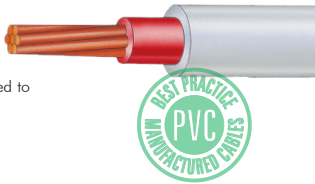
Nominal conductor area	Main conductor type	Nominal insulation thickness	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm^2		mm	mm	kg/100m		
0.5	Solid	0.8	2.4	1.0	BAAP01AA001	•
1.0	Stranded	0.8	2.8	1.5	BAAP03AA001	•
1.0	Solid	0.8	2.8	1.6	BAAP02AA001	☑
1.5	Stranded	0.8	3.1	2.0	BAAP05AA001	☑
2.5	Stranded	0.8	3.6	3.2	BAAP07AA001	☑
4	Stranded	1.0	4.5	5.1	BAAP09AA001	☑
6	Stranded	1.0	5.1	7.1	BAAP11AA001	☑
10	Stranded	1.0	6.0	11	BAAP13AA001	☑
16	Stranded	1.0	6.9	17	BAAP15AA001	☑
25	Compacted	1.2	8.4	26	BAAC17AA001	☑
35	Compacted	1.2	9.4	35	BAAC18AA001	☑
50	Compacted	1.4	10.9	48	BAAC19AA001	☑
70	Compacted	1.4	12.4	67	BAAC20AA001	☑
95	Compacted	1.6	15.2	96	BAAC22AA001	☑
120	Stranded	1.6	17.3	118	BAAP23AA001	☑
150	Stranded	1.8	18.8	144	BAAP24AA001	☑
185	Stranded	2.0	21.1	180	BAAP25AA001	☑
240	Compacted	2.2	24.1	236	BAAP26AA001	☑
300	Stranded	2.4	26.9	296	BAAP27AA001	•
400	Stranded	2.6	30.6	376	BAAP28AA001	•
500	Stranded	2.8	34.1	477	BAAP30AA001	•
630	Stranded	2.8	37.8	613	BAAP32AA001	•
Single Core PVC Insulated Copper Earth Conductor						
1.5	Stranded	0.6	2.7	1.8	AATP05AA001	☑
2.5	Stranded	0.7	3.4	3.0	AATP07AA001	☑

Colour Options This range is stocked in black. Other popular colours may also be ordered by adding the following 4 letter codes to the product code.

- Red AARD
- Blue AABE
- Black AABK
- Grey AAGY
- White AAWT
- Green/Yellow AAHN

APPROVED CABLES INITIATIVE
Cabling a Safer Australia

PVC SDI



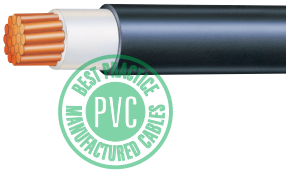
Single core copper conductors, 450/750V V-90 insulated to AS/NZS 5000 and AS/NZS 5000.2, 90°C.

Nom. cond. area	Main conductor type	Nominal insulation thickness	Nominal sheath thickness	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑
mm^2		mm	mm	mm	kg/100m		Made to Order •
1.0	Stranded	0.6	0.8	4.0	2.7	AABP02AA001	☑
1.5	Stranded	0.6	0.8	4.4	3.2	AABP05AA001	☑
2.5	Stranded	0.7	0.8	5.1	4.8	AABP07AA001	☑
4	Stranded	0.8	0.9	6.0	7.1	AABP09AA001	☑
6	Stranded	0.8	0.9	6.6	9.4	AABP11AA001	☑
10	Stranded	1.0	0.9	7.8	14	AABP13AA001	☑
16	Stranded	1.0	1.0	8.9	21	AABP15AA001	☑
25	Compacted	1.2	1.4	11.1	32	BABC17AA001	•

Colour Options This range is stocked in white with black or red cores. Other popular colours can be ordered by adding the following 4 letter codes to the product code.

- White Sheath, Black Insulated WTBK
- White Sheath, Red Insulated WTRD
- White Sheath, White Iinsulated WTWT
- Black Sheath, Green/Yellow Insulated BKHN

XLPE/PVC SINGLE CORE



Single core copper conductors, 0.6/1kV X-90 insulated, PVC sheathed to AS/NZS 5000.1, 90°C.

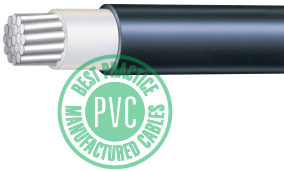
Also available in Nylon subject to minimum order quantity and lead time.

Nom. cond. area	Main conductor type	Nominal insulation thickness	Nominal sheath thickness	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm²		mm	mm	mm	kg/100m		
Copper Conductor							
16	Stranded	0.8	1.4	9.3	21	BDBP15AA001	☑
25	Compacted	0.9	1.4	10.5	30	BDBC17AA001	☑
35	Compacted	0.9	1.4	11.5	40	BDBC18AA001	☑
50	Compacted	1.0	1.4	12.9	52	BDBC19AA001	☑
70	Compacted	1.1	1.4	14.7	73	BDBC20AA001	☑
95	Stranded	1.1	1.5	17.2	101	BDBC22AA001	☑
120	Stranded	1.2	1.5	19.6	123	BDBP23AA001	☑
150	Stranded	1.4	1.6	21.3	152	BDBP24AA001	☑
185	Stranded	1.6	1.6	23.5	189	BDBP25AA001	☑
240	Stranded	1.7	1.7	26.6	246	BDBP26AA001	☑
300	Stranded	1.8	1.8	29.4	306	BDBP27AA001	☑
400	Compacted	2.0	1.9	33.3	386	BDBP28AA001	☑
500	Compacted	2.2	2.0	37.0	491	BDBP30AA001	☑
630	Compacted	2.4	2.2	41.4	635	BDBP32AA001	☑

Colour Options This range is stocked in black. Other popular colours can be ordered by adding the following 4 letter codes to the product code.

- Black CXNA
- Orange OMNA
- Green/Yellow HTNA

XLPE/PVC SINGLE CORE



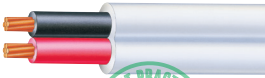
Single core aluminium conductors, 0.6/1kV X-90 insulated, PVC sheathed to AS/NZS 5000.1, 90°C.

Nom. cond. area	Main conductor type	Nominal insulation thickness	Nominal sheath thickness	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm^2		mm	mm	mm	kg/100m		
Aluminium Conductor							
25	Compacted	0.9	1.4	10.7	15	BDBA17AA001	•
35	Compacted	0.9	1.4	11.8	18	BDBA18AA001	•
50	Compacted	1.0	1.4	13.1	23	BDBA19AA001	•
70	Compacted	1.1	1.4	14.9	31	BDBA20AA001	☑
95	Compacted	1.1	1.5	16.8	40	BDBA22AA001	☑
120	Compacted	1.2	1.5	18.4	49	BDBA23AA001	☑
150	Compacted	1.4	1.6	20.5	60	BDBA24AA001	☑
185	Compacted	1.6	1.6	22.4	72	BDBA25AA001	☑
240	Compacted	1.7	1.7	25.1	91	BDBA26AA001	☑
300	Compacted	1.8	1.8	27.6	112	BDBA27AA001	☑
400	Compacted	2.0	1.9	31.1	142	BDBA28AA001	☑
500	Compacted	2.2	2.0	35.3	185	BDBA30AA001	☑
630	Compacted	2.4	2.2	39.5	233	BDBA32AA001	•

Colour Options This range is stocked in black. Other popular colours can be ordered by adding the following 4 letter codes to the product code.

- Black CXNA
- Orange OMNA
- Green/Yellow HTNA

PVC FLAT



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

Nom. cond. area	Main conductor type	Nominal insulation thickness	Nominal sheath thickness	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm^2		mm	mm	mm	kg/100m		
				2C			
1.0	Solid	0.6	0.9	6.5 X 4.2	5.0	CACP02AA002	☑
1.5	Stranded	0.6	0.9	7.2 X 4.5	6.2	CACP05AA002	☑
2.5	Stranded	0.7	1.0	8.9 X 5.4	9.7	CACP07AA002	☑
4	Stranded	0.8	1.1	10.5 X 6.3	14	CACP09AA002	☑
6	Stranded	0.8	1.1	11.6 X 6.9	19	CACP11AA002	☑
10	Stranded	1.0	1.2	14.2 X 8.3	29	CACP13AA002	☑
16	Stranded	1.0	1.3	16.3 X 9.5	43	CACP15AA002	☑
				3C			
1.5	Stranded	0.6	0.9	9.9 X 4.5	8.8	EACP05AA003	☑
2.5	Stranded	0.7	1.0	12.3 X 5.4	14	EACP07AA003	•
4.0	Stranded	0.8	1.1	14.8 x 6.4	20	EACP09AA003	☑*

Colour Options This range is stocked in white with red black or red white cores. Other popular colours can be ordered by adding the following 4 letter codes to the product code.

White with Red Black Cores	WVAA
White with Red White Cores	WVAB
Orange with Red Black Cores (WA ONLY)	OGAA
Red with Red White Cores	RDAB
Black with Red Black Cores	BKAA
White with Red White Blue Cores (3 core)	WVAA
*Black with Red Green/Yellow Black (3 core)	CXTD
White with Red Green/Yellow Black (3 core)	WVTD

PVC FLAT + EARTH

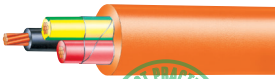
2 & 3 core+earth copper conductors, flat, 450/750V V-90 insulated, PVC sheathed to AS/NZS 5000.2, 90°C.
Low Smoke Zero Halogen alternative materials are also available subject to minimum order quantities and lead time.

Nom. cond area	Main conductor type	Nom. insul. thick	Nom. sheath thick	Earth cond. area	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm^2		mm	mm	mm^2	mm	kg/100m		
2C+E								
1.0	Solid	0.6	0.9	1.0	8.9 X 4.2	7.7	CNCP02AA002	☑
1.5	Stranded	0.6	0.9	1.5	9.9 X 4.5	8.9	CNCP05AA002	☑
2.5	Stranded	0.7	1.0	2.5	12.2 X 5.4	14	CNCP07AA002	☑
4	Stranded	0.8	1.1	2.5	13.9 X 6.3	19	CNCP09AA002	☑
6	Stranded	0.8	1.1	2.5	15.0 X 6.9	23	CNCP11AA002	☑
10	Stranded	1.0	1.2	4	18.3 X 8.3	36	CNCP13AA002	☑
16	Stranded	1.0	1.3	6	21.0 X 9.5	52	CNCP15AA002	☑
3C+E								
1.5	Stranded	0.6	0.9	1.5	12.6 X 4.5	12	ENCP05AA003	☑
2.5	Stranded	0.7	1.0	2.5	15.7 X 5.4	18	ENCP07AA003	☑

Colour Options This range is stocked in white with red black cores. Other popular colours can be ordered by adding the following 4 letter codes to the product code.

White with Red Black Cores + Green Yellow Earth	WVAA
Black with Red Black Cores + Green Yellow Earth	BKAA
White with Red White Cores + Green Yellow Earth	WVAB
White with Red White Blue Cores + Green Yellow Earth	WVAA

PVC CIRCULAR



2 & 3 core+earth copper conductors, circular, CNHP & ENHP 450/750V V-90 insulated to AS/NZS 5000.2, DNHP & FNHP 0.6/1kV V-90 insulated to AS/NZS 5000.1, PVC sheathed to AS/NZS 5000. Also available in Nylon subject to minimum order quantity and lead time.

Nom. cond. area	Main conductor type	Nom. insul. thick	Nom. sheath thick.	Earth cond. area	Nom. overall diam.	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm²		mm	mm	mm²	mm	kg/100m		
2C+E								
1.5	Stranded	0.6	1.2	1.5	8.5	12	CNHP05AA002	☑
1.5	Stranded	0.8	1.8	1.5	10.3	15	DNHP05AA002	☑
2.5	Stranded	0.7	1.2	2.5	10.0	17	CNHP07AA002	☑
2.5	Stranded	0.8	1.8	2.5	11.5	21	DNHP07AA002	☑
4	Stranded	0.8	1.3	2.5	11.4	23	CNHP09AA002	☑
4	Stranded	1.0	1.8	2.5	13.1	27	DNHP09AA002	☑
6	Stranded	0.8	1.3	2.5	12.5	30	CNHP11AA002	☑
6	Stranded	1.0	1.8	2.5	14.3	34	DNHP11AA002	☑
10	Stranded	1.0	1.8	4	16.1	47	DNHP13AA002	☑
16	Stranded	1.0	1.8	6	18.0	58	DNHP15AA002	☑
50	Stranded	1.4	1.8	16	25.8	141	DNHC19AA002	•
3C+E								
1.5	Stranded	0.6	1.2	1.5	9.2	14	ENHP05AA003	☑
1.5	Stranded	0.8	1.8	1.5	11.1	18	FNHP05AA003	☑
2.5	Stranded	0.7	1.3	2.5	11.1	21	ENHP07AA003	☑
2.5	Stranded	0.8	1.8	2.5	12.5	25	FNHP07AA003	☑
4	Stranded	0.8	1.3	2.5	12.5	28	ENHP09AA003	☑
4	Stranded	1.0	1.8	2.5	14.2	33	FNHP09AA003	☑
6	Stranded	0.8	1.3	2.5	13.6	35	ENHP11AA003	☑
6	Stranded	1.0	1.8	2.5	15.5	41	FNHP11AA003	☑
10	Stranded	1.0	1.8	4	17.6	60	FNHP13AA003	☑
16	Stranded	1.0	1.8	6	19.7	77	FNHP15AA003	☑
35	Compacted	1.2	1.8	10	24.6	141	FNHC18AA003	•
70	Compacted	1.4	1.9	25	32.0	264	FNHC20AA003	•
150	Stranded	1.8	2.3	50	46.3	542	FNHP24AA003	•
185	Stranded	2.0	2.5	70	51.8	690	FNHP25AA003	•
240	Compacted	2.2	2.7	95	58.3	915	FNHP26AA003	•
300	Stranded	2.4	2.9	120	65.9	1128	FNHP27AA003	•

PVC CIRCULAR

4 core+earth copper conductors, circular, GNHP 450/750V V-90 insulated to AS/NZS 5000.2, HNHP 0.6/1kV V-90 insulated to AS/NZS 5000.1, PVC sheathed to AS/NZS 5000.
Also available in Nylon subject to minimum order quantity and lead time.

Nom. cond. area	Main conductor type	Nom. insul. thick	Nom. sheath thick.	Earth cond. area	Nom. overall diam.	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm²		mm	mm	mm²	mm	kg/100m		
				4C+E				
1.5	Stranded	0.6	1.2	1.5	10.0	16	GNHP05AA004	☑
1.5	Stranded	0.8	1.8	1.5	12.0	21	HNHP05AA004	☑
2.5	Stranded	0.7	1.3	2.5	12.1	26	GNHP07AA004	☑
2.5	Stranded	0.8	1.8	2.5	13.5	30	HNHP07AA004	☑
4	Stranded	0.8	1.4	2.5	13.9	35	GNHP09AA004	☑
4	Stranded	1.0	1.8	2.5	15.5	40	HNHP09AA004	☑
6	Stranded	0.8	1.4	2.5	15.1	44	GNHP11AA004	☑
6	Stranded	1.0	1.8	2.5	17.0	50	HNHP11AA004	☑
10	Stranded	1.0	1.8	4	19.3	73	HNHP13AA004	☑
16	Stranded	1.0	1.8	6	21.6	96	HNHP15AA004	☑
25	Compacted	1.2	1.8	6	24.5	136	HNHC17AA004	•
35	Compacted	1.2	1.8	10	27.2	180	HNHC18AA004	•
50	Compacted	1.4	1.9	16	31.2	242	HNHC19AA004	•
95	Compacted	1.6	2.2	25	42.0	465	HNHC22AA004	•
120	Stranded	1.6	2.4	35	47.5	573	HNHP23AA004	•
150	Stranded	1.8	2.5	50	51.8	700	HNHP24AA004	•
185	Stranded	2.0	2.7	70	58.3	889	HNHP25AA004	•
240	Stranded	2.2	2.9	95	65.6	1177	HNHP26AA004	•
300	Stranded	2.4	3.1	120	77.5	1463	HNHP27AA004	•

Colour Options This range is stocked in orange. Other popular colours and white numbered insulated cores can also be purchased by replacing the last 2 letters (AA) with WW.

- Black CXAA
- Orange OMAA

XLPE/PVC MULTICORE

2 & 3 core+earth copper conductors, circular, 0.6/1kV X-90 insulated, PVC sheathed to AS/NZS 5000.1, 90°C.
Also available in Nylon subject to minimum order quantity and lead time.

Nom. cond. area	Main cond. type	Nom. insul. thick.	Nom. sheath thick.	Earth cond. area	Nom. overall diam.	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm²		mm	mm	mm²	mm	kg/100m		
2C+E								
16	Stranded	0.8	1.8	6	17.1	52	DTHP15AA002	☑
25	Compacted	0.9	1.8	6	19.3	72	DTHC17AA002	☑
35	Compacted	0.9	1.8	10	21.3	96	DTHC18AA002	☑
50	Compacted	1.0	1.8	16	24.2	129	DTHC19AA002	•
70	Compacted	1.1	1.8	25	27.8	180	DTHC20AA002	•
95	Compacted	1.1	1.9	25	31.8	238	DTHC22AA002	•
120	Stranded	1.2	2.0	35	36.6	299	DTHP23AA002	•
3C+E								
16	Stranded	0.8	1.8	6	18.6	69	FTHP15AA003	☑
25	Compacted	0.9	1.8	6	20.9	97	FTHC17AA003	☑
35	Compacted	0.9	1.8	10	23.2	132	FTHC18AA003	☑
50	Compacted	1.0	1.8	16	26.5	176	FTHC19AA003	☑
70	Compacted	1.1	1.9	25	30.8	248	FTHC20AA003	☑
95	Compacted	1.1	2.0	25	34.6	333	FTHC22AA003	☑
120	Stranded	1.2	2.1	35	39.7	416	FTHP23AA003	☑
150	Stranded	1.4	2.3	50	44.4	524	FTHP24AA003	☑
185	Stranded	1.6	2.4	70	49.7	655	FTHP25AA003	☑
240	Stranded	1.7	2.6	95	55.7	861	FTHP26AA003	•
300	Stranded	1.8	2.8	120	62.9	1066	FTHP27AA003	•

Colour Options This range is stocked in orange. Other popular colours and white numbered insulated cores can also be purchased by replacing the last 2 letters (AA) with WW.

- Black CXAA
- Orange OMAA

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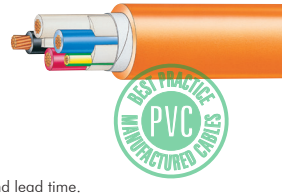
XLPE/PVC MULTICORE



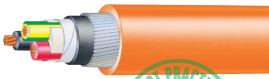
4 core+earth copper conductors, circular, 0.6/1kV X-90 insulated, PVC sheathed to AS/NZS 5000.1, 90°C.
Also available in Nylon subject to minimum order quantity and lead time.

Nom. cond. area	Main conductor type	Nom. insul. thick	Nom. sheath thick	Earth cond. area	Nom. overall diam.	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm²		mm	mm	mm²	mm	kg/100m		
				4C+E				
10	Stranded	0.7	1.8	4	17.7	64	HTHP13AA004	☑
16	Stranded	0.8	1.8	6	20.4	88	HTHP15AA004	☑
25	Compacted	0.9	1.8	6	23.1	124	HTHC17AA004	☑
35	Compacted	0.9	1.8	10	25.7	167	HTHC18AA004	☑
50	Compacted	1.0	1.9	16	29.7	225	HTHC19AA004	☑
70	Compacted	1.1	2.0	25	34.4	317	HTHC20AA004	☑
95	Compacted	1.1	2.1	25	38.8	431	HTHC22AA004	☑
120	Stranded	1.2	2.3	35	44.8	542	HTHP23AA004	☑
150	Stranded	1.4	2.4	50	49.9	676	HTHP24AA004	☑
185	Stranded	1.6	2.6	70	56.1	845	HTHP25AA004	☑
240	Compacted	1.7	2.8	95	62.6	1104	HTHP26AA004	•
300	Stranded	1.8	3.0	120	74.1	1385	HTHP27AA004	•

Colour Options This range is stocked in orange. Other popular colours and white numbered insulated cores can also be purchased by replacing the last 2 letters (AA) with WW.

- Black CXAA
- Orange OMAA

PVC SWA CIRCULAR



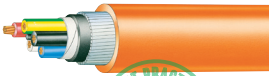
2 & 3 core+earth copper conductors, circular, 0.6/1kV V-90 insulated, PVC bedded, steel wire armoured, PVC sheathed cable to AS/NZS 5000.1, 90°C.
Also available in Nylon subject to minimum order quantities and lead time.

Nom. cond. area	Main cond. type	Nom. insul. thick.	Earth cond. area	Nom. diam. over bed.	Nom. diam. over arm.	Nom. overall diam.	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm²		mm	mm²	mm		mm	kg/100m		
2C+E									
1.5	Stranded	0.8	1.5	8.7	10.5	14.1	38	DNMP05AA002	☑
2.5	Stranded	0.8	2.5	9.9	11.7	15.4	46	DNMP07AA002	☑
4	Stranded	1.0	2.5	11.5	13.3	17.0	56	DNMP09AA002	☑
6	Stranded	1.0	2.5	13.1	15.6	19.2	77	DNMP11AA002	☑
10	Stranded	1.0	4	15.5	18.0	21.7	101	DNMP13AA002	☑
16	Stranded	1.0	6	16.4	18.9	22.6	110	DNMP15AA002	☑
25	Compact.	1.2	6	18.9	22.1	25.8	151	DNMC17AA002	•
35	Compact.	1.2	10	20.9	24.1	27.8	184	DNMC18AA002	•
50	Compact.	1.4	16	24.2	27.4	31.1	231	DNMC19AA002	•
3C+E									
1.5	Stranded	0.8	1.5	9.5	11.3	15.0	43	FNMP05AA003	☑
2.5	Stranded	0.8	2.5	10.9	12.7	16.3	53	FNMP07AA003	☑
4	Stranded	0.8	2.5	12.6	15.1	18.8	74	FNMP09AA003	☑
6	Stranded	1.0	2.5	14.9	17.4	21.1	92	FNMP11AA003	☑
10	Stranded	1.0	4	17.0	19.5	23.2	118	FNMP13AA003	☑
16	Stranded	1.0	6	18.1	21.3	24.9	146	FNMP15AA003	☑
150	Stranded	2.0	50	44.6	49.6	54.6	804	FNMP24AA003	•
185	Stranded	2.0	70	49.6	54.6	60.0	969	FNMP25AA003	•
240	Compact.	2.2	95	56.1	61.1	67.0	1211	FNMP26AA003	•
300	Stranded	2.4	120	63.2	68.2	74.6	1431	FNMP27AA003	•

Colour Options This range is stocked in orange. Other popular colours and white numbered insulated cores can also be purchased by replacing the last 2 letters (AA) with WW.

- Black CXAA
- Orange OMAA

PVC SWA CIRCULAR



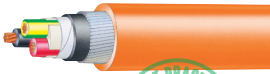
4 core+earth copper conductors, circular, 0.6/1kV V-90 insulated, PVC bedded, steel wire armoured PVC sheathed to AS/NZS 5000.1, 90°C.
Also available in Nylon subject to minimum order quantities and lead time.

Nom. cond. area	Main cond. type	Nom. insul. thick.	Earth cond. area	Nom. diam. over bed.	Nom. diam. over arm.	Nom. overall diam.	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm²		mm	mm²	mm		mm	kg/100m		
4C+E									
1.5	Stranded	0.8	1.5	10.4	12.2	15.9	47	HNMP05AA004	☑
2.5	Stranded	0.8	2.5	11.9	13.7	17.4	58	HNMP07AA004	☑
4	Stranded	1.0	2.5	13.9	16.4	20.1	84	HNMP09AA004	☑
6	Stranded	1.0	2.5	16.4	18.9	22.6	107	HNMP11AA004	☑
10	Stranded	1.0	4	18.7	21.9	25.5	151	HNMP13AA004	☑
16	Stranded	1.0	6	20.0	23.2	26.9	172	HNMP15AA004	☑
25	Compact.	1.2	6	23.1	26.3	30.0	222	HNMC17AA004	•
35	Compact.	1.2	10	25.7	28.9	32.8	277	HNMC18AA004	•
70	Compact.	1.4	25	34.5	38.5	42.9	498	HNMC20AA004	•
120	Stranded	1.6	35	45.1	50.1	55.3	829	HNMP23AA004	•
240	Compact.	2.2	95	62.9	67.9	74.3	1480	HNMP26AA004	•
300	Stranded	2.4	120	74.8	81.1	88.0	1929	HNMP27AA004	•

Colour Options This range is stocked in orange. Other popular colours and white numbered insulated cores can also be purchased by replacing the last 2 letters (AA) with WW.

- Black CXAA
- Orange OMAA

XLPE/PVC SWA MULTICORE



2 & 3 core+earth copper conductors, circular, 0.6/1kV X-90 insulated, PVC bedded, steel wire armoured, PVC sheathed to AS/NZS 5000.1,90°C. Also available in Nylon subject to minimum order quantities and lead time.

Nom. cond. area	Main cond. type	Nom. insul. thick.	Earth cond. area	Nom. diam. over bed.	Nom. diam. over arm.	Nom. overall diam.	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm^2		mm	mm^2	mm		mm	kg/100m		
2C+E									
16	Stranded	0.8	6	15.5	18.0	21.7	101	DTMP15AA002	•
25	Compact.	0.9	6	17.7	20.9	24.6	139	DTMC17AA002	•
35	Compact.	0.9	10	19.7	22.9	26.6	170	DTMC18AA002	•
50	Compact.	1.0	16	22.6	25.8	29.5	213	DTMC19AA002	•
70	Compact.	1.1	25	26.2	29.4	33.3	278	DTMC20AA002	•
95	Compact.	1.1	25	30.0	34.0	38.1	373	DTMC22AA002	•
120	Stranded	1.2	35	35.0	39.0	43.3	458	DTMP23AA002	•
3C+E									
16	Stranded	0.8	6	17.0	19.5	23.2	122	FTMP15AA003	•
25	Compact.	0.9	6	19.3	22.5	26.1	170	FTMC17AA003	☑
35	Compact.	0.9	10	21.6	24.8	28.5	212	FTMC18AA003	☑
50	Compact.	1.0	16	24.9	28.1	32.0	270	FTMC19AA003	☑
70	Compact.	1.1	25	29.4	33.4	37.6	384	FTMC20AA003	☑
95	Compact.	1.1	25	33.0	37.0	41.4	484	FTMC22AA003	☑
120	Stranded	1.2	35	37.9	41.9	46.5	589	FTMP23AA003	☑
150	Stranded	1.4	50	42.6	47.6	52.7	766	FTMP24AA003	☑
185	Stranded	1.6	70	47.7	52.7	58.0	924	FTMP25AA003	☑
240	Compact.	1.7	95	53.7	58.7	64.3	1153	FTMP26AA003	•
300	Stranded	1.8	120	60.5	65.5	71.7	1367	FTMP27AA003	•

Colour Options This range is available in orange as stock or black on request. White numbered insulated cores can also be purchased by replacing the last 2 letters (AA) with WW.

- Black 2C+E CXHF
- Orange 2C+E OMHF
- Orange 3C+E OMAA

XLPE/PVC SWA MULTICORE

4 core+earth copper conductors, circular, 0.6/1kV X-90 insulated, PVC bedded, steel wire armoured, PVC sheathed to AS/NZS 5000.1, 90°C. Also available in Nylon subject to minimum order quantities and lead time.

Nom. cond. area	Main cond. type	Nom. insul. thick.	Earth cond. area	Nom. diam. over bed.	Nom. diam. over arm.	Nom. overall diam.	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm²		mm	mm²	mm		mm	kg/100m		
4C+E									
16	Stranded	0.8	6	18.8	22.0	25.7	160	HTMP15AA004	•
25	Stranded	0.9	6	21.5	24.7	28.3	204	HTMC17AA004	☑
35	Stranded	0.9	10	24.1	27.3	31.2	257	HTMC18AA004	☑
50	Stranded	1.0	16	27.9	31.9	35.9	350	HTMC19AA004	☑
70	Stranded	1.1	25	32.8	36.8	41.3	468	HTMC20AA004	☑
95	Stranded	1.1	25	37.0	41.0	45.7	600	HTMC22AA004	☑
120	Stranded	1.2	35	43.0	48.0	53.0	783	HTMP23AA004	☑
150	Stranded	1.4	50	47.9	52.9	58.2	945	HTMP24AA004	☑
185	Stranded	1.6	70	54.1	59.1	64.7	1138	HTMP25AA004	•
240	Stranded	1.7	95	60.2	65.2	71.3	1405	HTMP26AA004	•
300	Stranded	1.8	120	71.2	77.5	84.2	1838	HTMP27AA004	•

Colour Options This range is available in orange as stock or black on request. White numbered insulated cores can also be purchased by replacing the last 2 letters (AA) with WW.

- Black CXEM
- Orange OMAA

PVC CONTROL

Multicore circular+earth copper conductors,
0.6/1kV V-90 insulated, PVC sheathed to AS/NZS 5000.1, 90°C.

Number of cores	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑
	mm	kg/100m		Made to Order •
1.5mm² (7/0.50mm)				
5+E	13.1	23	BFAP05AA005	•
6+E	14.2	28	BFAP05AA006	☑
8+E	16.4	43	BFAP05AA008	☑
10+E	17.1	36	BFAP05AA010	☑
12+E	17.9	41	BFAP05AA012	☑
20+E	21.5	61	BFAP05AA020	☑
30+E	26.0	86	BFAP05AA030	☑
50+E	31.5	132	BFAP05AA050	☑
36+E	25.2	95	BFAP05AA036	•
2.5mm² (7/0.67mm)				
6+E	15.8	39	BFAP07AA006	☑
8+E	17.3	43	BFAP07AA008	☑
10+E	19.2	52	BFAP07AA010	☑
12+E	20.2	59	BFAP07AA012	☑
20+E	24.3	88	BFAP07AA020	☑
25+E	26.9	106	BFAP07AA025	•
30+E	29.5	127	BFAP07AA030	•
36+E	30.7	144	BFAP07AA036	•
50+E	36.0	198	BFAP07AA050	•

Colour Options This range is available in black as stock or orange on request.

- Black with white numbered cores CXWW
- Orange with white numbered cores OMWW

PVC SWA CONTROL

Multicore circular+earth copper conductors,
0.6/1kV V-90 insulated, PVC bedded, steel wire armoured,
PVC sheathed to AS/NZS 5000.1, 90°C.

Number of cores	Nominal diameter over bedding	Nominal diameter over armour	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
	mm	mm	mm	kg/100m		
1.5mm² (7/0.50mm)						
6+E	12.6	14.4	18.0	57	BFCP05AA006	☑
10+E	15.5	18.0	21.7	85	BFCP05AA010	☑
12+E	16.3	18.8	22.5	92	BFCP05AA012	☑
20+E	19.9	23.1	26.7	136	BFCP05AA020	☑
30+E	24.4	27.6	31.2	176	BFCP05AA030	☑
36+E	25.4	28.6	32.4	193	BFCP05AA036	•
40+E	27.8	31.0	34.9	213	BFCP05AA040	•
50+E	30.1	34.1	38.3	271	BFCP05AA050	•
2.5mm² (7/0.67mm)						
6+E	14.2	16.7	20.4	84	BFCP07AA006	•
10+E	17.6	20.1	23.8	106	BFCP07AA010	☑
12+E	18.6	21.8	25.4	128	BFCP07AA012	•
15+E	20.3	23.5	27.2	147	BFCP07AA015	•
20+E	22.7	25.9	29.6	173	BFCP07AA020	☑
25+E	25.3	28.5	32.3	200	BFCP07AA025	•
30+E	27.9	31.1	35.0	230	BFCP07AA030	•
50+E	34.4	38.4	42.9	355	BFCP07AA050	•

Colour Options This range is available in black as stock or orange on request.

- Black with white numbered cores CXWW
- Orange with white numbered cores OMWW

XLPE URD POWER

4 core copper and aluminium conductors, 0.6/1kV X-90 insulated, PVC sheathed to AS/NZS 4026, 90°C.

Nom. cond. area	Main conductor type	Nom. insul. thick.	Diam. over insul.	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ / Made to Order •
mm^2		mm	mm	mm	kg/100m		
LV Distribution – Aluminium							
185	Solid Sector	1.6	17.5	43.6	283	XDDS25AA004	☑
240	Solid Sector	1.7	19.8	49.0	362	XDDS26AA004	☑
185	Stranded Sector	1.6	18.1	47.5	287	XDDA25AA004	☑
240	Stranded Sector	1.7	20.4	53.2	365	XDDG37AA004	☑
LV Service – Copper							
16	Stranded	1.5	7.9	21.5	77	HEVP15AA004	☑
25	Stranded	1.7	9.3	24.8	116	HEVC17AA004	☑
35	Stranded	1.7	10.3	27.3	151	HEVC18AA004	☑
50	Stranded	1.8	11.7	30.8	201	HEVC19AA004	☑

Note: A range of PVC or XLPE insulated neutral screened cables are available on request.

The above XLPE URD Distribution and Service Cable are generic reference designs. For additional information on Nexans Olex product approved for use on Australian utility networks, please contact your Account Manager or email olex.utilities@nexans.com.

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XLPE AERIAL BUNDLED

2, 3 & 4 core stranded aluminium conductors, aerial bundled cable 0.6/1kV X-90UV insulated, to AS/NZS 3560.1, 90°C.

Nominal conductor area	Nominal insulation thickness	Nominal diameter over insulation	Diameter over laid up cores	Approx. mass	**Product code**	Made to Stock • Made to Order •
mm^2	mm	mm	mm	kg/100m		
2C						
25	1.3	8.6	17.2	19	XDAB17AA002	☑
35	1.3	9.6	19.3	25	XDAB18AA002	☑
50	1.5	11.2	22.3	34	XDAB19AA002	☑
95	1.7	14.9	29.8	64	XDAB22AA002	☑
3C						
25	1.3	8.6	18.5	29	XDAB17AA003	☑
35	1.3	9.6	20.8	37	XDAB18AA003	☑
50	1.5	11.2	24.1	50	XDAB19AA003	•
70	1.5	12.8	27.5	70	XDAB20AA003	•
4C						
25	1.3	8.6	20.8	38	XDAB17AA004	☑
35	1.3	9.6	23.2	50	XDAB18AA004	☑
50	1.5	11.2	27.0	67	XDAB19AA004	☑
70	1.5	12.8	30.8	93	XDAB20AA004	•
95	1.7	14.9	36.0	127	XDAB22AA004	☑
120	1.7	16.3	39.3	156	XDAB23AA004	•
150	1.7	17.7	42.8	188	XDAB24AA004	☑

Note: A range of XLPE insulated hard drawn copper aerial bundle cables are available on request.

The above XLPE Aerial cables are generic reference designs. For additional information on Nexans Olex product approved for use on Australian utility networks, please contact your Account Manager or email olex.utilities@nexans.com.

OLEX-FLEXS™

EASY TO BEND
EASY TO INSTALL

Nexans
Olex

Easy to Install

Easier to bend and install in tight spaces, so projects are completed faster

Complete Range

Full range of single and multicore cable sizes to meet any building requirements

No Cutting Charge

Free cut to length service as per your design specifications

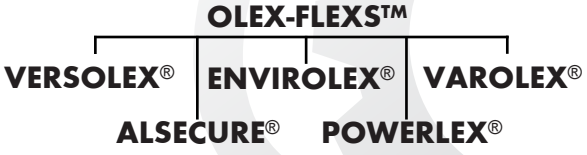
Quick Project Turnaround

Popular conductor sizes held as stock to meet quick project turnarounds without delay

A wide range of flexible cables for building and industrial applications. The flexibility that makes your installation easy yet functions in a truly diverse range of operating environments.

Easy to use and easy to install. Complete your job with less time and reduce the total cost of ownership of your next project.

Trust Olex-Flexs™, the complete solution for all your flexible cable requirements.



VERSOLEX® 90°C SINGLE CORE

Single core flexible copper conductors, 0.6/1kV X-90 insulated and TPE-90 sheathed to AS/NZS 5000.1 (power) and AS/NZS 1995 (Welding), 90°C.

Nominal conductor area	Maximum diameter of wires	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑
mm²	mm	mm	kg/100m		Made to Order •
10	0.21	8.5	14	BDSX01AA001	☑
16	0.21	9.8	20	BDSX02AA001	☑
25	0.21	11.3	28	BDSX03AA001	☑
35	0.21	12.5	37	BDSX04AA001	☑
50	0.31	14.3	51	BDSX05AA001	☑
70	0.31	16.2	71	BDSX06AA001	☑
95	0.31	18.1	92	BDSX07AA001	☑
120	0.51	20.6	108	BDSE87AA001	☑
150	0.51	22.5	144	BDSE88AA001	☑
185	0.51	24.6	175	BDSE89AA001	☑
240	0.51	27.7	228	BDSE90AA001	☑
300	0.51	31.0	282	BDSE91AA001	☑
400	0.51	35.4	369	BDSE92AA001	☑
500	0.51	40.0	466	BDSE93AA001	•
630	0.51	44.6	618	BDSE94AA001	•

Multicore

Multicore flexible copper conductors, 0.6/1kV X-90 insulated and TPE-90 sheathed to AS/NZS 3191 and AS/NZS 5000.1 where applicable, 90°C.

Nominal conductor area	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑
mm²	mm	mm	mm	kg/100m		Made to Order •
2C+E						
1.5	0.7	1.8	10.3	14	PTFR04AA002	☑
2.5	0.7	1.8	11.3	18	PTFR05AA002	☑
4	0.7	1.8	11.9	21	PTFR06AA002	☑
6	0.7	1.8	12.8	26	PTFR07AA002	•

ACI APPROVED CABLES INITIATIVE
Cabling a Safer Australia

VERSOLEX® 90°C MULTICORE

Multicore flexible copper conductors, 0.6/1kV X-90 insulated and TPE-90 sheathed to AS/NZS 3191 and AS/NZS 5000.1 where applicable, 90°C.

Nominal conductor area	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑
mm²	mm	mm	mm	kg/100m		Made to Order •
3C+E						
1.5	0.7	1.8	11.1	16	PTFR04AA003	•
2.5	0.7	1.8	12.2	21	PTFR05AA003	☑
4	0.7	1.8	13.0	26	PTFR06AA003	☑
6	0.7	1.8	13.9	33	PTFR07AA003	•
10	0.7	1.8	16.9	51	PTFX01AA003	•
16	0.8	1.8	19.4	68	PTFX02AA003	•
25	0.9	1.8	22.2	92	PTFX03AA003	•
35	0.9	1.8	25.2	125	PTFX04AA003	•
4C+E						
1.5	0.7	1.8	12.0	19	PTFR04AA004	☑
2.5	0.7	1.8	13.1	25	PTFR05AA004	☑
4	0.7	1.8	14.1	32	PTFR06AA004	☑
6	0.7	1.8	15.2	41	PTFR07AA004	☑
10	0.7	1.8	18.5	63	PTFX01AA004	☑
16	0.8	1.8	21.4	88	PTFX02AA004	☑
25	0.9	1.8	24.7	117	PTFX03AA004	☑
35	0.9	1.8	28.0	159	PTFX04AA004	☑
50	1.0	2.0	32.9	229	PTFX05AA004	☑
70	1.1	2.2	38.3	320	PTFX06AA004	•
95	1.1	2.2	42.1	405	PTFX07AA004	•
120	1.2	2.4	48.2	522	PTFE87AA004	•
150	1.4	2.6	53.7	654	PTFE88AA004	•
185	1.6	2.6	59.8	805	PTFE89AA004	•
240	1.7	3.0	67.9	1060	PTFE90AA004	•
300	1.8	3.0	78.3	1320	PTFE91AA004	•

Colour Options Single core is stocked in Orange. Multicores are stocked in black. Other popular colours can be ordered using adding the following 4 letter codes to the product code:

- Black Single: CXNA, 2C: CXHF, 3C: CXRJ, 4C: CXEM
- Orange Single: OMNA, 2C: OMHF, 3C: OMRJ, 4C: OMEM
- Green/Yellow Single: HTNA

ENVIROLEX® 110°C SINGLE CORE

Single core flexible copper conductor, 0.6/1kV X-HF-110 insulated, HFS-110-TP sheathed to AS/NZS 5000.1, AS/NZS 1995, and AS/NZS 4507 RHE, low smoke zero halogen insulation and sheath, 110° C continuous.

Nominal conductor area	Maximum diameter of wires	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm^2	mm	mm	kg/100m		
10	0.21	8.6	16	BZHX01AA001	☑
16	0.21	9.8	23	BZHX02AA001	☑
25	0.21	11.3	31	BZHX03AA001	☑
35	0.21	12.5	40	BZHX04AA001	☑
50	0.31	14.3	56	BZHX05AA001	☑
70	0.31	16.2	75	BZHX06AA001	☑
95	0.31	18.1	98	BZHX07AA001	☑
120	0.51	20.4	113	BZHE87AA001	☑
150	0.51	22.5	151	BZHE88AA001	☑
185	0.51	24.8	182	BZHE89AA001	☑
240	0.51	27.9	236	BZHE90AA001	☑
300	0.51	30.8	295	BZHE91AA001	☑
400	0.51	34.7	382	BZHE92AA001	☑
500	0.51	40.0	483	BZHE93AA001	☑
630	0.51	44.6	635	BZHE94AA001	☑

Colour Options Available in black as stock. Other popular colours can be ordered by adding the following 4 letter codes:

- Black CXNA
- Orange OMNA
- Green/Yellow HTNA

ENVIROLEX® 110°C MULTICORE

Multicore flexible copper conductor, 0.6/1kV X-HF-110 insulated, HFS-110-TP sheathed to AS/NZS 5000.1, AS/NZS 1995, and AS/NZS 4507 RHE, Low smoke zero halogen insulation and sheath, 110° C continuous.

Nominal conductor area	Nom. Insul Thickness	Nom. Sheath Thickness	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm^2	mm	mm	mm	kg/100m		
2C+E						
1.5	0.7	1.8	10.3	17	PTHR04AA002	☑
2.5	0.7	1.8	11.3	22	PTHR05AA002	☑
4	0.7	1.8	11.9	25	PTHR06AA002	☑
3C+E						
2.5	0.7	1.8	12.2	24	PTHR05AA003	☑
4	0.7	1.8	13.0	29	PTHR06AA003	☑
4C+E						
1.5	0.7	1.8	12.0	22	PTHR04AA004	☑
2.5	0.7	1.8	13.1	28	PTHR05AA004	☑
4	0.7	1.8	14.1	35	PTHR06AA004	☑
6	0.7	1.8	15.2	45	PTHR07AA004	☑
10	0.7	1.8	18.5	67	PTHX01AA004	☑
16	0.8	1.8	21.4	96	PTHX02AA004	☑
25	0.9	1.8	24.7	133	PTHX03AA004	☑
35	0.9	1.8	28.0	178	PTHX04AA004	☑
50	1.0	2.0	32.9	256	PTHX05AA004	☑
70	1.1	2.2	38.3	356	PTHX06AA004	•
95	1.1	2.2	42.1	447	PTHX07AA004	•
120	1.2	2.4	48.2	574	PTHE87AA004	•
150	1.4	2.6	53.7	714	PTHE88AA004	•
185	1.6	2.6	59.8	872	PTHE89AA004	•
240	1.7	3.0	67.9	1144	PTHE90AA004	•
300	1.8	3.0	87.2	1501	PTHE91AA004	•

Colour Options Available in black as stock. Other popular colours can be ordered by adding the following 4 letter codes:

- Black — 2C: CXHF, 3C: CXRJ, 4C: CXEM
- Orange — 2C: OMHF, 3C: OMRJ, 4C: OMEM

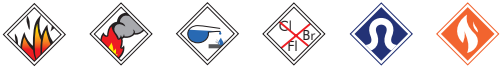
APPROVED CABLES INITIATIVE
Cabling a Safer Australia

ALSECURE® FIRE RATED CABLE

Alsecure is the range of fire performance cables to use when safety and security are critical to your project. Our Alsecure® range incorporates stranded or flexible conductors for easy handling and installation and a choice of two Fire Rated protection technologies; Mica Tape or Nexans Olex's own Ceramifiable.

Setting the Highest Standards

Properties	Australian Standards	International Standards
Fire Performance	AS/NZS 4507	
Fire Resistant	AS/NZS 3013 WS52W	
Bunched Cable Flame Retardant	AS/NZS 1660.5.1	IEC60332-1
Low Smoke	AS/NZS 1660.5.2	IEC61034-2
Halogen Free	AS/NZS 1660.5.3	IEC60754-1
Non Corrosive	AS/NZS 1660.5.4	IEC60754-2
Circuit Integrity	AS/NZS 1660.5.5	IEC60331.11
Single Cable Flame Retardant	AS/NZS 1660.5.6	IEC60332-3



Alsecure® Plus Mica Tape 110ºC Single and Multicore

Alsecure® Plus utilises the tried and true Glass Mica Tape technology. The tape barrier provides circuit integrity in accordance with AS/NZS 3013 WS52W.

Alsecure® Premium Ceramifiable 90ºC Single and Multicore

Alsecure® Premium Ceramifiable is the latest in polymer composite technology. When exposed to flame, the material transforms from a flexible plastic covering into a tough insulating ceramic barrier that preserves circuit integrity. By eliminating the need for the traditional Mica Tape, Alsecure® Premium can provide valuable time savings during installation.

FEATURES AND BENEFITS

Flexible Copper Conductor
For added ease of handling and installation

Low Smoke Zero Halogen Materials
Non-toxic emissions in the event of a fire and contributes to the green star rating of your project

Mica Tape
Provides the cable with circuit integrity to ensure operation of key safety systems in the event of fire

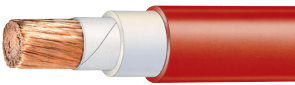
Ceramifiable Insulation
Provides the cable with circuit integrity with the added benefit of being easy to strip

90 or 110ºC Rated Insulation and Sheath
To maximise your utilisation of copper

APPLICATIONS

- Fire resistant power circuits
- Consumer mains and subs mains
- Lift sub mains
- Power cable to fire pumps

ALSECURE® PLUS MICA TAPE SINGLE CORE



Single core flexible copper conductor, Mica taped, 0.6/1kV X-HF-110 insulated, HFS-110-TP sheathed to AS/NZS 5000.1 AS/NZS 4507 RHE and AS/NZS 3013 WS52W, 110°C.

Nom. Cond. area	Nom. insul. thick.	Nom. sheath thick.	Nom. overall diam.	Approx. mass	Min. bending radius during install	Max pulling tension	**Product code**	Made to Stock ☑ Made to Order •
mm^2	mm	mm	mm	kg/100m	mm	kN		
10	0.7	1.4	8.9	18	40	0.22	PFLX01AA001	☑
16	0.8	1.4	10.1	24	61	0.34	PFLX02AA001	☑
25	0.9	1.4	11.6	34	70	0.53	PFLX03AA001	☑
35	0.9	1.4	13.5	44	81	0.72	PFLX04AA001	☑
50	1.0	1.4	15.3	63	92	1.08	PFLX05AA001	☑
70	1.1	1.4	17.2	82	103	1.5	PFLX06AA001	☑
95	1.1	1.6	19.3	110	116	2.0	PFLX07AA001	☑
120	1.2	1.6	21.6	134	130	2.5	PFLE87AA001	☑
150	1.4	1.6	23.5	162	141	3.1	PFLE88AA001	☑
185	1.6	1.8	26.2	196	236	3.8	PFLE89AA001	☑
240	1.7	1.8	29.1	254	262	5.1	PFLE90AA001	☑
300	1.8	1.8	31.8	309	286	6.2	PFLE91AA001	☑
400	2.0	2.0	35.9	396	323	8.1	PFLE92AA001	☑
500	2.2	2.2	40.8	510	367	10.6	PFLE93AA001	☑
630	2.4	2.2	45.0	646	405	13.7	PFLE94AA001	☑

Colour Options Available in red as standard. Other popular colours can be ordered using the following 4 character codes:

- Red JBNA
- Black CXAA

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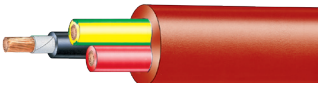
Cabling a Safer Australia

ALSECURE® PLUS MICA TAPE MULTICORE



Multicore flexible copper conductors, Mica taped, 0.6/1kV X-HF-110 insulated, HFS-110-TP sheathed to AS/NZS 5000.1, AS/NZS 4507 RHE and AS/NZS 3013 WS52W, 110°C.

Nominal conductor area	Nominal insulation thickness	Nominal sheath thickness	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm^2	mm	mm	mm	kg/100m		
2C+E						
2.5	0.7	1.8	14.2	27	PDGP07AA002*	☑
4C+E						
10	0.7	1.8	21.1	80	PDGX01AA004	☑
16	0.8	1.8	23.9	110	PDGX02AA004	☑
25	1.0	1.8	27.7	175	PDGX03AA004	☑
35	1.0	1.8	31.5	230	PDGX04AA004	☑
50	1.0	2.0	35.9	312	PDGX05AA004	☑

Note: *These codes utilise non flexible conductor

Colour Options Available in red as standard.

● Red JBNA

ALSECURE® PREMIUM CERAMIFIABLE SINGLE CORE

Single core flexible copper conductor, 0.6/1kV, Ceramifiable HFI-90-TP insulated, HFS-90-TP sheathed to AS/NZS 5000.1, AS/NZS 4507 and AS 3013 WS52W, 90°C.

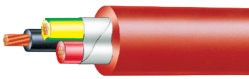
Nom. cond. area	Nom. insul. thick	Nom. sheath thick.	Nom. overall diam.	Approx. mass	Min. bending radius during install	Max. pulling tension	**Product code**	Made to Stock ☑ Made to Order •
mm^2	mm	mm	mm	kg/100m	mm	kN		
10	1.0	1.4	9.6	18	43	0.22	PXKX01AA001	•
16	1.0	1.4	10.6	24	63	0.34	PXKX02AA001	•
25	1.2	1.4	12.3	32	73	0.49	PXKX03AA001	•
35	1.2	1.4	13.5	42	81	0.69	PXKX04AA001	•
50	1.4	1.4	15.5	58	93	1.00	PXKX05AA001	•
70	1.4	1.6	17.6	80	105	1.43	PXKX06AA001	•
95	1.6	1.6	19.7	103	118	1.89	PXKX07AA001	•
120	1.6	1.6	21.8	119	131	2.19	PXKE87AA001	•
150	1.8	1.6	23.7	157	142	3.01	PXKE88AA001	•
185	2.0	1.8	26.4	192	238	3.67	PXKE89AA001	•
240	2.2	1.8	29.5	248	265	4.85	PXKE90AA001	•
300	2.4	2.0	32.8	308	295	6.06	PXKE91AA001	•
400	2.6	2.0	36.5	400	328	7.99	PXKE92AA001	•
500	2.8	2.2	42.0	503	378	10.1	PXKE93AA001	•
630	2.8	2.2	45.8	651	412	13.5	PXKE94AA001	•

Colour Options Popular colours can be ordered using the following 4 character codes:

- ● Red JBAA
- ● Black CXAA

ACI APPROVED CABLES INITIATIVE
Cabling a Safer Australia

ALSECURE® PREMIUM CERAMIFIABLE MULTICORE



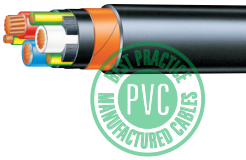
Multicore copper conductor, 0.6/1kV, Ceramifiable HFI-90-TP insulated, HFS-90-TP sheathed to AS/NZS 5000.1, AS/NZS 4507 and AS 3013 WS52W, 90°C.
Note: Alsecure Premium multicore utilises non-flexible copper conductors

Number of cores	Nom. cond. area	Nom. insul. thick.	Nom. sheath thick.	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
	mm^2	mm	mm	mm	kg/100m		
2C & 2C+E							
2	2.5	1.0	1.8	12.0	19	PEKP07AA002	•
2	4	1.0	1.8	13.0	23	PEKP09AA002	•
2+E	2.5	1.0	1.8	12.3	23	PDKP07AA002	•
2+E	4	1.0	1.8	13.2	27	PDKP09AA002	•
2+E	6	1.0	1.8	14.2	32	PDTP11AA002	•
2+E	10	1.0	1.8	15.9	43	PDTP13AA002	•
3C & 3C+E							
3	2.5	1.0	1.8	12.6	23	PEKP07AA003	•
3	4	1.0	1.8	13.7	29	PEKP09AA003	•
3+E	1.5	1.0	1.8	11.2	21	PDKP05AA003	•
3+E	2.5	1.0	1.8	13.3	27	PDKP07AA003	•
3+E	4	1.0	1.8	14.3	33	PDKP09AA003	•
3+E	6	1.0	1.8	15.5	41	PDTP11AA003	•
3+E	10	1.0	1.8	17.3	56	PDTP13AA003	•
3+E	16	1.0	1.8	19.4	78	PDTP15AA003	•
3+E	25	1.2	1.8	22.0	109	PDTC17AA003	•
3+E	35	1.2	1.8	24.4	141	PDTC18AA003	•
4C & 4C+E							
4	1.5	1.0	1.8	12.4	22	PEKP05AA004	•
4+E	1.5	1.0	1.8	13.1	25	PDKP05AA004	•
4+E	2.5	1.0	1.8	14.4	32	PDKP07AA004	•
4+E	4	1.0	1.8	15.6	40	PDKP09AA004	•
4+E	6	1.0	1.8	16.9	49	PDTP11AA004	•
4+E	10	1.0	1.8	19.0	69	PDTP13AA004	•
4+E	16	1.0	1.8	21.4	97	PDTP15AA004	•
4+E	25	1.2	1.8	24.4	138	PDTC17AA004	•
4+E	35	1.2	1.8	27.1	180	PDTC18AA004	•
4+E	50	1.4	1.9	31.5	243	PDTC19AA004	•

Colour Options Popular colours can be ordered using the following 4 character codes:

- Red JBAA
- Black CXAA

VAROLEX® VSD/EMC



3C + 3E copper conductor, 0.6/1kV X-90 insulated, PVC bedded, copper tape screened, PVC sheathed to AS/NZS 5000.1, 90°C.

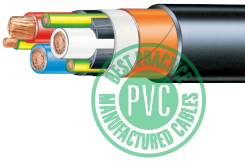
Nom. cond. area	Nom. insul. thick	Combined earth size area	Nominal dia.over screen	Nom. overall diam.	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm²	mm	mm²	mm	mm	kg/100m		
2.5	0.7	2.5*	10.9	14.6	32	FTDP07AA003	☑
4	0.7	4.5	13.0	16.6	44	FTDP09AA003	☑
6	0.7	4.5	13.8	17.5	51	FTDP11AA003	☑
10	0.7	4.5	14.8	18.5	62	FTDP13AA003	☑
16	0.8	7.5	17.0	20.6	86	FTDP15AA003	☑
25	0.9	12	19.2	22.8	121	FTDC17AA003	☑
35	0.9	18	21.9	25.6	160	FTDC18AA003	☑
50	1.0	30	25.1	28.8	211	FTDC19AA003	☑
70	1.1	30	28.1	32.0	277	FTDC20AA003	☑
95	1.1	48	33.9	38.0	390	FTDC22AA003	☑
120	1.2	48	38.9	43.2	467	FTDP23AA003	☑
150	1.4	75	42.6	47.3	585	FTDP24AA003	☑
185	1.6	75	47.5	52.0	711	FTDP25AA003	☑
240	1.7	105	53.6	58.9	918	FTDP26AA003	•
300	1.8	150	59.6	65.2	1154	FTDP27AA003	•

Note: *Split earth not feasible, therefore a single earth conductor is utilised.
This range does not utilise flexible conductors.

Colour Options This range is available in black as stock. Add the 4 letter code to the end of the product code to place an order

- Black CXRJ

VAROLEX® VSD FLEXIBLE CONDUCTOR



3C + 3E flexible copper conductors, 0.6/1kV X-90 insulated, PVC bedded, copper tape screened, PVC sheathed to AS/NZS 5000.1, 90°C.

Range Coming Soon. Call 1300 CABLES for availability.

Nom. cond. area	Nom. insul. thick	Combined earth size area	Nom. overall diam.	Approx. mass	Min. Bend Radius (installed)	**Product code**	Made to Stock ☑ Made to Order •
mm^2	mm	mm^2	mm	kg/100m	mm		
1.5	0.7	1.5*	13.5	26	162	FTDR04AA003	☑
2.5	0.7	2.5*	14.6	33	175	FTDR05AA003	☑
4.0	0.7	4.5	16.8	46	202	FTDR06AA003	☑
6.0	0.7	4.5	18.7	59	224	FTDR07AA003	☑
10	0.7	4.5	20.3	76	243	FTDX01AA003	☑
16	0.7	7.5	22.6	101	271	FTDX02AA003	☑
25	0.9	12	25.5	133	306	FTDX03AA003	☑
35	0.9	18	28.1	174	338	FTDX04AA003	☑
50	1.0	30	33.0	246	396	FTDX05AA003	☑
70	1.1	30	37.4	321	449	FTDX06AA003	☑
95	1.1	48	41.5	414	498	FTDX07AA003	☑
120	1.2	48	46.5	511	558	FTDE87AA003	☑
150	1.4	75	51.0	631	612	FTDE88AA003	☑
185	1.6	75	56.0	750	672	FTDE89AA003	☑
240	1.7	105	63.0	973	752	FTDE90AA003	☑
300	1.8	150	69.0	1207	827	FTDE91AA003	☑

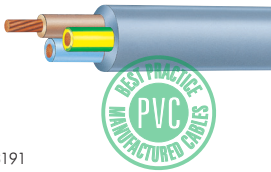
Note: *Split earth not feasible, therefore a single earth conductor is utilised.

Colour Options This range will be available in black as stock and can be ordered by added the 4 letter code to the end of the product code to place an order

- Black CXRJ

APPROVED CABLES INITIATIVE
Cabling a Safer Australia

POWERLEX® PVC OD CORDS



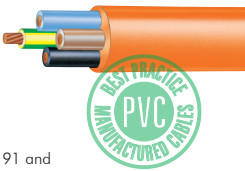
2, 3, 4C+E flexible copper conductors, 250/440V V-90 insulated and sheathed ordinary duty flexible cord to AS/NZS 3191 and AS/NZS 60227.

Nominal conductor area	Maximum diameter of wires	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm^2	mm	mm	kg/100m		
2C					
0.75	0.21	6.2	5.6	CAHR02AA002	☑
1.0	0.21	6.6	6.4	CAHR03AA002	•
1.5	0.21	7.5	8.7	CAHR04AA002	•
2.5	0.21	9.2	13	CAHR05AA002	•
2C+E					
0.75	0.21	6.6	6.5	EAHR02AA003	☑
1.0	0.21	6.9	7.6	EAHR03AA003	☑
1.5	0.21	8.1	11	EAHR04AA003	☑
2.5	0.21	9.9	17	EAHR05AA003	☑
4	0.31	11.2	23	EAHR06AA003	☑
3C+E					
0.75	0.21	7.2	7.9	GAHR02AA004	•
1.0	0.21	7.8	9.5	GAHR03AA004	☑
1.5	0.21	9.1	13	GAHR04AA004	☑
2.5	0.21	10.9	20	GAHR05AA004	☑
4	0.31	12.3	28	GAHR06AA004	•
4C+E					
1.0	0.21	8.5	10	APAR03AA005	•
1.5	0.21	10.1	14	APAR04AA005	•
2.5	0.21	12.1	22	APAR05AA005	•
4.0	0.31	13.9	31	APAR06AA005	•

Colour Options This range is available in black as stock. Other popular colours can be ordered by adding the following 4 letter codes to the product code.

- ● Black BKAA
- ● Orange OGAA
- ● Grey GYAA
- ○ White KKAA

POWERLEX® PVC HD CORDS



1, 2C+E and 3C+E flexible copper conductors, 0.6/1kV V-90 insulated and PVC sheathed heavy duty flexible cord to AS/NZS 3191 and AS/NZS 3012.

Nominal conductor area	Maximum diameter of wires	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock / Made to Order •
mm^2	mm	mm	kg/100m		
Single Core 0.6/1kV – V-90 Insulated, Flexible Cord					
0.75	0.21	2.7	1.3	BAAR02AA001	•
1.0	0.21	2.9	1.6	BAAR03AA001	•
1.5	0.21	3.2	2.1	BAAR04AA001	•
2.5	0.21	3.8	3.3	BAAR05AA001	•
2C+E					
1.0	0.21	9.0	11	EBGR03AA003	☑
1.5	0.21	9.9	14	EBGR04AA003	☑
2.5	0.21	11.7	21	EBGR05AA003	☑
3C+E					
1.5	0.21	10.9	18	GBGR04AA004	•
2.5	0.21	12.9	25	GBGR05AA004	•

Note to OD and HD cord insulation colours:
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
Light blue is normally used as a neutral (where applicable)
V-90HT is available on request subject to minimum production runs

Colour Options This range is available in black as stock. Other popular colours can be ordered by adding the following 4 letter codes to the product code.

- ● Black BKAA
- ● Orange OGAA
- ● Grey GYAA
- ○ White KKAA

APPROVED CABLES INITIATIVE
Cabling a Safer Australia

DATA AND COMMS

Nexans Polex

FEATURES AND BENEFITS

Aluminium Tape Screen
Provides uninterrupted clean signals

LSOH
For added safety in the event of a fire

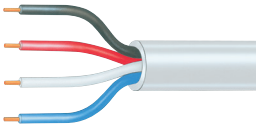
Nylon
For rodent and termite resistance

Rip Cord
Easy stripping for safe and fast installation

Steel Wire Armour
For added mechanical strength

The Nexans Olex range of data and communications cables are designed to meet the needs of customers today and in the future. Our comprehensive Datolex® range has been specifically designed with the installer in mind while our Gardolex® range of extra low voltage cables make garden lighting simple, reliable and economical.

SECURITY



Used in control circuits associated with security systems including detection, monitoring and access control.
Designed for use in ELV systems at maximum 50V AC or 120V DC.

Unscreened Security

Stranded bare copper conductor, PVC insulated, cores laid up, PVC sheathed

No. of conductors	Nominal conductor area	Nominal overall diameter	Approx. mass	Max. DC resistance @20°C	**Product code**	Made to Stock ☑ / Made to Order •
	mm²	mm	kg/100m	ohm/km		
7/0.20 mm Conductor						
4	0.22	3.6	1.4	100	JSC.2xx4C*	☑
6	0.22	4.9	3.1	100	JSC.2xx6C*	☑
14/0.20mm Conductor						
4	0.44	4.7	3.2	50	JSC.5xx4C*	☑
6	0.44	6.1	4.7	50	JSC.5xx6C*	☑

* Pack size: 1 – 100m spool; B30 – 300m box; B20 - 200m box (6C only)
Insulation colours: 4C – Red, Black, White, Blue; 6C – Red, Black, White, Blue, Green, Yellow.

Screened Security

Stranded bare copper conductor, PVC insulated, twisted pair, aluminium foil overall tape screened and stranded tinned copper drain wire, PVC sheathed.

Number of conductors	Nominal conductor area	Nominal overall diameter	Approx. mass	Max. DC resistance @20°C	**Product code**	Made to Stock ☑ / Made to Order •
	mm²	mm	kg/100m	ohm/km		
7/0.25 mm Conductor						
2 Pair (individually screened)	0.35	4.2	2.8	55	JD2PIS*	☑

Note: *Pack size: AA – 100m spool; B30 300m box.
Also available in jelly filled version JD2PISFP3, Grey PVC Sheath, 7/0.25mm T/C drain wire.
Insulation colours: Black and Red, Green and White. xx sheath colour.

FIGURE 8

Two stranded bare copper conductors, PVC insulated (parallel webbed).

Nominal conductor size	Nominal overall size	Stranding	Insulation thickness	Approx. mass	Maximum direct current resistance @ 20°C	**Product code**	Made to Stock ☑ Made to Order •
mm^2	mm	no./mm	mm	kg/100m	ohm/km		
Standard							
0.5	2.0 X 4.0	14/0.20	0.5	2.0	50	JSF.5xx*	☑
0.75	3.0 X 6.0	24/0.20	0.8	3.0	29.2	JSF.75xx*	☑
Oxygen Free Copper							
2	7.0 X 3.4	64/0.20	0.8	5.2	10.9	JSF2.0CL*	☑
2.6	9.0 X 4.5	84/0.20	1.0	8.1	7.4	JSF2.6CL1	☑

Note: *Pack size xx sheath colour.

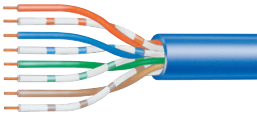
Security Cable Colour Options This range is available in white or grey. Replace "xx" with the colour codes below.

- GY Grey
- WT White

Figure 8 Cable Colour Options: This range is available in white with black stripe, but can be made to order subject to MOQ and lead time in other popular variations.

- BKWT White with black stripe
- WTBK Black with white stripe
- RDBK Red with black stripe
- GY Grey
- CL Clear

LAN



Used in high speed data/comms networks.
Manufactured for compatibility with the RJ type connector.

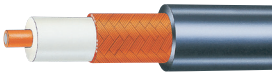
LAN

Bare copper conductor, polyolefin insulated, twisted pairs, PVC sheathed.
Polyethelene sheathed for LAN underground.

No. of pairs	Nominal conductor area	Nominal overall diameter	Stranding	Approx. mass	Maximum conductor resistance @ 20°C	Nominal impedence	Mutual capac.	**Product Code**	Made to Stock ☑ Made to Order •
	mm²	mm	no./mm	kg/100m	ohm/km	ohms	pF/m		
LAN									
4	0.22	5.3	1/0.50	3.2	93.8	100	51	JCAT5E	☑
4	0.22	5.3	1/0.50	3.2	93.8	100	51	JCAT56	☑
LAN UNDERGROUND									
4	0.22	5.7	1/0.50	3.2	93.8	100	51	JCAT5EFPA3	☑
4	0.22	6.3	1/0.54	4.2	93.8	100	51	JCAT6FPA3	☑

Colours:
- LAN (Cat5 and Cat 6) Blue
- LAN Underground Black

COAXIAL



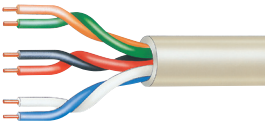
Used in baseband and broadband video systems, digital data link applications and digital highways.

Coaxial 75 Ohm

Bare annealed copper conductor, PE insulated, bare copper wire braid, black PVC sheathed.

Nom. overall diam.	Stranding	Approx. mass	Shield	Max cond. resist @ 20°C	Nom. capac	Nom. velociy prop.	**Product code**	Made to Stock ☑ Made To Order •
mm	no./mm	kg/100m		ohm/km	pF/m	%		
6.1	1/0.60	5.2	85% B/C Braid	62.2	67	66	JBCRG59BUCCTV	☑

TELEPHONE INTERNAL



Used in networks within telephone exchanges, commercial switchboards and interconnecting wiring systems for some data applications.

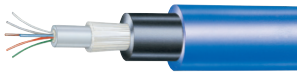
Internal, PVC Insulated, PVC Sheath

Solid bare copper conductor, PE insulated twisted pair, PVC sheathed, manufactured to Category 3 standard.

Pairs	Nominal overall diameter	Wire size	Approx. mass	Sheath colour	**Product code**	Made to Stock ☑ Made to Order •
	mm	mm	kg/100m			
2	4.1	0.5	1.3	Cream	TINT002	☑

Note: External telephone cable designs are also available on request.

OPTICAL FIBRE



Designed for duct installation or direct burial, where water or termite resistance are required.

Nylon Underground

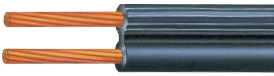
Optical Fibres contained in jelly filled mono/loose tube, aramid yarn reinforced, PE sheathed and nylon oversheath.

Description	Nom. over. diam.	Approx. mass	Maximum pulling tension	Minimum bending radius		**Product code**	Made to Stock ☑ Made to Order •
	mm	kg/100m	kN	During install	Installed		
Multi Mode (0M1)							
62.5/125 μm 6 Fibre	8.5	6.0	1.5	170	85	FIB06MMJN	•
62.5/125 μm 8 Fibre	8.5	6.0	1.5	170	85	FIB08MMJN	•
62.5/125 μm 12 Fibre	8.5	6.0	1.5	170	85	FIB12MMJN	•
62.5/125 μm 24 Fibre	11.0	9.5	2.3	220	110	FIB24MMJN	•
Multi Mode (0M3)							
50/125 μm 12 Fibre	8.5	6.0	1.5	170	85	FIB120M3JN	•

Options

Fibre counts up to 324 fibre are available upon request for loose tube cables
Corrugated Steel Tape (CST) Armouring
Composite (combination of single and multi mode)
ADSS (All Dielectric Self Supporting)
Sacrificial Sheath
Low Smoke Zero Halogen (LSZH) outer sheath
Rodent Resistance

GARDOLEX® PVC GARDEN LIGHTING



Used for outdoor AC/DC lighting applications, Gardolex is a robust PVC insulated power cable suitable for projects of all sizes.

Figure 8, plain annealed copper, PVC insulated.

Stranded Bare Copper Conductors, PVC insulated (parallel web), water resistant. Designed for ELV systems at maximum 50 V AC or 120V DC.

No. of cores	Nom. cond. area	Stranding	Nominal overall size	Approx. mass	Max direct current resistance @ 20°C	Voltage drop single phase @ 45°C	Current rating	**Product code**	Made to Stock ☑ Made to Order •
	mm^2	no./mm	mm	kg/100m	ohm.km	mV/A.m	A		
2	1.3	26/0.25	4.0 X 8.6	7	15.3	33.6	18	JSF1.3GLBK	☑
2	2.5	76/0.20	4.0 X 9.35	10	8.00	17.6	25	JSF2.5GLBK	☑
2	4	56/0.30	5.0 X 10.4	12	4.95	10.9	33	JSF4GLBK	☑
2	6	81/0.30	6.0 X 12.5	16	3.30	7.25	42	JSF6GLBK	☑
2	10	348/0.20	6.7 X 13.9	25	1.91	4.20	57	JSF10GLBK	•

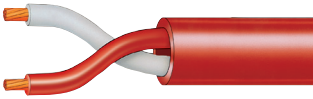
DETONATING

Used as shot firing wire, connected to detonators in mining, geological and exploration industries. 2 Core (1/0.70mm) tinned copper conductor, PVC insulated in twisted pair or figure 8 configuration. White with red stripe.

Configuration	Nominal conductor area	Nominal overall size	Approx. mass	Maximum conductor resistance @ 20°C	**Product code**	Made to Stock ☑ Made to Order •
	mm^2	mm	kg/100m	ohm/km		
Twister Pair	0.38	3.2 X 1.6	0.8	47.6	JDW2CRDWT	☑
Figure 8	0.38	3.2 X 1.6	0.8	47.6	JDW1PRDWT	☑

Note: JDW1 stocked in 100m or 200m, JDW2 500m

FIRE ALARM



Used in evacuation systems, smoke detectors and alarms.

Unscreened

Stranded bare copper conductor, PVC insulated, flat parallel or twisted pair, PVC sheath.

Nom. cond. area	Stranding	Nominal overall diameter/ size	Approx. mass	Max. cond. resistance @20°C	Voltage rating	**Product code**	Made to Stock ☑ Made to Order •
mm^2	No./mm	mm	kg/100m	ohm/km			
1.5	7/0.50	7.0	5.0	13.6	ELV	JRS1502	☑
1.5	7/0.50	4.6 X 7.3	10.0	13.6	450/750	CACP05AA002	☑

Note: JRS1502 stocked in 500m

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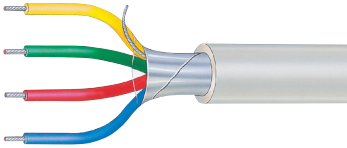
DATA



Designed for the interconnection of data terminal and communications equipment. This range of cables can be used to connect equipment operating on the EIA standards RS232 and RS485.

RS232

Stranded (7/0.2mm) tinned copper conductors, PVC cores laid up, aluminium foil overall tape screened with a stranded drain wire, PVC sheath.

Cores	Nom. cond. area	Nominal overall diameter	Approx. mass	Max. cond. resistance @20°C	Nominal pair	**Product code**	Made to Stock ☑
	mm²	mm	kg/100m	ohm/km	pF/m		Made to Order •
6	0.22	5.5	4.2	93.3	90	JD6CSAA	☑

Note: JD6CSAA is available in 100 or 300m

RS485

Stranded (7/0.2mm) tinned copper conductors, PE insulated, twisted pair, aluminium foil overall tape screened and tinned copper braid shield (90% coverage), PVC sheathed.

Pairs	Nom. cond. area	Nominal overall diameter	Approx. mass	Max. cond. resistance @20°C	Nominal pair	**Product code**	Made to Stock ☑
	mm²	mm	kg/100m	ohm/km	pF/m		Made to Order •
1 Pair	0.22	5.9	6.0	83.5	50	JD1PS485A3	☑

COMPOSITE

Composite Coaxial and Control Core

RG59 coaxial with braid (95% coverage) with two 24/0.20mm power cores (250V/250V), PVC insulated, positioned either side of coaxial, black PVC sheathed.

Nominal overall size	Approx. mass	Nominal insulation thickness	DC resistance @ 20°C	Voltage drop single phase @ 45°C	**Product code**	Made to Stock ☑ Made to Order •
mm	kg/100m	mm	ohm/km	mV/A.m		
13 x 7.8	12	0.8	26	57.1	JCOMP1	☑

Composite LAN (2 Pair and Earth)

2 pair 7/0.25mm tinned copper, individually shielded with 7/0.67 bare copper insulated earth, PVC sheathed.

Nominal overall size	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
mm	kg/100m		
9.6 X 5.8	8.4	J8723+2.5BW250	☑

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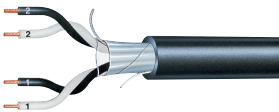
TRAFFIC SIGNALLING

Traffic Signalling Multicore Power Cable

Stranded (7/0.50mm) bare copper conductor, 0.6/1kV PVC insulated, orange PVC sheathed to AS/NZS 2276.1.

Cores	Power Stranding	Control stranding	Nominal overall diameter	Approx. mass	**Product code**	Made to Stock ☑
			mm	kg/100m		Made to Order •
13	3 X 2.5	10 X 1.5	17.6	43	LXMP07AA013	•
19	3 X 2.5	16 X 1.5	19.9	59	LXMP07AA019	•
29	3 X 2.5	26 X 1.5	23.7	81	LXMP07AA029	•
29	3 X 4.0	26 X 1.5	26.0	92	LXMP09AA029	•
51	3 X 4.0	48 X 1.5	32.3	143	LXMP09AA051	•

INSTROLEX® INSTRUMENTATION



Overall Screened Pairs

Designed to transmit clean signals within industrial environments where there is a high level of electromagnetic interference. Uses include process control, oil and gas and heavy industry.

Pairs	Nominal overall diameter	Mininum bending radius	Maximum pulling tension	Approx. mass	**Product code**	Made to Stock ☑
	mm	mm	kN	kg/100m		Made to Order •
Conductor 0.5mm² (7/0.30mm)						
1	5.2	31	0.07	3.5	IEB183AA001	•
2	7.8	47	0.14	6.3	IEC183AA002	•
4	8.4	50	0.28	9.4	IEC183AA004	•
6	10.0	60	0.42	13	IEC183AA006	•
8	11.2	67	0.56	17	IEC183AA008	•
10	12.5	75	0.70	21	IEC183AA010	•
12	13.4	80	0.84	24	IEC183AA012	•
16	15.1	91	1.12	31	IEC183AA016	•
20	16.8	101	1.40	38	IEC183AA020	•
24	18.1	109	1.68	45	IEC183AA024	•
36	22.0	132	2.52	66	IEC183AA036	•
50	25.6	153	3.50	90	IEC183AA050	•
Conductor 1.5mm² (7/0.50mm)						
1	6.6	40	0.21	6	IEB184AA001	•
2	9.9	60	0.42	11	IEC184AA002	•
4	10.9	65	0.84	18	IEC184AA004	•
6	13.0	78	1.26	26	IEC184AA006	•
8	14.6	88	1.68	33	IEC184AA008	•
10	16.3	98	2.10	41	IEC184AA010	•
12	17.5	105	2.52	48	IEC184AA012	•
16	20.0	120	3.36	63	IEC184AA016	•
20	22.3	134	4.20	79	IEC184AA020	•
24	24.1	145	5.04	93	IEC184AA024	•
36	29.2	175	7.56	137	IEC184AA036	•
50	34.2	205	10.50	188	IEC184AA050	•

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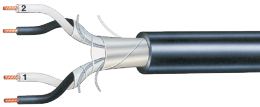
INSTROLEX® INSTRUMENTATION



Individually and Overall Screened Pairs

Plain annealed copper conductor, V-90 PVC insulated, twisted pairs, individually and overall screened with aluminium polyester tape plus tinned copper drain wire, rip cord, V-90 PVC sheathed, tested to confirm limited flame propagation.

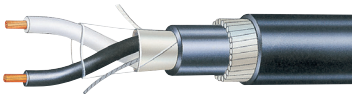
Pairs	Nominal overall diameter	Mininum bending radius	Maximum pulling tension	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
	mm	mm	kN	kg/100m		
Conductor 0.5mm² (7/0.30mm)						
2	8.1	49	0.14	7.3	IED183AA002	•
4	10.4	62	0.28	12	IED183AA003	•
6	12.2	73	0.42	17	IED183AA006	•
8	13.9	84	0.56	22	IED183AA008	•
10	14.6	88	0.70	26	IED183AA010	•
12	16.0	96	0.84	31	IED183AA012	•
16	18.0	108	1.12	39	IED183AA016	•
20	20.1	120	1.40	48	IED183AA020	•
24	21.9	131	1.68	57	IED183AA024	•
36	26.3	158	2.52	83	IED183AA036	•
50	30.6	184	3.50	112	IED183AA050	•
Conductor 1.5mm² (7/0.50mm)						
2	10.3	62	0.42	13	IED184AA002	•
4	13.4	81	0.84	22	IED184AA004	•
6	16.1	97	1.26	32	IED184AA006	•
8	18.2	109	1.68	40	IED184AA008	•
10	19.3	116	2.10	49	IED184AA010	•
12	20.9	125	2.52	57	IED184AA012	•
16	23.9	143	3.36	75	IED184AA016	•
20	26.5	159	4.20	92	IED184AA020	•
24	29.0	174	5.04	110	IED184AA024	•
36	35.1	210	7.56	162	IED184AA036	•
50	40.8	245	10.50	220	IED183AA050	•

Colour This range can be ordered in black. Add the following 4 letters to the product code.

- Black CXAA

INSTROLEX®
INSTRUMENTATION SWA

Overall Screened Pairs with SWA



Plain annealed copper conductor, V-90 PVC insulated, twisted pairs, overall screened with aluminium polyester tape plus tinned copper drain wire, rip cord, PVC bedding, steel wire armour, V-90 PVC sheathed, tested to confirm limited flame propagation.

Pairs	Nom. diam. over bed.	Nom. diam over armour	Nominal overall diameter	Mininum bending radius	Max. pulling tension	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
	mm	mm	mm	mm	kN	kg/100m		
Conductor 0.5mm² (7/0.30mm)								
2	7.4	9.2	11.4	137	2.3	25	IEG183AA002	☑
4	8.0	9.8	12.0	144	2.4	28	IEG183AA004	☑
6	9.4	11.2	13.6	164	2.8	36	IEG183AA006	•
8	10.6	12.4	14.8	178	3.1	42	IEG183AA008	•
10	11.7	13.5	16.1	193	3.4	48	IEG183AA010	•
12	12.6	14.4	17.0	204	3.6	54	IEG183AA012	•
16	14.3	16.1	18.9	227	4.2	65	IEG183AA016	•
20	15.8	18.3	21.1	253	6.4	86	IEG183AA020	•
24	17.1	19.6	22.7	272	6.9	97	IEG183AA024	•
36	20.5	23.0	26.3	316	8.2	127	IEG183AA036	•
50	23.9	26.4	29.9	259	9.5	160	IEG183AA050	•
Conductor 1.5mm² (7/0.50mm)								
1	6.2	8.0	10.2	123	2.0	22	IGF184AA001	•
2	9.4	11.2	13.6	163	2.8	34	IEG184AA002	☑
4	10.3	12.1	14.5	174	3.1	42	IEG184AA004	☑
6	12.2	14.0	16.6	199	3.6	55	IEG184AA006	•
8	13.8	15.6	18.2	219	4.0	65	IEG184AA008	•
10	15.2	17.7	20.6	247	6.2	87	IEG184AA010	•
12	16.5	19.0	22.1	265	6.7	99	IEG184AA012	•
16	18.8	21.3	24.4	292	7.5	119	IEG184AA016	•
20	20.8	23.3	26.6	319	8.3	140	IEG184AA020	•
24	22.6	25.1	28.6	344	9.0	161	IEG184AA024	•
36	27.7	30.2	34.4	413	11.0	223	IEG184AA036	•
50	32.3	35.5	39.7	477	16.4	307	IEG184AA050	•

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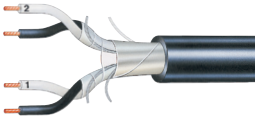
INSTROLEX®
INSTRUMENTATION SWA

Individually and Overall Screened Pairs with SWA



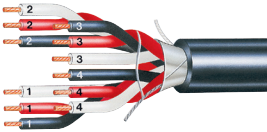
Plain annealed copper conductor, V-90 PVC insulated, twisted pairs, individually and overall screened with aluminium polyester tape plus tinned copper drain wire, rip cord, PVC bedding, steel wire armour, V-90 PVC sheathed, tested to confirm limited flame propagation.

Pairs	Nom. diam. over bed.	Nom. diam. over armour	Nom. overall diam.	Min. bend radius	Max. pulling tension	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
	mm	mm	mm	mm	kN	kg/100m		
Conductor 0.5mm² (7/0.30mm)								
2	7.7	9.5	11.7	141	2.4	26	IEH183AA002	•
4	9.8	11.6	14.0	168	2.9	35	IEH183AA004	•
6	11.6	13.4	16.0	192	3.4	45	IEH183AA006	•
8	13.1	14.9	17.5	210	3.8	52	IEH183AA008	•
10	13.8	15.6	18.2	219	4.0	58	IEH183AA010	•
12	15	16.8	19.6	235	4.3	66	IEH183AA012	•
16	17	19.5	22.6	271	6.9	91	IEH183AA016	•
20	18.8	21.3	24.4	293	7.5	104	IEH183AA020	•
24	20.4	22.9	26.2	315	8.2	118	IEH183AA024	•
36	24.6	27.1	30.6	368	9.8	155	IEH183AA036	•
50	29.1	31.6	35.8	430	11.5	202	IEH183AA050	•
Conductor 1.5mm² (7/0.50mm)								
2	9.7	11.5	13.9	167	2.9	36	IEH184AA002	•
4	12.6	14.4	17.1	205	3.6	51	IEH184AA004	•
6	15.1	17.6	20.4	245	6.2	78	IEH184AA006	•
8	17.1	19.6	22.7	272	6.9	92	IEH184AA008	•
10	18.1	20.6	23.7	284	7.4	103	IEH184AA010	•
12	19.6	22.1	25.4	305	7.9	116	IEH184AA012	•
16	22.4	24.9	28.4	341	9.0	143	IEH184AA016	•
24	27.5	30.0	33.9	407	11.0	194	IEH184AA024	•

Colour This range can be ordered in black. Add the following 4 letters to the product code.

- Black CXAA

INSTROLEX® TRIPLES



Plain annealed copper conductor, V-90RP PVC insulated, twisted triples, individual and/or overall screened with aluminium polyester tape plus tinned copper drain wire, rip cord, V-90RP PVC sheathed.

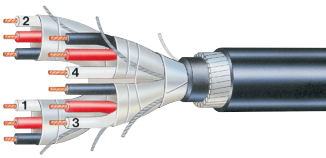
Overall Screened

Triples	Nominal overall diameter	Mininum bending radius	Maximum pulling tension	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
	mm	mm	kN	kg/100m		
Conductor 0.5mm² (7/0.30mm)						
4	10.0	60	0.42	13	IGC183AA004	•
6	11.7	70	0.63	19	IGC183AA006	•
12	16.1	96	1.26	35	IGC183AA012	•
16	18.1	109	1.68	45	IGC183AA016	•
36	26.4	159	3.78	96	IGC183AA036	•
Conductor 1.5mm² (7/0.50mm)						
1	6.9	42	0.32	7.8	IGB184AA001	•
4	13.0	78	1.26	26	IGC183AA004	•
6	15.6	93	1.89	38	IGC184AA006	•
12	21.1	126	3.78	71	IGC184AA012	•
16	24.1	145	5.04	93	IGC184AA016	•
36	35.4	212	11.3	202	IGC184AA036	•

Individual and Overall Screened

Triples	Nominal overall diameter	Mininum bending radius	Maximum pulling tension	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
	mm	mm	kN	kg/100m		
Conductor 0.5mm² (7/0.30mm)						
4	11.0	66	0.42	16	IGD183AA004	•
6	13.4	79	0.63	22	IGD183AA006	•
12	17.0	102	1.26	40	IGD183AA012	•
16	19.4	116	1.68	52	IGD183AA016	•
36	28.2	169	3.78	111	IGD183AA036	•
Conductor 1.5mm² (7/0.50mm)						
4	14.2	85	1.26	29	IGD184AA004	•
6	17.1	102	1.89	42	IGD184AA006	•
12	22.4	135	3.78	78	IGD184AA012	•
16	25.6	154	5.04	103	IGD184AA016	•
36	37.6	225	11.3	223	IGD184AA036	•

INSTROLEX® TRIPLES SWA



Plain anealed copper conductor, V-90RP PVC insulated, twisted triples, individual and/or overall screened with aluminium polyester tape plus tinned copper drain wire, rip cord, V-90RP PVC sheathed with SWA variations.

Overall Screened SWA

Triples	Nom. diam. over bed.	Nom. diam. over armour	Nom. overall diam.	Min. bend. radius	Max. pulling tension	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
	mm	mm	mm	mm	kN	kg/100m		
Conductor 0.5mm² (7/0.30mm)								
4	9.4	11.2	13.6	164	2.8	36	IGG183AA004	•
12	15.0	16.8	19.7	236	4.3	70	IGG183AA012	•
16	17.1	19.6	22.7	272	6.9	97	IGG183AA016	•
Conductor 1.5mm² (7/0.50mm)								
1	6.6	8.4	10.6	127	2	24	IGF184AA001	•
4	12.2	14	16.6	199	3.6	55	IGG184AA004	•
12	19.8	22.3	25.6	307	8	132	IGG184AA012	•

Individual and Overall Screened SWA

Triples	Nom. diam. over bed.	Nom. diam. over armour	Nom. overall diam.	Min. bend. radius	Max pulling tension	Approx. mass	**Product code**	Made to Stock ☑ Made to Order •
	mm	mm	mm	mm	kN	kg/100m		
Conductor 0.5mm² (7/0.30mm)								
4	10.4	12.2	14.6	175	3.1	40	IGH183AA004	•
12	15.9	18.4	21.3	256	6.5	88	IGH183AA012	•
16	18.1	20.6	23.7	284	7.4	107	IGH183AA016	•
Conductor 1.5mm² (7/0.50mm)								
4	13.4	15.2	17.9	214	3.9	60	IGH184AA004	•
12	21.0	23.5	26.7	321	8.3	140	IGH184AA012	•

Colour This range can be ordered in black. Add the following 4 letters to the product code.

- Black CXAA

CURRENT RATINGS

Nexans Olex is dedicated to providing industry leading service. The following information is provided to assist in the selection of cables and gland accessories and includes a comprehensive listing of general data and current ratings as calculated in accordance with International Electrotechnical Commission Publication IEC 60287.

Nexans Olex

CURRENT RATINGS

2x1 CORE PVC

Single Phase Current Ratings
Two single core V-90 PVC or PVC/PVC 0.6/1kV cables.

Con. 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	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
1	16	16	16	13	16	13	13	11	14	11	8	6	23	18	23	18	26	21	33.0	51.6
1.5	21	21	21	16	23	16	24	18	20	14	12	8	32	23	32	23	36	26	18.0	33.0
2.5	30	29	39	31	40	32	41	32	33	25	20	16	41	32	52	41	58	47	11.2	18.0
4	40	39	49	40	54	41	54	41	44	33	27	20	52	41	69	52	77	58	7.50	11.2
6	51	49	67	54	72	56	70	54	56	43	36	28	69	52	89	69	99	77	4.46	7.50
10	69	67	89	69	97	75	94	73	75	58	48	38	89	69	116	90	129	100	2.81	4.68
16	92	72	119	92	119	92	112	87	90	70	59	46	116	90	147	139	155	120	1.78	2.95
25	124	96	145	113	146	113	138	107	110	86	–	–	123	139	174	168	130	186	145	0.96
35	153	119	177	137	184	143	170	132	136	105	–	–	158	225	215	206	160	228	177	0.680
50	187	145	223	173	230	178	212	164	169	131	–	–	122	95	89	69	99	77	2.81	4.68
70	238	184	276	214	267	208	242	188	193	150	–	–	38	46	190	147	139	108	155	120
95	295	229	321	249	308	239	282	219	225	175	–	–	424	329	329	255	354	274	0.352	0.535
120	344	267	367	285	358	279	320	249	256	199	–	–	480	374	373	291	408	317	0.301	0.439
150	395	307	424	331	428	334	381	298	305	238	–	–	556	434	438	342	472	368	0.255	0.352
185	459	357	505	394	495	388	–	–	–	–	–	–	628	491	496	388	546	425	0.229	0.300
240	549	427	582	456	577	456	–	–	–	–	–	–	713	564	575	454	621	487	0.209	0.256
300	636	495	676	535	668	535	–	–	–	–	–	–	805	644	649	520	721	570	0.194	0.226
400	744	583	780	624	770	627	–	–	–	–	–	–	904	737	750	611	816	652	0.181	0.202
500	867	685	897	730																
630	1014	808																		

CURRENT RATINGS

2X1 CORE PVC FLEXIBLE

Single Phase Current Ratings
Two single core V-90 PVC or PVC/PVC 0.6/1kV cables.

Conductor size	Unenclosed space	Spaced from surface		Touching	Enclosed conduit in air		Underground ducts			Single phase voltage drop mV/A.m
mm²										
	Cu - Flex	Cu - Flex		Cu - Flex	Cu - Flex		Cu - Flex		Cu - Flex	
1	17	17		13	14		19		–	47.5
1.5	21	21		17	18		23		–	32.2
2.5	29	28		22	24		31		–	19.4
4	38	38		30	31		40		–	12.0
6	49	48		38	40		50		–	8.03
10	69	67		54	54		68		–	4.65
16	91	88		71	69		87		–	2.96
25	121	115		94	91		112		–	1.91
35	150	143		117	110		136		–	1.36
50	189	179		147	139		168		–	0.960
70	238	224		185	169		205		–	0.688
95	287	269		223	206		244		–	0.718
120	341	317		265	237		282		–	0.431
150	393	365		306	278		324		–	0.362
185	450	416		351	312		363		–	0.314
240	541	498		422	373		429		–	0.262
300	624	571		486	–		493		–	0.234
400	752	682		583	–		572		–	0.208
500	876	787		675	–		663		–	0.193
630	1036	914		785	–		754		–	0.180

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Cabling a Safer Australia

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CURRENT RATINGS

2x1 CORE XLPE

Single Phase Current Ratings
Two single core XLPE/PVC 90°C 0.6/1kV cables.

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	
mm²																			mV/A.m	
	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
1	20		20		16		16		13		8		20		20		24		54.1	
1.5	26		25		20		21		16		10		26		26		30		34.7	
2.5	36		36		28		30		24		14		36		36		41		18.9	
4	48		47		37		38		30		19		46		46		53		11.8	
6	61		60		47		47		38		24		58		58		66		7.87	
10	84		82		65		65		52		32		78		78		87		4.68	
16	112	87	108	84	86	67	84	65	67	52	43	33	139	107	100	78	112	87	2.95	4.91
25	151	117	145	112	117	91	113	87	90	70	58	45	179	139	131	102	146	114	1.87	3.08
35	186	144	177	137	144	111	135	105	108	84	72	56	215	167	157	122	175	136	1.35	2.24
50	228	177	216	167	176	136	166	129	133	103	–	–	255	198	189	147	211	164	1.01	1.65
70	291	226	273	212	224	174	204	159	164	127	–	–	313	243	233	181	258	200	0.710	1.15
95	361	280	338	262	278	216	255	198	204	158	–	–	375	291	285	221	309	239	0.528	0.840
120	422	328	393	305	325	253	292	226	233	181	–	–	427	332	325	252	358	278	0.431	0.672
150	486	377	451	350	375	291	329	255	263	204	–	–	480	372	365	283	401	311	0.365	0.557
185	565	439	522	406	436	340	387	301	309	241	–	–	543	423	423	329	463	359	0.311	0.455
240	678	527	622	485	522	408	461	360	369	288	–	–	630	492	497	388	536	417	0.262	0.363
300	787	612	718	562	605	473	–	–	–	–	–	–	711	556	562	440	620	482	0.233	0.307
400	923	723	836	660	708	559	–	–	–	–	–	–	808	638	653	516	706	553	0.211	0.261
500	1078	850	966	772	821	656	–	–	–	–	–	–	913	729	739	590	800	632	0.196	0.228
630	1261	1003	1113	904	950	772	–	–	–	–	–	–	1026	833	856	695	930	740	0.184	0.204

CURRENT RATINGS

2X1 CORE XLPE FLEXIBLE

Single Phase Current Ratings
Two single core XLPE/PVC 90°C 0.6/1kV cables.

Conductor size	Unenclosed space		Spaced from surface		Touching		Enclosed conduit in air		Underground ducts			Single phase voltage drop
mm^2												mV/A.m
	Cu	Flex	Cu	Flex	Cu	Flex	Cu	Flex	Cu	Flex		
1	21		21		16		17		21	–		49.8
1.5	26		26		20		21		26	–		34.0
2.5	35		34		27		28		35	–		20.3
4	46		46		36		37		45	–		12.6
6	59		58		46		46		56	–		8.42
10	83		81		64		64		77	–		4.87
16	110		106		85		82		98	–		3.10
25	147		141		114		109		127	–		2.00
35	183		174		141		132		154	–		1.43
50	231		218		178		167		190	–		1.00
70	292		274		225		204		232	–		0.718
95	351		328		271		248		276	–		0.558
120	418		389		322		286		319	–		0.448
150	483		448		373		336		368	–		0.375
185	555		512		428		377		412	–		0.323
240	668		613		515		452		486	–		0.269
300	772		705		594		–		548	–		0.239
400	933		843		715		–		650	–		0.211
500	1090		975		830		–		733	–		0.195
630	1288		1135		969		–		860	–		0.181

CURRENT RATINGS

2x1 CORE 110°C

Single Phase Current Ratings
Two single core R-HF-110, R-E-110 or X-HF-110°C insulated cables.

Cond. size	Unenclosed space	Spaced from surface	Touching	Conduit in air	Enclosed partially surrounded by thermal insulation	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	Cu	Cu
1	25	24	20	20	16	10	31	23	26	57.4
1.5	32	31	25	25	20	13	39	29	33	36.8
2.5	45	44	36	35	28	18	55	40	46	20.1
4	59	58	47	46	37	23	71	53	59	12.5
6	75	73	59	58	46	30	89	66	74	8.35
10	103	99	81	78	62	40	119	88	97	4.97
16	137	131	107	104	83	53	154	115	127	3.12
25	183	175	143	137	109	72	198	148	163	1.99
35	225	214	176	165	132	88	238	177	195	1.43
50	276	261	215	205	164	–	282	214	236	1.07
70	349	328	272	255	204	–	346	262	288	0.751
95	434	406	339	321	257	–	416	321	352	0.556
120	505	471	394	369	296	–	473	366	400	0.453
150	581	540	454	430	344	–	531	420	448	0.382
185	673	624	527	493	394	–	601	477	517	0.323
240	806	743	630	594	476	–	698	561	600	0.271
300	934	857	730	–	–	–	789	648	694	0.240
400	1094	998	853	–	–	–	898	738	790	0.216
500	1278	1155	990	–	–	–	1018	837	921	0.199
630	1498	1334	1146	–	–	–	1148	973	1045	0.185

CURRENT RATINGS

2x1 CORE 110°C FLEXIBLE

Single Phase Current Ratings
Two single core R-HF-110, R-E-110 or X-HF-110°C insulated cables.

Conductor size	Unenclosed space		Spaced from surface		Touching		Conduit in air		Underground ducts		Single phase voltage drop
mm²											mV/A.m
	Cu	Flex	Cu	Flex	Cu	Flex	Cu	Flex	Cu	Flex	
1	26		26		21		21		24	–	52.8
1.5	32		32		26		25		30	–	36.0
2.5	43		42		34		33		39	–	21.6
4	57		56		45		45		51	–	13.4
6	73		70		57		56		64	–	8.94
10	102		98		80		77		86	–	5.17
16	135		129		105		102		112	–	3.28
25	178		170		139		133		143	–	2.13
35	221		210		172		167		176	–	1.51
50	279		263		218		207		215	–	1.06
70	351		329		273		263		266	–	0.760
95	422		395		329		312		312	–	0.588
120	500		466		390		364		359	–	0.471
150	577		536		450		426		414	–	0.393
185	660		611		516		481		464	–	0.338
240	794		732		621		583		548	–	0.280
300	916		841		716		–		631	–	0.246
400	1105		1006		860		–		734	–	0.216
500	1290		1164		999		–		855	–	0.199
630	1529		1359		1168		–		977	–	0.184

2 CORE PVC

Single Phase Current Ratings
Two core V-90 PVC/PVC 0.6/1kV cables.

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	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
1	15		14		13		11		7		17		17		51.6	
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	66	80	62	68	52	64	49	40	31	114	88	86	66	2.81	4.67
25	113	88	107	83	90	70	85	66	53	41	147	114	112	87	1.78	2.93
35	139	108	131	101	112	87	105	81	65	51	178	138	136	106	1.28	2.13
50	170	132	159	124	133	103	127	99	–	–	211	163	162	126	0.957	1.57
70	215	167	201	156	170	132	161	125	–	–	259	201	202	157	0.673	1.09
95	265	205	248	192	204	158	198	154	–	–	311	241	243	189	0.498	0.798
120	307	239	288	224	241	187	230	179	–	–	355	276	282	220	0.405	0.638
150	351	272	328	255	271	210	263	204	–	–	398	309	317	246	0.342	0.528
185	403	314	377	294	313	244	302	235	–	–	449	350	363	283	0.290	0.431
240	477	373	446	349	364	285	357	279	–	–	520	406	421	329	0.243	0.343
300	547	429	511	401	424	333	409	321	–	–	586	460	483	379	0.215	0.290
400	631	500	589	467	482	383	471	373	–	–	663	526	548	434	0.194	0.245
500	716	575	668	536	561	451	534	429	–	–	741	595	628	504	0.180	0.215

CURRENT RATINGS

2 CORE PVC FLEXIBLE

Single Phase Current Ratings
Two core V-90 PVC/PVC 0.6/1kV cables.

Conductor size	Unenclosed space	Touching	Enclosed conduit in air round or flat cable		Underground ducts	Single phase voltage drop
mm²						mV/A.m
	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	
1	16	15	13	18	47.5	
1.5	20	18	17	22	32.3	
2.5	26	25	23	29	19.4	
4	35	33	29	38	12.0	
6	45	42	38	48	8.03	
10	63	59	51	65	4.65	
16	83	78	68	85	2.95	
25	110	104	87	108	1.91	
35	137	128	109	133	1.36	
50	171	161	134	163	0.955	
70	215	202	169	202	0.683	
95	257	241	198	236	0.528	
120	304	285	236	277	0.424	
150	348	326	267	313	0.353	
185	395	370	305	353	0.305	
240	470	439	368	419	0.253	
300	537	502	415	472	0.224	
400	636	593	500	560	0.198	
500	728	678	564	629	0.182	

2 CORE XLPE

Single Phase Current Ratings
Two core XLPE/PVC or X-HF-90 90°C 0.6/1kV cables.

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	
mm^2															mV/A.m	
	Cu	**Al**	**Cu**	**Al**	**Cu**	**Al**	**Cu**	**Al**	**Cu**	**Al**	**Cu**	**Al**	**Cu**	**Al**	**Cu**	**Al**
1	18		17		16		14		9		19		19		54.1	
1.5	24		22		20		18		11		24		24		34.7	
2.5	34		31		28		25		16		34		34		18.9	
4	45		42		37		33		21		45		45		11.8	
6	57		53		46		42		27		56		56		7.85	
10	78		73		63		58		36		75		75		4.68	
16	104	81	97	75	82	63	78	60	49	38	132	102	98	75	2.95	4.90
25	140	109	131	102	110	85	105	81	66	51	170	132	128	99	1.86	3.08
35	173	134	162	125	132	102	129	100	81	63	205	159	154	119	1.35	2.23
50	211	163	197	153	162	126	158	122	–	–	244	189	185	144	1.00	1.65
70	268	208	250	194	200	155	200	155	–	–	300	233	228	177	0.703	1.15
95	331	257	309	239	250	194	247	192	–	–	360	279	279	216	0.520	0.835
120	385	299	359	279	285	222	287	223	–	–	410	319	318	247	0.423	0.666
150	441	342	411	319	332	257	328	255	–	–	460	357	365	283	0.355	0.550
185	509	396	473	369	377	293	379	295	–	–	520	405	413	322	0.299	0.448
240	604	472	562	439	448	350	449	351	–	–	603	471	485	379	0.249	0.355
300	694	544	645	505	523	410	516	404	–	–	680	533	558	437	0.219	0.298
400	804	636	745	590	596	472	596	472	–	–	771	610	663	501	0.198	0.249
500	915	734	848	680	695	557	678	544	–	–	862	691	728	583	0.182	0.218

CURRENT RATINGS

2 CORE XLPE FLEXIBLE

Single Phase Current Ratings
Two core XLPE/PVC or X-HF-90 90°C 0.6/1kV cables.

Conductor size	Unenclosed space	Touching	Enclosed conduit in air round or flat ducts		Underground	Single phase voltage drop
mm²						mV/A.m
	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	
1	19	18	16	20		49.8
1.5	24	23	20	25		34.0
2.5	32	30	27	33		20.3
4	43	40	35	43		12.6
6	55	51	44	54		8.42
10	78	72	62	74		4.87
16	103	96	80	95		3.10
25	136	128	106	124		2.00
35	169	158	129	150		1.42
50	213	199	163	186		1.00
70	269	251	207	231		0.714
95	322	300	242	271		0.551
120	381	355	289	318		0.442
150	438	408	328	360		0.367
185	499	464	375	407		0.315
240	596	554	439	475		0.260
300	682	633	511	544		0.229
400	811	751	595	631		0.201
500	932	862	699	729		0.185

CURRENT RATINGS

2 CORE 110°C

Single Phase Current Carrying Ratings
Two Core R-HF-110, R-E-110, X-HF-110.

Cond. size	Unenclosed space		Touching		Exposed to sun		Enclosed conduit in air		Partially surrounded by thermal insulation	Completely surrounded by thermal insulation	Buried direct	Underground ducts	
mm²													
	Cu	Cu-Flex	Cu	Cu-Flex	Cu	Cu-Flex	Cu	Cu-Flex	Cu	Cu	Cu	Cu	Cu-Flex
1	23	24	22	23	20	21	19	20	15	11	29	22	23
1.5	29	30	28	28	25	26	24	24	19	14	37	28	29
2.5	41	40	39	38	36	34	33	32	27	19	51	39	37
4	55	53	51	50	47	45	45	43	36	26	67	51	49
6	69	67	65	63	59	57	56	54	45	33	84	64	62
10	95	94	89	88	81	80	76	75	60	45	112	85	84
16	126	124	118	116	107	105	102	100	81	59	145	111	109
25	168	163	158	154	142	138	133	129	107	79	188	144	139
35	206	202	194	190	174	170	166	163	133	97	226	175	171
50	251	254	236	238	211	213	200	202	160	–	268	208	209
70	317	318	298	299	265	266	256	257	205	–	330	260	259
95	392	381	367	357	326	317	312	303	250	–	396	313	304
120	455	450	426	421	377	372	368	362	294	–	452	363	357
150	519	515	486	482	429	425	417	412	333	–	507	409	403
185	598	586	559	547	491	481	486	474	389	–	573	468	456
240	708	698	662	652	580	570	588	577	470	–	665	554	541
300	815	799	760	745	664	650	670	656	536	–	751	626	611
400	941	949	878	884	763	767	768	801	615	–	853	711	727
500	1074	1091	1000	1014	866	877	905	913	724	–	957	819	820

CURRENT RATINGS

3X1 CORE PVC

Three Phase Current Ratings

Three single core V-90 PVC or PVC/PVC 0.6/1kV cables.

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			
mm²																						
	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
1	16		14		13		12		10		6		16		16		19		44.7		51.6	
1.5	20		17		16		15		12		8		20		20		24		28.6		33.0	
2.5	29		25		23		21		17		12		27		27		33		15.6		18.0	
4	38		33		31		28		23		16		36		36		43		9.71		11.2	
6	49		42		40		35		28		20		45		45		53		6.49		7.50	
10	67		58		54		47		37		27		59		59		70		3.86		4.46	
16	89	69	77	59	72	56	62	48	50	39	36	28	104	81	78	60	90	70	2.43	4.05	2.81	4.05
25	120	93	103	80	97	75	81	63	64	50	48	38	134	104	100	78	117	91	1.54	2.55	1.79	2.55
35	148	115	127	98	119	92	100	78	80	62	59	46	160	124	122	94	140	108	1.12	1.85	1.29	1.85
50	181	141	156	121	146	113	119	92	95	74	–	–	190	147	144	112	168	131	0.834	1.37	0.970	1.37
70	230	179	197	153	184	143	152	118	122	94	–	–	233	181	180	140	205	159	0.589	0.952	0.690	0.956
95	287	222	246	191	230	178	183	142	147	114	–	–	279	216	217	168	250	194	0.439	0.696	0.519	0.702
120	335	260	287	223	267	208	217	169	173	135	–	–	317	247	252	196	283	220	0.359	0.558	0.429	0.565
150	385	298	330	256	308	239	244	190	195	152	–	–	356	276	283	220	317	246	0.305	0.463	0.368	0.472
185	447	347	383	299	357	278	284	222	227	177	–	–	402	313	325	253	365	284	0.261	0.380	0.320	0.391
240	535	417	457	358	426	334	331	259	265	207	–	–	465	364	377	295	422	329	0.221	0.305	0.277	0.319
300	620	483	529	415	492	387	388	305	311	244	–	–	524	412	434	341	488	380	0.198	0.260	0.253	0.276
400	726	570	615	488	573	455	442	351	353	281	–	–	593	471	492	391	553	434	0.181	0.222	0.233	0.240
500	846	669	710	571	661	532	523	421	418	337	–	–	668	537	571	459	641	507	0.168	0.196	0.221	0.216
630	990	789	817	668	760	622	588	481	471	385	–	–	748	612	639	523	723	578	0.157	0.175	0.209	0.197

CURRENT RATINGS

3x1 CORE PVC FLEXIBLE

Three Phase Current Ratings
Three single core V-90 PVC or PVC/PVC 0.6/1kV cables.

Cond. size	Unenclosed space	Spaced from surface	Touching	Enclosed conduit in air	Underground ducts		Three phase voltage drop mV/A.m	
mm²								
	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex
1	16	14	13	13	16	–	41.1	41.1
1.5	21	18	17	15	20	–	28.0	28.0
2.5	27	24	22	20	26	–	16.8	16.8
4	37	32	30	27	35	–	10.4	10.4
6	47	41	38	34	43	–	6.95	6.96
10	66	57	54	46	58	–	4.03	4.03
16	88	75	71	61	76	–	2.56	2.56
25	117	100	94	78	97	–	1.65	1.66
35	145	125	117	98	119	–	1.18	1.18
50	183	157	147	120	145	–	0.831	0.837
70	231	198	185	152	180	–	0.596	0.603
95	279	239	223	178	210	–	0.463	0.473
120	331	284	264	213	247	–	0.373	0.385
150	383	328	305	241	279	–	0.313	0.327
185	438	376	350	277	316	–	0.272	0.287
240	528	451	420	336	376	–	0.227	0.245
300	609	519	484	379	423	–	0.203	0.223
400	734	621	578	461	504	–	0.180	0.202
500	855	717	668	520	566	–	0.167	0.190
630	1011	833	775	592	641	–	0.156	0.180

CURRENT RATINGS

3x1 CORE XLPE

Three Phase Current Ratings
Three single core XLPE/PVC or X-HF-90 90°C 0.6/1kV cables.

Cond. size	Unenclosed Spaced space		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	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
1	19		16		16		15		12		8		18		22		46.8		46.8	
1.5	25		21		20		18		15		10		22		27		30.0		30.0	
2.5	35		30		28		25		20		14		31		38		16.4		16.4	
4	46		40		37		33		26		19		40		49		10.2		10.2	
6	59		50		47		42		34		24		50		60		6.81		6.81	
10	81		69		65		56		45		32		67		79		4.05		4.05	
16	108	84	92	71	86	67	72	56	58	45	43	33	117	91	86	66	101	79	2.55	4.25	2.55	4.25
25	146	113	125	97	117	91	97	75	77	60	58	45	151	117	113	87	132	103	1.62	2.67	1.62	2.67
35	180	140	154	119	144	111	120	93	96	75	72	56	180	140	137	106	158	122	1.17	1.94	1.18	1.94
50	221	171	188	146	176	136	143	111	114	89	–	–	214	166	163	126	190	147	0.872	1.43	0.878	1.44
70	282	219	240	186	224	174	183	142	146	114	–	–	262	203	203	158	232	180	0.615	0.997	0.623	1.00
95	350	271	298	232	278	216	220	171	176	137	–	–	313	243	244	190	276	214	0.457	0.727	0.467	0.733
120	410	318	349	271	325	253	261	203	209	162	–	–	356	277	284	221	320	248	0.373	0.582	0.385	0.589
150	472	366	403	313	375	291	295	229	236	183	–	–	400	310	320	249	358	277	0.316	0.482	0.330	0.491
185	550	427	468	365	435	339	335	261	268	209	–	–	452	352	363	283	413	321	0.269	0.394	0.285	0.404
240	660	513	560	438	521	407	399	312	320	250	–	–	523	409	426	333	477	371	0.227	0.314	0.245	0.327
300	766	596	648	508	602	472	469	368	375	294	–	–	589	463	491	385	552	430	0.202	0.266	0.222	0.281
400	899	705	756	599	702	557	534	424	427	339	–	–	668	530	557	442	626	491	0.183	0.226	0.205	0.243
500	1051	829	874	703	812	652	633	509	506	407	–	–	752	604	648	520	707	559	0.170	0.197	0.193	0.216
630	1230	978	1010	824	938	765	714	583	571	466	–	–	843	688	727	593	820	654	0.159	0.177	0.182	0.198

CURRENT RATINGS

3x1 CORE XLPE FLEXIBLE

Three Phase Current Ratings
Three single core XLPE/PVC or X-HF-90 90°C 0.6/1kV cables.

Cond. size	Unenclosed space		Spaced		Touching surface		Enclosed conduit in air		Underground ducts				Three phase voltage drop mV/A.mm	
mm²														
	Cu	Flex	Cu	Flex	Cu	Flex	Cu	Flex	Cu	Flex	Cu	Flex	Cu	Flex
1	20		17		16		15		19		–		43.1	43.1
1.5	25		22		20		19		23		–		29.4	29.4
2.5	33		29		27		24		30		–		17.6	17.6
4	45		38		36		31		38		–		10.9	10.9
6	57		49		46		41		49		–		7.29	7.29
10	80		69		64		55		66		–		4.22	4.22
16	106		91		85		73		85		–		2.68	2.68
25	142		121		114		94		109		–		1.73	1.74
35	177		151		141		118		134		–		1.24	1.24
50	223		191		178		144		163		–		0.869	0.875
70	283		241		225		183		203		–		0.622	0.630
95	341		290		271		214		237		–		0.483	0.492
120	406		346		322		256		279		–		0.388	0.399
150	470		400		372		291		316		–		0.325	0.338
185	540		459		427		334		357		–		0.280	0.295
240	651		553		514		391		416		–		0.233	0.251
300	752		637		591		458		479		–		0.207	0.227
400	909		764		709		533		554		–		0.183	0.204
500	1062		884		821		630		642		–		0.169	0.192
630	1256		1030		956		719		729		–		0.157	0.181

3X1 CORE 110°C

Three Phase Current Ratings
Three single core HFS-110-TP 110°C 0.6/1kV cables.

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	
mm²											
	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu
1	24	21	20	17	14	10	20	20	24	49.7	49.7
1.5	31	27	25	22	18	13	25	25	30	31.9	31.9
2.5	43	38	36	32	25	18	36	36	42	17.4	17.4
4	57	50	47	41	33	23	46	46	54	10.8	10.8
6	73	63	59	51	41	30	57	57	67	7.23	7.23
10	99	86	81	71	57	40	77	77	88	4.30	4.30
16	132	114	107	93	74	53	130	99	115	2.70	2.71
25	177	153	143	125	100	72	168	130	148	1.72	1.72
35	218	188	176	151	121	88	201	155	176	1.24	1.25
50	267	230	215	182	146	–	237	184	212	0.924	0.929
70	339	291	272	234	187	–	291	230	259	0.650	0.657
95	422	363	339	285	228	–	348	277	315	0.481	0.491
120	492	422	394	337	269	–	396	322	357	0.392	0.403
150	565	486	453	382	306	–	445	362	400	0.331	0.344
185	656	564	526	449	359	–	503	415	461	0.280	0.296
240	786	674	629	548	439	–	583	492	533	0.235	0.252
300	912	780	727	626	501	–	657	556	617	0.208	0.227
400	1069	910	847	718	575	–	746	631	700	0.187	0.208
500	1248	1053	981	865	692	–	843	736	815	0.172	0.195
630	1462	1217	1132	983	787	–	947	827	920	0.160	0.184

CURRENT RATINGS

3X1 CORE 110°C FLEXIBLE

Three Phase Current Ratings
Three single core HFS-110-TP 110°C 0.6/1kV cables.

Cond. size	Unenclosed space	Spaced from surface	Touching	Enclosed conduit in air	Underground ducts		Three phase voltage drop mV/A.m	
mm²								
	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex
1	25	22	21	18	21	–	45.7	45.7
1.5	31	27	26	23	26	–	31.2	31.2
2.5	42	36	34	31	34	–	18.7	18.7
4	55	48	45	40	44	–	11.6	11.6
6	70	61	57	50	55	–	7.74	7.74
10	99	85	80	70	76	–	4.48	4.48
16	130	112	105	91	97	–	2.84	2.85
25	173	149	139	121	125	–	1.84	1.84
35	214	184	172	148	151	–	1.31	1.31
50	270	233	217	190	188	–	0.921	0.926
70	340	292	273	234	229	–	0.658	0.665
95	410	353	329	277	268	–	0.509	0.518
120	487	418	390	331	316	–	0.408	0.419
150	562	482	450	378	357	–	0.340	0.353
185	644	553	516	438	404	–	0.293	0.307
240	775	665	620	538	481	–	0.242	0.259
300	895	766	714	612	542	–	0.213	0.232
400	1079	918	855	757	648	–	0.187	0.208
500	1260	1064	990	864	729	–	0.172	0.194
630	1493	1240	1154	993	828	–	0.159	0.182

CURRENT RATINGS

3 & 4 CORE PVC

Three Phase Current Ratings
Three and four core V-90 PVC/PVC 0.6/1kV cables.

Table of ratings are also applicable to armoured cables.

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	
mm²															mV/A.m	
	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
1	13	–	12	–	11	–	9	–	6	–	14	–	14	–	44.7	
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	56	68	53	58	45	54	42	34	26	96	75	73	56	2.43	4.04
25	97	75	91	71	76	59	73	57	46	35	125	97	94	73	1.54	2.54
35	120	93	112	87	94	73	90	69	56	43	150	117	114	89	1.11	1.84
50	146	113	137	106	112	87	109	85	–	–	178	138	136	105	0.829	1.36
70	185	143	172	134	142	111	138	107	–	–	219	170	170	132	0.583	0.948
95	228	177	213	165	177	137	170	132	–	–	263	204	208	161	0.431	0.691
120	265	206	247	192	202	157	198	154	–	–	300	233	237	184	0.351	0.552
150	303	235	282	219	228	177	226	175	–	–	336	261	266	207	0.296	0.457
185	348	272	324	253	263	206	259	203	–	–	379	296	304	237	0.251	0.373
240	412	323	383	301	316	248	307	240	–	–	438	344	359	281	0.210	0.297
300	472	372	438	345	–	–	–	–	–	–	493	388	404	318	0.186	0.251
400	544	434	504	402	–	–	–	–	–	–	557	444	468	374	0.168	0.212
500	616	498	571	461	–	–	–	–	–	–	620	501	522	422	0.156	0.186

CURRENT RATINGS

3 & 4 CORE PVC FLEXIBLE

Three Phase Current Ratings
Three and four core V-90 PVC/PVC 0.6/1kV cables.

Table of ratings are also applicable to armoured cables.

Conductor size	Unenclosed space	Touching		Enclosed conduit in air round or flat cable		Underground ducts		Three Phase Voltage Drop
mm^2								mV/A.m
	Cu-Flex	Cu-Flex		Cu-Flex		Cu-Flex		Cu-Flex
1	13	13		11		15		41.1
1.5	17	16		14		18		28.0
2.5	22	21		19		24		16.8
4	30	28		24		32		10.4
6	38	36		32		40		6.95
10	54	51		43		54		4.03
16	71	67		57		71		2.55
25	94	89		73		91		1.65
35	117	110		92		112		1.18
50	148	138		112		137		0.827
70	185	173		142		169		0.591
95	222	207		172		201		0.457
120	262	244		199		232		0.367
150	301	280		229		265		0.306
185	342	318		257		296		0.264
240	407	378		309		351		0.219
300	464	430			–	394		0.194
400	549	508			–	467		0.171
500	627	580			–	523		0.158

3 & 4 CORE XLPE

Three Phase Current Ratings
Three and four core XLPE/PVC 90°C 0.6/1kV cables.

Table of ratings are also applicable to armoured cables.

Cond. size	Unenclosed space		Touching		Enclosed conduit in air round of flat cable		Unenclosed and partially surrounded by thermal insulation		Unenclosed and completely surrounded by thermal insulation		Buried direct		Underground ducts		Three phase voltage drop	
mm²															mV/A.m	
	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
1	16	–	14	–	13	–	12	–	7	–	16	–	16	–	46.8	
1.5	20	–	19	–	16	–	15	–	9	–	20	–	20	–	30	
2.5	28	–	26	–	24	–	21	–	13	–	29	–	29	–	16.4	
4	38	–	35	–	30	–	28	–	18	–	37	–	37	–	10.2	
6	48	–	45	–	38	–	36	–	22	–	46	–	46	–	6.8	
10	66	–	62	–	53	–	49	–	31	–	63	–	63	–	4.05	
16	88	68	83	64	68	53	66	51	41	32	110	85	81	63	2.55	4.24
25	119	93	111	86	91	71	89	69	56	43	143	111	107	83	1.61	2.67
35	147	114	137	106	114	88	110	85	69	53	172	133	130	101	1.17	1.93
50	180	140	168	130	136	105	134	104	–	–	204	159	155	120	0.868	1.43
70	229	178	213	165	173	134	170	132	–	–	251	195	193	150	0.609	0.993
95	283	220	263	204	209	162	210	163	–	–	302	234	233	181	0.450	0.723
120	330	256	306	238	246	192	245	190	–	–	344	267	270	210	0.366	0.577
150	377	293	350	272	277	216	280	218	–	–	385	299	304	236	0.307	0.476
185	436	340	404	315	322	251	323	252	–	–	435	340	348	272	0.259	0.388
240	517	405	479	375	386	303	383	300	–	–	504	395	411	322	0.216	0.307
300	594	467	549	432	–	–	–	–	–	–	567	446	463	365	0.190	0.258
400	685	546	632	504	–	–	–	–	–	–	640	510	524	417	0.171	0.216
500	779	629	718	579	–	–	–	–	–	–	714	577	601	485	0.158	0.189

CURRENT RATINGS

3 & 4 CORE XLPE FLEXIBLE

Three Phase Current Ratings
Three and four core XLPE/PVC 90°C 0.6/1kV cables.

Table of ratings are also applicable to armoured cables.

Conductor size	Unenclosed space	Touching	Enclosed conduit in air round of flat cable		Underground ducts		Three phase voltage drop
mm^2							mV/A.m
	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex	Cu-Flex		
1	16	15	14		17		43.1
1.5	20	19	17		21		29.4
2.5	27	26	23		28		17.6
4	36	34	29		36		10.9
6	46	43	37		45		7.29
10	66	61	52		62		4.22
16	87	81	67		79		2.68
25	116	108	89		103		1.73
35	144	135	111		127		1.23
50	182	170	136		155		0.866
70	230	214	173		193		0.618
95	275	256	202		226		0.477
120	327	303	242		266		0.383
150	375	348	274		300		0.318
185	428	396	314		339		0.273
240	511	472	379		402		0.225
300	584	539	–		452		0.198
400	692	638	–		537		0.174
500	794	730	–		602		0.160

CURRENT RATINGS

3 & 4 CORE 110°C

Three Phase Current Ratings
Three and Four Core R-HF-110, R-E-110, or X-HF-110 insulated cables.

Cond. size	Unenclosed space		Touching		Exposed to sun			Enclosed conduit in air		Partially surrounded by thermal insulation	Completely surrounded by thermal insulation	Buried direct	Underground ducts		Three phase voltage drop
mm²														mV/A.m	
	Cu	Cu-Flex	Cu	Cu-Flex	Cu	Cu-Flex	Cu	Cu	Cu-Flex	Cu	Cu	Cu	Cu	Cu-Flex	Cu
1	20	21	18	19	17	18	16	17	21	16	13	25	19	20	49.7	49.7
1.5	25	26	24	24	22	22	20	20	21	16	12	31	24	24	31.9	31.9
2.5	35	34	33	32	30	29	29	27	23	17	44	33	31	17.4	17.4	
4	47	45	44	42	40	39	38	36	30	22	56	43	41	10.8	10.8	
6	59	57	56	54	50	49	47	46	38	28	71	53	51	7.22	7.22	
10	81	80	76	75	69	68	64	65	51	38	94	71	71	4.29	4.29	
16	107	106	101	99	91	89	86	84	68	50	122	93	91	2.70	2.70	
25	144	140	135	131	121	118	116	112	93	67	158	122	118	1.71	1.71	
35	177	173	166	162	148	145	140	137	112	83	190	146	143	1.24	1.24	
50	216	218	202	204	180	182	174	175	139	–	226	177	178	0.920	0.920	
70	272	273	255	255	227	227	217	217	173	–	277	217	217	0.645	0.645	
95	337	327	314	306	278	271	270	263	216	–	333	267	259	0.475	0.475	
120	391	387	364	360	322	318	311	306	249	–	379	304	298	0.385	0.385	
150	447	444	416	413	367	364	360	356	288	–	426	346	341	0.322	0.322	
185	515	505	479	470	421	412	411	402	329	–	481	391	381	0.271	0.271	
240	611	602	567	559	496	488	498	489	398	–	558	463	453	0.224	0.224	
300	701	688	650	638	567	555	–	–	–	–	629	522	509	0.196	0.196	
400	810	817	751	756	651	655	–	–	–	–	713	608	606	0.175	0.175	
500	921	936	852	865	737	746	–	–	–	–	797	680	680	0.160	0.160	

FLEXIBLE CORDS

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.

Nom 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
10	90	91	99	102	96	114	121	1.91	5.06	4.38
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
70	325	370	471	507	391	523	567	0.272	0.707	0.612
95	390	454	590	637	476	644	700	0.206	0.566	0.490
120	455	536	705	763	559	762	829	0.161	0.453	0.392
150	535	636	843	914	661	904	985	0.129	0.373	0.323
185	600	723	968	1051	747	1027	1120	0.106	0.326	0.282
240	715	870	1174	1276	895	1236	1348	0.0801	0.276	0.239

CURRENT RATINGS

ALUMINIUM AERIAL

XLPE Aerial Cables

No. conductor area	Nom and nominal diameter of wires	2 core twisted		3 and 4 core twisted		Three phase voltage drop at 50Hz
			1.0m/s		1.0m/s	
mm^2	no/mm	still air	wind	still air	wind	mV/A.m
16	7/1.70	49	78	44	70	4.15
25	19/1.35	64	105	59	97	2.64
35	19/1.53	78	125	72	120	1.94
50	19/1.78	94	150	88	140	1.47
70	19/2.14	115	190	110	175	1.08
95	37/1.78	140	230	135	215	0.840
120	37/2.03			155	250	0.718
150	37/2.25			180	280	0.636

Note: The current carrying capacities are based on an air ambient temperature of 40°C, a maximum conductor temperature of 80°C and exposure to direct sunlight having an intensity of 1000W/m^2.
The values are based on the use of black XLPE.
Under normal circumstances there will always be some air movement and the rating for 1.0m/s wind is recommended.
General Note – applies to all following current rating tables.
Reference should be made to AS/NZS 3008.1 for the following derating factors for
(a) Grounded circuits
(b) Cables fixed to underside of ceilings
(c) Cables on perforated or unperforated trays
(d) Ambient temperature

CURRENT RATINGS

COPPER AERIAL

PVC Aerial Cables

No. cond. area	Nom and nominal diameter of wires	1 core insulated cond.		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
35	19/1.53	105	205					1.26
50	19/1.78	130	240					0.988
70	19/2.14	165	305					0.767
95	37/1.78	200	360					0.639
120	37/2.03	235	425					0.574
150	37/2.25	265	475					0.530
185	37/2.52	310	540					0.494

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.
(a) Also for 2 conductor neutral screened aerial cable.
(b) Also for 3 and 4 conductor neutral screened aerial cable.
Under normal circumstances there will always be some air movement and the rating for 1.0m/s wind is recommended.

CABLE SELECTION

1. Current carrying capacity and voltage drop

Conductor sizes are nominated by the Wiring Rules (AS/NZS 3000) for the wiring of socket outlets and lighting circuits in domestic and commercial buildings.
For other types of installations:
a) The cable must be capable of carrying the maximum continuous load of the circuit, with due regard for the insulating material and conditions of installation.
b) The voltage drop from the consumer's terminals to any point in the installation must not exceed 5% of the nominal system voltage.
Simplified tables of current ratings and voltage drops for commonly used cables are given on pages 70-92. In large installations where current ratings are critical, attention is drawn to the comprehensive tables given in AS/NZS 3008.1.1:2009.

2. Installation conditions

Nexans Olex cables are available for aerial, underground and submarine installations as well as in conduit, on racks or trays in air. Special constructions available include:

- Brass or copper taped or nylon sheathed cables for resistance to termite and marine borer.
- Steel wire armoured for areas where there is a high risk of mechanical damage.
- Alsecure® fire performance low smoke halogen free cables for emergency power and lighting and other purposes in areas of high fire risk.
- Alsecure® Ceramifiable® is a world first in fire performance cable with a polymer layer that hardens into a protective shield when exposed to fire.
- Versolex® the new high performance multipurpose cable for fixed and flexible applications.
- Lead alloy sheathing as a barrier to moisture or hydrocarbons.
- Alsecure® Envirolex® cables with low smoke emission and no halogen or lead for environmentally sensitive areas.
- Flexolex® cables for flexible applications and where flexibility provides advantages during installation.

CABLE SELECTION

3. Cable insulating and sheathing materials

Standard Nexans Olex cables are available in a number of materials, including:

- Nexans Olex PVC (Polyvinyl Chloride) insulated and sheathed cables are the economic choice for general wiring. They are resistant to occasional contact with most oils and solvents, clean and easy to handle and coloured to assist phase identification. PVC is suitable for operating temperatures up to 90°C and 90°HT, subject to the requirements of AS/NZS-3000. PVC is inherently resistant to ultraviolet radiation and although some colours may fade the material will not significantly degrade due to the effects of sunlight and weather, maintaining its physical integrity if not physically abused. Care should be taken where cables are subjected to extremes of temperature or contact with crude petroleum, caustic materials or aromatic solvents.
- Nexans Olex synthetic rubber (EPR/CPE) insulated and sheathed cables are more flexible and have better resistance to oils and solvents than PVC.
- Nexans Olex EPR (Ethylene Propylene Rubber), while not oil resistant, has excellent dielectric properties and high voltage grades are available for cables up to 33kV. In addition, EPR is halogen free and therefore does not emit toxic or corrosive by-products when burned.
- Nexans Olex CPE (Chlorinated Polyethylene) is an excellent flexible insulation and heavy duty sheathing material. Although having lower insulation resistance than EPR it is suitable for low voltage cable insulation and is used as such in welding cables because of its oil resistance.
- X-90 (Cross-linked Polyethylene) has very high dielectric properties. It is halogen-free and also free of heavy metals such as lead and antimony. It has low smoke and toxicity when burned. It is a suitable alternative to PVC and is becoming more widely specified where there are environmental concerns.
- Ceramifiable® – An insulation material that is polymeric in its normal state, but converts to an insulating ceramic that provides circuit integrity when burned. Normal state properties are suitable for continuous operation at 90°C or 110°C as selected. It is halogen-free, lead and antimony-free, and does not emit toxic or corrosive products when burned.
- HFS-110-TP. Nexans Olex offers this thermoplastic, halogen and heavy metal-free sheathing as an alternative to PVC when these characteristics are required. The material has reasonable oil resistance and flexibility, with a high resistance to spread of fire.

CABLE INSTALLATION

In all cases, cables must be installed in compliance with the safety requirements of AS/NZS 3000.

Particular attention should be paid to the following:

- Current carrying capacities of cables depend on the temperature of the air or ground in which they are installed and the degree to which heat can escape. Except for a group of single core cables carrying the phase currents of a circuit, cables should be spaced to allow heat to escape.
- Wherever cables are installed in close proximity, especially in the ground, or enclosed in such a way as to restrict heat loss, their current carrying capacities must be reduced using a derating factor appropriate to the situation.
- For minimum voltage drop single core cables carrying the phase currents of a single circuit should be installed as closely as possible together, to minimise inductive reactance. The preferred formation for three phase conductors is a "trefoil" or cloverleaf pattern although flat formation may also be used. Sheaths should be in contact with one another in either case.

A single core cable generates an alternating magnetic field around itself which can cause large increases in voltage drop and power loss due to "transformer effect" when ferrous metal (iron and steel) is allowed to encircle the cable. Steel racking or ladder will not cause trouble, but the following must be observed:

- Steel wire or tape armour is never used on a single core cable for AC use.
- Where three single phase cables pass through a steel bulkhead all must pass through the same hole. Where glanding is required it is usual to cut out a panel and replace this with a non-ferrous (metal or plastic) plate in which the three or four glands are mounted. Should plastic or non-ferrous gland plate material not be available, an alternative is to cut a slot (hacksaw blade width is adequate) between adjacent gland holes. This will provide physical and electrical isolation for the eddy current paths and stop the cable from overheating.

GENERAL DATA

Minimum size of copper earthing conductors

Nominal area active conductors	For copper active conductors	For aluminium active conductors
mm^2	mm^2	mm^2
1	1.0*	
1.5	1.5*	
2.5	2.5	
4	2.5	
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	25
150	50	25
185	70	35
240	95	50
300	120	70
400	120	95
500	120	95
630	120	120

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

Maximum operating temperatures for various types of cable insulants

Type		Normal use* °C	Max permissible °C
Thermoplastic (PVC)	V-75	75	75
	V-90	75	90
	V-90HT	90	90**
Elastomer	R-EP-90	90	90
	R-CPE-90	90	90
	R-S-150	150	150
Polyethylene – low density		70	70
Cross linked polyethylene (X-90)		90	90
Nexans Olex Ceramifiable®	R-E-110	110	110
	HF-I-90	90	90

*As defined in AS/NZS 3008.1.1.

**V-90HT PVC may be operated up to 105°C for restricted periods only.

GENERAL DATA

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

Nominal conductor area mm²	Conductor type	Single core or multicore		
		Maximum DC resistance at 20°C Ω/km		
		Copper Plain	Copper Tinned	Aluminium
0.5	Solid	36.0	36.7	
1.0*	Solid	18.1	18.2	
1.0	Stranded	21.2	21.6	
1.5*	Solid	12.1	12.2	
1.5	Stranded	13.6	13.8	
2.5*	Solid	7.41	7.56	
2.5	Stranded	7.41	7.56	
4	Stranded	4.61	4.70	
6	Stranded	3.08	3.11	
10	Stranded	1.83	1.84	
16	Stranded	1.15	1.16	1.91
25	Stranded	0.727	0.734	1.20
35	Stranded	0.524	0.529	0.868
50	Stranded	0.387	0.391	0.641
70	Stranded	0.268	0.270	0.443
95	Stranded	0.193	0.195	0.320
120	Stranded	0.153	0.154	0.253
150	Stranded	0.124	0.126	0.206
185	Stranded	0.0991	0.100	0.164
240	Stranded	0.0754	0.0762	0.125
300	Stranded	0.0601	0.0607	0.100
400	Stranded	0.0470	0.0475	0.0778
500	Stranded	0.0366**	0.0369**	0.0605**
630	Stranded	0.0283**	0.0286**	0.0469**

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

GENERAL DATA

USEFUL 3 PHASE FORMULA

$$kW = kVA \times pf$$

$$kW = \frac{hp \times 746}{1000 \times Eff}$$

$$kW = \frac{\text{Line Amps} \times \text{Line Volts} \times 1.732 \times pf}{1000}$$

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

$$kVA = \frac{hp \times 746}{1000 \times Eff \times pf}$$

$$kVA = \frac{\text{Line Amps} \times \text{Line Volts} \times 1.732}{1000}$$

$$\text{Line Amps} = \frac{kW \times 1000}{\text{Line Volts} \times 1.732 \times pf}$$

$$\text{Line Amps} = \frac{kVA \times 1000}{\text{Line Volts} \times 1.732}$$

$$\text{Line Amps} = \frac{hp \times 746}{\text{Line Volts} \times 1.732 \times Eff \times pf}$$

$$\text{Horsepower (hp)} = \frac{kW \times 1000 \times Eff}{746}$$

$$hp = \frac{kVA \times 1000 \times Eff \times pf}{746}$$

$$hp = \frac{\text{Line Amps} \times \text{Line Volts} \times 1.732 \times Eff \times pf}{746}$$

$$\text{Line Current} = \frac{5}{100} \times \text{Supply Voltage} \times \frac{1}{\text{Route Length} \times \text{Voltage Drop Factor}}$$

GENERAL DATA

American conductor sizes M.C.M. & A.W.G. conversion to mm^2.

M.C.M.	mm^2	M.C.M.	mm^2
1300	659	650	329
1200	608	600	304
1100	557	550	279
1000	507	500	253
950	481	450	228
900	456	400	203
850	431	350	177
800	405	300	152
750	380	250	127
700	355	200	101

Note: The American term "mil" refers to a milli-inch (1/1000N) NOT a millimetre.
A Circular Mil. (C.M.) is the area of a circle 1 mil in diameter.
The term "M.C.M." refers to an area of 1000 Circular Mils and is the same as "kcmil."
1.0mm^2 is approximately 1974 Circular Mils.

A.W.G.	Diameter	mm^2	A.W.G.	Diameter	mm^2
	mm			mm	
0000	11.68	107.3	10	2.59	5.3
000	10.40	85.0	12	2.05	3.3
00	9.27	67.4	14	1.63	2.1
0	8.25	53.5	16	1.29	1.3
2	6.54	33.6	18	1.02	0.8
4	5.19	21.2	20	0.81	0.5
6	4.12	13.3	22	0.64	0.3
8	3.25	8.4	24	0.51	0.2

Note: The American Wire Gauge (AWG) was originally known as the Brown & Sharp (B&S) Gauge and both terms are synonymous. The gauge number can apply to a single wire or to a stranded or bunched conductor. The cross-sectional areas given apply to single wire only. The larger gauges are sometimes written using a number to denote the number of zeroes, e.g. 0 gauge can be written 1/0 and 000 as 3/0.

GENERAL DATA

Cable minimum installed bending radii

			Factor	
	Type	Voltage	Instal.	During instal.
Fixed wiring	PVC or Elastomer 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
	(2) Multicore SWA or metal tape	0.6/1kV	12	18
	(3) Solid aluminium, Stranded or sector	0.6/1kV	8	12
Flexible cords	PVC or Elastomer	250/440V	4	
		0.6/1kV	4	
Flexible cables	PVC or Elastomer (incl. Versolex®)	0.6/1kV	4	
Lead sheath	PVC or Elastomer	0.6/1kV	12	18
Paper insulated	Single	Up to 11kV	15	22
	Multicore	Up to 11kV	12	18
	Single Core	22kV	18	27
	Multicore	22kV	15	22
	Single Core	33kV	20	30
	Multicore	33kV	18	27
Trailing	Elastomer			
	(1) Single and Multicore	1.1kV	6	
	(2) Single and Multicore	3.3kV & above	12	
Welding	PVC or Elastomer	0.6/1kV	6	
Nylon covered	All cables		20	30
HDPE sheathed	All cables		15	25

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 Nexans Olex manufactured product only.

GENERAL DATA

Number of cables in conduit. Calculated maximum number of thermoplastic insulated and sheathed single core copper or aluminium cables permitted in metallic and non-metallic conduit or pipe. 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 HD	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 Nexans Olex 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%

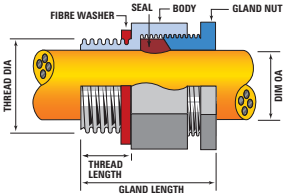
Note: The above values should not be exceeded.

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)

ACCESSORIES
GLANDS



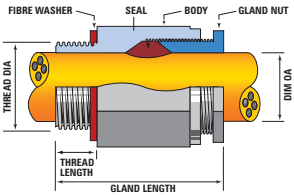
Alco Metal Cable Glands – Type UW (IP68)

Item number	Mounting thread dia.x length	Cable details				PVC shroud
		Seal B (thick)		Seal A (thin)		
		OA	OA	OA	OA	
	mm	min	max	min	max	orange*
ALCUW12	M12x10	1.5	3.5	3.5	6.0	ALCSG0
UW16S	M16x10	1.5	3.5	3.5	5.0	ALCSG0
ALCUW16	M16x10	5.0	7.5	7.5	10.0	ALCSG0
UW20A	M20x10	5.0	7.5	7.5	10.0	ALCSG1
ALCUW20	M20x10	10.0	11.0	11.0	15.0	ALCSG1
ALCUW25	M25x12	14.5	17.0	17.0	20.0	ALCSG3
ALCUW32	M32x12	20.0	23.0	23.0	26.5	ALCSG3
ALCUW40	M40x15	26.0	30.0	30.0	33.5	ALCSG4
ALCUW50	M50x15	33.0	36.0	36.0	42.0	ALCSG5
ALCUW63	M63x19	41.5	46.0	46.0	52.0	ALCSG6
ALCUW75	M75x19	51.0	56.0	56.0	65.0	ALCSG7
ALCUW90	M90x30	64.0	68.0	68.0	75.0	ALCSG9
ALCUW105	M105x30	75.0	80.0	82.0	89.0	ALCSG10
ALCUW120A	M120x30	89.0	92.0	92.0	98.0	ALCSG11
ALCUW120B	M120x30			98.0	105.0	ALCSG11

*For Black Shroud add "B" to part number: ALCSG2B.

Note: To comply with IP68 approval, the washer supplied must be installed on mounting thread.

ACCESSORIES
GLANDS



Alco Metal Cable Glands – Hazardous Area Type HUW

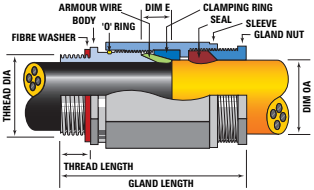
(Grpl/IIC, Ex d, Ex e, IP68)(AUS Ex 03 3903)

Item number	Mounting thread dia.x length	Cable details						PVC shroud
		Seal C (thickest)		Seal B (thick)		Seal A (thin)		
		OA	OA	OA	OA	OA	OA	
	mm	min	max	min	max	min	max	(orange)
ALCHUW20SB	M20x12			4.0	8.0	8.0	10.0	ALCSG1
ALCHUW20A	M20x12			6.5	8.0	8.0	10.0	ALCSG3
ALCHUW20B	M20x12			10.0	12.0	12.0	14.0	ALCSG3
ALCHUW25	M25x12			14.0	16.0	16.0	19.0	ALCSG3
ALCHUW32	M32x15			19.0	22.0	22.0	25.0	ALCSG3
ALCHUW40	M40x15			25.0	28.5	28.5	31.0	ALCSG4
ALCHUW50	M50x20	31.0	36.0	36.0	39.0	39.0	42.0	ALCSG6
ALCHUW63	M63x25	42.0	46.5	46.5	50.0	50.0	53.0	ALCSG7
ALCHUW75	M75x25	53.0	57.0	57.0	61.0	61.0	64.0	ALCSG7
ALCHUW 90	M90x30			64.0	68.0	70.0	75.0	ALCSG9
ALCHUW105	M105x30			75.0	80.0	82.0	89.0	
ALCHUW120A	M120x30			89.0	92.0	92.0	98.0	
ALCHUW120B	M120x30					98.0	105.0	

*For black shroud add "B" to part number: ALCSG2B.

Note: To comply with IP68 approval, the washer supplied must be installed on mounting thread.

ACCESSORIES
GLANDS



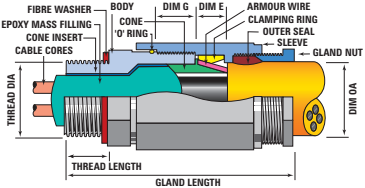
Alco Metal Cable Glands – Type AW (IP68)

Item number	Mounting thread dia.x length	Cable details				PVC shroud
		overall		over bedding	SWA	
		min.	max.	max.	dia.	
	mm	mm	mm	mm	mm	(orange)
ALCAW16	M16x12	10.5	15.5	10.0	0.8–1.25	ALCSG2
ALCAW20SB	M20x12	10.5	15.5	10.0	0.8–1.25	ALCSG1
ALCAW20MR	M20x12	14.5	17.5	11.5	0.8–1.25	ALCSG1
ALCAW20	M20x12	14.5	20.0	14.0	0.8–1.25	ALCSG3
ALCAW20UR	M20x12	19.5	22.5	16.0	0.8–1.25	ALCSG3
ALCAW25	M25x14	20.0	26.0	19.0	1.25–1.6	ALCSG3
ALCAW32	M32x14	26.0	33.5	26.0	1.25–1.6	ALCSG4
ALCAW40	M40x15	33.0	42.0	33.0	1.6–2.0	ALCSG5
ALCAW50	M50x15	41.5	51.0	42.0	2.0–2.5	ALCSG6
ALCAW50L	M50x15	49.0	56.0	44.5	2.50	ALCSG6
ALCAW63	M63x19	51.0	64.0	55.0	2.5–3.15	ALCSG7
ALCAW63L	M63x19	62.0	69.0	56.5	2.5–3.15	ALCSG7
ALCAW75	M75x19	63.0	75.0	63.0	2.5–3.15	ALCSG8
ALCAW90	M90x19	75.0	90.0	75.0	2.5–3.15	ALCSG9

*For black shroud add "B" to part number: ALCSG2B.

Note: To comply with IP68 approval, the washer supplied must be installed on mounting thread. Two weatherproof seals are provided with each gland. Fitting instructions will define the seal suitable for your application.

ACCESSORIES
GLANDS

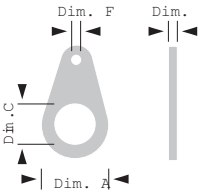


Alco Metal Cable Glands – Hazardous Area Type HAW (Grpl/IIC, Ex d, Ex e, IP68)(AUS Ex 03.3904)

Item number	Mounting thread diameter	Cable details				SWA diameter	Barrier gland requirements	PVC shroud
		Over bedding diameter		Cable diameter				
	xlength	min.	max.	min.	max.			
	mm	mm	mm	mm	mm	mm		(orange)
ALCHAW20LR	M20x15	5.2	8.0	7.8	12.7	0.70–0.90	ALCHAW20LR-B	ALCSG1
ALCHAW20	M20x20	6.5	10.0	11.5	16.0	0.80–1.25	ALCHAW20-B	ALCSG2
ALCHAW20SB	M20x16	9.1	12.3	14.0	18.0	0.80–1.25	ALCHAW20SB-B	ALCSG2
ALCHAW25A	M25x20	10.0	14.0	16.0	20.0	0.80–1.25	ALCHAW25A-B	ALCSG3
ALCHAW25B	M25x20	14.0	18.0	20.0	24.0	1.25–1.60	ALCHAW25B-B	ALCSG3
ALCHAW32A	M32x20	18.0	21.5	24.0	28.0	1.25–1.60	ALCHAW32A-B	ALCSG4
ALCHAW32B	M32x20	21.5	25.0	28.0	32.0	1.60–2.00	ALCHAW32B-B	ALCSG4
ALCHAW40A	M40x20	25.0	29.0	32.0	37.0	1.60–2.00	ALCHAW40A-B	ALCSG4
ALCHAW40B	M40x20	28.5	33.5	37.0	42.0	1.60–2.00	ALCHAW40B-B	ALCSG5
ALCHAW50A	M50x20	33.0	37.5	41.0	46.0	2.00–2.50	ALCHAW50A-B	ALCSG6
ALCHAW50B	M50x20	36.5	42.0	45.0	51.0	2.00–2.50	ALCHAW50B-B	ALCSG6
ALCHAW63A	M63x25	42.0	47.0	51.0	57.0	2.50–3.15	ALCHAW63A-B	ALCSG7
ALCHAW63B	M63x25	47.0	53.0	57.0	63.0	2.50–3.15	ALCHAW63B-B	ALCSG7
ALCHAW75A	M75x25	52.5	58.5	62.0	69.0	2.50–3.15	ALCHAW70A-B	ALCSG8
ALCHAW75B	M75x25	58.0	64.0	66.0	75.0	2.50–3.15	ALCHAW70B-B	ALCSG8
ALCHAW90A	M90x25	63.0	69.0	73.0	82.0	2.50–3.15	ALCHAW90A-B	ALCSG9
ALCHAW90B	M90x25	68.0	75.0	81.0	90.0	2.50–3.15	ALCHAW90B-B	ALCSG9

Note: Alco HAW glands are suitable for use with elastomer seals or as a barrier gland. Two seals are provided for bedding to body sealing (see fitting instructions). Alternatively, discard the seals and use the epoxy resin and insert to provide a barrier. When ordering add 'B' to the standard code as indicated in the second last column above.

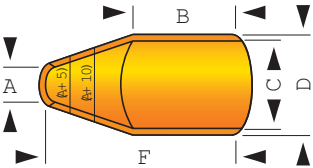
ACCESSORIES
EARTH TAGS



Alco Earth Tags – Nickel Plated

Item number	Description	Width Dim. A (+0.5, –0.0)	Width Dim. C (+0.5, –0.0)	Depth Dim. B	Width Dim. F (+0.5, –0.0)
ALCET12	EARTH TAG, 12mm, BRS, PLTD	28.85	12.45	1.80	7.00
ALCET12	EARTH TAG, 12mm, BRS, PLTD	22.50	12.45	1.80	7.00
ALCET16	EARTH TAG, 16mm, BRS, PLTD	28.85	16.48	1.80	7.00
ALCET20	EARTH TAG, 20mm, BRS, PLTD	28.86	20.40	1.80	7.00
ALCET25	EARTH TAG, 25mm, BRS, PLTD	37.55	25.50	1.80	10.50
ALCET32	EARTH TAG, 32mm, BRS, PLTD	43.30	32.64	1.80	12.00
ALCET40	EARTH TAG, 40mm, BRS, PLTD	54.85	40.80	1.80	13.50
ALCET50	EARTH TAG, 50mm, BRS, PLTD	66.40	51.25	2.00	13.50
ALCET63	EARTH TAG, 63mm, BRS, PLTD	80.83	63.95	2.00	13.50
ALCET75	EARTH TAG, 75mm, BRS, PLTD	103.93	76.13	2.00	13.50
ALCET90	EARTH TAG, 90mm, BRS, PLTD	127.02	91.35	2.00	13.50
ALCET105	EARTH TAG, 105mm, BRS, PLTD	138.60	106.58	2.00	13.50
ALCET120	EARTH TAG, 120mm, BRS, PLTD	161.65	121.80	2.00	13.50

ACCESSORIES
SHROUDS



Alco Gland Shrouds

Flexible rubber shrouds for the protection of Alco glands.

Item number	Cable dia. (A)	Overall Length (F)	Parallel Length (B)	Outside dia. (D)	Inside dia. (C)
	mm	mm	mm	mm	mm
ALCSG0	2.0	44	20	22	20
ALCSG1	6.0	69	43	28	25
ALCSG2	10.0	76	50	32	29
ALCSG2L	12.0	87	55	38	35
ALCSG3	14.0	96	60	43	40
ALCSG3L	18.0	100	65	47	44
ALCSG4	20.0	108	65	54	51
ALCSG5	29.0	115	70	65	62
ALCSG6	38.0	126	75	78	75
ALCSG6L	42.0	127	80	85	81
ALCSG7	48.0	135	85	95	91
ALCSG8	62.0	140	90	109	104
ALCSG9	62.0	170	110	120	114
ALCSG10	78.0	135	88	130	124
ALCSG11	87.0	137	88	130	144

Standard colour for all shrouds is orange. Sizes 1, 2 and 2L are stocked in black.

For black shroud part numbers add B to the orange item number in the LH column.

THE NEXANS OLEX CABLE RANGE

LOW VOLTAGE POWER AND CONTROL CABLES

Building wires
Flats
PVC/PVC SDIs
XLPE/PVC single cores
PVC/PVC circulars
XLPE/PVC multicores
Armoured PVC/PVC circulars
Armoured XLPE/PVC multicores
Multicore control
Armoured control
Neutral screened
Aerial

INSTROLEX® INSTRUMENTATION CABLES

Overall screened
Overall screened armoured
Individual and overall screened
Individual and overall screened armoured

OLEX FLEXS™

Versolex® – XLPE/TPE
– Power
– Welding
– Submersible
Powerlex® Flexible Cords
Envirolex®
Varolex® VSD
Alsecure® Fire Rated Cable
- Alsecure Plus Mica Tape
- Alsecure Premium Ceramifiable

DATA AND COMMUNICATIONS CABLES

Datolex® – Security
– Figure 8
– Category 5e
– Coaxial
Gardolex® Garden Lighting
Audiolex® – Speaker
– Coaxial
Fibre – Multi Mode
– Single Mode
Telephone – Internal
– External
Data

MINING CABLES UP TO 33KV

Reeling and trailing cables to AS/NZS-1802 and 2802
Feeder cables
Machine cables

SPECIALISED INDUSTRIAL CABLES

Airport lighting cables:
– Primary and secondary cables

Automation cables
Offshore Oil and gas cables
Defence cables – AO 14,000
– VG cables
– Milspec cables

Rolling stock cables
Materials handling cables
Marine cables
Wind turbine cables

HV TRANSMISSION CABLES

Extra High Voltage U/G XLPE to 330kV (joints, terminations, engineering services, condition monitoring)

OVERHEAD DISTRIBUTION CABLES

– All Aluminium

– All Aluminium alloy 1120

– ACSR

– Steel earth wire and stay wire (galvanised or aluminium clad)

- Lo-Sag™ Covered Conductor for reduced risk of starting bushfires

MV DISTRIBUTION CABLES

U/G XLPE to 33kV

Aerial bundled cable XLPE to 33kV (metallic and non-metallic screened)

Covered Conductor (CCT)

Single Point Suspension

11kV to 33kV (EHV also)

XLPE, EPR or PILC insulation

Radial water barrier:
– Al/HDPE, LAS, stainless steel sheath

Mechanical protection:
– Single, double wire armour, HDPE

ABBREVIATIONS

A.m	Ampere metre
ABC	aerial bundled cable
AC	alternating current
Al	aluminium
AS	Australian Standard
C	core
°C	degree Celsius
CPE	Chlorinated Polyethylene
CSA	cross-sectional area
CSP	Chlorosulphonated Polyethylene
Cu	copper
dB	decibel
DC	direct current
E	earth
EA	Ethylene Acrylic
Eff	efficiency
ELV	Extra Low Voltage
EPR	Ethylene Propylene Rubber
HD	hard drawn
H.D.	heavy duty
HFS-90-TP	halogen free sheath – 90°C – thermoplastic
HFS-110-TP	halogen free – 110°C – rubber (sheath)
hp	horsepower
HR	heat resistant
HRC	high rupture capacity
ISDN	Integrated Services Digital Network
kg	kilogram
kN	kilonewton
kV	kilovolt
kVA	kilovoltamp
kW	kilowatt
LAN	local area network
L.D.	light duty
mm	millimetre
MM	Multi Mode (Fibre)
nF/km	nanofarad/kilometre
OD	outside diameter
O.D.	ordinary duty
PACW	plain annealed copper wire
PE	Polyethylene
pf	power factor
pF/m	picofarad/metre
PILC	paper insulated lead covered
PVC	Polyvinyl Chloride
R-CPE-90	rubber – Chlorinated Polyethylene – 90°C
SM	Single Mode (Fibre)
SWA	steel wire armoured
TACW	tinned annealed copper wire
TPE	thermoplastic elastomer
UTP	unshielded twisted pairs
V	volt
V-75	75°C rated PVC
V-90	90°C rated PVC
V-90RP	PVC 90°C insulation formulated for Reduced Propagation of Fire
5V-90RP	PVC 90°C sheathing formulated for Reduced Propagation of Fire
V-90HT	90°C rated PVC – 105°C for restricted periods
X-HF-90	XLPE – halogen free – 90°C
X-90	Cross-linked Polyethylene

NEXANS OLEX LOCATIONS

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WOULD YOU LIKE THE NEXT EDITION OF THE HANDBOOK DELIVERED TO YOUR DOOR?

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All information received on this form will be kept strictly confidential and will be used only for the purposes of sending you the next edition of The Handbook and for sending information of interest (only if you have requested above).

SAFETY WARNING

Cables are insulated and sheathed with stable materials which may contain certain toxic substances including lead. Insulation and sheathing materials should not be chewed or ingested. Should you require more detailed data regarding materials, please contact our Group Safety Manager on 03 9281 4444 or refer to our web site www.olex.com.au

Installation Cables must be installed in accordance with the requirements of Section 3 – Selection and Installation of Wiring Systems in the latest issue of AS/NZS 3000 or the appropriate ruling standard in the country of installation. Cables must also be connected by a licensed electrician, as ruled in the state or country of installation. In particular your attention is drawn to Section 1.5 of the Wiring Rules (AS/NZS 3000) – Fundamental Principles.

Designers and installers can be assured the products provided by Nexans Olex meet the requirements of the relevant cable standard, but must ensure appropriate selection of cables for the electrical installation conditions.

Hazardous Areas Installation of wiring and fittings for hazardous areas, e.g. flammable or explosive gas, liquid, dust or solids must comply with Section 7.7 – Hazardous Areas, of AS/NZS 3000, and other relevant Australian Standards for specific hazards and occupancies.

Technical Note

PVC 90°C Thermal Rating The current carrying capacities for thermoplastic cables, including flexible cords used as fixed wiring, insulated with V-90 and V-90HT PVC compounds have been based on a conductor operating temperature of 75°C (refer AS/NZS 3008.101 Table 1 Note 2).

Subtle differences in construction methodology and use of materials indicate that data in this catalouge relate only to Nexans Olex manufactured products.

Nexans Olex as a member of Australian cable makers Association supports the Approved Cables Initiative. The focus of ACI is to ensure that electrical cables available in the Australian market are fully compliant to the relevant Australian standards.

Find out more by visiting
www.australiancablemakers.com

Nexans Olex has taken every precaution to ensure that the information contained in this booklet is in line with requirements of the appropriate Australian Standards and correct electrical practice. However, we accept no liability of any kind with respect to the information presented here. All information is subject to change without notice. Note: Current carrying capacity tables stated in this handbook are based on AS/NZS 3008.1, Electrical Installations – Selection of Cables. Part 1: Cables for alternating voltages up to and including 0.6/1kV. The latest edition of this handbook and other Nexans Olex product catalogues is always available at www.olex.com.au.

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