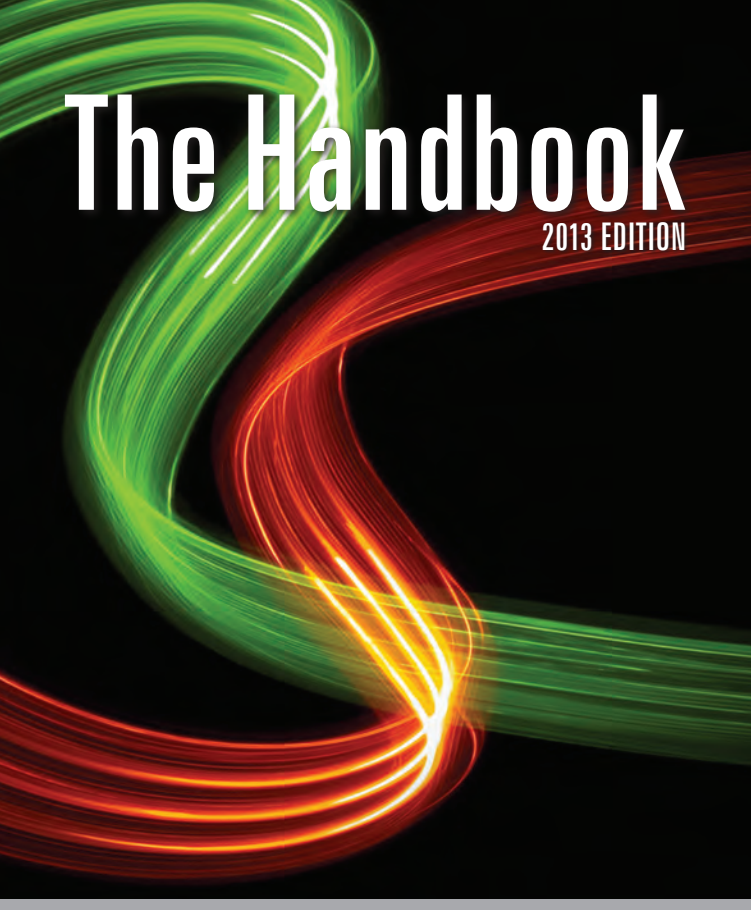
The Handbook

2013 EDITION



Nexans

Olex

Alsecure is the cable you can stake your reputation on when safety and security are critical – to maintain circuit integrity for mains power, lighting, alarms, pumps, and other essential services when under fire.

Nexans Olex Alsecure range is highly flexible and can be handled and installed safely and easily with standard tools just like normal building cables.

For more information on these products or for information on Nexans Olex power, industrial and mining products, visit **www.olex.com.au**

Nexans
Olex

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).

DOES IT COMPLY?

Does it comply? Nexans Olex is an active Voltimum member proudly supporting "Does it Comply". This promotes the use of genuine, quality products eliminating the use of non compliant electrical products and the associated commercial and safety risks. Find out more by visiting **www.doesitcomply.com.au**

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**

Contents

Contents

Building a sustainable future with Nexans Olex.

Sustainable development has become a major concern in our society in recent years. For the construction industry, particularly in buildings, sustainable development implies a built environment which is habitable, safe and healthy. Nexans Olex recognizes the importance of sustainable development in the building and construction industry and opportunities for advancement of cable design and technology.

Environmental, fire and safety cables

PVC Best Practice Manufactured Cables

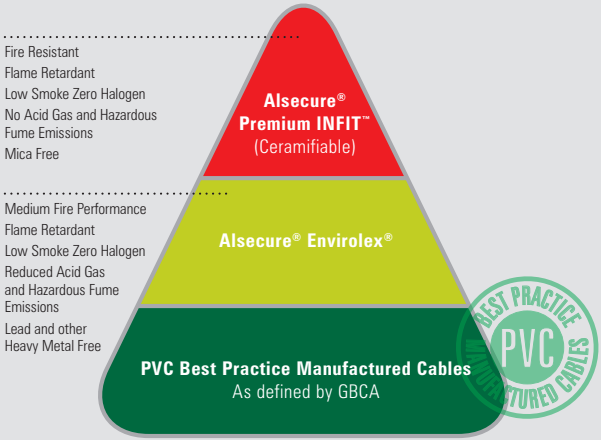
All PVC used in Nexans Olex manufactured cables complies with GBCA PVC Best Practice Guidelines and can contribute to your project earning points towards your new building's GBCA Green Star rating.

Alsecure® Envirolex®

Extensive range of enhanced performance cables for the construction industry engineered from low smoke halogen free materials with improved fire retardant properties (over standard PVC cables), reduced smoke, acid gas and hazardous fume generation particularly under fire conditions.

Alsecure® Premium INFIT® (Ceramifiable®)

Complete range of high performance fire safety/fire resistant cables engineered from unique polymeric insulation material which hardens into a protective ceramic shield when exposed to fire, maintaining circuit integrity and life-saving essential services.



For a safer environment, you can breathe easy.

Alsecure® Envirolex® cables are an extensive range of enhanced performance cables for the construction industry engineered to dramatically reduce environmental impact, particularly under fire conditions, while retaining the excellent mechanical and electrical properties designed into Nexans Olex cables.

Halogen free

Low smoke

Advantages of Alsecure® Envirolex®

- Conductor range up to 630mm² for single core cables
- Improved performance in case of fire including flame retardant/self-extinguishing, reduced acid, gas and smoke generation, non-corrosive and reduced toxicity
- Halogen free (i.e. no chlorine, bromine etc.)
- Lead free
- Easy termination and installation requirements
- Made in accordance with Australian Standards

Alsecure® Envirolex® products include readily strippable cables for general construction purposes as well as the tougher products commonly found in cables with high performance capability.

Alsecure® Envirolex® materials can also be used as alternatives for all other low voltage power and control cables (Refer Low Voltage power and Control cable from pages 10 to 19). Cables are available on request, subject to minimum production run.

Applications

Halogen free

Low smoke

Operating temp 90°C

Flame retardant

Alsecure® Envirolex® Building Flat Cables

Applications Suitable for use in power circuits, consumer mains and submains including lift sub mains, pumps and essential circuits – 0.6/1KV.

Nom. cond. area mm^2	Main conductor type	Nom. insul. thick. mm	Nom. sheath thick. mm	Earth cond. area mm^2	Nominal overall diameter mm	Approx. mass kg/100m	**Product code**
2C+E							
1.0	Solid Cu	0.6	0.9	1.0	9.0×4.2	5.7	CTCP02JA002
1.5	Strand Cu	0.6	0.9	1.5	10.0×4.6	7.2	CTCP05JA002
2.5	Solid Cu	0.6	1.0	2.5	11.2×5.0	11.0	CTCP06JA002
2.5	Strand Cu	0.6	1.0	2.5	11.7×5.3	11.1	CTCP07JA002
4.0	Strand Cu	0.7	1.1	2.5	13.4×6.2	15.2	CTCP09JA002
6.0	Strand Cu	0.7	1.1	2.5	14.5×6.8	19.2	CTCP11JA002
10.0	Strand Cu	0.7	1.2	4.0	17.0×7.8	29.8	CTCP13JA002
16.0	Strand Cu	0.7	1.3	6.0	19.7×8.9	43.7	CTCP15JA002
3C+E							
1.5	Strand Cu	0.6	0.9	1.5	12.7×4.6	9.4	ETCP05JA003
2.5	Strand Cu	0.6	1.0	2.5	14.9×5.3	14.6	ETCP07JA003

Construction 2 & 3 core+earth flat, 450/750V X-90 (XLPE) insulated, HFS-90-TP sheathed to AS/NZS 5000.2, copper conductors, 90°C.

Note Alsecure® Envirolex® cables are lead and halogen free and are suitable for "green" building installations.

Alsecure® Envirolex® Flexible Cables

Applications Flexible cable is intended for installations with moving equipment, electric appliances and for building sites. This cable can be installed in open air or buried (with extra mechanical protection).

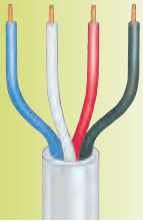
Nominal conductor area mm^2	Maximum diameter of wires mm	Nominal overall diameter mm	Approx. mass kg/100m	**Product code 110°C**
10	0.21	8.5	14	BZHX01AA001
16	0.21	9.8	20	BZHX02AA001
25	0.21	11.3	30	BZHX03AA001
35	0.21	12.6	40	BZHX04AA001
50	0.31	14.2	54	BZHX05AA001
70	0.31	16.2	74	BZHX06AA001
95	0.31	18.3	99	BZHX07AA001
120	0.51	20.7	125	BZHE87AA001
150	0.51	22.6	150	BZHE88AA001
185	0.51	24.6	179	BZHE89AA001
240	0.51	27.7	240	BZHE90AA001
300	0.51	31.0	290	BZHE91AA001
400	0.51	35.4	389	BZHE92AA001
500	0.51	40.0	498	BZHE93AA001
630	0.51	44.0	629	BZHE94AA001

Construction 110°C: 0.6/1kV cables, flexible, X-110 (XLPE) insulated and HFS-110-TP sheathed to AS/NZS 5000.1 (Power) and AS/NZS 1–995 (Welding), copper conductors, 110°C continuous, LSZH.

Note Also available in green/yellow earth between $10mm^2$–$120mm^2$.

Alsecure® Envirolex® Data/Comms

Applications Offering you an alternative to standard PVC sheath cables, a range of LSZH cables for security, data and fire is now available from Nexans Olex.



LAN

No. of cores/ pairs	Nom. cond. area	Nom. overall diam.	Stranding	Approx. mass for cable	Max. cond. resis. @20°C	Sheath colour	Pack sizes	**Product code**
	mm²	mm²	No./mm	kg/100m	ohm/km			
4 pairs	0.22	5.3	1/0.50	3.2	93.8	Blue	300m reel	JCAT5ELSZHA3
4 pairs	0.22	5.3	1/0.50	3.2	93.8	Grey	300m reel	JCAT6LSOH

Unscreened Security

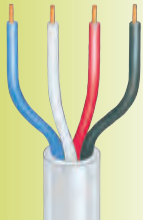
No. of cores/ pairs	Nom. cond. area	Nom. overall diam.	Strand.	Approx. mass for cable	Max. cond. resis. @20°C	Sheath colour	Pack sizes	**Product code**
	mm²	mm²	No./mm	kg/100m	ohm/km			
4 cores	0.5	4.7	14/0.20	3.4	45.2	White	300m box	JSC5WT4LSOHB30

Unscreened Alarm

No. of cores/ pairs	Nom. cond. area	Nom. overall diam.	Stranding	Approx. mass for cable	Max. cond. resis. @20°C	Sheath colour	Pack sizes	**Product code**
	mm²	mm²	No./mm	kg/100m	ohm/km			
2 cores	1.5	5.3	7/0.50	5	13.6	Red	300m reel	JRSI502A3LSOH

Alsecure® Envirolex® Data/Comms

Applications Offering you an alternative to standard PVC sheath cables, a range of LSZH cables for security, data and fire is now available from Nexans Olex.



Screened Data

No. of cores/ pairs	Nom. cond. area	Nom. overall diam.	Stranding	Approx. mass for cable	Max. cond. resis. @20°C	Sheath colour	Pack sizes	**Product code**
	mm²	mm²	No./mm	kg/100m	ohm/km			
6 cores	0.22	5.5	7/0.20	4.7	95.3	Grey	300m box	JD6CSLSOH
2 pairs	0.35	4.3	7/0.25	3	55	Grey	300m box	JD2PISLSOHB30

Coaxial

No. of cores/ pairs	Nom. cond. area	Nom. overall diam.	Stranding	Approx. mass for cable	Max. cond. resis. @20°C	Sheath colour	Pack sizes	**Product code**
	mm²	mm²	No./mm	kg/100m	ohm/km			
N/A	6.2	–	1/0.60	5.5	62	Black	500m reel	JBCRG59CCTVLSOH

Figure 8

No. of cores/ pairs	Nom. cond. area	Nom. overall diam.	Strand.	Approx. mass for cable	Max. cond. resis. @20°C	Sheath colour	Pack sizes	**Product code**
	mm²	mm²	No./mm	kg/100m	ohm/km			
N/A	0.75	3.0 × 6.0	24/0.20	3.1	26.4	White/blk stripe	500m reel	JSF75WTBKLSOH

Ultimate fire protection.

Fire may destroy everything else in its path, but Alsecure® Ceramifiable® literally gets tougher. Ceramifiable's insulation layer hardens into a protective ceramic shield when exposed to fire, maintaining circuit integrity and life-saving essential services. Alsecure® Ceramifiable® stands up to fire without mica tape, making it more flexible and easier to strip than traditional fire rated cables.

Alsecure® Premium INFIT™ – Breakthrough in Fire Safety Cables

ALSECURE® PREMIUM INFIT™

Alsecure® Premium INFIT™ utilises the latest in polymer composite technology. Unlike conventional polymers that breakdown in a fire emergency, the INFIT (previously known as Ceramifiable®) polymer technology transforms from a flexible, plastic covering into a tough insulating ceramic barrier that preserves circuit integrity (no breaks or short circuits) of essential/critical services and equipment such as fire alarms, emergency lighting, pumps, fans and important process safety continue to operate for period of time.

Features and Benefits

- Superior fire performance
- Zero hazardous fume emissions
- Halogen free
- Fire resistant
- Superior thermal performance
- Environmentally friendly – no mica, lead or toxic materials
- High flexibility
- Safe, easy to use, terminable and handle
- Resistant to mechanical and water impacts

For more details on the features and benefits, please email us at **olex.marketing@nexans.com**

Applications

Get information wherever you are with the Olex Handbook app. See page 112 for details.


Fire resistant


Low smoke


Corrosion resistant

Halogen free


Operating temp 90°C


High flexibility


Flame retardant


Chemical resistance

Alsecure® Premium INFIT™

(Ceramifiable) Single Core Flex 90°C

Applications Suitable for use in power circuits, consumer mains and submains including lift sub mains, pumps and essential circuits – 0.6/1KV.

Nom. cond. area mm^2	Nom. insul. thick. mm	Nom. sheath thick. mm	Nom. overall diameter mm	Approx. mass kg/100m	Min. bending radius during installation mm	Max. pulling tension kN	**Product code**
10	1.0	1.4	9.5	16	45	0.2	PXKX01AA001
16	1.0	1.4	10.5	22	50	0.3	PXKX02AA001
25	1.2	1.4	12.2	33	60	0.5	PXKX03AA001
35	1.2	1.4	13.4	42	80	0.8	PXKX04AA001
50	1.4	1.4	15.4	59	90	1.1	PXKX05AA001
70	1.4	1.4	17.1	78	105	1.5	PXKX06AA001
95	1.6	1.5	19.4	105	115	2.1	PXKX07AA001
120	1.6	1.5	21.6	128	130	2.6	PXKE87AA001
150	1.8	1.6	23.6	156	140	3.3	PXKE88AA001
185	2.0	1.7	26.1	189	155	4.0	PXKE89AA001
240	2.2	1.8	29.3	249	175	5.2	PXKE90AA001
300	2.4	1.9	32.4	303	195	6.5	PXKE91AA001
400	2.6	2.0	36.4	390	220	8.7	PXKE92AA001
500	2.8	2.1	41.7	508	250	10.9	PXKE93AA001
630	2.8	2.2	45.9	647	275	13.7	PXKE94AA001

Colours – insulation white (natural), outer sheath red only.

Construction 0.6/1kV, single conductor, Stranded Flexible AS/NZS 1125 Plain Annealed Copper conductor, INFIT™ (Ceramifiable®) HFI-90-TP Insulated, (HFFR) Halogen Free Flame Retardant HFS-90-TP Sheathed to AS/NZS 5000.1, 90°C, WS52W Fire Rated to AS/NZS 3013:2005.

AUSTRALIAN MADE

Alsecure® Premium INFIT™

(Ceramifiable) 90°C Multicore

Applications Suitable for use in power circuits, consumer mains and submains including lift sub mains, pumps and essential circuits – 0.6/1KV.

Number of cores	Nominal conductor area mm^2	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx. mass kg/100m	**Product code**
			90°C			
2	1.5	1.0	1.8	10.8	18.5	PEKP05AA002
2+E	1.5	1.0	1.8	11.0	16.9	PDKP05AA002
3	1.5	1.0	1.8	11.3	17.9	PEKP05AA003
3+E	1.5	1.0	1.8	11.9	19.8	PDKP05AA003
4	1.5	1.0	1.8	12.2	20.3	PEKP05AA004
4+E	1.5	1.0	1.8	12.9	23.4	PDKP05AA004
2	2.5	1.0	1.8	11.8	22.8	PEKP07AA002
2+E	2.5	1.0	1.8	12.2	22.4	PDKP07AA002
3	2.5	1.0	1.8	12.4	23.1	PEKP07AA003
3+E	2.5	1.0	1.8	13.2	26.6	PDKP07AA003
4+E	2.5	1.0	1.8	14.3	31.2	PDKP07AA004
2	4.0	1.0	1.8	12.9	27.9	PEKP09AA002
2+E	4.0	1.0	1.8	13.1	27.1	PDKP09AA002
3	4.0	1.0	1.8	13.6	29.5	PEKP09AA003
3+E	4.0	1.0	1.8	14.2	32.7	PDKP09AA003
4+E	4.0	1.0	1.8	15.4	39.8	PDKP09AA004

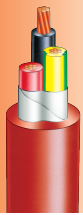
Colours – insulation see core chart, outer sheath red only.

Construction Multicore ES90. Copper conductor 0.6/1kV INFIT™ (Ceramifiable®) HFI-90-TP Insulated, (HFFR) Halogen Free Flame Retardant HFS-90-TP sheathed to AS/NZS 5000.1, 90°C, WS52W fire rated to AS/NZS 3013:2005.

AUSTRALIAN MADE

Alsecure® Premium INFIT™

(Ceramifiable) 90°C Multicore



Applications Suitable for use in power circuits, consumer mains and submains including lift sub mains, pumps and essential circuits – 0.6/1KV.

Number of cores	Nominal conductor area mm^2	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx. mass kg/100m	**Product code**
90°C						
2+E	6	1.0	1.8	14.3	29	PDTP11AA002
3+E	6	1.0	1.8	15.4	37	PDTP11AA003
4+E	6	1.0	1.8	16.9	45	PDTP11AA004
2+E	10	1.0	1.8	16.0	40	PDTP13AA002
3+E	10	1.0	1.8	17.3	52	PDTP13AA003
4+E	10	1.0	1.8	18.9	65	PDTP13AA004
3+E	16	1.0	1.8	19.4	73	PDTP15AA003
4+E	16	1.0	1.8	21.3	94	PDTP15AA004
3+E	25	1.2	1.8	23.6	108	PDTC17AA003
4+E	25	1.2	1.8	26.3	137	PDTC17AA004
3+E	35	1.2	1.8	24.7	139	PDTC18AA003
4+E	35	1.2	1.8	27.4	176	PDTC18AA004
4+E	50	1.4	2.0	33.2	242	PDTC19AA004

Colours – insulation see core chart, outer sheath red only.

Construction Multicore ES90. Copper conductor 0.6/1kV INFIT™ (Ceramifiable®) HFI-90-TP Insulated, (HFFR) Halogen Free Flame Retardant HFS-90-TP sheathed to AS/NZS 5000.1, 90°C, WS52W fire rated to AS/NZS 3013:2005.

AUSTRALIAN MADE


LOW VOLTAGE
Powering where we live.
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.
Olex
Nexans
Olex

PVC Insulated Cables

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

Nominal conductor area mm^2	Main conductor type	Nominal insulation thickness mm	Nominal overall diameter mm	Approximate mass kg/100m	**Product code**
0.5	Solid Cu	0.8	2.4	1.0	BAAP01AA001
1.0	Solid Cu	0.8	2.8	1.6	BAAP02AA001
1.0	Strand Cu	0.8	2.8	1.5	BAAP03AA001
1.5	Strand Cu	0.8	3.1	2.0	BAAP05AA001
2.5	Strand Cu	0.8	3.6	3.2	BAAP07AA001
4	Strand Cu	1.0	4.5	5.1	BAAP09AA001
6	Strand Cu	1.0	5.1	7.1	BAAP11AA001
10	Strand Cu	1.0	6.0	11.1	BAAP13AA001
16	Strand Cu	1.0	6.9	17	BAAP15AA001
25	Compact Cu	1.2	8.4	26	BAAC17AA001
35	Compact Cu	1.2	9.4	35	BAAC18AA001
50	Compact Cu	1.4	10.9	48	BAAC19AA001
70	Compact Cu	1.4	12.4	67	BAAC20AA001
95	Compact Cu	1.6	15.2	96	BAAC22AA001
120	Strand Cu	1.6	17.3	118	BAAP23AA001
150	Strand Cu	1.8	18.8	144	BAAP24AA001
185	Strand Cu	2.0	21.1	180	BAAP25AA001
240	Compact Cu	2.2	24.1	236	BAAP26AA001
300	Strand Cu	2.4	26.9	296	BAAP27AA001
400	Strand Cu	2.6	30.6	376	BAAP28AA001
500	Strand Cu	2.8	34.1	477	BAAP30AA001
630	Strand Cu	2.8	37.8	613	BAAP32AA001
Single Core PVC Insulated Copper Earth Conductor					
1.5	Strand Cu	0.6	2.7	1.8	AATP05AA001
2.5	Strand Cu	0.7	3.4	3.0	AATP07AA001

Note: Other temperature grades subject to minimum production runs.

AUSTRALIAN MADE

PVC SDI Cables

Single core, V-90 insulated, PVC sheathed to AS/NZS 5000, copper conductors, 90°C.

- 1.0 to 16mm² 450/750V to AS/NZS 5000.2.

Nominal conductor area mm²	Main conductor type	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx. mass kg/100m	**Product code**
1.0	Strand Cu	0.6	0.8	4.0	2.7	AABP02AA001
1.5	Strand Cu	0.6	0.8	4.4	3.2	AABP05AA001
2.5	Strand Cu	0.7	0.8	5.1	4.8	AABP07AA001
4	Strand Cu	0.8	0.9	6.0	7.1	AABP09AA001
6	Strand Cu	0.8	0.9	6.6	9.4	AABP11AA001
10	Strand Cu	1.0	0.9	7.8	14.3	AABP13AA001
16	Strand Cu	1.0	1.0	8.9	20.8	AABP15AA001

AUSTRALIAN MADE

XLPE/PVC
Single Core Cables

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

Nom. cond. area mm^2	Main conductor type	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approximate mass kg/100m	**Product code**
			Copper Conductor			
16	Strand Cu	0.8	1.4	9.3	21	BDBP15AA001
25	Compact Cu	0.9	1.4	10.5	30	BDBC17AA001
35	Compact Cu	0.9	1.4	11.5	40	BDBC18AA001
50	Compact Cu	1.0	1.4	12.9	52	BDBC19AA001
70	Compact Cu	1.1	1.4	14.7	73	BDBC20AA001
95	Compressed Cu	1.1	1.5	17.2	101	BDBC22AA001
120	Compressed Cu	1.2	1.5	19.6	123	BDBP23AA001
150	Compressed Cu	1.4	1.6	21.3	152	BDBP24AA001
185	Compressed Cu	1.6	1.6	23.5	189	BDBP25AA001
240	Compressed Cu	1.7	1.7	26.6	246	BDBP26AA001
300	Compressed Cu	1.8	1.8	29.4	306	BDBP27AA001
400	Strand Cu	2.0	1.9	33.3	386	BDBP28AA001
500	Strand Cu	2.2	2.0	37.0	491	BDBP30AA001
630	Strand Cu	2.4	2.2	41.4	635	BDBP32AA001
			Aluminium Conductor			
25	Compact Al	0.9	1.4	10.7	15	BDBA17AA001
35	Compact Al	0.9	1.4	11.8	18	BDBA18AA001
50	Compact Al	1.0	1.4	13.1	23	BDBA19AA001
70	Compact Al	1.1	1.4	14.9	31	BDBA20AA001
95	Compact Al	1.1	1.5	16.8	40	BDBA22AA001
120	Compact Al	1.2	1.5	18.4	49	BDBA23AA001
150	Compact Al	1.4	1.6	20.5	60	BDBA24AA001
185	Compact Al	1.6	1.6	22.4	72	BDBA25AA001
240	Compact Al	1.7	1.7	25.1	91	BDBA26AA001
300	Compact Al	1.8	1.8	27.6	112	BDBA27AA001
400	Compact Al	2.0	1.9	31.1	142	BDBA28AA001
500	Compact Al	2.2	2.0	35.3	185	BDBA30AA001
630	Compact Al	2.4	2.2	39.5	233	BDBA32AA001

PVC Flat Cables

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

Nom. cond. area mm^2	Main conductor type	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approximate mass kg/100m	**Product code**
2C						
1.0	Solid Cu	0.6	0.9	6.5 × 4.2	5.04	CACP02AA002
1.5	Strand Cu	0.6	0.9	7.2 × 4.5	6.17	CACP05AA002*
2.5	Strand Cu	0.7	1.0	8.9 × 5.4	9.68	CACP07AA002
4	Strand Cu	0.8	1.1	10.5 × 6.3	14.19	CACP09AA002
6	Strand Cu	0.8	1.1	11.6 × 6.9	18.59	CACP11AA002
10	Strand Cu	1.0	1.2	14.2 × 8.3	29.42	CACP13AA002
16	Strand Cu	1.0	1.3	16.3 × 9.5	42.48	CACP15AA002
3C						
1.5	Strand Cu	0.6	0.9	9.9 × 4.5	8.84	EACP05AA003
2.5	Strand Cu	0.7	1.0	12.3 × 5.4	14.03	EACP07AA003

Note: *Red sheath 450/750V version available for fire alarm wiring systems. A 0.6/1kV red sheath version is also available: DACP05AA002.
Alsecure Envirolex Flat refer to page 10.

AUSTRALIAN MADE

PVC Flat Cables

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

Nom. cond. area mm^2	Main conductor type	Nom. insul. thick. mm	Nom. sheath thick. mm	Earth cond. area mm^2	Nominal overall diameter mm	Approx. mass kg/100m	**Product code**
2C+E							
1.0	Solid Cu	0.6	0.9	1.0	8.9 × 4.2	7.74	CNCP02AA002
1.5	Strand Cu	0.6	0.9	1.5	9.9 × 4.5	8.86	CNCP05AA002
2.5	Strand Cu	0.7	1.0	2.5	12.2 × 5.4	14.03	CNCP07AA002
4.0	Strand Cu	0.8	1.1	2.5	13.9 × 6.3	18.65	CNCP09AA002
6.0	Strand Cu	0.8	1.1	2.5	15.0 × 6.9	23.04	CNCP11AA002
10.0	Strand Cu	1.0	1.2	4.0	18.3 × 8.3	36.05	CNCP13AA002
16.0	Strand Cu	1.0	1.3	6.0	21.0 × 9.5	51.46	CNCP15AA002
3C+E							
1.5	Strand Cu	0.6	0.9	1.5	12.6 × 4.5	11.54	ENCP05AA003
2.5	Strand Cu	0.7	1.0	2.5	15.7 × 5.4	18.31	ENCP07AA003

Alsecure Envirolex Flat refer to page 10.

AUSTRALIAN MADE

PVC Circular Cables

2 & 3 core+earth, circular, V-90 insulated, PVC sheathed to AS/NZS 5000, copper conductors, 90°C. ● 1.5 to 6mm² 450/750V to AS/NZS 5000.2 ● 10 to 300mm² 0.6/1kV to AS/NZS 5000.1.

Nom. cond. area mm²	Main conductor type	Nom. insul. thick. mm	Nom. sheath thick. mm	Earth cond. area mm²	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
2C+E							
1.5	Strand Cu	0.8	1.8	1.5	10.1	16	DNHP05AA002
2.5	Strand Cu	0.8	1.8	2.5	11.3	21	DNHP07AA002
4	Strand Cu	1.0	1.8	2.5	13.0	28	DNHP09AA002
6	Strand Cu	1.0	1.8	2.5	14.0	33	DNHP11AA002
10	Strand Cu	1.0	1.8	4	16.1	44	DNHP13AA002
16	Strand Cu	1.0	1.8	6	18.0	60	DNHP15AA002
25	Compact Cu	1.2	1.8	6	20.5	80	DNHC17AA002
35	Compact Cu	1.2	1.8	10	22.5	103	DNHC18AA002
50	Compact Cu	1.4	1.8	16	25.6	138	DNHC19AA002
3C+E							
1.5	Strand Cu	0.8	1.8	1.5	11.0	19	FNHP05AA003
2.5	Strand Cu	0.8	1.8	2.5	12.3	26	FNHP07AA003
4	Strand Cu	1.0	1.8	2.5	14.1	34	FNHP09AA003
6	Strand Cu	1.0	1.8	2.5	15.1	42	FNHP11AA003
10	Strand Cu	1.0	1.8	4	17.5	56	FNHP13AA003
16	Strand Cu	1.0	1.8	6	19.6	78	FNHP15AA003
25	Compact Cu	1.2	1.8	6	22.2	107	FNHC17AA003
35	Compact Cu	1.2	1.8	10	24.6	141	FNHC18AA003
50	Compact Cu	1.4	1.8	16	28.0	188	FNHC19AA003
70	Compact Cu	1.4	1.9	25	32.0	264	FNHC20AA003
95	Compact Cu	1.6	2.1	25	37.6	360	FNHC22AA003
120	Strand Cu	1.6	2.2	35	42.4	442	FNHP23AA003
150	Strand Cu	1.8	2.3	50	46.3	542	FNHP24AA003
185	Strand Cu	2.0	2.5	70	51.7	686	FNHP25AA003
240	Compact Cu	2.2	2.7	95	59.4	902	FNHP26AA003
300	Strand Cu	2.4	2.9	120	66.2	1124	FNHP27AA003

Note: Earth cores smaller than 25mm² are not compacted.
2C+E, 35mm² and above, subject to minimum production run.

AUSTRALIAN MADE

XLPE/PVC Multicore Cables

2 & 3 core+earth, circular, 0.6/1kV X-90 insulated, PVC sheathed to AS/NZS 5000.1, copper conductors, 90°C.

Nominal conductor area mm²	Main conductor type	Nom. insul. thick. mm	Nom. sheath thick. mm	Earth cond. area mm²	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
			2C+E				
16	Strand Cu	0.8	1.8	6	17.1	54	DTHP15AA002
25	Compact Cu	0.9	1.8	6	19.3	74	DTHC17AA002
35	Compact Cu	0.9	1.8	10	21.3	96	DTHC18AA002
50	Compact Cu	1.0	1.8	16	24.0	128	DTHC19AA002
70	Compact Cu	1.1	1.8	25	27.6	180	DTHC20AA002
95	Compact Cu	1.1	1.9	25	32.5	240	DTHC22AA002
120	Strand Cu	1.2	2.0	35	37.3	298	DTHP23AA002
			3C+E				
16	Strand Cu	0.8	1.8	6	18.6	71	FTHP15AA003
25	Compact Cu	0.9	1.8	6	20.8	98	FTHC17AA003
35	Compact Cu	0.9	1.8	10	23.2	132	FTHC18AA003
50	Compact Cu	1.0	1.8	16	26.3	175	FTHC19AA003
70	Compact Cu	1.1	1.9	25	30.5	249	FTHC20AA003
95	Compact Cu	1.1	2.0	25	35.2	337	FTHC22AA003
120	Strand Cu	1.2	2.1	35	40.3	417	FTHP23AA003
150	Strand Cu	1.4	2.3	50	44.3	516	FTHP24AA003
185	Strand Cu	1.6	2.4	70	49.7	655	FTHP25AA003
240	Strand Cu	1.7	2.6	95	56.8	856	FTHP26AA003
300	Strand Cu	1.8	2.8	120	63.3	1066	FTHP27AA003

Note: Earth cores smaller than 25mm² are not compacted. For insulation thickness refer to page 9. 3½ core (3 core+reduced neutral with or without earth) available on request subject to minimum production runs.

AUSTRALIAN MADE

PVC Circular Cables

4 core+earth, circular, V-90 insulated, PVC sheathed to AS/NZS 5000, copper conductors, 90°C. ● 1.5 to 6mm² 450/750V to AS/NZS 5000.2 ● 10 to 300mm² 0.6/1kV to AS/NZS 5000.1.

Nominal conductor area mm²	Main conductor type	Nom. insul. thick. mm	Nom. sheath thick. mm	Earth cond. area mm²	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
4C+E							
1.5	Strand Cu	0.8	1.8	1.5	11.9	22	HNHP05AA004
2.5	Strand Cu	0.8	1.8	2.5	13.3	30	HNHP07AA004
4	Strand Cu	1.0	1.8	2.5	15.3	41	HNHP09AA004
6	Strand Cu	1.0	1.8	2.5	16.5	52	HNHP11AA004
10	Strand Cu	1.0	1.8	4	19.2	70	HNHP13AA004
16	Strand Cu	1.0	1.8	6	21.5	98	HNHP15AA004
25	Compact Cu	1.2	1.8	6	24.5	136	HNHC17AA004
35	Compact Cu	1.2	1.8	10	27.2	180	HNHC18AA004
50	Compact Cu	1.4	1.9	16	31.2	242	HNHC19AA004
70	Compact Cu	1.4	2.1	25	35.8	339	HNHC20AA004
95	Compact Cu	1.6	2.2	25	42.0	465	HNHC22AA004
120	Strand Cu	1.6	2.4	35	47.5	573	HNHP23AA004
150	Strand Cu	1.8	2.5	50	51.8	700	HNHP24AA004
185	Strand Cu	2.0	2.7	70	57.9	885	HNHP25AA004
240	Strand Cu	2.2	2.9	95	66.9	1166	HNHP26AA004
300	Strand Cu	2.4	3.1	120	74.5	1446	HNHP27AA004

Note: Earth cores smaller than 25mm² are not compacted.

AUSTRALIAN MADE

XLPE/PVC Multicore Cables

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

Nominal conductor area mm²	Main conductor type	Nom. insul. thick. mm	Nom. sheath thick. mm	Earth cond. area mm²	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
4C+E							
16	Strand Cu	0.8	1.8	6	20.4	89	HTHP15AA004
25	Compact Cu	0.9	1.8	6	22.9	124	HTHC17AA004
35	Compact Cu	0.9	1.8	10	25.5	167	HTHC18AA004
50	Compact Cu	1.0	1.9	16	29.3	224	HTHC19AA004
70	Compact Cu	1.1	2.0	25	34.0	320	HTHC20AA004
95	Compact Cu	1.1	2.1	25	39.3	436	HTHC22AA004
120	Strand Cu	1.2	2.3	35	45.2	543	HTHP23AA004
150	Strand Cu	1.4	2.4	50	49.5	665	HTHP24AA004
185	Strand Cu	1.6	2.6	70	55.7	842	HTHP25AA004
240	Compact Cu	1.7	2.8	95	63.5	1100	HTHP26AA004
300	Strand Cu	1.8	3.0	120	71.2	1385	HTHP27AA004

Note: Earth cores smaller than 25mm² are not compacted.

AUSTRALIAN MADE

PVC SWA Circular Cables

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

Nom. cond. area mm²	Main cond. type	Nom. insul. thick. mm	Earth cond. area mm²	Nom. dia. over bedding mm	Nom. dia. over armour mm	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
2C+E								
1.5	Strand Cu	0.8	1.5	8.7	10.5	14.1	37.0	DNMP05AA002
2.5	Strand Cu	0.8	2.5	9.8	11.6	15.2	44.7	DNMP07AA002
4	Strand Cu	1.0	2.5	11.5	13.3	16.9	54.6	DNMP09AA002
6	Strand Cu	1.0	2.5	12.7	14.5	18.1	62.7	DNMP11AA002
10	Strand Cu	1.0	4	14.5	17.0	20.6	90.4	DNMP13AA002
16	Strand Cu	1.0	6	16.4	18.9	22.5	105	DNMP15AA002
25	Compact Cu	1.2	6	18.9	22.1	25.7	151	DNMC17AA002
35	Compact Cu	1.2	10	20.9	24.1	27.8	182	DNMC18AA002
50	Compact Cu	1.4	16	24.0	27.2	30.9	226	DNMC19AA002
3C+E								
1.5	Strand Cu	0.8	1.5	9.5	11.3	15.0	41.8	FNMP05AA003
2.5	Strand Cu	0.8	2.5	10.9	12.7	16.3	51.1	FNMP07AA003
4	Strand Cu	0.8	2.5	12.6	15.1	18.7	72.4	FNMP09AA003
6	Strand Cu	1.0	2.5	13.8	16.3	20.0	84	FNMP11AA003
10	Strand Cu	1.0	4	15.9	18.4	22.1	108	FNMP13AA003
16	Strand Cu	1.0	6	18.0	21.2	24.9	140	FNMP15AA003
25	Compact Cu	1.2	6	20.6	23.8	27.5	184	FNMC17AA003
35	Compact Cu	1.2	10	23.0	26.2	29.9	226	FNMC18AA003
50	Compact Cu	1.4	16	26.4	29.6	33.7	287	FNMC19AA003
70	Compact Cu	1.4	25	30.6	34.6	38.9	406	FNMC20AA003
95	Compact Cu	1.6	25	35.8	39.8	44.3	522	FNMC22AA003
120	Strand Cu	1.6	35	40.4	44.4	49.2	627	FNMP23AA003
150	Strand Cu	1.8	50	44.5	49.5	54.5	785	FNMP24AA003
185	Strand Cu	2.0	70	49.7	54.7	60.1	966	FNMP25AA003
240	Compact Cu	2.2	95	57.2	62.2	68.8	1219	FNMP26AA003
300	Strand Cu	2.4	120	63.5	68.5	75.6	1474	FNMP27AA003

Note: 3½ core (3 core+reduced neutral with or without earth) available on request subject to minimum production runs.

AUSTRALIAN MADE

XLPE/PVC SWA Multicore Cables

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

Nom. cond. area mm^2	Main cond. type	Nom. insul. thick. mm	Earth cond. area mm^2	Nom. dia. over bedding mm	Nom. dia. over armour mm	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
2C+E								
16	Strand Cu	0.8	6	15.5	18.0	21.6	98	DTMP15AA002
25	Compact Cu	0.9	6	17.7	20.2	23.8	128	DTMC17AA002
35	Compact Cu	0.9	10	19.7	22.9	26.6	169	DTMC18AA002
50	Compact Cu	1.0	16	22.4	25.6	29.3	210	DTMC19AA002
70	Compact Cu	1.1	25	26.0	29.2	33.1	276	DTMC20AA002
95	Compact Cu	1.1	25	30.7	34.7	38.8	377	DTMC22AA002
120	Strand Cu	1.2	35	35.7	39.7	44.0	459	DTMP23AA002
3C+E								
16	Strand Cu	0.8	6	17.0	19.5	23.1	118	FTMP15AA003
25	Compact Cu	0.9	6	19.2	22.4	26.1	171	FTMC17AA003
35	Compact Cu	0.9	10	21.6	24.8	28.4	212	FTMC18AA003
50	Compact Cu	1.0	16	24.7	27.9	31.8	267	FTMC19AA003
70	Compact Cu	1.1	25	29.1	33.1	37.4	384	FTMC20AA003
95	Compact Cu	1.1	25	33.6	37.6	42.1	491	FTMC22AA003
120	Strand Cu	1.2	35	38.5	42.5	47.2	592	FTMP23AA003
150	Strand Cu	1.4	50	42.5	47.5	52.6	749	FTMP24AA003
185	Strand Cu	1.6	70	47.7	52.7	58.0	915	FTMP25AA003
240	Compact Cu	1.7	95	54.8	59.8	66.2	1157	FTMP26AA003
300	Strand Cu	1.8	120	60.9	65.9	72.7	1402	FTMP27AA003

Note: 3½ core (3 core+reduced neutral with or without earth) available on request subject to minimum production runs.

AUSTRALIAN MADE

PVC SWA Circular Cables

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

Nom. cond. area mm²	Main cond. type	Nom. insul. thick. mm	Earth cond. area mm²	Nom. dia. over bedding mm	Nom. dia. over armour mm	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
4C+E								
1.5	Strand Cu	0.8	1.5	10.4	12.2	15.9	46	HNMP05AA004
2.5	Strand Cu	0.8	2.5	11.9	13.7	17.3	58	HNMP07AA004
4	Strand Cu	1.0	2.5	13.8	16.3	20.0	83	HNMP09AA004
6	Strand Cu	1.0	2.5	15.2	17.7	21.4	97	HNMP11AA004
10	Strand Cu	1.0	4	17.6	20.8	24.4	139	HNMP13AA004
16	Strand Cu	1.0	6	19.9	23.1	26.8	166	HNMP15AA004
25	Compact Cu	1.2	6	22.9	26.1	29.8	220	HNMC17AA004
35	Compact Cu	1.2	10	25.6	28.8	32.6	275	HNMC18AA004
50	Compact Cu	1.4	16	29.8	33.8	38.1	380	HNMC19AA004
70	Compact Cu	1.4	25	34.0	38.0	42.5	494	HNMC20AA004
95	Compact Cu	1.6	25	40.0	44.0	48.8	646	HNMC22AA004
120	Strand Cu	1.6	35	45.5	50.5	55.8	824	HNMP23AA004
150	Strand Cu	1.8	50	49.6	54.6	60.1	970	HNMP24AA004
185	Strand Cu	2.0	70	55.7	60.7	67.4	1192	HNMP25AA004
240	Compact Cu	2.2	95	64.3	69.3	76.3	1516	HNMP26AA004
300	Strand Cu	2.4	120	71.8	78.1	85.8	1936	HNMP27AA004

Note: 3½ core (3 core + reduced neutral with or without earth) available on request subject to minimum production runs.

AUSTRALIAN MADE

XLPE/PVC SWA Multicore Cables

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

Nom. cond. area mm²	Main cond. type	Nom. insul. thick. mm	Earth cond. area mm²	Nom. dia. over bedding mm	Nom. dia. over armour mm	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
4C+E								
16	Strand Cu	0.8	6	18.8	22.0	25.6	155	HTMP15AA004
25	Compact Cu	0.9	6	21.3	24.5	28.2	203	HTMC17AA004
35	Compact Cu	0.9	10	23.9	27.1	31.0	257	HTMC18AA004
50	Compact Cu	1.0	16	27.5	31.5	35.5	350	HTMC19AA004
70	Compact Cu	1.1	25	32.4	36.4	40.9	470	HTMC20AA004
95	Compact Cu	1.1	25	37.5	41.5	46.1	608	HTMC22AA004
120	Strand Cu	1.2	35	43.4	48.4	53.5	780	HTMP23AA004
150	Strand Cu	1.4	50	47.5	52.5	57.7	925	HTMP24AA004
185	Strand Cu	1.6	70	53.7	58.7	64.4	1134	HTMP25AA004
240	Compact Cu	1.7	95	61.1	66.1	73.0	1443	HTMP26AA004
300	Strand Cu	1.8	120	68.4	73.4	80.7	1759	HTMP27AA004

Note: 3½ core (3 core + reduced neutral with or without earth) available on request subject to minimum production runs.

AUSTRALIAN MADE

PVC
Control Cables

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

Number of cores	Nominal overall diameter mm	Approximate mass kg/100m	**Product code**
1.5mm² (7/0.50mm)			
5+E	13.1	22	BFAP05AA005
6+E	13.1	24	BFAP05AA006
8+E	15.4	30	BFAP05AA008
10+E	16.1	35	BFAP05AA010
12+E	17.0	40	BFAP05AA012
20+E	20.1	59	BFAP05AA020
30+E	24.3	83	BFAP05AA030
50+E	29.4	129	BFAP05AA050
2.5mm² (7/0.67mm)			
6+E	14.6	34	BFAP07AA006
10+E	18.1	50	BFAP07AA010
12+E	19.0	57	BFAP07AA012
20+E	22.8	85	BFAP07AA020
25+E	25.2	104	BFAP07AA025
30+E	27.6	122	BFAP07AA030
36+E	28.7	141	BFAP07AA036
50+E	33.7	194	BFAP07AA050

AUSTRALIAN MADE

PVC SWA Control Cables

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

Number of cores	Nominal dia. over bedding mm	Nominal dia. over armour mm	Nominal overall diameter mm	Approximate mass kg/100m	**Product code**
1.5mm² (7/0.50mm)					
6+E	11.5	13.3	16.9	52	BFCP05AA006
10+E	14.5	17.0	20.7	80	BFCP05AA010
12+E	15.2	17.7	21.4	87	BFCP05AA012
20+E	18.5	21.7	25.4	128	BFCP05AA020
30+E	22.7	25.9	29.6	167	BFCP05AA030
36+E	23.6	26.8	30.7	182	BFCP05AA036
40+E	25.9	29.1	32.9	202	BFCP05AA040
50+E	28.0	32.0	36.2	260	BFCP05AA050
2.5mm² (7/0.67mm)					
6+E	13.0	15.5	19.1	75	BFCP07AA006
10+E	16.5	19.0	22.7	100	BFCP07AA010
20+E	21.2	24.4	28.1	164	BFCP07AA020
25+E	23.6	26.8	30.6	191	BFCP07AA025
30+E	26.0	29.2	33.1	219	BFCP07AA030
40+E	30.1	34.1	38.3	299	BFCP07AA040
50+E	32.1	36.1	40.6	342	BFCP07AA050

AUSTRALIAN MADE

XLPE URD
Power Cables

4 core 0.6/1kV X-90 insulated, PVC sheathed
Low Voltage Underground Residential Distribution
Cable to AS/NZS 4026, 90°C.

Nominal conductor area mm^2	Nominal insulation thickness mm	Diameter over insulation mm	Nominal overall diameter mm	Approximate mass kg/100m	**Product code**
LV Distribution – Aluminium					
185	1.6	17.2	43.0	280	XDDS25AA004*
240	1.7	20.2	49.8	363	XDDS26AA004*
185	1.6	18.2	47.5	288	XDDA25AA004•
240	1.7	20.6	53.4	366	XDDG37AA004•
LV Service – Copper					
16	1.5	7.9	22.1	86	HEVP15AA004
25	1.7	9.3	25.5	127	HEVC17AA004
35	1.7	10.3	27.9	166	HEVC18AA004
50	1.8	11.6	31.2	217	HEVC19AA004

Note: *Solid conductor. •Stranded conductor.

AUSTRALIAN MADE

XLPE Aerial Bundled Cables

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

Nominal conductor area mm²	Nominal insulation thickness mm	Nominal dia. over insulation mm	Diameter over laid-up cores mm	Approx. mass kg/100m	**Product code**
			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 PVC insulated neutral screened cables and PVC insulated Hard Drawn Copper Aerials are also available on request.

AUSTRALIAN MADE

Industrial power.

Nexans Olex specialises in a range of industrial cables designed in accordance with local and international standards. The quality and toughness of these products make them much sought after on world markets from industrial power, to control cable, robotics, BUS technology, instrumentation and specialist applications.

Nexans
Olex

Powerlex™ PVC OD Cords

250/440V V-90 insulated and sheathed ordinary duty flexible cord to AS/NZS 3191 and AS/NZS 60227.

Nominal conductor area mm²	Maximum diameter of wires mm	Nominal overall diameter mm	Approximate mass kg/100m	**Product code**
2C				
0.75	0.21	6.2	5	CAHR02AA002
1.0	0.21	6.6	6	CAHR03AA002
1.5	0.21	7.5	8	CAHR04AA002
2.5	0.21	9.2	13	CAHR05AA002
2C+E				
0.75	0.21	6.6	7	EAHR02AA003
1.0	0.21	6.9	8	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	8	GAHR02AA004
1.0	0.21	7.8	10	GAHR03AA004
1.5	0.21	9.1	13	GAHR04AA004
2.5	0.21	10.9	20	GAHR05AA004
4	0.31	12.3	29	GAHR06AA004
4C+E				
1.0	0.21	8.5	10	APAR03AA005
1.5	0.21	10.1	15	APAR04AA005
2.5	0.21	12.1	26	APAR05AA005
4	0.31	13.9	36	APAR06AA005

Note: For core colour, flexible cords refer to page 105.
V-90HT is available on request subject to minimum production runs.

AUSTRALIAN MADE

Powerlex™ PVC HD Cords

0.6/1kV V-90 insulated and PVC sheathed heavy duty flexible cord to AS/NZS 3191.

Nominal conductor area mm^2	Maximum diameter of wires mm	Nominal overall diameter mm	Approximate mass kg/100m	**Product code**
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
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

Note: For core colour, flexible cords refer to page 105. Conductor stranding may vary according to production method and relevant Standard. V-90HT is available on request subject to minimum production runs.

AUSTRALIAN MADE

Versolex®
HD Single Cord

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

Nominal conductor area mm^2	Maximum diameter of wires mm	Nominal overall diameter mm	Approx. mass kg/100m	**Product code**
10	0.21	8.5	14	BDSX01AA001
16	0.21	9.8	20	BDSX02AA001
25	0.21	11.3	30	BDSX03AA001
35	0.21	12.6	40	BDSX04AA001
50	0.31	14.2	54	BDSX05AA001
70	0.31	16.2	74	BDSX06AA001
95	0.31	18.3	99	BDSX07AA001
120	0.51	20.7	125	BDSE87AA001
150	0.51	22.6	150	BDSE88AA001

Alsecure Envirolex Flexible Cables refer to page 11.

AUSTRALIAN MADE

Versolex® HD Unscreened Cables

0.6/1kV multicore cords & cables, flexible X-90 insulated and TPE-90 sheathed to AS/NZS 3191 (cords) and where applicable AS/NZS 5000.1 (cables), copper conductors, 90°C.

Nom. cond. area mm^2	Max. dia. of wires mm	Nom. ins. thick. mm	Nom. sheath thick. mm	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
3C (2C+E)						
1.5	0.21	0.7	1.6	9.5	12	EFGR04AA003
2.5	0.21	0.7	1.8	10.9	16	EFGR05AA003
4C (3C+E or 3C+3E)						
2.5	0.21	0.7	1.9	12.0	20	GFGR05AA004
4	0.31	0.7	2.0	13.6	29	GFGR06AA004
120	0.51	1.2	2.2	42.2	464	FTAE87AA003

Note: Other sizes and conductor configurations are available on request.

AUSTRALIAN MADE

Versolex® HD Braid Screened Cables

0.6/1kV multicore cords & cables flexible X-90 insulated, TPE-90 bedded, copper wire braid screened, sheathed to AS/NZS 3191 (cords) and AS/NZS 5000.1 (cables), copper conductors, 90°C.

Nom. cond. area mm^2	Max. dia. of wires mm	Nom. ins. thick. mm	Nom. dia. under braid mm	Nom. sheath thick. mm	Nom. overall dia. mm	Approx. mass kg/100m	**Product code**
4C (3C+E or 3C+3E)							
1.5	0.21	0.7	9.1	1.7	13.9	24	GETR04AA004
2.5	0.21	0.7	10.2	1.9	15.2	31	GETR05AA004
6	0.31	0.7	13.8	1.8	18.7	42	FTTR07AA003
10	0.21	0.7	15.0	1.8	20.0	66	FTTX01AA003
35	0.21	0.9	23.2	1.8	28.9	174	FTTX04AA003
50	0.31	1.0	27.1	1.8	32.9	237	FTTX05AA003
70	0.31	1.1	31.1	1.9	37.6	331	FTTX06AA003
95	0.31	1.1	35.2	2.1	41.9	428	FTTX07AA003
5C (4C+E)							
1.5	0.21	0.7	10.1	1.8	15.1	28	BWTR04AA005
2.5	0.21	0.7	11.4	2.0	16.6	36	BWTR05AA005
4	0.31	0.7	12.8	2.2	18.4	46	BWTR06AA005
6	0.31	0.7	15.6	1.8	21.1	63	BWTR07AA005
10	0.21	0.7	17.2	1.8	22.5	83	BWTX01AA005
16	0.21	0.8	21.7	1.8	26.4	124	BWTX02AA005
25	0.21	0.9	24.9	1.8	30.1	143	BWTX03AA005
35	0.21	0.9	28.5	1.9	33.7	247	BWTX04AA005
50	0.31	1.0	33.7	2.1	39.9	344	BWTX05AA005
70	0.31	1.1	38.4	2.3	43.9	406	BWTX06AA005

AUSTRALIAN MADE

Titanex® Single Core Cables

0.6/1kV cables, cross-linked synthetic EPR rubber insulated and sheathed, lead free. Copper conductors to DIN VDE 0295 class 5. Core identification to HD 308 S2. Temperature Rating: 85°C.

Cross section mm²	Perm.current rating open air A	Minimum outer diameter mm	Maximum outer diameter mm	Approx. mass kg/km	**Product code**
2.5	32	6.3	7.9	66	HAR1X2.5
4	43	7.2	9	94	HAR1X4
6	56	7.2	9.8	109	HAR1X6
10	77	9.5	11.9	182	HAR1X10
16	102	10.8	13.4	256	HAR1X16
25	136	12.7	15.8	369	HAR1X25
35	168	14.3	17.9	482	HAR1X35
50	203	16.5	20.6	662	HAR1X50
70	254	18.6	23.3	895	HAR1X70
95	315	20.8	26.0	1164	HAR1X95
120	363	22.8	28.6	1430	HAR1X120
150	416	25.2	31.4	1740	HAR1X150
185	475	27.6	34.4	2160	HAR1X185
240	559	30.6	38.3	2730	HAR1X240
300	637	33.5	41.9	3480	HAR1X300

Note: Permissible current rating is measured for an ambient temperature of 30°C and a maximum operating and conductor temperature of 85°C.

Titanex® Multicore Cables

0.6/1kV cables, cross-linked synthetic EPR rubber insulated and sheathed, lead free. Copper conductors to DIN VDE 0295 class 5. Core identification to HD 308 S2. Temperature Rating: 85°C.

No. cores × cross section mm²	Perm. current rating open air A	Minimum outer diameter mm	Maximum outer diameter mm	Approx. mass kg/km	**Product code**
2C					
2 × 2.5	32	10.2	13.1	161	HAR2X2.5
2 × 4	43	11.8	15.1	238	HAR2X4
2 × 6	56	13.1	16.8	279	HAR2X6
2 × 10	77	17.7	22.6	533	HAR2X10
2 × 16	102	20.2	25.7	744	HAR2X16
2 × 25	136	24.3	30.7	1074	HAR2X25
2C+E					
3 G 2.5	32	10.9	14	195	HAR3G2.5
3 G 4	43	12.7	16.2	290	HAR3G4
3 G 6	56	14.1	18	346	HAR3G6
3 G 10	77	19.1	24.2	663	HAR3G10
3 G 16	102	21.8	27.6	924	HAR3G16
3 G 25	136	26.1	33	1345	HAR3G25
3 G 35	168	29.3	37.1	1760	HAR3G35
3C+E					
4 G 2.5	29	12.5	15.5	245	HAR4G2.5
4 G 4	38	14	18	357	HAR4G4
4 G 6	50	15.7	20	443	HAR4G6
4 G 10	68	20.8	26.5	818	HAR4G10
4 G 16	92	23.8	30.1	1150	HAR4G16
4 G 25	122	28.9	36.6	1700	HAR4G25
4 G 35	150	32.5	41.1	2180	HAR4G35
4 G 50	182	37.7	47.5	3030	HAR4G50
4 G 70	232	42.7	54	3990	HAR4G70
4 G 95	281	48.4	61	5360	HAR4G95
4 G 120	325	53	66	6500	HAR4G120
4C+E					
5 G 2.5	29	13.3	17	297	HAR5G2.5
5 G 4	38	15.6	19.9	453	HAR5G4
5 G 6	50	17.5	22.2	557	HAR5G6
11C+E					
12 G 1.5	11	17.6	22.14	510	HAR12G1.5
17C+E					
18 G 1.5	9	20.7	26.3	730	HAR18G1.5

Flexolex® HD Unscreened Cables

0.6/1kV cords and cables R-EP-90 (EPR) insulated and HD-90-CPE sheathed to AS/NZS 3191 (cords) and AS/NZS 5000.1 (cables), bunched tinned copper conductors, 90°C, for flexible applications.

Nominal conductor area mm^2	Maximum diameter of wires mm	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx. mass kg/100m	**Product code**
2C+E						
0.75	0.21	0.8	1.4	8.8	11	RDER52AA003
1.0	0.21	0.8	1.4	9.1	12	RDER53AA003
1.5	0.26	0.8	1.6	10.5	15	RDER54AA003
2.5	0.26	0.9	1.8	12.5	22	RDER55AA003

Note: Other sizes, conductor configuration and screened options are available on request.

AUSTRALIAN MADE

Varolex®
VSD/EMC Cables

Fixed conductor variable speed drive cables. 0.6/1kV X-90 insulated, 3 core+3 earths, PVC bedded, copper tape screened, PVC sheathed to AS/NZS 5000.1, copper conductors, 90°C.

Nominal conductor area mm^2	Nomimal insulation thickness mm	Combined earth size area mm^2	Nominal dia. over screen mm	Nominal overall diameter mm	Approx. mass kg/100m	**Product code**
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

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

AUSTRALIAN MADE

PVC Flexible Control

300/500V cables, flexible PVC insulated and PVC sheathed to DIN VDE 0281 part 1 and HD 21.1, PVC self extinguishing and flame retardant, copper conductors. Flexing –5°C to 80°C, fixed –40°C to 80°C. Min. bending radius 7.5 × cable O.D.

Number cores × cross section mm²	Nomimal over diameter mm	Approximate mass kg/km	**Product code**
2C+E			
3 G 0.5	5.1	46	CC3G0.5
3 G 0.75	5.5	54	CC3G0.75
3 G 1	6	72	CC3G1
3 G 1.5	6.7	90	CC3G1.5
3 G 2.5	8.3	148	CC3G2.5
3C+E			
4 G 0.5	5.7	56	CC4G0.5
4 G 0.75	6.2	66	CC4G0.75
4 G 1	6.6	86	CC4G1
4 G 1.5	7.3	109	CC4G1.5
4C+E			
5 G 0.5	6.2	65	CC5G0.5
5 G 0.75	6.8	80	CC5G0.75
5 G 1	7.2	104	CC5G1
5 G 1.5	8.2	131	CC5G1.5
5 G 2.5	10.2	221	CC5G2.5
6C+E			
7 G 0.5	7.4	80	CC7G0.5
7 G 0.75	8.1	110	CC7G0.75
7 G 1	8.6	141	CC7G1
7 G 1.5	9.8	184	CC7G1.5
7 G 2.5	12.1	306	CC7G2.5

Note: Black cores with continuous white numbering according to DIN VDE 0293. Not suitable for open air applications. G = green-yellow earth core.

PVC Flexible Control

300/500V cables, flexible PVC insulated and PVC sheathed to DIN VDE 0281 part 1 and HD 21.1, PVC self extinguishing and flame retardant, copper conductors. Flexing –5°C to 80°C, fixed –40°C to 80°C. Min. bending radius 7.5 × cable O.D.

Number cores × cross section mm²	Nomimal over diameter mm	Approximate mass kg/km	**Product code**
11C+E			
12 G 0.5	9.1	135	CC12G0.5
12 G 0.75	9.9	179	CC12G0.75
12 G 1	10.7	230	CC12G1
12 G 1.5	12.1	309	CC12G1.5
12 G 2.5	15.2	498	CC12G2.5
17C+E			
18 G 0.5	10.7	196	CC18G0.5
18 G 0.75	11.9	257	CC18G0.75
18 G 1	12.7	343	CC18G1
18 G 1.5	14.5	440	CC18G1.5
24C+E			
25 G 0.5	13	270	CC25G0.5
25 G 0.75	14.5	365	CC25G0.75
25 G 1	15.6	485	CC25G1
25 G 1.5	17.8	620	CC25G1.5
35C+E			
36 G 1	17.4	668	CC36G1
49C+E			
50 G 1	19.1	936	CC50G1

Note: Black cores with continuous white numbering according to DIN VDE 0293. Not suitable for open air applications. G = green-yellow earth core.

PVC/EMC Flexible Control

300/500V cables, flexible PVC insulated, tinned copper braided with transparent PVC sheath, copper conductors to DIN VDE 0295 class 5 and IEC 60228 class 5. Flexing –5°C to 80°C, fixed –40°C to 80°C. Min. bending radius 10 × cable O.D.

Number cores × cross section mm²	Nomimal over diameter mm	Approximate mass kg/Km	**Product code**
2C+E			
3 G 0.5	7.2	83	CY3G0.5
3 G 0.75	7.8	98	CY3G0.75
3 G 1	8.2	103	CY3G1
3 G 1.5	9	152	CY3G1.5
3 G 2.5	10.7	216	CY3G2.5
3C+E			
4 G 0.5	7.8	94	CY4G0.5
4 G 0.75	8.3	113	CY4G0.75
4 G 1	8.9	146	CY4G1
4 G 1.5	9.6	168	CY4G1.5
4 G 2.5	11.4	267	CY4G2.5
4C+E			
5 G 0.5	8.3	108	CY5G0.5
5 G 0.75	9.1	130	CY5G0.75
5 G 1	9.5	169	CY5G1
5 G 1.5	10.5	202	CY5G1.5
5 G 2.5	12.5	347	CY5G2.5
5 G 4	14.8	502	CY5G4
6C+E			
7 G 0.5	9.5	136	CY7G0.5
7 G 0.75	10.4	184	CY7G0.75
7 G 1	11	219	CY7G1
7 G 1.5	12.1	304	CY7G1.5
11C+E			
12 G 0.5	11.3	195	CY12G0.5
12 G 0.75	12.5	292	CY12G0.75
12 G 1	13.1	350	CY12G1

Note: Black cores with continuous white numbering according to DIN VDE 0293. G = green-yellow earth core.

Silicone Multicore Cables

300/500V cables, silicone insulated, silicone sheathed, halogen free to IEC 60754-2, tinned copper conductors, fixed –60°C to 180°C (peak 220°C). Min. bending radius 7.5 × cable O.D.

Number cores × cross section mm²	Nomimal over diameter mm	Approximate mass kg/km	**Product code**
2 × 1	6.6	59	SF2X1
3 G 1	7.4	77	SF3G1
4 G 1	8	94	SF4G1
5 G 1	8.8	115	SF5G1
7 G 1	9.5	144	SF7G1
12 G 1	11.5	231	SF12G1
3 G 1.5	8	98	SF3G1.5
4 G 1.5	8.8	122	SF4G1.5
5 G 1.5	9.6	147	SF5G1.5
3 G 2.5	9.7	152	SF3G2.5
4 G 2.5	10.6	188	SF4G2.5
5 G 2.5	11.6	228	SF5G2.5

Note:

G = Green-yellow earth core
2 Core = Brown/Blue
3 Core = Brown/Blue/Green-Yellow
4 Core = Brown/Blue/Black/Green-Yellow
5 Core = Brown/Blue/Black/Grey/Green-Yellow
6 Core & above = Black cores with white numbering

Silicone Single Core

500V cables, fixed or flexible conductor silicone insulated with or without glass fibre braiding, halogen free to IEC 60754-2, tinned copper conductors, fixed –60°C to 180°C. Min. bending radius 15 × cable O.D.

Number cores × cross section mm^2	Nomimal over diameter mm	Approximate mass kg/km	**Product code**
1	2.5	13.5	SIF2351BK
1	2.5	13.5	SIF2351RD
1.5	2.8	18.5	SIF2361.5BK
1.5	2.8	18.5	SIF2361.5RD
2.5	3.4	30	SIF2372.5BK
2.5	3.4	30	SIF2372.5RD
4	4.2	47.3	SIF2384BK
4	4.2	47.3	SIF2384RD
6	5.2	71.1	SIF2396BK
6	5.2	71.1	SIF2396RD

Note: G = green-yellow earth core.

Instrolex® Instrumentation Cables

Plain annealed copper conductor, V-90RP PVC insulated, twisted pairs, overall screened with aluminium polyester tape plus tinned annealed copper drain wire, rip cord, 5V-90RP PVC sheathed.

Number and nominal diameter of wires No./mm	Number of pairs	Nominal outside diameter mm	Approximate mass kg/100m	**Product code**
Single Pair – Screened				
7/0.30	1	5.2	3.5	IEB183AA001
7/0.50	1	6.6	6.0	IEB184AA001
Overall Screened Pairs				
7/0.30	2	7.8	6.3	IEC183AA002
7/0.30	4	8.4	9.4	IEC183AA004
7/0.30	6	10.0	13	IEC183AA006
7/0.30	8	11.2	17	IEC183AA008
7/0.30	10	12.5	21	IEC183AA010
7/0.30	12	13.4	24	IEC183AA012
7/0.30	16	15.1	31	IEC183AA016
7/0.30	20	16.8	38	IEC183AA020
7/0.30	24	18.1	45	IEC183AA024
7/0.30	36	22.0	66	IEC183AA036
7/0.30	50	25.6	90	IEC183AA050
Individually and Overall Screened Pairs				
7/0.30	2	8.1	7.3	IED183AA002
7/0.30	4	10.4	12	IED183AA004
7/0.30	6	12.2	17	IED183AA006
7/0.30	8	13.9	22	IED183AA008
7/0.30	10	14.6	26	IED183AA010
7/0.30	12	16.0	31	IED183AA012
7/0.30	16	18.0	39	IED183AA016
7/0.30	20	20.1	48	IED183AA020
7/0.30	24	21.9	57	IED183AA024
7/0.30	36	26.3	83	IED183AA036
7/0.30	50	30.6	112	IED183AA050

Note: 1. A complete range of 7/0.50 pairs is available.

2. 7/0.30 is equivalent to 20 AWG.

3. 7/0.50 is equivalent to 16 AWG.

Alsecure Instrumentation cables refer to page 19.

Instrolex® Instrumentation SWA

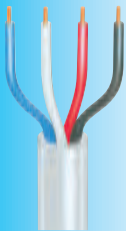
Plain annealed copper conductor, V-90 RPPVC insulated, twisted pairs, overall or individually and overall screened with aluminium polyester tape plus tinned annealed copper drain wire, rip cord, PVC bedding, steel wire armour, 5V-90 RPPVC sheathed.

Number & nom. dia. of wires No./mm	No. of pairs (or triples where applicable)	Nominal dia. over bedding mm	Nominal dia. over armour mm	Nominal outside diameter mm	Approx. mass kg/100m	**Product code**
Single Pair Screened – SWA						
7/0.50	1	6.2	8.0	10.2	22	IEF184AA001
Overall Screened Pairs – SWA						
7/0.30	2	7.4	9.2	11.4	25	IEG183AA002
7/0.30	4	8.0	9.8	12.0	28	IEG183AA004
7/0.30	6	9.4	11.2	13.6	36	IEG183AA006
7/0.30	8	10.6	12.4	14.8	42	IEG183AA008
7/0.30	10	11.7	13.5	16.1	48	IEG183AA010
7/0.30	12	12.6	14.4	17.0	54	IEG183AA012
7/0.30	16	14.3	16.1	18.9	65	IEG183AA016
Individually & Overall Screened Pairs – SWA						
7/0.30	2	7.7	9.5	11.7	26	IEH183AA002
7/0.30	4	9.8	11.6	14.0	35	IEH183AA004
7/0.30	6	11.6	13.4	16.0	45	IEH183AA006
7/0.30	8	13.1	14.9	17.5	52	IEH183AA008
7/0.30	10	13.8	15.6	18.2	58	IEH183AA010
Single Triple Screened						
7/0.50	1			6.9	7.8	IGB184AA001
Single Triple Screened – SWA						
7/0.50	1	6.6	8.4	10.6	24	IGF184AA001
Overall Screened Triples						
7/0.30	4			10.0	13	IGC183AA004
7/0.30	6			11.7	19	IGC183AA006
7/0.30	12			16.1	35	IGC183AA012

Note: Other pair and triple counts available.
7/0.50 SWA pairs and triples available.
Alsecure Instrumentation cables refer to page 19.


DATA/COMMS
Designed
for the future.
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 Audiolex cables will provide you with superior home theatre. The Gardolex range of extra low voltage cables make garden lighting simple, reliable and economical.
Nexans
Olex

Security Cables



Suitable for use in control circuits associated with security systems including detection, monitoring and access control.
Designed for use in ELV Systems – 50V AC, 120V DC.
Not suitable for mains connection.

Unscreened Security

Number of conductors	Nominal conductor area mm^2	Nominal overall diameter mm	Approx. mass kg/100m	Max. DC resistance @20°C Ohms/km	**Product code**
7/0.25 mm Conductor					
4	0.22	3.6	1.4	86.5	JSC.2xx4C*
6	0.22	4.9	3.1	86.5	JSC.2xx6C*
14/0.20mm Conductor					
4	0.50	4.7	3.2	44.5	JSC.5xx4C*
6	0.50	5.6	4.7	44.5	JSC.5xx6C*
8	0.50	6.5	5.8	44.5	JSC.5WT8C*

xx Sheath colour: GY Grey; WT White. *Pack size: 1 – 100m spool; B – 300m box; C – 250m spool (JSC.5xx6C only); B2 – 200m box (JSC.5xx6C only). Insulation colours: 4C – Red, Black, White, Blue; 6C – Red, Black, White, Blue, Green, Yellow. 8C – Red, Blue, White, Black, Yellow, Green, Violet, Brown.

Screened Security

Number of conductors	Nominal conductor area mm^2	Nominal overall diameter mm	Approx. mass kg/100m	Max. DC resistance @20°C Ohms/km	**Product code**
7/0.25mm Conductor					
2 pair•	0.35	4.2	2.8	55.0	JD2PIS†
2 pair•	0.35	4.3	2.9	55.0	JD2PISFPA3

*Pack size: 1 – 100m spool; B – 300m box (JD2PIS only);
A3 – 300m spool (JD2PISFPA3 only).
Note: Grey PVC Sheath, 7/0.25mm T/C drain wire.
•Individually screened pairs. Also available in jelly filled version JD2PISFP3).
Insulation colours: 4C – Red, Blue, White, Black; 2 Pair – Black and Red, Green and White. xx Sheath colour. †Polypropylene insulated.

Alsecure Envirolex cables refer to pages 12 and 13.

Security/Audio Cables

Suitable for use in audio systems for low and high power speaker connections, security applications.

Audiolex Oxygen Free Copper Audio

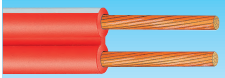
No. of cores	Nom. cond. area mm²	Stranding No./mm	Approx. mass kg/100m	Nom. insul. thickness mm	Nom. overall diameter mm	Nom. cond. res. @ 20°C ohm/km	Pack size	**Product code**
2	1.2	70/0.15	5.8	2.2	6.5	17.2	B	JTS1.2VT2CA3
2	2.5	140/0.15	10	3.3	8.5	7.8	B	JTS2.5VT2C*
4	1.2	70/0.15	8.6	2.2	6.9	17.2	B	JTS1.2VT4CA3

Pack size – B – 300m spool.

Figure 8

Standard								
0.5	4.3 × 1.8	14/0.20	2.0	44.5	97.8	0.5	A, C	JSF.5xx*
0.75	5.9 × 2.9	24/0.20	3.0	26.0	57.1	0.8	A, B, C	JSF.75xx*[1]
Oxygen Free Copper								
2.0	7.0 × 3.4	64/0.20	5.2	10.9	23.9	0.8	A, C	JSF2.0CL*
2.6	9.0 × 4.5	84/0.20	8.1	7.4	16.3	1.0	A	JSF2.6CL1

[1] Rated voltage ELV. *Pack size. xx Sheath colour.



Alsecure Envirolex Figure 8 cable refer to page 13.

LAN Cables

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

Bare copper conductor, polyolefin insulated, twisted pairs, PVC sheathed, compatible with RJ type connector.

No. of pairs	Nominal conductor area	Nominal overall diameter	Stranding	Approximate mass	Shielding	Maximum conductor resistance @ 20°C	Nom. impedence	Mutual capacitance	Sheath colour	Pack sizes			Product code
										300m box	300m spool	305m spool	
	mm²	mm	No./mm	kg/100m		ohm/km	ohms	pF/m					
Category 5E – Solid													
4	0.22	5.3	1/0.50	3.2	N/A	93.8	100	51	Blue, Green, Grey, Red, Yellow	✓	✓*	–	JCAT5Exx
Category 5E – Underground													
4	0.22	5.7	1/0.50	3.2	N/A	93.8	100	51	Black	–	✓	–	JCAT5EFPA3
Category 5E – Low Smoke Zero Halogen (LSOH)													
4	0.22	5.3	1/0.50	3.2	N/A	93.8	100	51	Black	–	✓	–	JCAT5ELSZHA3
Category 5E – Screened													
4	0.22	5.3	1/0.50	5	Aluminium Foil + DW	93.8	100	50	Grey	✓	–	–	JCAT5ESCRB30
Category 6													
4	0.22	6.3	1/0.50	4.5	N/A	93.8	100	51	Blue, Grey	✓	–	–	JCAT6
Category 6 – Underground													
4	0.22	6.3	1/0.54	4.15	N/A	93.8	100	51	Black	–	✓	–	JCAT6FPA3
Category LSOH													
4	0.54	6.0	1/0.54	–	N/A	89	100		Grey	✓	–	–	JCAT6LSOH

*Only in blue.

Alsecure Envirolex LAN cable refer to page 12.

Coaxial 50 Ohm

Type	Nom. overall diameter mm	Stranding No./mm	Approx. mass kg/100m	Shielding	Dielectric	Max. cond. resistance @ 20°C Ohm/km	Nom. cap. pF/m	Nom. velocity prop. %	Pack size	**Product code**
Coaxial 50 Ohm										
RG58	5.0	19/0.18 T/C	4.2	95% T/C	Solid PE	32.6	101	66	A	JBCRG58CUMIL1

Pack size: A – 100m spool.

Coaxial 75 Ohm

Nom. overall diameter mm	Stranding No./mm	Approx. mass kg/100m	Shielding	Dielectric	Max. cond. resistance @ 20°C Ohm/km	Nom. cap. pF/m	Nom. velocity prop. %	Pack size	**Product code**
RG59 – Closed Circuit Television (CCTV)									
6.1	1/0.60	5.2	86% B/C Braid	Solid PE	62.2	67	66	A, B, D	JBCRG59BUCCTV
6.2	1/0.60	6.0	95% B/C Braid	Solid PE	62.2	67	66	A, D	JBCRG59PREM

Pack sizes: A – 100m spool; B – 250m spool; D – 500m spool.

Alsecure Envirolex Coaxial cable refer to page 13.

Coaxial Cables

Designed for use in baseband and broadband video systems, digital data link applications and digital highways.

Coaxial 75 Ohm

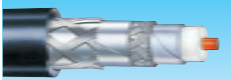
Nom. overall dia. mm	Stranding No./mm	Approx. mass kg/100m	Shielding	Dielectric	Max. cond. resistance @ 20°C Ohm/km	Nom. cap. pF/m	Nom. velocity prop. %	Pack size	**Product code**
RG6 – TV Downlead Premium/Antenna									
7.5	1/1.0	5.1	Al Foil, 60% Braid. Al Foil, 40% Braid	Foamed PE	100	53	84	A, B, C	JBCRG6QUAD
RG11 – Internal Use									
10.3	1/1.63	8.7	Al Foil, 60% Braid. Al Foil, 40% Braid	Foamed PE	36.1	53	83	D	JBCRG11QUAD
Air Space									
6.6	1/1.0	4.5	Al Foil, 35% B/C Braid	Air Space PE	22.4	55	82	A	JBCTVCOAX1

Pack sizes: A – 100m spool; B – 300m spool; C – 300m box; D – 305m spool.

Alsecure Envirolex Coaxial cable refer to page 13.

Coaxial Cables

Designed for use in baseband and broadband video systems, digital data link applications and digital highways.



Optical Fibre Cables

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

Nylon Underground

Description	Nom. O.D.	Approx. mass	Max. pulling tension	Min. bending radius mm		**Product code**
	mm	kg/100m	kN	During installation	installed	
Single Mode (OS1)						
9/125μm SM 6 Fibre	8.5	6.0	1.5	170	85	FIB06SMJN
9/125μm SM 12 Fibre	8.5	6.0	1.5	170	85	FIB12SMJN
9/125μm SM 24 Fibre	11.0	9.5	2.3	220	110	FIB24SMJN
9/125μm SM 24 Fibre	11.0	9.5	2.3	220	110	FIB48SMJN
Multi Mode (OM1)						
62.5/125μm MM 6 Fibre	8.5	6.0	1.5	170	85	FIB06MMJN
62.5/125μm MM 8 Fibre	8.5	6.0	1.5	170	85	FIB08MMJN
62.5/125μm MM 12 Fibre	8.5	6.0	1.5	170	85	FIB12MMJN
62.5/125μm MM 24 Fibre	11.0	9.5	2.3	220	110	FIB24MMJN
Multi Mode (OM3)						
50/125μm MM 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

Note: Minimum order quantity applies to these options.
The OS1 fibre is specified to ITU-T G652.D (low water peak).

Telephone Internal Cables

Designed for use in networks within telephone exchanges, commercial switchboards and interconnecting wiring systems. They are also suitable for some data applications.

Internal, PVC Insulated, PVC Sheath

Pairs	Nominal overall diameter mm	Wire size mm	Approx. mass kg/100m	Sheath colour	**Product code**
2	4.1	0.5	1.3	Cream	TINT002
3	4.6	0.5	2.6	Cream	TINT003
10	8.5	0.5	7.6	Grey	TINT010
20	11.2	0.5	15.0	Grey	TINT020
25	12.8	0.5	18.0	Grey	TINT025
50	17.0	0.5	34.0	Grey	TINT050

Note: 2 pair and 3 pair available in 100 metre and 300 metre spools.
10 pair available in 200 and 500 metre spools (no cuts).
20 pair and above available in bulk drum (will cut to length).

Telephone Jumper Wire

Pairs	Nominal overall diameter mm	Wire size mm	Approx. mass kg/100m	Sheath colour	**Product code**
2 core	1.0 × 1.9	0.5	0.5	Red & White	JUMPRW*

*Pack Size 250m/500m.

Telephone External Cables

External telephone distribution cables are designed for direct burial installation in conduit, or overhead suspension between power lines. Particularly suited where security against moisture ingress is required (underground only).

Aerial

Pairs	Nominal overall size mm	Max. conductor resistance @ 20°C Ohm/km	Approx. mass kg/100m	**Product code**
0.64mm Diameter Conductor				
1	7.9 × 4.9	58.6	4.0	TEXT64IB001A5
10	16.0 × 12.0	58.6	19	TEXT64IB010*

*Includes aluminium foil screen over the twisted pair. These cables are not power cables or for direct connection of equipment to mains power supplies.

External

No. of pairs	Nominal overall diameter mm	Wire size mm	Approx. mass kg/100m	Max. cond. resistance @ 20°C Ohm/km	Pack size	**Product code**
Jelly Filled, Polyethylene Sheath						
10	7.0	0.40	5.6	150	B	TEXT40FP010
20	8.5 × 9.5	0.40	10.0	150	B	TEXT40FP020
50	12.8	0.40	25.0	150	B	TEXT40FP050
2	5.7	0.64	3.1	58.6	A	TEXT64FP002A5
Jelly Filled, Polyethylene/Nylon Sheath						
2	9	0.90	9	27.9	B	TEXT90FN002AA
Jelly Filled, Moisture Barrier Polyethylene/Nylon Sheath						
10	14.1	0.90	25	27.9	B	TEXT90FMBN010AA(i)
30	21.25	0.90	63	27.9	B	TEXT90FMBN030AA(i)

Pack sizes: A – 1000m spool; B – Bulk drum (i) Telstra Approved.

PVC Garden Lighting Cables

Specifically engineered for outdoor AC/DC lighting applications, Gardolex is a robust PVC insulated power cable suitable for projects of all sizes. Designed for use in ELV systems – 50V AC, 120V DC. Not suitable for mains connection.

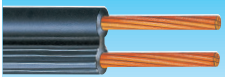


Figure 8, plain annealed copper, PVC insulated.

No. of cores	Nominal conductor area mm²	Stranding No./mm	Nominal overall size mm	Approx. mass kg/100m	Max DC resistance @ 20°C ohm/km	Voltage drop single phase @ 45°C mV/A.m	Current rating (A)	Pack size 100m spool	**Product code**
2	1.3	26/0.25	4.0 × 8.6	7	15.3	33.6	18	✓	JSF1.3GLBK*
2	1.8	26/0.30	4.0 × 6.7	9	9.7	20.7	23	✓	JTS1.8BK2C*
2	2.5	76/0.20	4.0 × 9.35	10	8.0	17.6	25	✓	JSF2.5GLBK*
2	4.0	56/0.30	5.0 × 10.4	12	4.95	10.9	33	✓	JSF4GLBK*
2	6.0	81/0.30	6.0 × 12.5	16	3.30	7.25	42	✓	JSF6GLBK*
2	10	348/0.20	6.7 × 13.9	25	1.91	4.20	57	✓	JSF10GLBK*

Note: This cable is non divisible.

Electrical characteristics

Number of cores	Nominal conductor area mm²	Voltage drop single phase @ 45°C mV/A.m	Current ratings (A)
2	1.3	33.6	18
2	1.8	20.7	23
2	2.5	17.6	25
2	4.0	10.9	33
2	6.0	7.25	42
2	10	4.20	57

Fire Alarm Cables

Designed for use in evacuation systems, smoke detectors and alarms.

Unscreened

Nominal conductor area mm²	Stranding No./mm	Nominal overall diameter/size mm	Approx. mass kg/100m	Core colours	Sheath colour	Max. cond. resistance @ 20°C ohm/km	Voltage rating	**Product code**
1.5	7/0.50	7.0	7	Red, White	Red	13.6	ELV	JRS1502A5*
0.75	24/0.20	3.4×5.5	4	Red, White	Red	26.0	250/250	CBLR02*
1.0	7/0.40	4.3×6.7	6	Red, White	Red	21.2	450/750	CACP03*
1.5	7/0.50	4.6×7.3	10	Red, White	Red	13.6	450/750	CACP05*

Screened (Aluminium Foil)

Nominal conductor area mm²	Stranding No./mm	Nom. o'all diameter/ mm	Approx. mass kg/100m	Core colours	Shielding	Max. cond. res. @ 20°C ohm/km	Voltage rating	**Product code**
1.5	7/0.50	7.0	7	Black, White	Aluminium Foil + DW	13.6	ELV	JRS1502SA5

*Pack sizes: 200m/500m reels.

Alsecure Envirolex Unscreened Alarm cable refer to page 12.

Data Cables

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, RS422 and RS485.

RS485 Screened (Low Capacitance)

Pairs	Nominal O.D. mm	Nom. pair capacitance pF/m	**Product code**
1	5.9	50	JD1PS485A3
2	8.6	50	JD2PS485A3

Available in 300m spools.

RS422 Screened Data (Pair)

Pairs	Nominal O.D. mm	Nom. pair capacitance pF/m	**Product code**
1	4.4	70	JD1PS
2	5.5	70	JD2PS
3	6.0	70	JD3PS

Available in 100m and 300m spools.

RS232 Screened Data (Cores)

Cores	Nominal O.D. mm	Nom. pair capacitance pF/m	**Product code**
4	4.8	90	JD4CSAA
6	5.5	90	JD6CSAA

Available in 100m spools.

Alsecure Envirolex Screened Data cable refer to page 13.

Composite

Detonating 2 Core (1/0.7mm) tinned copper conductor, PVC insulated.
Composite Coaxial and Control Core CCTV requiring low voltage connection for motion control.
Composite LAN (2 Pair and Earth) Designed for use in distributed data systems found in modern security and fire installations where components are connected over large distances and require earthing to a common point.

Detonating

No. of cores	Nom. cond. area mm²	Nom. overall size mm²	Approx. mass kg/100m	Max. cond. resis. @20°C ohm/km	Insul. colour	Pack sizes 100m spool	200m spool	500m spool	Product code
Twisted Pair									
2	0.38	3.2×1.6	0.8	47.6	Red/White	–	–	✓	JDW2CRDWT*
Figure 8									
2	0.38	3.2×1.6	0.8	47.6	Red/White	✓	✓	✓	JDW1PRDWT*

Composite Coaxial and Control Core

Nom. overall size mm	Approx. mass kg/100m	Nom. insul. thick. mm	DC resistance @ 20°C ohm/km	Voltage drop single phase @45°C mV/A.m	Pack sizes 100m spool	250m spool	500m spool	Product code
13.0×7.8	12	0.8	26.0	57.1	✓	✓	✓	JCOMP*

Composite LAN (2 Pair and Earth)

Nominal overall size mm	Approximate mass kg/100m	Core colours	Pack sizes 250m spool	Product code
9.6×5.8	8.4	Black & red, Green & white	✓	J8723+2.5BW250

*Pack size.

Traffic Cables

Complete supply of cables for traffic signal installation management.

Traffic Signalling Multicore Power Cable

Number of cores			Nominal overall diameter mm	Approximate mass kg/100m	**Product code**
Total	Power	Control			
13	3 × 2.5	10 × 1.5	17.6	43	LXMP07AA013
19	3 × 2.5	16 × 1.5	19.9	59	LXMP07AA019
29	3 × 2.5	26 × 1.5	23.7	81	LXMP07AA029
29	3 × 4.0	26 × 1.5	26.0	92	LXMP09AA029
51	3 × 4.0	48 × 1.5	32.3	143	LXMP09AA051

Feeder Cable for Vehicle Detectors

No. of pairs	Nom. overall diam. mm	Approx. mass kg/100m	Nom. insul. thick. mm	Char. imped. ohm	Mutual cap. nF/km	Cap. unbal.	Water pene.	Pack sizes 500m drum	Pack sizes 1000m drum	**Product code**
1	9.3	8	0.5	80-100	65-80	<2%	<3%	✓	✓	JTCD28*002

Loop Cable for Vehicle Detectors

Insulation	Nominal overall diameter mm	Approximate mass	Pack sizes 500m drum	Pack sizes 1000m drum	**Product code**
XLPE	4.0	2.3	✓	✓	XDCP55A5001
PP	3.6	2.0	✓	✓	ZZLM07*332

*Pack size.

CURRENT RATINGS, GENERAL DATA AND ACCESSORIES

Total cable solutions.

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 the International Electrotechnical Commission Publication IEC 60287. If you require further assistance, talk to your Nexans Olex Account Manager or visit www.olex.com.au

Nexans Olex

Current Ratings Flexible Cords

Electrical Data and Current Ratings

In accordance with AS/NZS 3008.1.1.

Nominal conductor area mm²	Current carrying capacity A	Maximum DC resistance at 20°C Multicore Ω/km		Voltage drop Single phase mV/A.m	Three phase
		PACW	TACW		
0.5	3	39.0	40.1	94.9	82.2
0.75	7.5	26.0	26.7	63.3	54.8
1.0	10	19.5	20.0	47.5	41.1
1.5	15	13.3	13.7	32.3	28.0
2.5	20	7.98	8.21	19.4	16.8
4.0	25	4.95	5.09	12.0	10.4

Current Ratings Versolex® and Flexolex®

Cords – Flexible installation.

Nominal conductor area mm²	Current carrying capacity A	Voltage drop 1 phase mV/A.m	Voltage drop 3 phase mV/A.m
0.75	7.5	66.3	57.4
1.0	10	49.8	43.1
1.5	15	34.0	29.4
2.5	20	20.3	17.6
4.0	25	12.6	10.9

Where a flexible cord is wound on a drum, multiply current carrying capacities by the following factor:

Number of layers:	1	2	3	4
Derating factor:	0.76	0.58	0.47	0.40

Current Ratings
Flexible Cords

Current carrying capacity, welding applications.

Nom. con. area	A Maximum duty cycle (AS 1995) 10 minute cycle				5 minute cycle			Max. DC resist. at 20°C	Voltage drop mV/A.m	
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

Nominal conductor area mm²	No. and nom. dia. of wires No./mm	2 core twisted		3 and 4 core twisted		Three phase voltage drop at 50Hz mV/A.m
		still air	1.0m/s wind	still air	1.0m/s wind	
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/m². 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

Nominal conductor area	No. and nom. dia. of wires	1 core insulated conductors		2 and 3 core (a) parallel webbed		3 and 4 core (b) twisted		Three phase voltage drop
			1.0m/s		1.0m/s		1.0m/s	at 50Hz
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.

Current Ratings 2×1 Core PVC

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

Cond. size mm²	Unenclosed Spaced		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	
	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
1	16		16		13		13		11		6		18		18		21		51.6	
1.5	21		21		16		18		14		8		23		23		26		33.0	
2.5	30		29		23		24		20		12		32		32		36		18.0	
4	40		39		31		32		25		16		41		41		47		11.2	
6	51		49		40		41		33		20		52		52		58		7.50	
10	69		67		54		54		44		27		69		69		77		4.46	
16	92	72	89	69	72	56	70	54	56	43	36	28	122	95	89	69	99	77	2.81	4.68
25	124	96	119	92	97	75	94	73	75	58	48	38	158	123	116	90	129	100	1.78	2.95
35	153	119	145	113	119	92	112	87	90	70	59	46	190	147	139	108	155	120	1.29	2.14
50	187	145	177	137	146	113	138	107	110	86	–	–	225	174	168	130	186	145	0.96	1.58
70	238	184	223	173	184	143	170	132	136	105	–	–	277	215	206	160	228	177	0.680	1.10
95	295	229	276	214	230	178	212	164	169	131	–	–	332	257	252	195	278	215	0.507	0.804
120	344	267	321	249	267	208	242	188	193	150	–	–	378	294	287	223	316	245	0.415	0.644
150	395	307	367	285	308	239	282	219	225	175	–	–	424	329	329	255	354	274	0.352	0.535
185	459	357	424	331	358	279	320	249	256	199	–	–	480	374	373	291	408	317	0.301	0.439
240	549	427	505	394	428	334	381	298	305	238	–	–	556	434	438	342	472	368	0.255	0.352
300	636	495	582	456	495	388	–	–	–	–	–	–	628	491	496	388	546	425	0.229	0.300
400	744	583	676	535	577	456	–	–	–	–	–	–	713	564	575	454	621	487	0.209	0.256
500	867	685	780	624	668	535	–	–	–	–	–	–	805	644	649	520	721	570	0.194	0.226
630	1014	808	897	730	770	627	–	–	–	–	–	–	904	737	750	611	816	652	0.181	0.202

Current Ratings 2×1 Core XLPE

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

Cond. size mm²	Unenclosed Spaced		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	
	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
2×1 Core 110°C

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

Cond. size mm²	Unenclosed Spaced		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 mV/A.m
	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu	Cu
1	25	24	20	20	20	20	16	16	10	31	23	26	57.4
1.5	32	31	25	25	25	25	20	20	13	39	29	33	36.8
2.5	45	44	36	36	35	35	28	28	18	55	40	46	20.1
4	59	58	47	47	46	46	37	37	23	71	53	59	12.5
6	75	73	59	59	58	58	46	46	30	89	66	74	8.35
10	103	99	81	81	78	78	62	62	40	119	88	97	4.97
16	137	131	107	107	104	104	83	83	53	154	115	127	3.12
25	183	175	143	143	137	137	109	109	72	198	148	163	1.99
35	225	214	176	176	165	165	132	132	88	238	177	195	1.43
50	276	261	215	215	205	205	164	164	–	282	214	236	1.07
70	349	328	272	272	255	255	204	204	–	346	262	288	0.751
95	434	406	339	339	321	321	257	257	–	416	321	352	0.556
120	505	471	394	394	369	369	296	296	–	473	366	400	0.453
150	581	540	454	454	430	430	344	344	–	531	420	448	0.382
185	673	624	527	527	493	493	394	394	–	601	477	517	0.323
240	806	743	630	630	594	594	476	476	–	698	561	600	0.271
300	934	857	730	730	–	–	–	–	–	789	648	694	0.240
400	1094	998	853	853	–	–	–	–	–	898	738	790	0.216
500	1278	1155	990	990	–	–	–	–	–	1018	837	921	0.199
630	1498	1334	1146	1146	–	–	–	–	–	1148	973	1045	0.185

Current Ratings
2 Core

Single Phase Current Carrying Capacity
Two Core R-HF-110, R-E-110, X-HF-110, HFI-90-TP.

Cond. size mm²	Unenclosed Spaced		Touching		Exposed to sun		Enclosed Conduit in air		Partially surrounded by thermal insulation		Completely surrounded by thermal insulation	Buried direct	Underground ducts	
	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 2 Core PVC

Single Phase Current Ratings

Two core V-90 PVC/PVC 0.6/1kV cables.

Table of ratings are also applicable to armoured cables.

Cond. size mm²	Unenclosed Spaced		Touching		Enclosed Conduit in air round or flat cable		Unenclosed & partially surrounded by thermal insulation		Unenclosed & completely surrounded by thermal insulation		Buried direct		U/ground ducts		Single phase voltage drop 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 XLPE

Single Phase Current Ratings
Two core XLPE/PVC 90°C 0.6/1kV cables.
Table of ratings are also applicable to armoured cables.

Cond. size mm²	Unenclosed Spaced		Touching		Enclosed Conduit in air round or flat cable		Unenclosed & partially surrounded by thermal insulation		Unenclosed & completely surrounded by thermal insulation		Buried direct		Underground ducts		Single phase voltage drop 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 3 × 1 Core PVC

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

Cond. size mm²	Unenclosed Spaced		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			
	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 3 × 1 Core XLPE

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

Cond. size mm²	Unenclosed Spaced		Spaced		Touching from surface		Enclosed Conduit in air		Partially surrounded by thermal insulation		Completely surrounded by thermal insulation		Buried direct		Underground ducts				Three phase voltage drop mV/A.m			
	Cu	Al	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		18		22		46.8		46.8	
1.5	25		21		20		18		15		10		22		22		27		30.0		30.0	
2.5	35		30		28		25		20		14		31		31		38		16.4		16.4	
4	46		40		37		33		26		19		40		40		49		10.2		10.2	
6	59		50		47		42		34		24		50		50		60		6.81		6.81	
10	81		69		65		56		45		32		67		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 3 × 1 Core 110°C

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

Cond. size mm²	Unenclosed Spaced	Unenclosed Spaced from surface	Unenclosed Touching	Enclosed Conduit in air	Enclosed Partially surrounded by thermal insulation	Enclosed Completely surrounded by thermal insulation	Buried direct	Underground ducts		Three phase voltage drop mV/A.m	
	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	4.3	4.3
16	132	114	107	93	74	53	130	99	115	2.7	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	0.65	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	0.28	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
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 Spaced		Touching		Enclosed Conduit in air round or flat cable		Unenclosed & partially surrounded by thermal insulation		Unenclosed & completely surrounded by thermal insulation		Buried direct		U/ground 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
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	0.21	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 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 mm²	Unenclosed Spaced		Touching		Enclosed Conduit in air round or flat cable		Unenclosed & partially surrounded by thermal insulation		Unenclosed & completely surrounded by thermal insulation		Buried direct		U/ground ducts		Three phase voltage drop 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	0.45	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	0.19	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

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.

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. It is halogen-free, lead and antimony-free, and does not emit toxic or corrosive products when burned.
- HFS-90-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 mm^2	For copper active conductors mm^2	For aluminium active conductors 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®	HFI-90-TP	90	90
	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	Conductor type	Single core or multicore Maximum DC resistance at 20°C Ω/km		
mm²		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 Formulae

$$kW = kVA \times pf$$

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

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

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

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

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

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

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

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

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

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

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

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

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 (1/1000") 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	mm^2	A.W.G.	Diameter mm	mm^2
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, compacted 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 × 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 mm²	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 • 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%

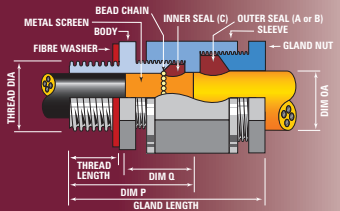
Note: The above values should not be exceeded.

Maximum safe pulling tension.

Conductor area mm^2	Maximum tension kN per conductor		Conductor area mm^2	Maximum tension kN per conductor	
	Copper	Aluminium		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

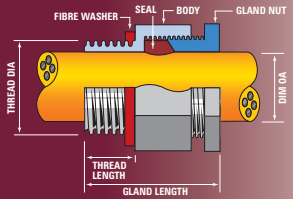


Alco Metal Cable Glands – EMC

Item number	Mounting thread dia.×len. mm	Cable details Varolex® product code	Versolex® 4C product code	Versolex® 5C product code	PVC shroud (orange)
ALCEMC12	M12×12				ALCSG0
ALCEMC16	M16×12				ALCSG2
ALCEMC20	M20×12	FTDP07,P09	GETR04,R05,R06	BWTR04,R05	ALCSG3
ALCEMC25	M25×12	FTDP11*,P13,P15	FTTR07,X01	BWTR07	ALCSG3
ALCEMC32	M32×12	FTDC17,C18	FTTX02,X03	BWTX01,X02	ALCSG3
ALCEMC40	M40×15	FTDC19,C20	FTTX04,X05	BWTX03,X04	ALCSG4
ALCEMC50	M50×15	FTDC22	FTTX06,X07	BWTX05	ALCSG5
ALCEMC63	M63×19	FTDP23,P24	FTTE87	BWTX06	ALCSG6
ALCEMC75A	M75×19	FTDP25	FTTE88		
ALCEMC75B	M75×19	FTDP26	FTTE90AA003		
ALCEMC75C	M75×19	FTDP27			
ALCEMC752	M75×19		FTTE89AA003		

*FTDP11 – Dimensions are within the gland working range but outside the dimension used in certification testing.

Accessories
Glands



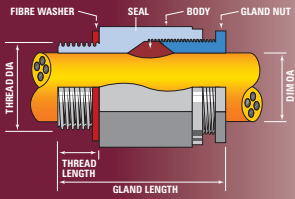
Alco Metal Cable Glands – Type UW (IP68)

Item number	Mounting thread dia. × length mm	Cable details Seal B (thick) OA min	OA max	Seal A (thin) OA min	OA max	PVC shroud orange*
ALCUW12	M12 × 10	1.5	3.5	3.5	6.0	ALCSG0
UW16S	M16 × 10	1.5	3.5	3.5	5.0	ALCSG0
ALCUW16	M16 × 10	5.0	7.5	7.5	10.0	ALCSG0
UW20A	M20 × 10	5.0	7.5	7.5	10.0	ALCSG1
ALCUW20	M20 × 10	10.0	11.0	11.0	15.0	ALCSG1
ALCUW25	M25 × 12	14.5	17.0	17.0	20.0	ALCSG3
ALCUW32	M32 × 12	20.0	23.0	23.0	26.5	ALCSG3
ALCUW40	M40 × 15	26.0	30.0	30.0	33.5	ALCSG4
ALCUW50	M50 × 15	33.0	36.0	36.0	42.0	ALCSG5
ALCUW63	M63 × 19	41.5	46.0	46.0	52.0	ALCSG6
ALCUW75	M75 × 19	51.0	56.0	56.0	65.0	ALCSG7
ALCUW90	M90 × 30	64.0	68.0	68.0	75.0	ALCSG9
ALCUW105	M105 × 30	75.0	80.0	82.0	89.0	ALCSG10
ALCUW120A	M120 × 30	89.0	92.0	92.0	98.0	ALCSG11
ALCUW120B	M120 × 30			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



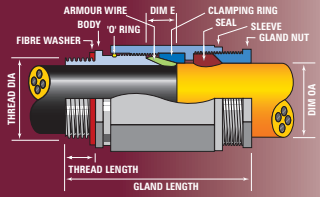
Alco Metal Cable Glands – Hazardous Area Type HUW (Grpl/IIC, Ex d, Ex e, IP68)(AUS Ex 03 3903)

Item number	Mounting thread dia.× length mm	Cable details Seal C (thickest) OA min	OA max	Seal B (thick) OA min	OA max	Seal A (thin) OA min	OA max	PVC shroud (orange)
ALCHUW20SB	M20 × 12			4.0	8.0	8.0	10.0	ALCSG1
ALCHUW20A	M20 × 12			6.5	8.0	8.0	10.0	ALCSG3
ALCHUW20B	M20 × 12			10.0	12.0	12.0	14.0	ALCSG3
ALCHUW25	M25 × 12			14.0	16.0	16.0	19.0	ALCSG3
ALCHUW32	M32 × 15			19.0	22.0	22.0	25.0	ALCSG3
ALCHUW40	M40 × 15			25.0	28.5	28.5	31.0	ALCSG4
ALCHUW50	M50 × 20	31.0	36.0	36.0	39.0	39.0	42.0	ALCSG6
ALCHUW63	M63 × 25	42.0	46.5	46.5	50.0	50.0	53.0	ALCSG7
ALCHUW75	M75 × 25	53.0	57.0	57.0	61.0	61.0	64.0	ALCSG7
ALCHUW 90	M90 × 30			64.0	68.0	70.0	75.0	ALCSG9
ALCHUW105	M105 × 30			75.0	80.0	82.0	89.0	
ALCHUW120A	M120 × 30			89.0	92.0	92.0	98.0	
ALCHUW120B	M120 × 30					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



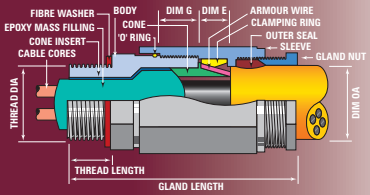
Alco Metal Cable Glands – Type AW (IP68)

Item number	Mounting thread dia. × length mm	Cable details overall min. mm	max. mm	over bedding max. mm	SWA dia. mm	PVC shroud (orange)
ALCAW16	M16 × 12	10.5	15.5	10.0	0.8–1.25	ALCSG2
ALCAW20SB	M20 × 12	10.5	15.5	10.0	0.8–1.25	ALCSG1
ALCAW20MR	M20 × 12	14.5	17.5	11.5	0.8–1.25	ALCSG1
ALCAW20	M20 × 12	14.5	20.0	14.0	0.8–1.25	ALCSG3
ALCAW20UR	M20 × 12	19.5	22.5	16.0	0.8–1.25	ALCSG3
ALCAW25	M25 × 14	20.0	26.0	19.0	1.25–1.6	ALCSG3
ALCAW32	M32 × 14	26.0	33.5	26.0	1.25–1.6	ALCSG4
ALCAW40	M40 × 15	33.0	42.0	33.0	1.6–2.0	ALCSG5
ALCAW50	M50 × 15	41.5	51.0	42.0	2.0–2.5	ALCSG6
ALCAW50L	M50 × 15	49.0	56.0	44.5	2.50	ALCSG6
ALCAW63	M63 × 19	51.0	64.0	55.0	2.5–3.15	ALCSG7
ALCAW63L	M63 × 19	62.0	69.0	56.5	2.5–3.15	ALCSG7
ALCAW75	M75 × 19	63.0	75.0	63.0	2.5–3.15	ALCSG8
ALCAW90	M90 × 19	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

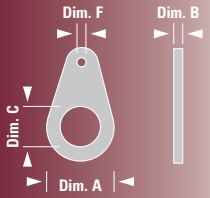


Alco Metal Cable Glands – Hazardous Area Type HAW (Grpl/IIC, Ex d, Ex e, IP68)(AUS Ex 03.3904)

Item number	Mounting thread diameter × length mm	Cable details Over bedding diameter min. mm	Over bedding diameter max. mm	Cable diameter min. mm	Cable diameter max. mm	SWA diameter mm	Barrier gland requirements	PVC shroud (orange)
ALCHAW20LR	M20 × 15	5.2	8.0	7.8	12.7	0.70–0.90	ALCHAW20LR-B	ALCSG1
ALCHAW20	M20 × 20	6.5	10.0	11.5	16.0	0.80–1.25	ALCHAW20-B	ALCSG2
ALCHAW20SB	M20 × 16	9.1	12.3	14.0	18.0	0.80–1.25	ALCHAW20SB-B	ALCSG2
ALCHAW25A	M25 × 20	10.0	14.0	16.0	20.0	0.80–1.25	ALCHAW25A-B	ALCSG3
ALCHAW25B	M25 × 20	14.0	18.0	20.0	24.0	1.25–1.60	ALCHAW25B-B	ALCSG3
ALCHAW32A	M32 × 20	18.0	21.5	24.0	28.0	1.25–1.60	ALCHAW32A-B	ALCSG4
ALCHAW32B	M32 × 20	21.5	25.0	28.0	32.0	1.60–2.00	ALCHAW32B-B	ALCSG4
ALCHAW40A	M40 × 20	25.0	29.0	32.0	37.0	1.60–2.00	ALCHAW40A-B	ALCSG4
ALCHAW40B	M40 × 20	28.5	33.5	37.0	42.0	1.60–2.00	ALCHAW40B-B	ALCSG5
ALCHAW50A	M50 × 20	33.0	37.5	41.0	46.0	2.00–2.50	ALCHAW50A-B	ALCSG6
ALCHAW50B	M50 × 20	36.5	42.0	45.0	51.0	2.00–2.50	ALCHAW50B-B	ALCSG6
ALCHAW63A	M63 × 25	42.0	47.0	51.0	57.0	2.50–3.15	ALCHAW63A-B	ALCSG7
ALCHAW63B	M63 × 25	47.0	53.0	57.0	63.0	2.50–3.15	ALCHAW63B-B	ALCSG7
ALCHAW75A	M75 × 25	52.5	58.5	62.0	69.0	2.50–3.15	ALCHAW70A-B	ALCSG8
ALCHAW75B	M75 × 25	58.0	64.0	66.0	75.0	2.50–3.15	ALCHAW70B-B	ALCSG8
ALCHAW90A	M90 × 25	63.0	69.0	73.0	82.0	2.50–3.15	ALCHAW90A-B	ALCSG9
ALCHAW90B	M90 × 25	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.

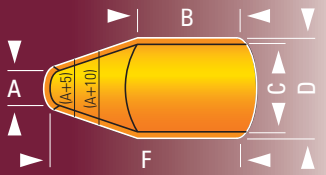
Accessories
Earth Tags



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) mm	Overall Length (F) mm	Parallel Length (B) mm	Outside dia. (D) mm	Inside dia. (C) 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.

Flexible Cable Cord Colours

Preferred Core Colours

For cords not installed as fixed wiring:

		Nexans Olex Colour Code
2 Core	Brown, Light Blue	JJ
3 Core	Brown, Light Blue, Green/Yellow	KA
4 Core	Brown, Light Blue, White, Green/Yellow	DV
5 Core	Brown, Light Blue, Orange, White, Green/Yellow	FS

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

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
HF-110-R	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
R-EP-90	rubber – Ethylene Propylene – 90°C
R-HF-110	rubber – halogen free – 110°C (insulation)
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

Notes

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 multicore control
Neutral screened
Aerial
Varolex® screened VSD/EMC

Fire performance cables

Alsecure® Ceramifiable® Fire Rated (FR)
– single core ES90
– multicore ES90
– Instrumentation
Fire Safe (FS) power
Rolling stock
Locomotive
Alsecure® Envirolex®

Instrolex® Instrumentation cables

Overall screened
Overall screened armoured
Individual and overall screened
Individual and overall screened armoured
Thermocouple extension wire

Flexible power and control cables

Versolex® – XLPE/TPE
– Power
– Welding
– EMC/VSD
– Submersible
Titanex®
Flexolex® EPR/CPE power
PVC/PVC power
PVC/PVC control
Harmonised rubber

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 (flexible) 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)

Bare overhead conductors

– All Aluminium
– All Aluminium alloy 1120
– ACSR
– Steel earth wire and stay wire (galvanised or aluminium clad)

HV distribution cables

U/G XLPE to 33kV
Paper insulated lead covered to 33kV
Aerial bundled cable XLPE to 33kV
(metallic and non-metallic screened)
Covered Conductor
Single Point Suspension

HV submarine cables

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, hessian-served

Nexans Olex Locations

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South Australia/Northern Territory

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Phone 1300 CABLES (1300 222 537) Fax 08 7002 5229

Western Australia

State Office 857 Abernethy Road, Forrestfield WA 6058
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Lilydale 55 Main Street, Lilydale Vic 3140

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New Zealand Nexans Olex New Zealand Ltd
Paraite Road, Bell Block, New Plymouth, New Zealand
Phone 64 6 755 9800 Fax 64 6 755 9890

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☐ No thanks ☐ Yes, please specify _____

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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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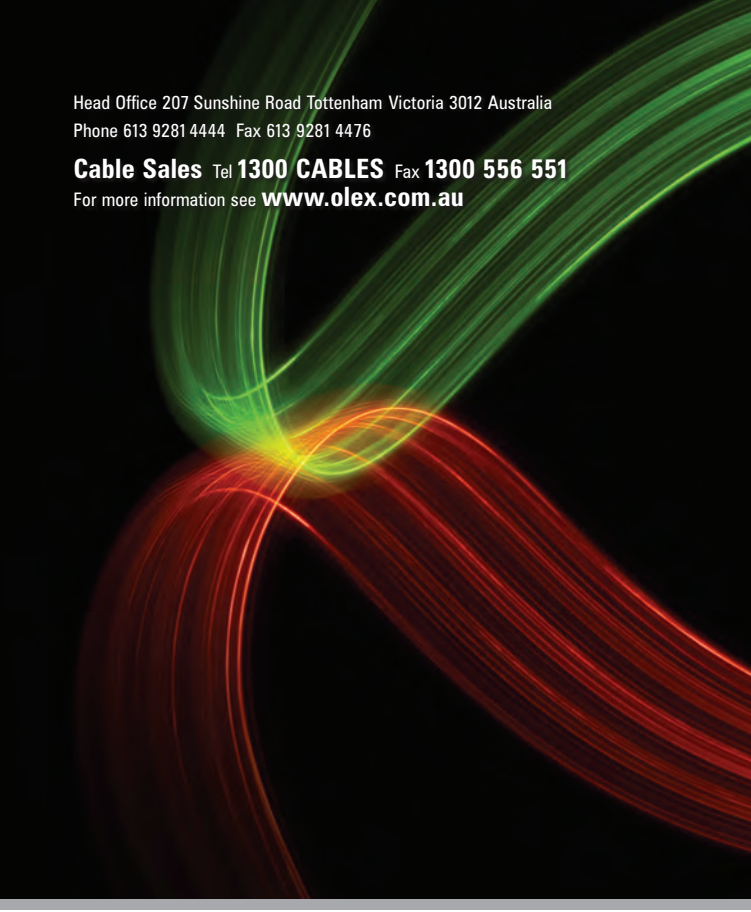


LOW VOLTAGE


INDUSTRIAL


HIGH VOLTAGE


FIRE RATED


DATA/COMMS


MINING

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