DATA/COMMS




Nexans

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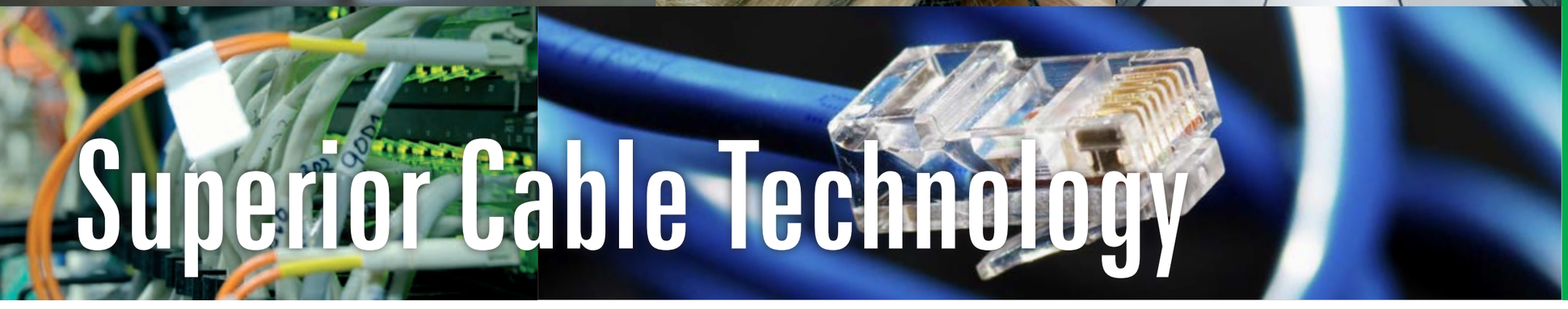

Superior Cable Technology

Olex's reputation as a world leading supplier of superior cable technology has been built over 65 years, backed by excellence in design, engineering, distribution and customer service.

And now as part of the world's largest cable manufacturer, Nexans, Olex are able to provide a wide range of data and communication cables, designed and tested in accordance with local and international standards.

This catalogue represents our standard range of data and communications cables. However, if you don't see what you're looking for contact us and we can source it for you.
For more information on these products, or for information on Olex's power, industrial and mining products, visit **www.olex.com.au**

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Contents

Introduction

Security	4
Figure 8	4
LSOH (Low Smoke Zero Halogen)	5
Audiolex	5
Coaxial	6–7
LAN	8
Data	9
Telephone (Internal)	10
Telephone (External)	11
Optical Fibre	12
Garden Lighting	12
Detonating	13
Composite	13
Traffic Signalling	14
Fire Alarm	15
Instrolex Instrumentation	16
Technical Information	17
Glossary	18–19

Fire Alarm Maximum security

Our range of screened and unscreened fire control and alarm cables complement our extensive range of fire rated cables, offering you maximum security in the event of fire.

PRODUCT NEW RELEASE

LSOH Low Smoke Zero Halogen

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

Audiolex Superior home theatre

Choosing the right cable is as important as choosing your theatre. Audiolex will enhance image and sound quality, connecting you with the home theatre quality you've dreamed of.

Datolex Bringing the world together

Datolex has been specifically designed with the installer in mind. Packs are smaller, safer and cables are more easily dispensed. They're also more easily identified through smart colour and bar coding.

Designed for the future.

Gardolex Garden lighting made simple

Whether you're a professional or installing a lighting system yourself, our Gardolex range of extra low voltage power cables makes garden lighting simple, reliable and economical.

Applications today demand more from equipment suppliers than ever before.

Technology is advancing at such a rapid pace, it has become essential to supply cables that are not only superior in quality and are great value for money, but are also valuable in terms of their longevity. That's why our range of data and communications cables are designed to meet the needs of customers today and in the future.

Australian Communications and Media Authority (ACMA) Compliant

Olex data and communications cables meet the highest standards. Such cables in this catalogue meet or exceed the standards set by ACMA (previously ACA and Austel). Appropriate products have also been further tested to the requirements of the ACMA and are marked with their tick to ensure that you receive the finest quality.

Merchant No.N10594

Nexans Olex

Security Unscreened

Application 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.

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

No. of cores	Nominal conductor area mm²	Nominal overall diameter mm	Stranding No./mm	Approximate mass kg/100m	Maximum DC resistance @ 20°C ohm/km	Sheath colour	Pack sizes 100m spool	200m box	250m spool	300m box	500m spool	**Product code**
4	0.22	3.6	7/0.20	1.4	86.5	Grey, White	✓	–	–	✓	–	JSC.2xx4C*
6	0.22	4.9	7/0.20	3.1	86.5	White	✓	–	–	✓	–	JSC.2xx6C*
4	0.50	4.7	14/0.20	3.2	44.5	Grey, White	✓	–	✓	✓	✓	JSC.5xx4C*
6	0.50	5.6	14/0.20	4.7	44.5	Grey, White	✓	✓	✓	–	✓	JSC.5xx6C*
8	0.50	6.5	14/0.20	5.8	44.5	White	✓	–	–	–	✓	JSC.5xx8C*

Colour references: 4 Core: Red, blue, white, black. **6 Core:** Red, blue, white, black, yellow, green. **8 Core:** Red, blue, white, black, yellow, green, violet, brown.

Security Screened

Construction Stranded bare copper conductor, PVC insulated, cores laid up, aluminium foil overall tape and stranded tinned annealed copper drain wire, PVC sheathed.

No. of cores	Nominal conductor area mm²	Nominal overall diameter mm	Stranding No./mm	Approximate mass kg/100m	Maximum DC resistance @ 20°C ohm/km	Sheath colour	Pack sizes 100m spool	300m box/spool	500m spool	**Product code**
7	0.50	6.8	14/0.20	6.5	44.5	Grey	✓	–	✓	JSS.5GY7C*
2 Pair[1]	0.35	4.2	7/0.25	2.8	55.0	Grey	✓	✓b	–	JD2PIS**
2 Pair[1,2]	0.35	4.3	7/0.25	2.9	55.0	Black	–	✓s	–	JD2PISFP3

[1]Individually screened pairs. [2]Jelly filled, polypropylene insulated & polyethylene sheath.
Colour references: 4 Core: Red, blue, white, black. **7 Core:** Red, blue, white, black, orange, yellow, green. **2 Pair:** Black and red, green and white.

Figure 8

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

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

Nominal conductor area mm²	Nominal overall size mm	Stranding No./mm	Approximate mass kg/100m	Maximum DC resistance @ 20°C ohm/km	Voltage rating	Maximum voltage drop @ 45°C mV/A.m	Insulation thickness	Insulation colours	Pack sizes 100m spool	250m spool	500m spool	**Product code**
Standard												
0.5	4.3 × 1.8	14/0.20	2.0	44.5	ELV	97.8	0.5	Various	✓	–	✓	JSF.5xx*
0.75	5.9 × 2.9	24/0.20	3.0	26.0	ELV	57.1	0.8	Various	✓	✓	✓	JSF.75xx*
Oxygen Free Copper												
2.0	7.0 × 3.4	64/0.20	5.2	10.9	ELV	23.9	0.8	Clear/red stripe	✓	–	–	JSF2.0CL*
2.6	9.0 × 4.5	84/0.20	8.1	7.40	ELV	16.3	1.0	Clear/red stripe	✓	–	✓	JSF2.6CL1

Note: *Pack size. xxSheath colour. **Polypropylene insulated.

LSOH (Low Smoke, Zero Halogen)

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

Number of cores/pairs	Nominal conductor area mm²	Nominal overall diameter mm²	Stranding No./mm	Approximate mass for cable kg/100m	Maximum conductor resistance @20°C ohm/km	Sheath colour	Pack sizes	**Product Code**
2 pairs	0.35	4.3	7/0.25	3	55	Grey	300m box	JD2PISLSOHB30
4 pairs	0.22	5.3	1/0.50	3.2	93.8	Black	300m reel	JCAT5ELSZHA3
N/A	0.75	3.0 × 6.0	24/0.20	3.1	26.4	White/blk stripe	100m reel	JSF.75WTBKLSOH1
N/A	6.2	–	1/0.60	5.5	62	Black	100m reel	JBCRG59CCTVLSOH
2 cores	1.5	5.3	7/0.50	5	13.6	Red	300m reel	JRS1502A3LSOH
4 cores	0.5	4.7	14/0.20	3.4	45.2	White	300m box	JSC.5WT4LSOHB30
6 cores	0.22	5.5	7/0.20	4.7	95.3	Grey	300m box	JD6CSLSOH

Audiolex Oxygen Free Copper Audio

Application Specifically designed for use in home theatre and commercial audio visual applications. Typical uses include connections for audio systems, custom audio and surround sound systems.

Construction Stranded bare copper conductor, PVC insulated with overall violet PVC sheath (twin sheath only).

Number of cores	Nominal conductor area mm²	Stranding No./mm	Approximate mass kg/100m	Nominal insulation thickness mm	Nominal overall diameter mm	Nom. cond. resistance @ 20°C ohm/km	Pack sizes 100m spool	300m spool	**Product code**
Twin Sheath Installation Cable – Oxygen Free Copper									
2	1.2	70/0.15	5.8	2.2	6.5	17.2	–	✓	JTS1.2VT2CA3
2	2.5	140/0.15	10	3.3	8.5	7.80	✓	✓	JTS2.5VT2C*
4	1.2	70/0.15	8.6	2.2	6.9	17.2	–	✓	JTS1.2VT4CA3

Nexans Olex

Coaxial 50 Ohm

Application Designed for use in radio transmission, reception and computer systems.

Construction Tinned or bare copper conductor, solid PE insulated, tinned copper wire braid (95% coverage), black PVC sheathed.

Type	Nominal overall diameter	Stranding No./mm	Approximate mass kg/100m	Shielding	Dielectric	Max. conductor resistance @ 20°C ohm/km	Nominal capacitance pF/m	Nominal velocity propagation %	Pack size 100m spool	Pack size 500m spool	**Product code**
RG58	5.0	19/0.18 T/C	4.2	95% T/C	Solid PE	32.6	101	66	✓	✓	JBCRG58CUMIL1
RG213	10.3	7/0.70 B/C	16	97% B/C	Solid PE	6.53	101	66	✓	–	JBCRG213MIL1

Refer to technical information (page 21) for nominal attenuation data.

Coaxial 75 Ohm Closed Circuit Television/Video

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

Construction Bare annealed copper conductor, PE insulated, bare copper wire braid (either 85% or 95% coverage), black PVC sheathed.

Nominal overall diameter	Stranding No./mm	Approximate mass kg/100m	Shielding	Dielectric	Max. conductor resistance @ 20°C ohm/km	Nominal capacitance pF/m	Nominal velocity propagation %	Pack sizes 100m spool	Pack sizes 250m spool	Pack sizes 300m box	Pack sizes 500m spool	**Product code**
RG59 – Closed Circuit Television (CCTV)												
6.1	1/0.60	5.2	85% B/C Braid	Solid PE	62.2	67	66	✓	✓	–	✓	JBCRG59BUCCTV*
6.2	1/0.60	6.0	95% B/C Braid	Solid PE	62.2	67	66	✓	–	✓	–	JBCRG59PREM*

Refer to Technical Information (page 21) for nominal attenuation data.

Note: *Pack size.

Coaxial 75 Ohm Television Antenna/Television Lead-in

AUSTAR & FOXTEL APPROVED

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

Construction Bare copper clad steel conductor, foamed PE insulated, aluminium foil, tinned copper wire braid (60% coverage), aluminium foil, tinned copper wire braid (40% coverage), black PVC sheathed.

Nominal overall diameter	Stranding No./mm	Approximate mass kg/100m	Shielding	Dielectric	Max. conductor resistance @ 20°C ohm/km	Nominal capacitance pF/m	Nominal velocity propagation %	Pack sizes 100m spool	Pack sizes 305m box	Pack sizes 305m spool	**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	✓	✓	✓	JBCRG6QUAD*
RG11 – Internal use (Quad)											
10.3	1/1.63	8.7	Al Foil, 60% Braid, Al Foil, 40% Braid	Foamed PE	36.1	53	83	–	–	✓	JBCRG11QUAD

Refer to technical information (page 21) for nominal attenuation data.

Coaxial 75 Ohm Air Space

Application Designed for use in free to air television reception, aerial to TV set connections.

Construction Solid bare copper conductor, PE air space insulated, aluminium foil, bare copper wire braid (35% coverage), black PVC sheathed.

Nominal overall diameter	Stranding No./mm	Approximate mass kg/100m	Shielding	Dielectric	Max. conductor resistance @ 20°C ohm/km	Nominal capacitance pF/m	Nominal velocity propagation %	Pack size 100m spool	**Product code**
75 Ohm – Air Space									
6.6	1/1.0	4.5	Al Foil, 35% B/C Braid	Air Space PE	22.4	55	82	✓	JBCTVCOAX1

Refer to technical information (page 21) for nominal attenuation data.

LAN

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

Construction Bare copper conductor, polyolefin insulated, twisted pairs, PVC sheathed.

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**
	mm²	mm	No./mm	kg/100m		ohm/km	ohms	pF/m		300m box	300m spool	305m spool	
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

*Only in blue.

Technical Information

Frequency	Attenuation (max)	PS-Next (min)	PS-Elfext (min)	PS ACR (min)	Return Loss (min)
MHz	dB/100m	dB	dB	dB	dB
Category 5E – Solid (JCAT5E)					
0.8	1.8	64	63	62	19
1	2	62	61	60	20
4	4.1	53	49	49	23
8	5.8	48	43	43	25
10	6.2	47	41	41	25
16	8.2	44	37	36	25
20	9.3	43	35	34	25
25	10	41	33	31	24
31.25	12	40	31	28	24
62.5	17	35	25	18	22
100	22	32	21	10	20
Category 5E – Underground (JCAT5EFPA3)					
1	2	62	61	60	17
4	4.1	53	49	49	19
8	5.8	49	43	43	20
10	6.3	47	41	41	20
16	8.2	44	31	36	20
20	9.3	43	35	34	20
25	10	41	33	30	19
31.25	12	40	31	28	19
62.5	17	35	25	18	17
100	22	32	21	10	15
Category 5E – Low Smoke Zero Halogen (LSZH) (JCAT5ELSZHA3)					
1	2	62	64	60	21
4	4.1	53	52	49	23
8	5.8	49	46	43	25
10	6.3	47	44	41	25
16	8.2	44	40	36	25
20	9.3	43	38	34	25
25	10	41	36	30	24
31.25	12	40	34	28	24
62.5	17	35	28	18	22
100	22	32	24	10	20

Frequency	Attenuation (max)	PS-Next (min)	PS-Elfext (min)	PS ACR (min)	Return Loss (min)
MHz	dB/100m	dB	dB	dB	dB
Category 5E – Screened (JCAT5ESCRA3)					
1	2.6	62	61	60	20
4	4.7	53	49	49	23
8	6.4	49	43	43	25
10	7	47	41	41	25
16	8.7	44	37	36	25
20	9.6	43	35	34	25
25	11	41	33	31	24
31.25	12	40	31	28	24
62.5	17	35	25	18	22
100	22	32	21	10	20
Category 6 (JCAT6)					
1	2	72	68	70	72
4	3.8	63	56	60	62
8	5.3	59	50	54	56
10	6	57	48	51	53
16	7.6	54	44	47	49
20	8.5	53	42	44	46
25	9.5	51	40	42	44
31.25	11	50	38	39	41
62.5	15	55	32	31	32
100	20	42	28	23	25
200	29	38	22	8.8	11
250	33	36	20	3.6	5.6
Category 6 – Underground (JCAT6FPA3)					
1	2	72.3	64.8	70.3	20
4	3.8	63.3	52.8	59.5	23
10	6	57.3	44.8	51.3	25
16	7.6	54.3	40.7	46.7	25
20	8.5	52.8	38.8	44.3	25
31.25	10.7	49.9	34.9	39.2	23.6
62.5	15.4	45.4	28.9	30	21.5
100	19.8	42.3	24.8	22.5	20.1
125	22.4	40.8	22.9	18.4	19.4
200	29	37.8	18.8	8.8	18
250	32.8	36.3	16.8	3.5	17.3

Data RS232

Application 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.

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

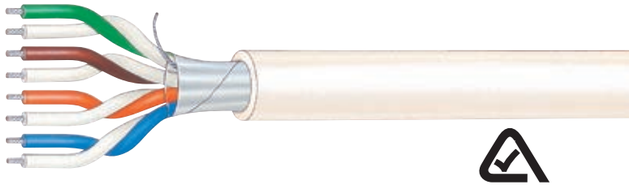
Number of cores	Nominal conductor area	Nominal overall diameter	Approximate mass	Maximum conductor resistance @ 20°C	Nominal pair capacitance	Pack sizes		**Product code**
	mm²	mm	kg/100m	ohm/km	pF/m	100m spool	300m spool	
RS232								
4 core	0.22	4.8	3.8	93.3	90	✓	–	JD4CSAA
6 core	0.22	5.5	4.2	93.3	90	✓	✓	JD6CSAA

Core Colours

Number of Core	Colour
RS232	
1	Red
2	Blue
3	Green

Number of Core	Colour
RS232	
4	Yellow
5	White
6	Black

Data RS422/RS485



Construction Stranded (7/0.2mm) tinned copper conductors, PP or PE insulated, twisted pair, aluminium foil overall tape screened with a stranded drain wire, PVC sheathed. RS485 range has aluminium foil overall tape screen and tinned copper braid shield (90% coverage).

Number of pairs	Nominal conductor area	Nominal overall diameter	Approximate mass	Maximum conductor resistance @ 20°C	Nominal pair capacitance	Insulation	Sheath colour	Pack sizes			**Product code**
	mm²	mm	kg/100m	ohm/km	pF/m			100m spool	300m spool	500m spool	
RS422											
1	0.22	4.4	2.1	93.3	70	PP	Cream	✓	✓		JD1PS*
2	0.22	5.5	3.1	93.3	70	PP	Cream	✓	✓	✓	JD2PS*
3	0.22	6.0	3.9	93.3	70	PP	Cream	–	✓		JD3PS*
4	0.22	6.2	5.0	93.3	70	PP	Cream	✓	–		JD4PS*
RS485											
1	0.22	5.9	6.0	83.5	50	PE	Grey	–	✓		JD1PS485A3**
2	0.22	8.6	8.0	83.5	50	PE	Grey	–	✓		JD2PS485A3***

Core Colours

Number of Pair	Pair Colours	
	Core 1	Core 2
RS422 and RS485		
1	White	Blue
2	White	Orange

Number of Pair	Pair Colours	
	Core 1	Core 2
RS422 and RS485		
3	White	Green
4	White	Brown

Note: *Pack size.**Equivalent to Belden 9841.***Equivalent to Belden 9842.

Internal Telephone

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

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

No. of pairs	Nominal overall diameter mm	Wire size mm	Approximate mass kg/100m	Sheath colour	Pack sizes 100m spool	200m spool	250m spool	300m box	500m spool	Bulk drum	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	Grey	–	–	–	–	–	✓	TINT020*
25	12.8	0.5	18	Grey	–	–	–	–	–	✓	TINT025*
50	17.0	0.5	34	Grey	–	–	–	–	–	✓	TINT050*
Jumper Wire											
2 core	1.0 × 1.9	0.5	0.5	Red & White	–	–	✓	–	✓	–	JUMPRW*
2 core	1.0 × 1.9	0.5	0.5	Green & White	–	–	✓	–	–	–	JUMPGNWT250
2 core	1.0 × 1.9	0.5	0.5	Blue & White	–	–	✓	–	–	–	JUMPBLU250

Technical Information – Colour Chart

Pair no.	Wire 1	Wire 2
1	White/Blue	Blue/White
2	White/Orange	Orange/White
3	White/Green	Green/White
4	White/Brown	Brown/White
5	White/Grey	Grey/White
6	Red/Blue	Blue/Red
7	Red/Orange	Orange/Red
8	Red/Green	Green/Red
9	Red/Brown	Brown/Red

Pair no.	Wire 1	Wire 2
10	Red/Grey	Grey/Red
11	Black/Blue	Blue/Black
12	Black/Orange	Orange/Black
13	Black/Green	Green/Black
14	Black/Brown	Brown/Black
15	Black/Grey	Grey/Black
16	Yellow/Blue	Blue/Yellow
17	Yellow/Orange	Orange/Yellow
18	Yellow/Green	Green/Yellow

Pair no.	Wire 1	Wire 2
19	Yellow/Brown	Brown/Yellow
20	Yellow/Grey	Grey/Yellow
21	Purple/Blue	Blue/Purple
22	Purple/Orange	Orange/Purple
23	Purple/Green	Green/Purple
24	Purple/Brown	Brown/Purple
25	Purple/Grey	Grey/Purple

Notes
TINT002 colour sequence is White and Blue, Red and Black.
TINT003 colour sequence is White and Blue, Red and Black, Orange and Green.
Max Conductor Resistance: 96 ohm/km. Insulation Resistance: >1000M ohm.km.

Telephone Information – Colour charts

Unit Binder Tapes

Unit No.	Colour of Binder Tapes
1	Blue
2	Orange
3	Green
4	Brown

External Telephone Underground

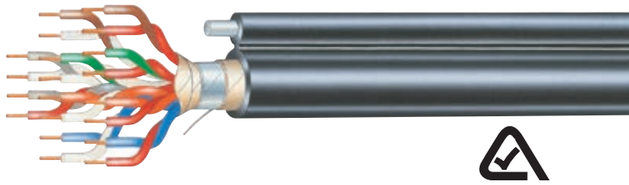
Application External telephone distribution cables are designed for direct burial installation in conduit, or overhead suspension between power lines. Particularly suited where security against moisture ingress is required (underground only).

Construction Solid bare copper conductor, PE insulated, twisted unit pair jelly filled, paper tape wrapped, black PE sheathed. Optional nylon oversheath.

No. of pairs	Nominal overall diameter mm	Wire size mm	Approximate mass kg/100m	Maximum conductor resistance @ 20°C ohm/km	Pack sizes 500m spool	Bulk drum	Product code
Polyethylene Sheath							
2	4.5	0.40	1.6	150	✓	–	TEXT40FP002A5
10	7.0	0.40	5.6	150	–	✓	TEXT40FP010*
20	8.5 × 9.5	0.40	10	150	–	✓	TEXT40FP020*
50	12.8	0.40	25	150	–	✓	TEXT40FP050*
2	5.7	0.64	3.1	58.6	✓	–	TEXT64FP002A5
10	9.6	0.64	13	58.6	–	✓	TEXT64FP010*
20	13.0	0.64	23.0	58.6	–	✓	TEXT64FP020*
Nylon Oversheath							
2	9	0.90	9	27.9	–	✓	TEXT90FN002AA
Moisture Barrier							
10	14.1	0.90	25	27.9	–	✓	TEXT90FMBN010[1]
30	21.25	0.90	63	27.9	–	✓	TEXT90FMBN030[1]
50	27.29	0.90	104	27.9	–	✓	TEXT90FMBN050[1]
100	36.80	0.90	204	27.9	–	✓	TEXT90FMBN100[1]

[1]Telstra approved.

External Telephone Aerial



Construction Solid bare copper conductor, PE insulated, twisted unit pair, black PE sheathed incorporating a galvanised solid high tensile steel bearer wire in figure 8 construction. 10 pair has aluminium foil screen and stranded drain wire for high interference areas.

No. of pairs	Nominal overall size mm	Wire size mm	Approximate mass kg/100m	Maximum conductor resistance @ 20°C ohm/km	Pack sizes 500m spool	Bulk drum	Product code
1	7.9 × 4.9	0.64	4.0	58.6	✓	–	TEXT64IB001A5
2	8.2 × 5.2	0.64	4.9	58.6	✓	–	TEXT64IB002A5
10	16.0 × 12.0	0.64	19	58.6	–	✓	TEXT64IB010*

Technical Information

Conductor Insulation

Pair No.	Wire 1	Wire 2
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown
5	White	Grey
6	Red	Blue
7	Red	Orange
8	Red	Green
9	Red	Brown
10	Red	Grey

Unit Binder Tapes

Unit No.	Colour of Binder Tapes
1	Blue
2	Orange
3	Green
4	Brown
5	Grey
6	Blue/White
7	Orange/White
8	Green/White
9	Brown/White
10	Grey/White

Electrical Characteristics

	External Telephone
High Voltage	
– Core to Core	2.0kV
– Core to Sheath	4.5kV
– Screen to Sheath	4.5kV
Max. Mutual Capacitance – Underground	49nF/km
– Aerial	52nF/km
Max. Pair to Pair Unbalance	2 Pair Cable: 500pF/500m
	>2 Pair Cable: 100pF/500m
Min. Insulation Resistance	10,000 ohm.km
Nom. Characteristic Impedance at 1MHz	120 ohm

Note: *Pack size.

Optical Fibre
Nylon Underground

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

Construction The optical fibres are contained in a jelly filled mono/loose tube, aramid yarn reinforced, PE sheathed with nylon oversheath.

Description	Nominal overall diameter mm	Approximate mass kg/100m	Maximum pulling tension kN	Minimum bending radius (mm) During installation	Minimum bending radius (mm) Installed	Product code
Single Mode (OS1)						
10/125 μm SM 6 Fibre	8.5	6.0	1.5	170	85	FIB06SMJN
10/125 μm SM 12 Fibre	8.5	6.0	1.5	170	85	FIB12SMJN
10/125 μm SM 24 Fibre	11.0	9.5	2.3	220	110	FIB24SMJN
Multi Mode (OM1)						
62.5/125 μm MM 6 Fibre	8.5	6.0	1.5	170	85	FIB06MMJN
62.5/125 μm MM 8 Fibre	8.5	6.0	1.5	170	85	FIB08MMJN
62.5/125 μm MM 12 Fibre	8.5	6.0	1.5	170	85	FIB12MMJN
62.5/125 μm MM 24 Fibre	11.0	9.5	2.3	220	110	FIB24MMJN
Multi Mode (OM3)						
50/125 μm MM 12 Fibre	8.5	6.0	1.5	170	85	FIB12OM3JN

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 (zero water peak)

Garden Lighting

Application 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.

Construction JSF Codes – Stranded bare copper conductors, PVC insulated (parallel web), water resistant.
JTS1.8BK2CA1 – Stranded bare copper conductors, PVC insulated with black overall sheath.

No. of cores	Nominal conductor area mm^2	Stranding No./mm	Nominal overall size mm	Approximate mass kg/100m	Max DC resistance @ 20°C ohm/km	Voltage drop single phase @ 45°C mV/A.m	Pack sizes 50m spool	Pack sizes 100m spool	Product code
2	1.3	26/0.25	4.0×8.6	7	15.3	33.6	–	✓	JSF1.3GLBK*
2	1.8	26/0.30	4.0×6.7	9	9.7	20.7	–	✓	JTS1.8BK2C*
2	2.5	76/0.20	4.0×9.35	10	8.0	17.6	–	✓	JSF2.5GLBK*
2	4.0	56/0.30	5.0×10.4	12	4.95	10.9	✓	✓	JSF4GLBK*
2	6.0	81/0.30	6.0×12.5	16	3.30	7.25	✓	✓	JSF6GLBK*
2	10	348/0.20	6.7×13.9	25	1.91	4.20	✓	✓	JSF10GLBK*

Refer to Technical Information (page 17) for Selection Chart.

Note: *Pack size.

Detonating

Application Used as shot firing wire, connected to detonators in mining, geological and exploration industries.

Construction 2 Core (1/0.7mm) tinned copper conductor, PVC insulated.

No. of cores	Nominal conductor area mm^2	Nominal overall size mm	Approximate mass kg/100m	Maximum conductor resistance @ 20°C ohm/km	Insulation colour	Pack sizes 100m spool	Pack sizes 200m spool	Pack sizes 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 & Control Core

Application CCTV requiring low voltage connection for motion control.

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

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

Refer to page 6, code JBCRG59PREM for coaxial cable details.

Composite
LAN (2 Pair and Earth)

Application 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.

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

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

Refer to page 4, code JD2PIS for 2 pair data details.

Note: *Pack size.

Traffic Signalling Multicore Power Cable

Application Complete supply of cables for traffic signal installation management.

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

Number of cores			Nominal overall diameter	Approximate mass	Product code
Total	Power	Control	mm	kg/100m	
13	3×2.5	10×1.5	17.6	43	LXMP07AAO13
19	3×2.5	16×1.5	19.9	59	LXMP07AAO19
29	3×2.5	26×1.5	23.7	81	LXMP07AAO29
29	3×4.0	26×1.5	26.0	92	LXMP09AAO29
51	3×4.0	48×1.5	32.3	143	LXMP09AAO51

Colours: Power cores: Grey, Black, Green/Yellow. **Control cores:** White, black numbered.

Feeder Cable for Vehicle Detectors

Construction Stranded (7/0.50mm) bare copper conductor, PE insulated twisted balanced – twin, jelly filled, metallic screened, PVC sheathed, for ELV to AS/NZS 2276.2.

Number of pairs	Nominal overall diameter mm	Appropriate mass kg/100m	Nominal insulation thickness mm	Characteristic impedance ohms	Mutual capacitance nF/km	Capacitance unbalance[1]	Water penetration[1]	Pack sizes 500m drum	Pack sizes 1000m drum	Product code
1	9.3	8	0.5	80–100	65–80	<2%	<3%	✓	✓	JTCD28*002

[1]Capacitance unbalance and water penetration tests to AS/NZS 2276.2/1986.

Loop Cable for Vehicle Detectors

Construction Single core stranded (7/0.50mm) tinned copper conductor, XLPE or polypropylene insulated 250V to AS/NZS 2276.3.

Insulation	Nominal overall diameter mm	Approximate mass kg/100m	Pack sizes 500m spool	Pack sizes 1000m drum	Product code
XLPE	4.0	2.3	✓	–	XDCP55A5001
PP	3.6	2.0	✓	✓	ZZLM07*332

Fire Alarm Unscreened

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

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

No. of cores	Nominal conductor area	Stranding	Nominal overall diameter/ size	Approx. mass	Core colours	Sheath colour	Maximum conductor resistance @ 20°C	Voltage rating	Pack sizes 100m spool	Pack sizes 200m spool	Pack sizes 300m spool	Pack sizes 500m spool	Product code
	mm^2	No./mm	mm	kg/100m			ohm/km						
2	1.5	7/0.50	7.0	5	Red, White	Red	13.6	ELV	–	✓	✓	✓	JRS1502*†
2	1.0	7/0.40	3.6×6.0	5	Red, White	Red	21.2	250/250	–	✓	–	–	JRS1002LDF*
2	1.5	7/0.50	3.8×6.6	7	Red, White	Red	13.6	250/250	–	✓	–	–	JRS1502LDF*
2	0.75	24/0.20	3.4×5.5	4	Red, White	Red	26.0	250/250	✓	–	–	✓	CBLR02*
2	1.0	7/0.40	4.3×6.7	6	Red, White	Red	21.2	450/750	✓	✓	–	✓	CACP03*
2	1.5	7/0.50	4.6×7.3	10	Red, White	Red	13.6	450/750	✓	✓	–	✓	CACP05*

LDF = Light duty flat
†Twisted

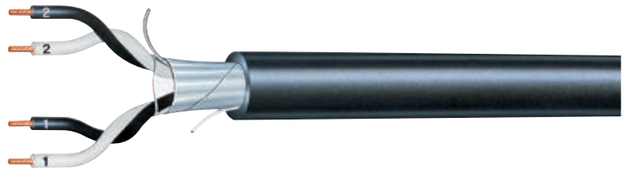
Fire Alarm Screened

Construction Stranded bare copper conductor, PVC insulated, twisted pair, aluminium foil screen, stranded drain wire, red PVC sheathed.

No. of cores	Nominal conductor area	Stranding	Nominal overall diameter	Approximate mass	Core colours	Shielding	Maximum conductor resistance @ 20°C	Voltage rating	Pack size 500m spool	Product code
	mm^2	No./mm	mm	kg/100m			ohm/km			
2	1.5	7/0.50	7.0	7	Red, Black	Aluminium Foil + DW	13.6	ELV	✓	JRS1502SA5

Note: *Pack size.

Instrolex® Instrumentation Overall Screened Pairs

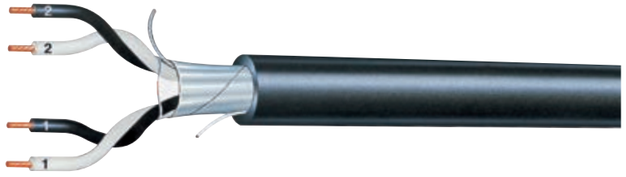


Application Designed to transmit 'clean' signals within industrial environments where there is a high level of electromagnetic interference. Uses include process control, oil and gas and heavy industry.

Construction Stranded bare annealed copper conductor, V-90RP PVC insulated, twisted pairs, unscreened or overall screened with aluminium polyester tape plus stranded drain wire, rip cord, V-90RP PVC sheathed.

Number of pairs	Nominal conductor area mm²	Nominal overall diameter mm	Approximate mass kg/100m	Minimum bending radius mm	Maximum pulling tension k/N	**Product code**
1	7/0.30	5.2	3.5	31	0.07	IEB183AA001
1	7/0.50	6.6	6.0	40	0.21	IEB184AA001
2	7/0.30	7.8	6.3	47	0.14	IEC183AA002
4	7/0.30	8.4	9.4	50	0.28	IEC183AA004
6	7/0.30	10.0	13	60	0.42	IEC183AA006
8	7/0.30	11.2	17	67	0.56	IEC183AA008
10	7/0.30	12.5	21	75	0.70	IEC183AA010
16	7/0.30	15.1	31	91	1.1	IEC183AA016
20	7/0.30	16.8	38	101	1.4	IEC183AA020
24	7/0.30	18.1	45	109	1.7	IEC183AA024
36	7/0.30	22.0	66	132	2.5	IEC183AA036
50	7/0.30	25.6	90	153	3.5	IEC183AA050

Instrolex® Instrumentation Individually and Overall Screened Pairs



Construction Stranded bare copper conductor, V-90RP PVC insulated, twisted pairs, individually and overall screened with aluminium polyester tape plus stranded drain wire, rip cord, V-90RP PVC sheathed.

Number of pairs	Nominal conductor area mm²	Nominal overall diameter mm	Approximate mass kg/100m	Minimum bending radius mm	Maximum pulling tension k/N	**Product code**
2	7/0.30	8.1	7.3	49	0.14	IED183AA002
4	7/0.30	10.4	12	62	0.28	IED183AA004
6	7/0.30	12.2	17	73	0.42	IED183AA006
8	7/0.30	13.9	22	84	0.56	IED183AA008
10	7/0.30	14.6	26	88	0.70	IED183AA010
12	7/0.30	16.0	31	96	0.84	IED183AA012
16	7/0.30	18.0	39	108	1.1	IED183AA016
20	7/0.30	20.1	48	120	1.4	IED183AA020
24	7/0.30	21.9	57	131	1.7	IED183AA024
36	7/0.30	26.3	83	158	2.5	IED183AA036
50	7/0.30	30.6	112	184	3.5	IED183AA050

Note – Representative range only. For armoured and other constructions see Olex Industrial Catalogue or visit www.olex.com.au

Note: *Pack size.

Technical Information

Copper Conductor Reference Chart

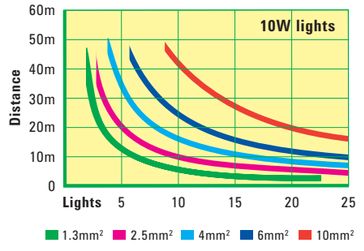
Stranding No./mm	Area mm²	AWG (nearest)	Resistance ohm/km
348/0.20	10.93	7	1.91
81/0.30	5.73	9	3.30
65/0.30	4.59	10	4.26
84/0.25	4.12	11	4.95
225/0.15	3.98	11	4.92
56/0.30	3.96	11	4.95
41/0.30	2.90	12	6.76
84/0.20	2.64	13	7.40
140/0.15	2.47	13	7.91
50/0.25	2.45	13	7.98
1/1.63	2.09	14	8.60
64/0.20	2.01	14	10.90
26/0.30	1.84	15	10.70
30/0.25	1.47	16	13.30
20/0.30	1.41	16	13.90
7/0.50	1.37	16	13.60
26/0.25	1.28	16	15.30
16/0.30	1.13	17	17.30
91/0.12	1.03	17	17.20
32/0.20	1.01	17	19.50
20/0.25	0.98	17	19.90
7/0.40	0.88	18	21.20
1/1.02	0.82	18	22.00
16/0.25	0.79	18	24.90
24/0.20	0.75	18	26.00
24/0.20	0.75	18	24.70
1/.912	0.65	19	27.50
1/0.90	0.64	19	28.20
9/0.30	0.64	19	30.80
1/.813	0.52	20	34.60
1/0.80	0.50	20	35.70
16/0.20	0.50	20	39.00
7/0.30	0.49	20	38.40
10/0.25	0.49	20	39.90
14/0.20	0.44	21	44.50
1/.724	0.41	21	43.60
1/0.70	0.38	21	46.60
19/0.16	0.38	22	51.30
20/0.15	0.35	22	55.40
7/0.25	0.34	22	55.40
1/.643	0.32	22	55.20
1/0.64	0.32	22	55.80
7/0.20	0.22	24	86.50
1/.511	0.21	24	87.50
1/0.50	0.20	24	91.40
7/0.16	0.14	26	135.10
1/.404	0.13	26	139.90
1/0.40	0.13	26	142.70
7/.127	0.09	28	214.50

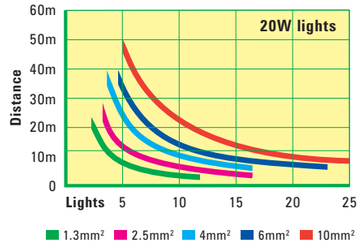
Coaxial Nominal Attenuation (dB/100m)

MHz	JBCRG58CUMIL dB	JBCRG213MIL dB	JBCRG59BUCCTV dB	JBCRG59PREM dB	JBCRG59DSB dB	JPLAS1PREM dB	JBCTVCOAX dB	JBCRG6QUAD dB	J1617 dB	J1618 dB
1	1.4	0.6	2	2	1	2.0	0.8	0.7	0.6	0.6
5	3.4	1.4	2.7	2.7	2.1	2.7	2.8	1.9	1.3	1.3
100	16	6.2	12	12	7	12	8	7.5	4.1	4.1
200	24	8.9	17	17	10	17	13	11	5.8	5.8
400	38	14	24	24	19	24	18	13	8.1	8.1
600	38	16	31	31	24	31	20	16	10	10
750	43	18	35	35	27	35	22	18	11	11
1000	71	26	40	40	32	40	28	22	14	14

Garden Lighting Selection Chart

These charts are based on the assumption of the first light at 5m and the rest evenly distributed thereafter.





Nexans Olex

Data/Comms
Glossary of terms

AC – Alternating current. Electric current that alternates or reverses polarity in a cyclical manner (e.g. 50 Hz AC power).
ACMA – Government Department responsible for managing of the frequency spectrum (includes wireless and conductor systems).
ACIF – (S008, S009) Association of the Communications Industry responsible for establishing industry guidelines and standards, i.e. S008/S009.
ACR – Attenuation Crosstalk Ratio. The difference between attenuation and crosstalk, measured in decibels (dB), at a given frequency.
ADSL – Asymmetric Digital Subscriber Line.
American Wire Gage (AWG) – A standard for expressing wire diameter. As the AWG number gets larger, the wire diameter gets smaller.
Analog – Representation of data by continuously variable quantities as opposed to a finite number of discrete quantities in digital.
Analog Signal – An electric signal which varies continuously, not having discrete values. Analog signals are copies or representations of other waves in nature. An analog audio signal, for instance, is a representation of the pressure waves which make up audible sound.
Anneal – To soften and relieve strains in any solid material, such as metal or glass, by heating to just below its melting point and then slowly cooling it. Annealing generally lowers the tensile strength of the material, while improving its flex life and flexibility.
Attenuation – The decrease in magnitude of a signal as it travels through any transmitting medium, such as a cable or circuitry. Attenuation is usually expressed logarithmically as the ratio of the original and decreased signal amplitudes. It is usually expressed in decibels (dB).
Audio – A term used to describe sounds within the range of human hearing (20Hz to 20kHz). Also used to describe devices which are designed to operate within this range.
AWG – American Wire Gage. A wire diameter specification. The larger the AWG number, the smaller the wire diameter.
Backbone – The cable used to connect all systems of a multi-level distributed system to an intermediate system.
Balanced Line – A cable having two identical conductors which carry voltages opposite in polarity, but equal in magnitude with respect to ground, suitable for differential signal transmission.
Bandwidth – The difference between the upper and lower limits of a given band of frequencies. It is expressed in Hertz. The range of frequencies that a transmitted communications signal occupies or that a receiving system can accept. For example, it takes more bandwidth to download a photograph in a second than to download a page of text. Virtual reality and three-dimensional audio/visual presentations require even more.
Bel – A unit that represents the logarithm of the ratio of two levels. One bel equals the base 10 logarithm of the ratio of two power levels. It is also equal to the base 10 logarithm of square of the ratio of two voltage or current levels, provided the impedances are the same at the two levels.
BNC – Abbreviation for 'Bayonet Neil-Concelman'. A coaxial cable connector used extensively in video and RF applications.
Buffer – A protective coating over an optical fibre.
Capacitance – The ability of a dielectric material between conductors to store energy when a difference of potential exists between the conductors. The unit of measurement is the farad. Cable capacitance is usually measured in picofarads (pF).
Category – Rating of a local area network (LAN) cable established by TIA/EIA to indicate the level of electrical performance.
Category Cables – An international standard system used to define the performance of twisted pair data cables (Cat 3 to Cat 7). The higher the category number, the greater the bandwidth. Category 7 is currently the highest performance telecommunication wire available.
CATV – Abbreviation for Community Antenna Television. Cable TV.
CCS – Copper clad steel.
CCTV – Closed circuit television.
Characteristic Impedance – In a transmission cable of infinite length, the ratio of the applied voltage to the resultant current at the point the voltage is applied. Or the impedance which makes a transmission cable seem infinitely long, when connected across the cable's output terminals.
Coaxial Cable – A cylindrical transmission line composed of a conductor centred inside a metallic tube or shield, separated by a dielectric material, and usually covered by an insulating jacket. Used by cable TV companies to distribute signals to homes and businesses.
Component Video – The unencoded output of a camera, video tape recorder, etc. whereby each red, green, and blue video signal is transmitted down a separate cable (usually coaxial) to improve picture quality.
Composite Cable – Cable having conductors with two or more sizes or more than one cable type.
Composite Video – The encoded output of a camera, video tape recorder, etc, whereby the red, green and blue video signals are combined with the synchronising, blanking and colour burst signals and are transmitted simultaneously down one cable.
Conductor – A substance, usually metal, used to transfer electrical energy from point to point.
Crosstalk – A type of interference caused by signals from one pair or cable being coupled into adjacent pairs or cables. Can occur with audio, data or RF signals.
Dielectric – An insulating (nonconducting) medium. It is the insulating material between conductors carrying a signal in a cable. In coaxial cables it is between the centre conductor and the outer conductor. In twisted pairs it is the insulation between conductors.
Dispersion – The cause of bandwidth limitations in an optical fibre. Dispersion causes a broadening of input pulses along the length of the fibre. Two major types are (a) mode dispersion caused by differential optical path lengths in a multimode fibre, and (b) mater.
Distortion – Any undesired change in a wave form or signal.
Distribution Cable – In a CATV system, the transmission cable between the distribution amplifier and the drop cable.
Drain Wire – A non-insulated wire in contact with parts of a cable, usually the shield, and used in the termination to that shield and as a ground connection.
DSL – Digital Subscriber Line. A technology for bringing high-bandwidth information to homes and small businesses over ordinary copper telephone lines. A DSL line can carry both data and voice signals.
EIA – Electronic Industries Association.
ELFEXT – Equal Level Far End Crosstalk (dB). A subtraction of attenuation from FEXT. By subtracting the attenuation, ELFEXT negates the effects of attenuation on the interference as it propagates down the cable, thus bringing it to an equal level.
ELV – Extra Low Voltage. Defined as up to 50V AC and 120V DC. Not suitable for connection to mains.
EMI – Electromagnetic Interference.
ETL – An organisation which tests and verifies construction and performance of electronic parts and equipment, including wire and cable.
FEXT – Far End Crosstalk. Crosstalk induced on the pairs, measured at the far end of the cable, referenced to the near end input signal. Usually expressed in decibels (dB).
Fibre – A single, separate optical transmission element characterised by core and cladding.
Fibre Optics – Light transmission through optical fibres for communication and signalling. A technology that transmits information as light pulses along a glass or plastic fibre. Optical fibre carries much more information than conventional copper wire and is generally not subject to interference. Most telephone company long-distance lines are optical fibre.
Fibre to the home (FTTH) – A technology that provides voice, data and video services from the phone company's branch office to local customers over an all-fibre optic link.
Filled – Cables that are gel filled.
Foam Polyethylene – Expanded or 'foam' polyethylene, consists of individual closed cells of inert gas suspended in a polyethylene medium, resulting in a desirable reduction of the dielectric constant.
Frequency – The number of times a periodic action occurs in one second. Measured in Hertz.
Gauge – The physical diameter of a wire.
Giga – One billion.
Gigahertz (GHz) – A unit of frequency equal to one billion Hz.
Graded-Index – A type of optical fibre in which the refractive index of the core is in the form of a parabolic curve, decreasing toward the cladding. This type of fibre provides high bandwidth capabilities.
Headroom – The amount by which a cable ACR exceeds the specified requirements. The TIA/EIA-568B standard specifies a minimum of 10 dB of ACR for Category 5e certification at 100 MHz.
Hertz (Hz) – Unit of frequency equal to one cycle per second.
High Frequency – The band from 3 to 30 MHz in the radio spectrum, as designated by the Federal Communications Commission.
Horizontal Cable – Cable used between the workstation outlet and the telecommunications closet. Limited to 90 metres maximum per TIA/EIA-568B.1.
IDSL – ISDN Digital Subscriber Line.
IEEE – Institute of Electrical and Electronic Engineers.
Impedance – The total opposition that a circuit offers to the flow of alternating current or any other varying current at a particular frequency.

Impedance, Characteristic – In a transmission cable of infinite length, the ratio of the applied voltage to the resultant current at the point the voltage is applied.
Inductance – The property of wire which stores electrical current in a magnetic field around the wire. By coiling wire, the effect can be intensified.
Insertion Loss – A measure of the attenuation of a cable and/or component(s) by determining the output of a system before and after the device is inserted into the system.
Insulation – A material having good dielectric properties which is used to separate close electrical components, such as cable conductors and circuit components.
Insulation Displacement Connector (IDC) – Insulation Displacement Connector. Type of connector where contact is made to the cable conductor(s) by cutting through the individual conductor's insulation. The conductor does not need to have its insulation removed prior to connection.
Jacket – Pertaining to wire and cable, the outer protective covering, also called sheath, that may also provide additional insulation.
Jumper – A short length of conductor or flat cable used to make a connection between terminals or around a break in a circuit or between circuit boards.
kB – Kilobyte.
kV – Kilovolt (1000 volts).
kW – Kilowatt.
LAN – Local Area Network. A data network connecting any number of users, intended to serve a small area. A group of computers and associated devices that shares a common communications line and typically shares the resources of a single processor or server within a small geographic area.
Lay – The length measured along the axis of a wire or cable required for a single strand (in stranded wire) or conductor (in cable) to make one complete turn about the axis of the conductor or cable.
LSZH/LSOH – Low Smoke Zero Halogen. A non-conducting material which produces no halogen compounds (Fl, Cl, Br, I, At) and low amount of smoke when combusted. These compounds also exhibit low toxicity or combustion emissions and are commonly used in cases installed.
MATV – Master Antenna Television.
MB – Megabyte.
Mbps – Mega bits per second. The number of bits, in millions, transmitted per second.
Megahertz (MHz) – Unit of frequency equal to one million Hertz.
Micron – Millionth of a meter. (μ is a common abbreviation).
Nano – One-billionth.
NEXT – Near-end Crosstalk. Crosstalk induced on the pairs, measured at the end near the transmitter. Usually expressed in decibels (dB).
Nylon – A thermoplastic polyamide used for termite protection.
OFC – Oxygen Free Copper. Is a high purity copper (>99.95%), often used in communication cabling, speaker cables, etc.
Ohm – The unit of electrical resistance. The value of resistance through which a potential difference of one volt will maintain a current of one ampere.
Polyethylene (PE) – A thermoplastic material having excellent electrical properties. Low dielectric constant, a stable dielectric constant over all frequencies, very high insulation resistance. In terms of flexibility, polyethylene can be rated stiff to very hard, depending on molecular weight and density.
Polypropylene (PP) – A thermoplastic similar to polyethylene but stiffer and having a higher softening point (temperature). This material is primarily used as an insulation material. Typically, it is harder than polyethylene.
Polyvinyl Chloride (PVC) – A general purpose thermoplastic used for wire and cable insulation and jackets. Typically, it is softer than polyethylene.
POTS – Plain Old Telephone Service. Sometimes used in discussions of new telephone technologies in which the question of whether and how existing voice transmission for ordinary telephone communications can be accommodated. For example, DSL and ISDN provide part of their channels for POTS, while using most of their bandwidth for digital data transmission.
Power Sum (PS) – Referring to cross-talk, the effect of all pairs powered on each of the other pairs.
Precision Video – Video coaxial cables having very tight electrical tolerances in impedance, velocity of propagation, attenuation and return loss. Used in high quality applications such as live broadcast in network studios and pre or post-production facilities.
Radio Frequency (RF) – Radio Frequency. Includes frequencies from a few kilohertz to several gigahertz. Used to transmit information from point to point over the airwaves or cable.
Receiver – A unit that converts an RF signal to another type of signal (e.g. radio, television). Also refers to an electronic package that converts light energy in a fibre optic system.
Refractive Index – The ratio of light velocity in a vacuum to its velocity in the transmitting medium.
Resistance – In DC circuits, the opposition a material offers to current flow, measured in ohms. In AC circuits, resistance is the real component of impedance, and may be higher than the value measured at DC.
Return Loss – Measure of signal reflections from a cable or device with a fixed, standard reference impedance on the measuring equipment. Expressed in decibels (dB).
RG/U – RG is the abbreviation for radio guide, a military designation for a coaxial cable, and U stands for universal.
RGB – Abbreviation for the three parts of colour video signal: red, green and blue. Also refers to multi-coaxial cables carrying these signals.
ScTP – Screened Twisted Pair. Premise network cable with an overall foil shield.
Sheath – Pertaining to wire and cable, the outer protective covering, also called jacket, that may also provide additional insulation.
Shield – A tape, serve or braid (usually copper, aluminium or other conductive material) placed around or between electric circuits or cables or their components, to prevent signal leakage or interference.
Shield Coverage – The optical percentage of a cable actually covered by shielding material.
Shield Effectiveness – The relative ability of a shield to screen out undesirable interference or prevent signal leakage out of the cable. Frequently confused with the term shield coverage.
Signal – Any visible or audible indication which can convey information. Also, the information conveyed through a communication system.
STP – Shielded Twisted Pair(s).
Structural Return Loss – Magnitude of the internal cable reflections, measured in decibels (dB), relative to the actual cable impedance, not the system impendance.
Teflon® – DuPont Company trademark for fluorocarbon resins.
Temperature Rating – The maximum temperature at which the insulating material or cable may be used in continuous operation without change in its basic properties.
Tensile Strength – The pull stress required to break a bare wire.
TIA – Telecommunications Industry Association.
TIA/EIA–568–B – Commercial Building Telecommunications Wiring Standard defines a generic telecommunications wiring system for commercial buildings that will support a multi-product, multi-vendor environment. It also provides direction for the design of telecommunications products for commercial enterprises.
Triaxial Cable – A cable construction having a conductor and two isolated braid shields, all insulated from each other. A coaxial cable with a second braid applied over an inner jacket and an outer jacket applied over the outer braid.
Twisted Pair – Two lengths of insulated conductors twisted together. The traditional method for connecting home and many business computers to the telephone company. Gets its name because two insulated copper wire are twisted together, both of which are needed for each connection. In commercial environments, performance of data transmission can be improved by adding metallic tape to the pair. This is known as shielded twisted pair.
Unbalanced Line – A transmission line in which voltages on the two conductors are unequal with respect to ground. A coaxial cable is a common type of unbalanced line.
UTP – Unshielded Twisted Pair(s).
VHF – Very High Frequency. International Telcommunications Union designation for the 30 to 300Mhz band of frequencies.
Volt – A unit of electromotive force.
Voltage – Electrical potential of electromotive force expressed in volts.
Voltage Drop – The voltage developed across a component or conductor by the current flow through the resistance or impedance of the component or conductor.
Voltage Rating – The highest voltage that may be continuously applied to a cable construction in conformance with standards or specifications.
WAN – Wide Area Network.
Watt – A unit of electrical power.
Wavelength – The distance between positive peaks of a signal. As the frequency increases, and waves get closer together, the wavelength decreases.
XLPE – Crosslinked polyethylene is a thermoset and is crosslinked by radiation, thermally, or by moisture. XLPE operates in a wide range of temperatures, has excellent deformation and abrasion resistance.

The Olex Cable Range

Low Voltage power and control-cables

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Armoured PVC/PVC circulars
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Armoured multicore control
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– Submersible
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Data & communications cables

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– Figure 8
– Category 5e
– Coaxial
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Fibre – Multi Mode
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Data

Mining cables (flexible) to-33kV

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Feeder cables
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Specialised Industrial cables

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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

The future is our favourite place

At Olex, the future always looks incredibly bright. That's because we spend most of our time there. Over the decades, Olex has consistently led the cable market in technological innovation. For more than 65 years Olex has stood for the highest quality and the most innovative technology, from design, through manufacture to installation and service. The following range of standards approved cables is proudly designed and produced in Australia by Olex: Versolex® and Flexolex® Flexible Power Cables, Instrolex® Instrumentation Cables, Ship Wiring Cables, Envirolex® PVC Free Cables, Mining Cables, Varolex® EMC Cables, Aerial Cables, High Voltage Power Cables, Pyrolex™ Ceramifiable® Fire-Rated Cables, Low Voltage Building Wires, Airport Lighting Cables and Lead Covered Power Cables.

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