



LOW VOLTAGE CABLE > > >



Zenergy Cable

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An Aryam Australia Group

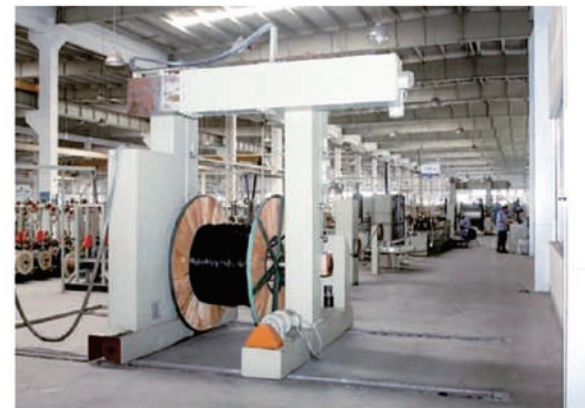


Company Introduction

Znergy Magnus Systema (ZMS) with Znergy Cable is an Australian owned business and an Affiliated International Group Partner with modern state of art manufacturing facilities. These plants proudly employ more than 1500 permanent staff, and has an annual group turnover of \$USD 2.2 Billion. It is proudly a part of the ARYAM AUSTRALIA GROUP.

Znergy Cable has an objective of providing high quality products & services to its customers at right price through competitive approach. Quality is our competency, which is achieved by our highly qualified & dedicated staff to ensure product excellence till the last meter. Our design & engineering team can meet the demand for virtually any cable specification to suit the needs of clients. All our products comply with the latest IEC, BASEC, S/NZS, DIN, VDE, UL, NEMA & other International Standards. In most cases, the IEC and VDE Standards are equal to or higher than AS/NZS Standards.

Znergy Cable's vision is to be a dynamic organization that delivers innovative cable solutions for a sustainable future. Our goal is to conduct business in a safe, ethical and environmentally responsible manner. We understand our customers changing needs and expectations to deliver superior value. We work to develop the strengths and capabilities of our people and the organization. We strive for innovation and continuous improvement to lower costs and enhance our products and services.



Our greatest value is to take ownership of what is expected of us and full responsibility for our actions, as a truly global enterprise. With a modern state of art production, integrated R&D, sales and after-service, we continually invest in R&D to innovate ourselves, enabling us to develop new items (Custom Make and OEMs for other major cable manufacturers) to national and International Standards. We are proud manufacturers of registered brand ZENERGY®.

The production plants have High Standard Bench Mark operation with Quality Control and High Efficiency. Our products are Quality Endorsed with ISO9001 Quality System Certification and International Standard Product Certification.

With Global reach and International bench mark, Znergy Cable assures its clients of par excellence service and quality. We thrive on long term customer relationship and guarantee total commitment to help our customers in all aspects of their work. We are fully committed to support our customers to achieve their company goals and enable continuous business growth. We wish long term prosperity of all our business partners.



NATA endorsed Lab Test Certificate





		Power & Control 110 °C LSZH 0.6/1kV Class 5 Flexible WS52W
23	CFZ SERIES	Znergy Cable Fire Resistant Flexible Rubber
		Power & Control 110 °C LSZH 0.6/1kV Class 5 Flexible WS52W
24	TUS SERIES	Znergy Cable Fire Resistant Flexible Rubber
		Alarm Signal Cable 110 °C LSZH 250V Class 5 Flexible WS52W
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Znergy Cable
Single Core - SDI | 0.6/1kV | PVC/PVC



CPV SERIES
ZNERGY CABLE Single Core - SDI | 0.6/1kV | PVC/PVC



Application

This cable for energy distribution is suitable for all types of low voltage industrial type connections, in urban grids, building installations, etc. Its high flexibility makes the installation process substantially easier and as a result is particularly suitable for use in difficult layouts. It can be buried or installed in a tube as well as outdoors without requiring additional protection.

Construction

- Class 2 stranded plain or Class 5 Flexible annealed copper wire conductor to IEC60228 | AS/NZS1125
- X-90 Insulated and PVC UV outer sheath - A medium splash oil resistant, ozone and UV resistant sheath.
- AS/NZS5000.1 PVC UV sheathed.

Feature & Benefits

- Meter marked medium splash oil resistant and medium impact low voltage industrial all rounder ..
- Can be installed in open air, outdoor, in damp areas, in conduits and buried direct.
- Robust and Abrasion impact good. Fire Retardant.

Standards

- National Norm: AS/NZS5000.1 | AS/NZS1125 | AS/NZS3008 |
- International Norm: IEC60228 | IEC60332.1
- Temperature Range: 0°C to +90°
- Voltage Rating: 0.6/1kV

Cross Section mm²	Strands mm	approx diameter of conductor Phase mm	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx Weight Kg/Km	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Spaced 3 PHASE	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Spaced 3 PHASE	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Touching 3 PHASE
2.5	7X0.67	1.98	0.7	1.4	6.4	60	35	30	28
4	7 X0.85	2.49	0.7	1.4	6.9	77	46	40	37
6	7X1.05	3.24	0.7	1.4	7.5	100	59	50	47
10	7X1.35	4.05	0.7	1.4	8.4	145	81	69	65
16	7X1.70	5.1	0.7	1.4	9.4	206	108	92	86
25	7X2.13	6	0.9	1.4	11	302	146	125	117
35	7X2.52	7	0.9	1.4	12.2	398	180	155	144
50	19X 1.83	8.1	1.0	1.4	13.9	521	221	188	176
70	19X2.17	9.8	1.1	1.4	16.1	728	282	240	224
95	19X2.52	11.4	1.1	1.5	17.9	985	350	298	278
120	37X2.03	12.9	1.2	1.5	19.7	1225	410	349	325
150	37X2.27	14.4	1.4	1.6	21.8	1510	472	403	375
185	37X2.52	16	1.6	1.6	23.8	1869	560	468	435
240	37X 2.87	18.4	1.7	1.7	26.8	2430	660	560	521
300	61X2.50	20.6	1.8	1.8	29.6	3025	766	648	602
400	61X 2.89	23.4	2.0	1.9	33.5	3846	899	756	702
500	61X3.23	26.2	2.2	2.0	37.3	4900	1051	874	812
630	91X2.97	29.8	2.4	2.2	42.9	6309	1230	1010	938

These ratings are based on 40°(ambient air temperature and 25°) ambient soil temperature.



Znergy Cable
Multi Core - | 0.6/1kV | PVC/PVC



CPV SERIES
ZNERGY CABLE Multi Core - | 0.6/1 kV | PVC/PVC



Number of cores and nominal area	Approx diameter of conductor		Nominal insulation thickness mm	Nominal thickness of outer Sheath mm	Overall diameter of cable mm	Approx. mass of cable Kg/Km	Current Rating (Amps)TABLE 7 AS/NZS3808.1.1:2009 Unenclosed Spaced 3 PHASE	Current Rating (Amps)TABLE 7 AS/NZS3808.1.1:2009 Unenclosed Spaced 3 PHASE	Current Rating (Amps)TABLE 7 AS/NZS3808.1.1:2009 Unenclosed Touching phase earth 3 PHASE
	Phase mm	Earth mm							
2x1.5+E 1.5	1.53	1.53	0.8	1.8	11.4	169	20	17	16
2x2.5+E 2.5	1.98	1.98	0.8	1.8	12.3	210	29	25	23
2x4+E 2.5	2.49	1.98	1.0	1.8	13.8	268	38	33	31
2x6+E 2.5	3.24	1.98	1.0	1.8	15.1	327	49	42	40
2x10+E 4	4.05	2.49	1.0	1.8	16.8	450	67	58	54
2x16+E 6	5.1	3.24	1.0	1.8	18.9	616	89	77	75
2x25+E 6	6	3.24	1.2	1.8	21.4	844	120	103	97
2x35+E 10	7	4.05	1.2	1.8	23.4	1099	148	127	119
2x50+E 16	8.1	5.1	1.4	1.8	27.0	1504	181	156	146
2x70+E 25	9.8	6	1.4	1.8	30.4	2056	230	197	184
2x95+E 25	11.4	6	1.6	1.9	34.8	2687	287	246	230
2x120+E 35	12.9	7	1.6	2.0	37.9	3321	335	287	267
2x150+E 50	14.4	8.1	1.8	2.1	41.9	4104	385	330	308
2x185+E 70	16	9.8	2.0	2.3	46.2	5156	447	383	357
2x240+E 95	18.4	11.4	2.2	2.5	52.2	6727	535	457	426
2x300+E 120	20.6	12.9	2.4	2.6	57.6	8328	620	529	492
2x400+E 120	23.4	12.9	2.6	2.8	64.8	10263	726	615	573
3x1.5+E 1.5	1.53	1.53	0.8	1.8	12.2	200	20	17	16
3x2.5+E 2.5	1.98	1.98	0.8	1.8	13.3	254	29	25	23
3x4+E 2.5	2.49	1.98	1.0	1.8	15.0	333	38	33	31
3x6+E 2.5	3.24	1.98	1.0	1.8	16.4	413	49	42	40
3x10+E 4	4.05	2.49	1.0	1.8	18.4	582	67	58	54
3x16+E 6	5.1	3.24	1.0	1.8	20.8	809	89	77	75
3x25+E 6	6	3.24	1.2	1.8	23.3	1126	120	103	97
3x35+E 10	7	4.05	1.2	1.8	25.6	1478	148	127	119
3x50+E 16	8.1	5.1	1.4	1.8	29.6	2018	181	156	146
3x70+E 25	9.8	6	1.4	1.9	33.6	2787	230	197	184
3x95+E 25	11.4	6	1.6	2.1	37.9	3674	287	246	230
3x120+E 35	12.9	7	1.6	2.2	41.5	4551	335	287	267
3x150+E 50	14.4	8.1	1.8	2.3	46.0	5621	385	330	308
3x185+E 70	16	9.8	2.0	2.5	51.0	7056	447	383	357
3x240+E 95	18.4	11.4	2.2	2.7	57.7	9205	535	457	426
3x300+E 120	20.6	12.9	2.4	2.9	63.9	11442	620	529	492
3x400+E 120	23.4	12.9	2.6	3.1	70.5	14121	726	615	573
4x1.5+E 1.5	1.53	1.53	0.8	1.8	13.2	236	20	17	16
4x2.5+E 2.5	1.98	1.98	0.8	1.8	14.4	301	29	25	23
4x4+E 2.5	2.49	1.98	1.0	1.8	16.4	403	38	33	31
4x6+E 2.5	3.24	1.98	1.0	1.8	18.0	507	49	42	40
4x10+E 4	4.05	2.49	1.0	1.8	20.3	722	67	58	54
4x16+E 6	5.1	3.24	1.0	1.8	23.0	1012	89	77	75
4x25+E 6	6	3.24	1.2	1.8	25.8	1428	120	103	97
4x35+E 10	7	4.05	1.2	1.8	28.4	1878	148	127	119
4x50+E 16	8.1	5.1	1.4	1.9	33.1	2575	181	156	146
4x70+E 25	9.8	6	1.4	2.1	37.8	3575	230	197	184
4x95+E 25	11.4	6	1.6	2.2	42.5	4725	287	246	230
4x120+E 35	12.9	7	1.6	2.4	46.7	5869	335	287	267
4x150+E 50	14.4	8.1	1.8	2.5	51.8	7242	385	330	308
4x185+E 70	16	9.8	1.6	9.8	57.4	9068	447	383	357
4x240+E 95	18.4	11.4	2.2	2.9	64.9	11818	535	457	426
4x300+E 120	20.6	12.9	2.4	3.1	71.9	14694	620	529	492

These ratings are based on 40°(ambient air temperature and 25°) ambient soil temperature.



Znergy Cable
Single Core - SDI | 0.6/1kV | XLPE/PVC
90°C | AS/NZS5000.1



Znergy Cable
Multi Core | 0.6/1kV | XLPE/PVC
AS/NZS5000.1 | 90°C



CXL | SERIES
ZNERGY CABLE Single Core - SDI | 0.6/1 kV | XLPE/PVC | 90°C | AS/NZS5000.1



CXL | SERIES
Znergy Cable Multi Core | 0.6/1kV | XLPE/PVC | AS/NZS5000.1 | 90°C



Application

This cable for energy distribution is suitable for all types of low voltage industrial type connections, in urban grids, building installations, etc. Its high flexibility makes the installation process substantially easier and as a result is particularly suitable for use in difficult layouts. It can be buried or installed in a tube as well as outdoors without requiring additional protection.

Construction

- Class 2 stranded plain or Class 5 Flexible annealed copper wire conductor to IEC60228 | AS/NZS1125
- X-90 Insulated and PVC UV outer sheath - A medium splash oil resistant, ozone and UV resistant sheath.
- AS/NZS5000.1 PVC UV sheathed.

Feature & Benefits

- Meter marked medium splash oil resistant and medium impact low voltage industrial all rounder ..
- Can be installed in open air, outdoor, in damp areas, in conduits and buried direct.
- Robust and Abrasion impact good. Fire Retardant.

Standards

- National Norm: AS/NZS5000.1 | AS/NZS1125 | AS/NZS3008 |
- International Norm: IEC60228 | IEC60332.1
- Temperature Range: 0°C to +90°
- Voltage Rating: 0.6/1kV

Cross Section mm²	Strands mm	approx diameter of conductor Phase mm	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx Weight Kg/Km	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Spaced3 PHASE	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Spaced form Surface 3 PHASE	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Touching 3 PHASE
2.5	7X0.67	1.98	0.7	1.4	6.4	60	35	30	28
4	7X0.85	2.49	0.7	1.4	6.9	77	46	40	37
6	7X1.05	3.24	0.7	1.4	7.5	100	59	50	47
10	7X1.35	4.05	0.7	1.4	8.4	145	81	69	65
16	7X1.70	5.1	0.7	1.4	9.4	206	108	92	86
25	7X2.13	6	0.9	1.4	11	302	146	125	117
35	7X2.52	7	0.9	1.4	12.2	398	180	155	144
50	19X1.83	8.1	1.0	1.4	13.9	521	221	188	176
70	19X2.17	9.8	1.1	1.4	16.1	728	282	240	224
95	19X2.52	11.4	1.1	1.5	17.9	985	350	298	278
120	37X2.03	12.9	1.2	1.5	19.7	1225	410	349	325
150	37X2.27	14.4	1.4	1.6	21.8	1510	472	403	375
185	37X2.52	16	1.6	1.6	23.8	1869	560	468	435
240	37X2.87	18.4	1.7	1.7	26.8	2430	660	560	521
300	61X2.50	20.6	1.8	1.8	29.6	3025	766	648	602
400	61X2.89	23.4	2.0	1.9	33.5	3846	899	756	702
500	61X3.23	26.2	2.2	2.0	37.3	4900	1051	874	812
630	91X2.97	29.8	2.4	2.2	42.9	6309	1230	1010	938

These ratings are based on 40°(ambient air temperature and 25°) ambient soil temperature.



Part Number	Cross Section mm²	Earth	Strands mm	Approx diameter of conductor		Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx. Weight Kg/Km	Current Rating (Amps)TABLE 7 AS/NZS3808.1.1:2009 Unenclosed Spaced 3 PHASE	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Spaced form Surface 3 PHASE	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Touching phase earth 3 PHASE
				Phase mm	Earth mm							
CXL-MC3/3C1.5	1.5	1.5	7X0.52	1.53	1.53	0.7	1.8	10.3	149	25	21	20
CXL-MC3/3C2.5	2.5	2.5	7X0.67	1.98	1.98	0.7	1.8	11.2	189	35	30	28
CXL-MC3/3C4	4	2.5	7X0.85	2.49	1.98	0.7	1.8	12.3	228	46	40	37
CXL-MC3/3C6	6	2.5	7X1.05	3.24	1.98	0.7	1.8	13.5	281	59	50	47
CXL-MC3/3C10	10	4	7X1.35	4.05	2.49	0.7	1.8	15.4	394	81	69	65
CXL-MC3/3C16	16	6	7X1.70	5.1	3.24	0.7	1.8	17.4	551	108	92	86
CXL-MC3/3C25	25	6	7X2.13	6	3.24	0.9	1.8	20.7	770	146	125	117
CXL-MC3/3C35	35	10	7X2.52	7	4.05	0.9	1.8	23.2	1018	180	155	144
CXL-MC3/3C50	50	16	19X1.83	8.1	5.1	1.0	1.8	26.7	1388	221	188	176
CXL-MC3/3C70	70	25	19X2.17	9.8	6	1.1	1.8	31.2	1938	282	240	224
CXL-MC3/3C95	95	25	19X2.52	11.4	6	1.1	1.9	34.7	2512	350	298	278
CXL-MC3/3C120	120	35	37X2.03	12.9	7	1.2	2.0	38.6	3152	410	349	325
CXL-MC3/3C150	150	50	37X2.27	14.4	8.1	1.4	2.2	43.3	3898	472	403	375
CXL-MC3/3C185	185	70	37X2.52	16	9.8	1.6	2.3	47.6	4896	560	468	435
CXL-MC3/3C240	240	95	37X2.87	18.4	11.4	1.7	2.5	53.7	6387	660	560	521
CXL-MC3/3C300	300	120	61X2.50	20.6	12.9	1.8	2.6	59.5	7912	766	648	602
CXL-MC3/4C1.5	1.5	1.5	7X0.52	1.53	1.53	0.7	1.8	10.5	178	25	21	20
CXL-MC3/4C2.5	2.5	2.5	7X0.67	1.98	1.98	0.7	1.8	12.0	227	35	30	28
CXL-MC3/4C4	4	2.5	7X0.85	2.49	1.98	0.7	1.8	13.2	282	46	40	37
CXL-MC3/4C6	6	2.5	7X1.05	3.24	1.98	0.7	1.8	14.6	356	59	50	47
CXL-MC3/4C10	10	4	7X1.35	4.05	2.49	0.7	1.8	16.7	511	81	69	65
CXL-MC3/4C16	16	6	7X1.70	5.1	3.24	0.7	1.8	19.0	724	108	92	86
CXL-MC3/4C25	25	6	7X2.13	6	3.24	0.9	1.8	22.6	1027	146	125	117
CXL-MC3/4C35	35	10	7X2.52	7	4.05	0.9	1.8	25.4	1368	180	155	144
CXL-MC3/4C50	50	16	19X1.83	8.1	5.1	1.0	1.8	30.0	1860	221	188	176
CXL-MC3/4C70	70	25	19X2.17	9.8	6	1.1	1.8	35.4	2626	282	240	224
CXL-MC3/4C95	95	25	19X2.52	11.4	6	1.1	1.9	39.4	422	350	298	278
CXL-MC3/4C120	120	35	37X2.03	12.9	7	1.2	2.0	44.0	4292	410	349	325
CXL-MC3/4C150	150	50	37X2.27	14.4	8.1	1.4	2.2		5334	472	403	375
CXL-MC3/4C185	185	70	37X 2.52	16	9.8	1.6	2.3	23.8	6704	560	468	435
CXL-MC3/4C240	240	95	37X 2.87	18.4	11.4	1.7	2.5	26.8	8742	660	560	521
CXL-MC3/4C300	300	120	61X2.50	20.6	12.9	20.6	2.6	29.6	10875	766	648	602
CXL-MC3/5C1.5	1.5	1.5	7X0.52	1.53	1.53	1.53	1.8	37.3	208	25	21	20
CXL-MC3/5C2.5	2.5	2.5	7X0.67	1.98	1.98	1.98	1.8	42.9	269	35	30	28
CXL-MC3/5C4	4	2.5	7X0.85	2.49	1.98	2.49	1.8	6.9	340	46	40	37
CXL-MC3/5C6	6	2.5	7X1.05	3.24	1.98	3.24	1.8	7.5	435	59	50	47
CXL-MC3/5C10	10	4	7X1.35	4.05	2.49	4.05	1.8	8.4	633	81	69	65
CXL-MC3/5C16	16	6	7X1.70	5.1	3.24	5.1	1.8	9.4	907	108	92	86
CXL-MC3/5C25	25	6	7X2.13	6	3.24	6	1.8	11	1303	146	125	117
CXL-MC3/5C35	35	10	7X2.52	7	4.05	7	1.8	12.2	1738	180	155	144
CXL-MC3/5C50	50	16	19X 1.83	8.1	5.1	8.1	1.8	13.9	2377	221	188	176
CXL-MC3/5C70	70	25	19X2.17	9.8	6	9.8	1.8	16.1	3357	282	240	224
CXL-MC3/5C95	95	25	19X 2.52	11.4	6	11.4	1.9	17.9	4406	350	298	278
CXL-MC3/5C120	120	35	37X2.03	12.9	7	12.9	2.0	19.7	5543	410	349	325
CXL-MC3/5C150	150	50	37X 2.27	14.4	8.1	14.4	2.2	21.8	6850	472	403	375
CXL-MC3/5C185	185	70	37X 2.52	16	9.8	16	2.3	23.8	189	8623	468	435
CXL-MC3/5C240	240	95	37X2.87	18.4	11.4	18.4	2.5	26.8	246	11230	560	521
CXL-MC3/5C300	300	120	61X 2.50	20.6	12.9	1.8	2.6	29.6	306	13977	648	602

These ratings are based on 40°(ambient air temperature and 25°) ambient soil temperature.





EPR | SERIES
Znergy Cable Single Core - SDI Rubber Flexible | 0.6/1 kV | EPR /CPE | UV



EPR | SERIES
Znergy Cable Multi Core Rubber Flexible | 0.6/1kV | EPR/CPE | UV



Application

Heavy duty rubber flexible that is suitable for medium mechanical stress in dry, damp and wet areas and as well as open air installation. Generally used in industry work for generators, switchboards, agricultural equipment, boilers, lighting industry, electrical tools, transportable motors, onsite machines. For fixed installation on plaster in buildings and as is suitable for direct laying on mechanical parts of machinery like cranes and lifts.

Construction

- Class 2 stranded plain or Class 5 Flexible annealed copper wire conductor to IEC60228 | AS/NZS1125
- X-90 Insulated and PVC UV outer sheath - A medium splash oil resistant, ozone and UV resistant sheath.
- AS/NZS5000.1 PVC UV sheathed.

Feature & Benefits

- Meter marked medium splash oil resistant and medium impact low voltage industrial all rounder.
- Can be installed in open air, outdoor, in damp areas, in conduits and buried direct.
- Robust and Abrasion impact good. Fire Retardant.

Standards

- National Norm: AS/NZS5000.1 | AS/NZS1125 | AS/NZS3008 |
- International Norm: IEC60228 | IEC60332.1
- Temperature Range: 0°C to +90°
- Voltage Rating: 0.6/1kV

Cross Section mm²	Strands mm	Approx Overall Diameter mm	Bending Radius mm	Current Rating (Amps)TABLE 4 AS/NZS3808 Unenclosed Spaced	Current Rating (Amps)TABLE 7 AS/NZS3808 Unenclosed Spaced 3 PHASE	Current Rating (Amps)TABLE 7 AS/NZS3808 Unenclosed Spaced forn Surface 3 PHASE	Current Rating (Amps)TABLE 7 AS/NZS3808 Unenclosed Touching 3 PHASE
6	84/0.30	8.9	53.4	61	59	50	47
10	80/0.40	10.9	65.4	84	81	69	65
16	128/0.40	12.0	72.0	110	110	92	86
25	200/0.40	14.2	85.2	150	145	125	115
35	280/0.40	15.8	94.8	185	180	155	145
50	400/0.40	18.4	110.4	230	220	190	175
70	356/0.50	20.8	124.8	290	280	240	225
95	485/0.50	23.6	141.6	360	350	300	280
120	614/0.50	25.8	154.8	420	410	350	325
150	765/0.50	28.3	169.8	485	470	405	375
185	944/0.50	31.0	186.0	570	550	470	435
240	1225/0.50	34.4	206.4	680	660	560	520
300	1530/0.50	38.6	231.6	790	770	650	600
400	2035/0.50	42.8	256.8	920	900	760	700

These ratings are based on 40°(ambient air temperature and 25°) ambient soil temperature.



Application

Heavy duty rubber flexible that is suitable for medium mechanical stress in dry, damp and wet areas, and as well as open air installation. Generally used in industry work for generators, switchboards, agricultural equipment, boilers, lighting industry, electrical tools, transportable motors, onsite machines. For fixed installation on plaster in buildings and as is suitable for direct laying on mechanical parts of machinery like cranes and lifts.

Construction

Multi-stranded Class 5 fine plain annealed copper wire conductor to IEC60228 | AS/NZS1125 CPE Chlorinated Polyethylene outer sheath - An oil, ozone and heat resistant sheathing compound that is UV Stabilised !Halogen Free ! Fire Retardant ! RoHS Compliant EPR Ethylene Propylene Rubber Insulation - A water and ozone resistant, flexile, cross linked high grade insulation

Feature & Benefits

Flame Retardant properties of material to prevent the rate of combustion to spread and the formation of toxic gases. Halogen Free compound thus no risk of producing very strong toxins, oxidizers and chemically reactive material in fire. Submersible to 600 meters depth ! Flame Retardant ! Halogen Free ! Resistant to -UV! Abrasion ! Acids

Standards

IEC60228 | AS/NZS1125 | AS/NZS3008 | AS/NZS5000.2 | AS/NZS1660.5.3 |1EC60245-4| IEC60332-1 |DIN VOE 0282 | DIN VOE 0165 | DIN VOE 0472 | DIN VDE0295 | Bs6500 AS/NZS1660.5.1 & IEC60332-1 Test Method B (3.5 liters of combustible material exposed to flame for 40 minutes) Temperature Range: -60°C to +90°

Cross Section mm²	Strands mm	Approx Overall Diameter mm	Current Rating (Amps) TABLE 13 AS/NZS3808 Unenclosed Spaced	Current Rating (Amps) TABLE 13 AS/NZS3808 Unenclosed Touching 3 PHASE
3corex1.0	32/0.020	9.35	16	14
3corex1.5	30/0.25	10.39	20	19
3corex2.5	50/0.25	12.09	28	26
3corex4	56/0.30	14.11	38	35
3corex6	84/0.30	16.55	48	45
4corex1.5	30/0.25	11.42	20	19
4corex2.5	50/0.25	13.27	28	26
4corex4	56/0.30	15.50	38	35
4corex6	84/0.30	18.38	48	45
4corex10	84/0.40	24.44	66	62
4corex16	126/0.40	27.01	88	83
4corex25	200/0.40	23.34	120	110
4corex35	280/0.40	36.84	145	135
5corex1.5	30/0.25	11.62	20	19
5corex2.5	50/0.25	13.47	28	26
5corex4	56/0.30	15.90	38	35
5corex6	84/0.30	18.78	48	45
5corex10	84/0.40	24.84	66	62
5corex16	126/0.40	27.61	88	83
5corex25	200/0.40	33.94	120	110
5corex35	280/0.40	37.64	145	135
7corex1.5	30/0.25	13.50	20	19
7corex2.5	50/0.25	16.10	28	26
12corex1.5	30/0.25	18.59	20	19
12corex2.5	50/0.25	21.29	28	26
19corex1.5	30/0.25	21.50	20	19

These ratings are based on 40°(ambient air temperature and 25°) ambient soil temperature.



Znergy Cable
FLEXIBLE | 0.6kV | LSZH | 110°C
X-HF 110/HFS-110 TP



CXT | SERIES

Znergy Cable FLEXIBLE | 0.6kV | LSZH | 110°C | X-HF 110/HFS-110 TP

RoHS
compliant



Application

This cable for energy distribution is suitable for all types of low voltage industrial-type connections, in urban grids, building installations, etc. Its high flexibility makes the installation process substantially easier and as a result is particularly suitable for use in difficult layouts. It can be buried or installed in a tube as well as outdoors without requiring additional protection. As a result of the cross-linking of the polymer molecules, the Znergy® cable and single cores treated in this manner acquire properties usually associated with difficult to process high performance polymeric materials. For example, electron beam irradiation makes the plastic dimensionally stable under the influence of heat, resistant to chemicals, solvents and high temperatures, harder and more abrasion resistant.

Construction

Class 5 Flexible annealed copper wire conductor to IEC60228 | AS/NZS1125
Low Smoke Zero Halogen | 110°C
X-HF-110 Inner sheath
HFS-110-TP outer sheath

Feature & Benefits

Cross-linking provides significant commercial benefits to wire and cable insulation. Ionizing energy, as provided by an accelerated electron beam (EB), is an efficient means of cross-linking the polymers that are used for wire and cable jacketing. Electron Beam cross linking reduces the risk of flame propagation should a fire occur in electrical equipment. Tensile strength, especially at elevated temperatures, is increased, as are abrasion resistance, stress crack resistance and solvent resistance. A medium splash oil resistant, ozone and UV resistant sheath.
Meter marked medium splash oil resistant and medium impact low voltage industrial all rounder.
Robust and Abrasion Impact good. Fire Retardant

Standards

National Norm: AS/NZS5000.1 | AS/NZS1125 | AS/NZS3008 | AS/NZS1660.5.2 | AS/NZS1660.5.3 |
International Norm: IEC60228 | IEC60332.1 | IEC60754-1&2 | IEC61034-1&2 | BS5467
Temperature Range: 0°C to +110°
Voltage Rating: 0.6/1k V

The electron beam irradiation process is carried out in plants that accelerate the electrons almost to the speed of light using a voltage of up to 10 million volts in a high vacuum.

As a result of the cross-linking of the polymer molecules, the ZNERGY® cable and single cores treated in this manner acquire properties usually associated with difficult to process high performance polymeric materials. For example, electron beam irradiation makes the plastic dimensionally stable under the influence of heat, resistant to chemicals, solvents and high temperatures, harder and more abrasion resistant.

Cross-linking provides significant commercial benefits to wire and cable insulation. Ionizing energy, as provided by an accelerated electron beam (EB), is an efficient means of cross linking the polymers that are used for wire and cable jacketing. In this process, chemical bonds are formed between polymer molecules to produce a three-dimensional insoluble network. This can be done without heat. In most instances, ionization causes the abstraction of hydrogen from a polymer to produce active sites along a polymer chain that can bond to similar sites on adjacent chains without the use of agents EB cross linked wire and cable insulation exhibits several desirable properties. It will not melt and flow at elevated ambient temperatures, nor melt and ? ow should the conductor become heated due to a shorted electrical circuit. EB cross linking protects wire and cable insulation during a soldering operation, when a short circuit condition occurs or at high-temperatures. EB cross linking reduces the risk of flame propagation should a fire occur in electrical equipment. Tensile strength, especially at elevated temperatures, is increased, as are abrasion resistance, stress crack resistance and solvent resistance.

No thermally unstable reagents need to be added to the compound. This improves long term aging.

The a-beam process typically involves product temperature of 40-60° C whereas chemically cross-linked cables can be exposed to 160-200° C. This ensures that the aging performance is not degraded during processing.

The by-products of both the process and the reactions that take place are significantly less hazardous with a-Beam cross-linking.

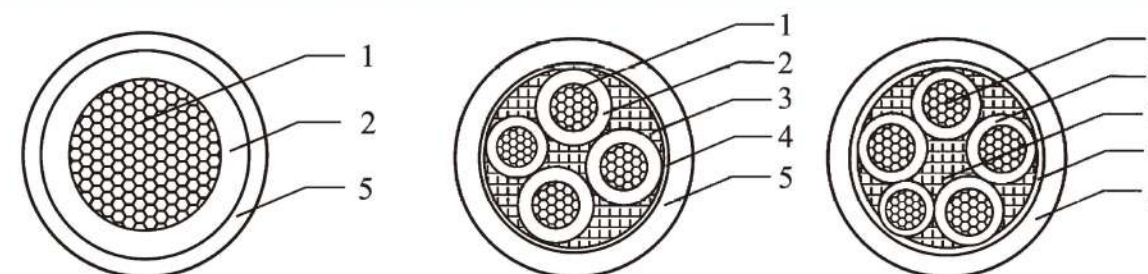
The e-beam process is particularly suited for cross-linking flame retardant compounds due to the low thermal stress.

With appropriately formulated compounds e-Beam cross linking can convey temperature ratings of 90°C and above, which can result in a significant increase in service life.

Cross Section mm²	Strands mm	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx Weight Kg/Km	Current Rating (Amps) TABLE 9 AS/NZS3808 Unenclosed Spaced 3 PHASE	Current Rating (Amps) TABLE 9 AS/NZS3808 Unenclosed Spaced form Surface 3 PHASE	Current Rating (Amps) TABLE 9 AS/NZS3808 Unenclosed Touching 3 PHASE
2.5	56X0.25	0.7	1.4	6.4	61	42	36	34
4	56X0.3	0.7	1.4	6.9	78	55	48	45
6	84X0.3	0.7	1.4	7.5	100	70	61	57
10	80X0.4	0.7	1.4	8.4	144	99	85	80
16	128x0.4	0.7	1.4	9.4	203	130	112	105
25	200X0.4	0.9	1.4	11.0	293	172	172	139
35	280X0.4	0.9	1.4	12.2	390	214	184	172
50	400X0.4	1.0	1.4	13.9	537	270	233	217
70	356X0.5	1.1	1.4	16.1	738	340	292	273
95	485X0.5	1.1	1.5	17.9	952	410	353	329
120	614X0.5	1.2	1.5	19.7	1194	487	418	390
150	765X0.5	1.4	1.6	21.8	1476	562	482	450
185	944X0.5	1.6	1.7	23.8	1781	644	553	516
240	1225X0.5	1.7	1.8	26.8	2328	775	665	620
300	1530X0.5	1.8	1.9	29.6	2882	895	766	714
400	2035X0.5	2.0	2.0	33.5	3768	1079	918	855
500	1768X0.6	2.2	2.1	37.3	4740	1260	1064	990
630	2228X0.6	2.4	2.2	42.9	6289	1493	1240	1154



Cross Section mm²	Earth	Strands mm	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx. Weight Kg/100m	Current Rating (Amps)TABLE 12/15 AS/NZS3808 Fixed Unenclosed Spaced 3 PHASE	Current Rating (Amps)TABLE 12/15 AS/NZS3808 Unenclosed Touching 2-3-4 Core	Current Rating (Amps)TABLE 12-15 AS/NZS3808 Unenclosed Exposed to Sun 2-3-4 Core
2 CORE + EARTH									
1.5	1.5	30X0.25	0.7	1.8	10.3	133	30	28	26
2.5	2.5	50X0.25	0.7	1.8	11.2	171	40	38	34
4	2.5	56X0.3	0.7	1.8	12.3	213	53	50	45
6	2.5	84X0.3	0.7	1.8	13.5	267	67	63	57
10	4	80X0.4	0.7	1.8	15.4	383	94	88	80
16	6	128X0.4	0.7	1.8	17.4	537	124	116	105
25	6	200X0.4	0.9	1.8	20.7	758	163	154	138
35	10	280X0.4	0.9	1.8	23.2	1018	202	190	170
50	16	400X0.4	1.0	1.8	26.7	1439	254	238	213
70	25	356X0.5	1.1	1.8	31.2	1990	318	299	266
95	25	485X0.5	1.1	1.9	34.7	2492	381	357	317
120	35	614X0.5	1.2	2.0	38.6	3162	450	421	372
150	50	765X0.5	1.4	2.2	43.3	3998	515	482	425
185	70	944X0.5	1.6	2.3	47.6	4908	586	547	481
240	95	1225X0.5	1.7	2.5	53.7	6396	698	652	570
300	120	1530X0.5	1.8	2.6	59.5	7874	799	745	650
3 CORE + EARTH									
1.5	1.5	30X0.25	0.7	1.8	10.5	155	26	24	22
2.5	2.5	50X0.25	0.7	1.8	12.0	219	34	32	29
4	2.5	56X0.3	0.7	1.8	13.2	277	45	42	39
6	2.5	84X0.3	0.7	1.8	14.6	351	57	54	49
10	4	80X0.4	0.7	1.8	16.7	511	80	75	68
16	6	128X0.4	0.7	1.8	19.0	722	106	99	89
25	6	200X0.4	0.9	1.8	22.6	1030	140	131	118
35	10	280X0.4	0.9	1.8	25.4	1386	173	162	145
50	16	400x0.4	1.0	1.8	30.0	1987	218	204	182
70	25	356X0.5	1.1	1.8	35.4	2772	273	255	227
95	25	485X0.5	1.1	1.9	39.4	3490	327	306	271
120	35	614X0.5	1.2	2.0	44.0	4442	387	360	318
150	50	765X0.5	1.4	2.2	5568	444	444	413	364
185	70	944X0.5	1.6	2.3	23.8	6843	505	470	412
240	95	1225X0.5	1.7	2.5	26.8	8879	602	559	488
300	120	1530X0.5	1.8	2.6	29.6	11003	688	638	555
4 CORE + EARTH									
1.5	1.5	30X0.25	0.7	1.8	37.3	204	26	24	22
2.5	2.5	50X0.25	0.7	1.8	42.9	266	34	32	29
4	2.5	56X0.3	0.7	1.8	6.9	337	45	42	39
6	2.5	84X0.3	0.7	1.8	7.5	427	57	54	49
10	4	80X0.4	0.7	1.8	8.4	627	80	75	68
16	6	128X0.4	0.7	1.8	9.4	895	106	99	89
25	6	200X0.4	0.9	1.8	11	1271	140	131	118
35	10	280X0.4	0.9	1.8	12.2	1721	173	162	145
50	16	400X0.4	1.0	1.8	13.9	2457	218	204	182
70	25	356X0.5	1.1	1.8	16.1	3423	273	255	227
95	25	485X0.5	1.1	1.9	17.9	4335	327	306	271
120	35	614X0.5	1.2	2.0	19.7	5502	387	360	318
150	50	765X 0.5	1.4	2.2	21.8	6922	444	413	364
185	70	944X 0.5	1.6	2.3	23.8	8486	505	470	412
240	95	1225X 0.5	1.7	2.5	26.8	11098	602	559	488



1 copper conductor 2 X-HF-110 insulation 3 Filler 4 binding tape 5 HFS-110-TP

Zenergy Cable
FLEXIBLE | 0.6kV | LSZH | 110°C
R-HF 110/HFS-110 TP



CZH | SERIES

Zenergy Cable FLEXIBLE | 0.6/1kV | LSZH | 110°C | R-HF 110/HFS-110 TP

RoHS
compliant



Application

This cable for energy distribution is suitable for all types of low voltage industrial-type connections, in urban grids, building installations, etc. Its high flexibility makes the installation process substantially easier and as a result is particularly suitable for use in difficult layouts. It can be buried or installed in a tube as well as outdoors without requiring additional protection.
Low Smoke Zero Halogen is environmentally responsible product that is approved for Green Star Projects*

Construction

Class 5 Flexible annealed copper wire conductor to IEC60228 | AS/NZS1125
Low Smoke Zero Halogen | 110°C
R-HF-11 0 Inner sheath
HFS-110-TP outer sheath

Feature & Benefits

As populations grow and natural resources are depleted ever more rapidly, consumers have become increasingly aware of the need to conserve energy, manage the use of raw materials, reduce waste and safeguard against pollutants. In response, many developers and owners now demand buildings with materials and technologies that will help save energy, preserve the integrity of the surrounding land, and assure a clean, healthy indoor environment. Green Star aims to assist the building industry in its transition to sustainable development. The Green Star environmental rating system for buildings was created for the property industry in order to:
establish a common language set a standard of measurement for green buildings;
promote integrated, whole-building design recognise environmental leadership; identify building life-cycle impacts and raise awareness of green building benefits.
Robust and Abrasion impact good. Flame Retardant

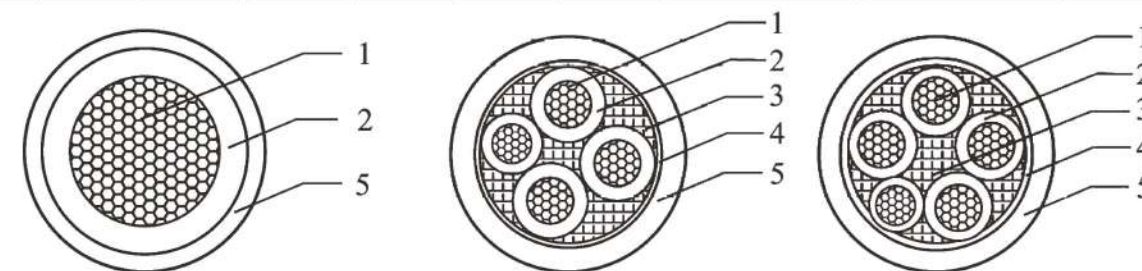
Standards

National Norm: AS/NZS5000.1 | AS/NZS1125 | AS/NZS3008 | AS/NZS1660.5.2 | AS/NZS1660.5.3 |
International Norm: IEC60228 | IEC60332.1 | IEC60754-1&2 | IEC61034-1&2 | BS5467
Temperature Range: 0°C to +110°
Voltage Rating: 0.6/1 kV

Cross Section mm²	Strands mm	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx Weight Kg/Km	Current Rating (Amps) TABLE 9 AS/NZS3808 Unenclose Spaced 3 PHASE	Current Rating (Amps) TABLE 9 AS/NZS3808 Unenclose Spaced form Surface 3 PHASE	Current Rating (Amps) TABLE 9 AS/NZS3808 Unenclose Touching 3 PHASE
2.5	50x0.25	0.7	1.4	6.4	61	42	36	34
4	56x0.3	0.7	1.4	6.9	78	55	48	45
6	84x0.3	0.7	1.4	7.5	100	70	61	57
10	80x0.4	0.7	1.4	8.4	144	99	85	80
16	128x0.4	0.7	1.4	9.4	203	130	112	105
25	200x0.4	0.9	1.4	11.0	293	172	172	139
35	280x0.4	0.9	1.4	12.2	390	214	184	172
50	400x0.4	1.0	1.4	13.9	537	270	233	217
70	356x0.5	1.1	1.4	16.1	738	340	292	273
95	485x0.5	1.1	1.5	17.9	952	410	353	329
120	614x0.5	1.2	1.5	19.7	1194	487	418	390
150	765x0.5	1.4	1.6	21.8	1476	562	482	450
185	944x0.5	1.6	1.7	23.8	1781	644	553	516
240	1225x0.5	1.7	1.8	26.8	2328	775	665	620
300	1530x0.5	1.8	1.9	29.6	2882	895	766	714
400	2035x0.5	2.0	20	33.5	3768	1079	918	855
500	1766x0.6	2.2	21	37.3	4740	1260	1064	990
630	2228x0.6	2.4	22	42.9	6289	1493	1240	1154



Cross Section mm²	Earth	Strands mm	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx. Weight Kg/100m	Current Rating (Amps)TABLE 12/15 AS/NZS3808 Fixed Unenclosed Spaced 3 PHASE	Current Rating (Amps)TABLE 12/15 AS/NZS3808 Unenclosed Touching 2-3-4 Core	Current Rating (Amps)TABLE 12-15 AS/NZS3808 Unenclosed Exposed to Sun 2-3-4 Core
2 CORE + EARTH									
1.5	1.5	30x0.25	0.7	1.8	10.3	133	30	28	26
2.5	2.5	50x0.25	0.7	1.8	11.2	171	40	38	34
4	2.5	56x0.3	0.7	1.8	12.3	213	53	50	45
6	2.5	84x0.3	0.7	1.8	13.5	267	67	63	57
10	4	80x0.4	0.7	1.8	15.4	383	94	88	80
16	6	128x0.4	0.7	1.8	17.4	753	124	116	105
25	6	200x0.4	0.9	1.8	20.7	758	163	154	138
35	10	280x0.4	0.9	1.8	23.2	1018	202	190	170
50	16	400x0.4	1.0	1.8	26.7	1439	254	238	213
70	25	356x0.5	1.1	1.8	31.2	1990	318	299	266
95	25	485x0.5	1.1	1.9	34.7	2492	381	357	317
120	35	614x0.5	1.2	20	38.6	3162	450	421	372
150	50	765x0.5	1.4	22	43.3	3998	515	482	425
185	70	944x0.5	1.6	23	47.6	4098	586	517	481
240	95	1225x0.5	1.7	25	53.7	6396	698	652	570
300	120	1530x0.5	1.8	26	59.5	7874	799	745	650
3 CORE + EARTH									
1.5	1.5	30x0.25	0.7	1.8	10.5	155	26	24	22
25	25	50x0.25	0.7	1.8	120	219	34	32	29
4	25	56x0.3	0.7	1.8	13.2	277	45	42	39
6	25	84x0.3	0.7	1.8	14.6	351	57	54	49
10	4	80x0.4	0.7	1.8	16.7	511	80	75	68
16	6	128x0.4	0.7	1.8	19.0	722	106	99	89
25	6	200x0.4	0.9	1.8	22.6	1030	140	131	118
35	10	280x0.4	0.9	1.8	25.4	1386	173	162	145
50	16	400x0.4	1.0	1.8	30.0	1987	218	204	182
70	25	356x0.5	1.1	1.8	35.4	2772	273	255	227
95	25	485x0.5	1.1	1.9	39.4	3490	327	306	271
120	35	614x0.5	1.2	20	44.0	4442	387	360	318
150	50	765x0.5	1.4	22	5568	444	444	413	364
185	70	944x0.5	1.6	23	23.8	6842	505	470	412
240	95	1225x0.5	1.7	25	26.8	8879	602	559	488
300	120	1530x0.5	1.8	26	29.6	11003	688	638	555
4 CORE + EARTH									
1.5	1.5	30x0.25	0.7	1.8	37.3	204	26	24	22
25	25	50x0.25	0.7	1.8	42.9	266	34	32	29
4	25	50x0.3	0.7	1.8	6.9	337	45	42	39
6	25	84x0.3	0.7	1.8	7.5	427	57	54	49
10	4	84x0.4	0.7	1.8	8.4	627	80	75	68
16	6	128x0.4	0.7	1.8	9.4	895	106	99	89
25	6	200x0.4	0.9	1.8	11	1271	140	131	118
35	10	280x0.4	0.9	1.8	12.2	1721	173	164	175
50	16	400x0.4	1.0	1.8	13.9	2457	218	204	182
70	25	356x0.5	1.1	1.8	16.1	3423	273	255	227
95	25	485x0.5	1.1	1.9	17.9	4335	327	306	271
120	35	614x0.5	1.2	20	19.7	5502	387	360	318
150	50	765x0.5	1.4	22	21.8	6922	444	413	364
185	70	944x0.5	1.6	23	23.8	8486	505	470	412
240	95	1225x0.5	1.7	25	26.8	11098	602	559	488
300	120	1530x0.5	1.8	26	29.6	13763	688	638	555



1 copper conductor 2 X-HF-1 1 0 insulation 3 Filler 4 binding tape 5 HFS-110-TP

Znergy Cable
0.6kV | 110°C Low Smoke Zero Halogen
Switchboard/Panel Wire LSZH



TUS | SERIES

Znergy Cable

0.6kV | 110°C Low Smoke Zero Halogen
Switchboard/Panel Wire LSZH

Application

This cable is used in industrial distribution switchboards, internal wiring of electrical appliances, instrumentation and control systems. Manufactured to plain multi-stranded copper or tinned copper for oxygen free applications like marine usage.

Construction

Class 5 stranded plain annealed copper wire conductor to IEC60228 | AS/NZS1125
Insulation is Low Smoke Zero Halogen cross-linked thermosetting compound to IEC60332, IEC60754, IEC61034

Feature & Benefits

Meter marked | Medium splash Oil Resistant | Fire Retardant | UV & Ozone resistant.
Medium Impact | Annealed Flexible | Resistant to petrol, sea water and acid.
110° C cable allows for downsizing in cable size saving space, cost on size of cable and installation time costs.

Standards

IEC60228 | AS/NZS1125 | AS/NZS3008 | AS/NZS5000.1 | IEC60332 | IEC60754 | IEC61034 |
Temperature Range: -40°C to +110°
Voltage Rating: 0.6/1k V

Cross Section mm ²	Approx Overall Diameter mm	Minimum Bending Radius mm	Apprx Weight Kg/1Km	Current Rating (Amps) TABLE 8 Fixed Unenclosed Touching 100°C perating Temperature	Short Circuit Current (Amps for 1 second) AS/NZS3008 Table 51/52	Voltage Drop at 50 Hz (mV/A/m)
0.5	2.3-2.5	14	9	13	66	-
0.75	2.6-2.7	15	12	16	99	-
1.0	2.6-2.8	16	14	20	132	49.7
1.5	2.9-3.0	17	19	25	198	31.9
2.5	3.4-3.6	20	29	36	330	17.4
4	3.8-4.1	23	43	47	528	10.8
6	4.4-4.7	27	62	59	792	7.23
10	5.3-5.6	32	102	81	1320	4.30
16	6.4-6.8	38	155	105	2112	2.71
25	8.0-8.4	48	244	145	3300	1.72
35	9.4-9.9	56	337	175	4620	1.25
50	11.0-11.6	66	481	215	6600	0.929
70	12.8-13.5	77	656	270	9240	0.657
95	14.9-15.7	89	895	340	12540	0.491
120	16.8-17.7	101	1112	395	15840	0.403
150	18.8-19.8	113	1387	455	19800	0.344
185	20.4-21.5	122	1713	530	24420	0.296
240	23.4-24.6	140	2210	630	31680	0.252
300	26.1-27.5	157	2734	730	39600	0.227
400	29.5-31.1	177	3610	850	52800	0.208
500	33.0-34.7	198	4568	980	66000	1.195
630	36.8-38.7	221	5744	1130	83160	0.184

AS/NZS3008 Table 8 (Fixed -Unenclosed Touching) 110°C temperature, 40°C ambient temperature, 25°C soil temperature

Znergy Cable
VSD/EMC | 3 CORE + 3 SPLIT EARTH
0.6/1kV | AS/NZS5000.1 | 90°C



VFX | SERIES

Znergy Cable

VSD/EMC | 3 CORE + 3 SPLIT EARTH | 0.6/1kV | AS/NZS5000.1 | 90°C

Application

For applications that require Electromagnetic Compatibility (EMC), to minimise any interference or disturbance, propagation and reception of electromagnetic energy with reference to unwanted effects.
Suitable for Variable Speed Drive equipment or other application requiring screened cable.

Construction

- Plain annealed copper wire conductor to IEC60228 | AS/NZS1125
- Flame Retardant PVC outer sheath -compound that is UV Stabilised | RoHS Compliant | Flame Retardant
- XLPE Insulation - high grade X-90 .
- MANUFACTURED & SUPPLIED IN CLASS 2 OR CLASS 5 FLEXIBLE ACCORDING TO CUSTOMER NEED
- OPTIONS: Can be constructed with LSZH, HDPE Outer, EPR Rubber, 110C Rubber

Standards

- IEC60228 | AS/NZS1125 | AS/NZS3008 | AS/NZS5000.1 | AS/NZS3808.1 |
- Temperature Range: so°C
- Voltage Rating: 0.6/1kV

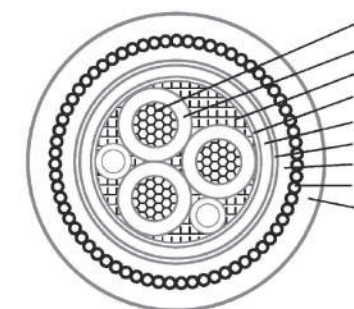
Cross Section mm ²	3 x Split Earth	Sds mm	Approx diameter of conductor		Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx Weight Kg/KM	Current Rating (Amps) TABLE 14 AS/NZS3808.1.1:2009 Unenclosed Spaced	Current Rating (Amps) TABLE 14 AS/NZS3808.1.1:2009 Unenclosed Touching	Current Rating (Amps) TABLE 14 AS/NZS3808.1.1:2009 Enclosed Wiring enclosure in air
			Phase mm	Earth mm							
2.5	0.75	7x0.67	2.01	0.97	0.7	1.8	16.3	375	28	26	24
4	1.5	7x0.85	2.55	1.38	0.7	1.8	17.0	452	38	35	30
6	1.5	7x1.05	3.12	1.38	0.7	1.8	17.7	527	48	45	38
10	1.5	7x1.35	4.05	1.38	0.7	1.8	19.4	687	66	62	53
16	2.5	7x1.70	5.1	2.01	0.7	1.8	21.4	934	88	83	68
25	4	7x2.13	6	2.55	0.7	1.8	24.1	1317	119	111	91
35	6	7x2.52	7	3.12	0.9	1.8	26.2	1689	147	137	114
50	10	19x1.83	8.1	4.05	1.0	1.8	30.1	2252	180	168	136
70	10	19x2.17	9.8	4.05	1.1	1.9	33.3	2879	229	213	173
95	16	19x2.52	11.4	5.1	1.1	2.0	37.0	3855	283	263	209
120	16	37x2.03	12.9	5.1	1.2	2.1	40.0	4669	330	306	246
150	25	37x2.27	14.4	6.0	1.4	2.3	45.0	5855	377	350	277
185	25	37x2.52	16	6.0	1.6	2.4	50.0	7070	436	404	322
240	35	37x2.87	18.4	7.0	1.7	2.6	56.4	9203	517	479	379

VSW | SERIES

Znergy Cable

VSD/EMC 13 CORE + 3 SPLIT EARTH | 0.6/1 kV | AS/NZS5000.1 | 90°C
XLPE Insulated | FR-PVC Bedded | Copper Tape Screened | STEEL WIRE ARMoured | PVC Sheath |

1	Conductor	Class2 plain annealed circular copper conductor
2	Insulation	XLPE
3	Filler	non-hygroscopic
4	Bindingtape	non-hygroscopic
5	Innersheath	PVC/5V-90
6	Screen	copper tape
7	Separation	PVC/5V-90
8	Armour	galvanizedsteel wire
9	Outersheath	PVC/5V-90



Zenergy Cable
TERMITE RESISTANT - NYLON EXTRUDED + SACRIFICIAL SHEATH
0.6/1kV | XLPE/PVC/NYLON/PVC | 90°C | AS/NZS5000.1



CXN | SERIES
Zenergy Cable

TERMITE RESISTANT - NYLON EXTRUDED + SACRIFICIAL SHEATH
0.6kV | XLPE/PVC/NYLON/PVC | 90°C | AS/NZS5000.1



Application

This cable for energy distribution is suitable for all types of low voltage industrial-type connections, in urban grids, building installations, etc. It is designed as a hard wearing power cable for the supply of mains electricity. It can be buried or installed in a tube as well as outdoors without requiring additional protection. Its used for underground systems, power networks and cable ducting

Construction

- Class 2 stranded plain to IEC60228 | AS/NZS1125
- X-90 Insulated and PVC UV outer sheath - A medium splash oil resistant, ozone and UV resistant sheath.
- Non-hygroscopic Binder Tape and Filler

Feature & Benefits

- Meter marked medium splash oil resistant and medium impact low voltage industrial all rounder. .
- Can be Installed in open air, outdoor, in damp areas, in conduits and buried direct.
- Robust and Abrasion impact good. Fire Retardant.

Standards

- National Norm: AS/NZS5000.1 | AS/NZS1125 | AS/NZS3008 |
- International Norm: IEC60228 | IEC60332.1
- Temperature Range: 0°C to +90° | Voltage Rating: 0.6/1 kV |
- Min. bending radius during installing - 18D(D is the diameter of cable) | Min. bending radius installed - 12D (D is the diameter of cable)

Cross Section mm ²	Strands mm	approx diameter of conductor	Approx diameter over nylon	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx Weight Kg/Km	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Spaced 3 PHASE	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Spaced form Surface 3 PHASE	Current Rating (Amps)TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Touching 3 PHASE
10	7x1.35	4.05	9.3	0.7	1.4	11.7	216	81	69	65
16	7x1.70	5.10	10.3	0.7	1.4	12.7	283	108	92	86
25	7x2.13	6.00	11.6	0.9	1.4	14.0	389	146	125	117
35	7x2.52	7.00	12.6	0.9	1.4	15.0	491	180	155	144
50	19x1.83	8.10	13.9	1.0	1.4	16.3	624	221	188	176
70	19x2.17	9.80	15.8	1.1	1.4	18.2	843	282	240	224
95	19x2.52	11.40	17.4	1.1	1.5	19.8	1104	350	298	278
120	37x2.03	12.90	19.1	1.2	1.5	21.5	1355	410	349	325
150	37x2.27	14.40	21.0	1.4	1.6	23.4	1643	472	403	375
185	37x2.52	16.00	23.0	1.6	1.6	25.4	2015	560	468	435
240	37x2.87	18.40	25.6	1.7	1.7	28.0	2580	660	560	521
300	61x2.50	20.60	28.0	1.8	1.8	30.4	3175	766	648	602
400	61x2.89	23.40	31.2	2.0	1.9	33.6	3998	899	756	702
500	61x3.23	26.20	34.4	2.2	2.0	36.8	5051	1051	874	812
630	91x2.97	29.80	38.4	2.4	2.2	40.8	6442	1230	1010	938

These ratings are based on 40°(ambient air temperature and 25°) ambient soil temperature.



Industrial Use



Temperature Rating



Open Air



In Conduit



Buried



Outdoor Installation



Damp Environment



Medium Impact



Oil Resistant



Meter Marked

Cross	Approx. diameter of conductor		Nominal thickness insulation mm	Approx diameter over nylon mm	Nominal thickness of outer Sheath mm	Approx.diameter of cable mm	Approx mass of cable kg/km	Max resistance of conductor at 20°C Ω/km
	Phase mm	Earth mm						
2x1.5+E1.5	1.53	1.53	0.7	10.5	1.8	12.9	12.9	12.1
2x2.5+E2.5	1.98	1.98	0.7	11.6	1.8	14.0	14.0	7.41
2x4+E2.5	2.49	1.98	0.7	12.3	1.8	14.7	14.7	4.61
2x6+E2.5	3.24	1.98	0.7	13.5	1.8	15.9	15.9	3.08
2x10+E4	4.05	2.49	0.7	15.2	1.8	17.6	17.6	1.83
2x16+E6	5.10	3.24	0.7	17.2	1.8	19.6	19.6	1.15
2x25+E6	6.00	3.24	0.9	19.8	1.8	22.2	22.2	0.727
2x35+E10	7.00	4.05	0.9	21.8	1.8	24.2	24.2	0.524
2x50+E16	8.10	5.1	1.0	24.6	1.8	27.0	27.0	0.387
2x70+E25	9.80	6	1.1	28.4	1.8	30.8	30.8	0.268
2x95+E25	11.40	6	1.1	31.8	1.9	34.2	34.2	0.193
2x120+E35	12.90	7	1.2	35.2	2.0	37.6	37.6	0.153
2x150+E50	14.40	8.1	1.4	38.9	2.1	41.3	41.3	0.124
2x185+E70	16.00	9.8	1.6	42.8	2.2	45.2	45.2	0.0991
2x240+E95	18.40	1.4	1.7	48.0	2.4	50.4	50.4	0.0754
3x1.5+E1.5	1.53	1.53	0.7	11.3	1.8	13.7	13.7	12.1
3x2.5+E2.5	1.98	1.98	0.7	12.5	1.8	14.9	14.9	7.41
3x4+E2.5	2.49	1.98	0.7	13.4	1.8	15.8	15.8	4.61
3x6+E2.5	3.24	1.98	0.7	14.7	1.8	17.1	17.1	3.08
3x10+E4	4.05	2.49	0.7	16.7	1.8	19.1	19.1	1.83
3x16+E6	5.10	3.24	0.7	18.9	1.8	21.3	21.3	1.15
3x25+E6	6.00	3.24	0.9	21.4	1.8	23.8	23.8	0.727
3x35+E10	7.00	4.05	0.9	23.8	1.8	26.2	26.2	0.524
3x50+E16	8.10	5.1	1.0	26.9	1.8	29.3	29.3	0.387
3x70+E25	9.80	6	1.1	31.2	1.9	33.6	33.6	0.268
3x95+E25	11.40	7	1.1	34.3	2.0	36.7	36.7	0.193
3x120+E	12.90	8.1	1.2	38.0	2.1	40.4	40.4	0.153
3x150+E50	14.40	9.8	1.4	42.3	2.3	44.7	44.7	0.124
3x185+E70	16.00	1.4	1.6	47.0	2.4	49.4	49.4	0.0991
3x240+E95	18.40	1.53	1.7	53.0	2.6	55.6	55.6	0.0754
4x1.5+E1.5	1.53	1.98	0.7	12.2	1.8	14.6	14.6	12.1
4x2.5+E2.5	1.98	1.98	0.7	13.5	1.8	15.9	15.9	7.41
4x4+E2.5	2.49	1.98	0.7	14.6	1.8	17.0	17.0	4.61
4x6+E2.5	3.24	2.49	0.7	16.1	1.8	18.5	18.5	3.08
4x10+E4	4.05	3.24	0.7	18.4	1.8	20.8	20.8	1.83
4x16+E6	5.10	3.24	0.7	20.9	1.8	23.3	23.3	1.15
4x25+E6	6.00	4.05	0.9	23.8	1.8	26.2	26.2	0.727
4x35+E10	7.00	5.1	0.9	26.4	1.8	28.8	28.8	0.524
4x50+E16	8.10	6	1.0	30.0	1.9	32.4	32.4	0.387
4x70+E25	9.80	6	1.1	34.9	2.0	37.3	37.3	0.268
4x95+E25	11.40	7	1.1	38.4	2.1	40.8	40.8	0.193
4x120+E	12.90	8.1	1.2	42.6	2.3	45.0	45.0	0.153
4x150+E50	14.40	9.8	1.4	47.4	2.4	49.8	49.8	0.124
4x185+E70	16.00	11	1.6	53.0	2.6	55.6	55.6	0.0991
4x240+E95	18.40	.4	1.7	59.7	2.8	62.5	62.5	0.0754

These ratings are based on 40°(ambient air temperature and 25°) ambient soil temperature.



Industrial Use



Temperature Rating



Open Air



In Conduit



Buried



Outdoor Installation



Damp Environment



Medium Impact



Oil Resistant



Meter Marked



CXN SERIES

Zenergy Cable

MULTI CORE | 0.6/1kV | XLPE/NY/SWA/PVC | AS/NZ50001.1 | 90°C

RoHS
compliant



Application

This cable for energy distribution is suitable for all types of low voltage industrial-type connections. In urban grids, building installations, etc. It is designed as a hard wearing power cable for the supply of mains electricity. It can be buried or installed in a tube as well as outdoors without requiring additional protection. Its used for underground systems, power networks and cable ducting

Construction

- Class 2 stranded plain to IEC60228 | AS/NZS1125
- X-90 Insulated and PVC UV outer sheath - A medium splash oil resistant, ozone and UV resistant sheath.
- Non-hygroscopic Binder Tape and Filler

Feature & Benefits

- Meter marked medium splash oil resistant and medium impact low voltage industrial all rounder. .
- Can be Installed in open air, outdoor, in damp areas, In conduits and buried direct.
- Robust and Abrasion impact good. Fire Retardant

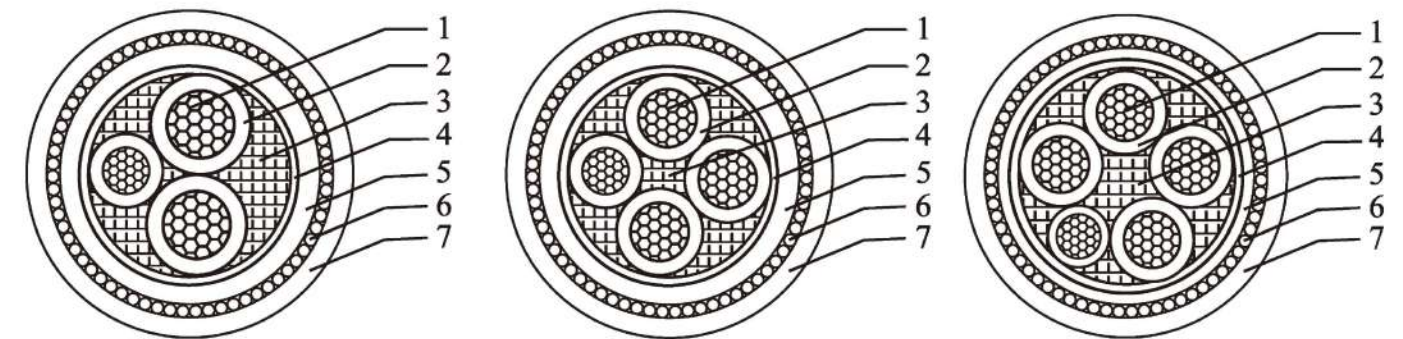
Standards

- National Norm: AS/NZS5000.1 | AS/NZS 1125 | AS/NZS3008 |
- International Norm: IEC60228 | IEC60332.1
- Temperature Range: 0°C to +90° | Voltage Rating: 0.6/1 kV |
- Min. bending radius during installing - 18D(D is the diameter of cable) | Min. bending radius installed - 12D (D is the diameter of cable)

Approx.diameter of onductor		Nominal insulation thickness mm	Approx Diameter under Armour	Approx.Diameter of Cable	Approx Weight Kg/KM	Max resisance of conductor at 20°C
Phase mm	Earth mm					
1.53	1.53	0.7	8.9	14.7	362	12.1
1.98	1.98	0.7	9.9	15.7	422	7.41
2.49	1.98	0.7	10.7	16.5	475	4.61
3.24	1.98	0.7	11.9	18.6	685	3.08
4.05	2.49	0.7	13.5	20.2	843	1.83
5.10	3.24	0.7	15.6	22.3	1057	1.15
6.00	3.24	0.9	18.2	25.6	1508	0.727
7.00	4.05	0.9	20.2	27.6	1827	0.524
8.10	5.1	1.0	23.0	30.4	2250	0.387
9.80	6	1.1	26.8	34.6	2952	0.268
11.40	6	1.1	30.2	39.0	3923	0.193
12.90	7	1.2	34.0	43.0	4761	0.153
14.40	8.1	1.4	37.7	46.9	5651	0.124
16.00	9.8	1.6	41.6	52.2	7336	0.0991
18.40	1.4	1.7	47.2	58.2	9181	0.0754
20.60	12	1.8	52.0	63.2	10932	0.0601
1.53	1.5	0.7	9.8	15.6	410	12.1
1.98	1.98	0.7	10.8	16.6	474	7.41
2.49	1.98	0.7	11.8	18.5	686	4.61
3.24	1.98	0.7	13.2	19.9	794	3.08
4.05	2.49	0.7	15.0	21.7	1004	1.83
5.10	3.24	0.7	17.3	24.7	1426	1.15
6.00	3.24	0.9	19.9	27.3	1819	0.727
7.00	4.05	0.9	22.2	29.6	2232	0.524
8.10	5.1	1.0	25.3	32.9	2806	0.387

3x70+E25	9.80	6	1.1	30.0	38.8	4065	0.268
3x95+E25	11.40	6	1.1	33.1	42.1	5003	0.193
3x120+E35	12.90	7	1.2	36.8	46.0	6017	0.153
3x150+E50	14.40	8.1	1.4	41.5	52.1	7794	0.124
3x185+E70	16.00	9.8	1.6	46.2	57.2	9413	0.0991
3x240+E95	18.40	11.4	1.7	52.4	63.8	11858	0.0754
3x300+E120	20.60	12.9	1.8	57.8	69.6	14269	0.0601
4x1.5+E1.5	1.53	1.53	0.7	10.7	16.5	455	12.1
4x2.5+E2.5	1.98	1.98	0.7	11.9	18.6	672	7.41
4x4+E2.5	2.49	1.98	0.7	13.0	19.7	777	4.61
4x6+E2.5	3.24	1.98	0.7	14.6	21.3	917	3.08
4x10+E4	4.05	2.49	0.7	16.7	23.4	1172	1.83
4x16+E6	5.10	3.24	0.7	19.3	26.7	1681	1.15
4x25+E6	6.00	3.24	0.9	22.2	29.6	2167	0.727
4x35+E10	7.00	4.05	0.9	24.8	32.4	2707	0.524
4x50+E16	8.10	5.1	1.0	28.4	37.2	3706	0.387
4x70+E25	9.80	6	1.1	33.7	42.7	4940	0.268
4X95+E25	11.40	6	1.1	37.2	46.6	6178	0.193
4x120+E35	12.90	7	1.2	41.8	52.6	8028	0.153
4x150+E50	14.40	8.1	1.4	46.6	57.6	9600	0.124
4x185+E70	16.00	9.8	1.6	52.4	63.8	11739	0.0991
4x240+E95	18.40	11.4	1.7	58.9	70.7	14710	0.0754
4x300+E120	20.60	12.9	1.8	65.1	78.8	18765	0.0601

These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature.



1	Conductor	Class 2 plain annealed circular copper conductor
2	Insulation	XLPE/X-90
3	Filler	non-hygroscopic
4	Binder tape	non-hygroscopic
5	Inner sheath	PVC black
6	Armour	galvanized steelwire
7	Outer sheath	PVC/ 5V-90 orange

Znergy Cable
Fire Rated
Single Core - SDI | 0.6/1kV
XIPE/MICA/PVC-R | Class 2 | WS52W



Znergy Cable
Fire Rated Cable
Multi Core - 0.6kV/1kV | XIPE/MICA/PVC-R
90°C | WS52W



CFR | SERIES

Znergy Cable Single Core - SDI | 0.6/1 kV | XLPE/MICA/PVC-R | Class 2 | WS52W

Application

The Fire rated cables are designed to continue functioning during the course of a fire. This is for a specific period of time allowing for safe evacuation of building & premises by maintaining smoke control systems, emergency lighting and safety design systems, that require power. The cable will burn in controlled propagation that ensures circuit integrity during the fire.

Construction

- Class 2 stranded plain annealed copper wire conductor to IEC60228 | AS/NZS1125
- PVC insulated and PVC outer sheath - A medium splash oil resistant, ozone and UV resistant sheath.
- AS/NZS5000.1 PVC sheathed. I Glass Mica Tape Flame Barrier

Feature & Benefits

- Meter marked medium splash oil resistant and medium impact low volatage industrial all rounder ..
- Can be installed in open air, outdoor, in damp areas, in conduits and buried direct.
- Robust and Abrasion impact good. Fire Resistant - circuit integrity 120 minutes at 750°C Fire test, as per IEC60331

Standards

- IEC60228 | AS/NZS1125 | AS/NZS3008 | AS/NZS5000.1 | IEC60331.1 | WS52W
- Temperature Range: -40°C to +90°
- Voltage Rating: 0.6/1kV

Part Number	Cross Section mm ²	Strands mm	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx Weight Kg/Km	Current Rating (Amps) TABLE 7 AS/NZS3808 Unenclosed Spaced 3 PHASE	Current Rating (Amps) TABLE 7 AS/NZS3808 Unenclosed Spaced 3 PHASE	Current Rating (Amps) TABLE 7 AS/NZS3808 Unenclosed bunching 3 PHASE
CFR-SD3/1C16RD	16	7x 1.70	0.8	1.4	10.9	230	110	92	86
CFR-SD3/1C25RD	25	7x2.13	0.9	1.4	12.5	324	145	125	115
CFR-SO3/1C35RD	35	7x2.52	0.9	1.4	13.7	424	180	155	145
CFR-SO3/1C50RD	50	19x1.83	1.0	1.4	15.4	575	220	190	175
CFR-SO3/1C70RD	70	19x2.17	1.1	1.4	17.6	782	280	240	225
CFR-SO3/1C95RD	95	19x2.52	1.1	1.5	19.4	1000	350	300	280
CFR-SO3/1C120RD	120	37x2.03	1.2	1.5	21.2	1248	410	350	325
CFR-SO3/1C150RD	150	37x2.27	1.4	1.6	23.5	1545	470	405	375
CFRSD3/1C185RD	185	37x2.52	1.6	1.6	25.5	1857	550	470	435
CFR-SO3/1C240RD	240	37x2.87	1.7	1.7	28.5	2413	660	560	520
CFR-SO3/1C300RD	300	61x2.50	1.8	1.8	31.3	2973	770	650	600
CFR-SO3/1C400RD	400	61x2.89	2.0	1.9	35.2	3871	900	760	700
CFR-SO3/1C500RD	500	61x3.23	2.2	2.0	39.0	4854	1050	760	700
CFR-SD3/1C630RD	630	91x2.97	2.4	2.2	44.6	6416	1230	760	700

These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature.



CFR | SERIES

Znergy Cable Multi Core | 0.6/1kV | XLPE/MICA/PVC-R 90°C | WS52W

RoHS
compliant



Part Number	Cross Section mm ²	Earth	Strands mm	Nominal insulation thickness mm	Nominal sheath thickness mm	Nominal overall diameter mm	Approx Weight Kg/Km	Current Rating (Amps) TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Spaced 3 PHASE	Current Rating (Amps) TABLE 8 AS/NZS3808.1.1:2009 Unenclosed Spaced from Surface 3 PHASE	Current Rating (Amps) TABLE 8 AS/NZS3808.1.1:2009 Unenclosed bunching 3 PHASE
CFR-MC3/3C1.5	1.5	1.5	7x0.52	0.7	1.8	10.9	135	25	21	20
CFR-MC3/3C2.5	2.5	2.5	7x0.67	0.7	1.8	12.9	182	35	30	28
CFR-MC3/3C4	4	2.5	7x0.85	0.7	1.8	13.9	239	46	40	37
CFR-MC3/3C6	6	2.5	7x1.05	0.7	1.8	15.2	309	59	50	47
CFR-MC3/3C10	10	4	7x1.35	0.7	1.8	16.9	392	81	69	65
CFR-MC3/3C16	16	6	7x1.70	0.7	1.8	19	551	108	92	86
CFR-MC3/3C25	25	6	7x2.13	0.9	1.8	22.1	780	146	125	117
CFR-MC3/3C35	35	10	7x2.52	0.9	1.8	26.2	1100	180	155	144
CFR-MC3/3C50	50	16	19x1.83	1.0	1.8	29.7	1512	221	188	176
CFR-MC3/3C70	70	25	19x2.17	1.1	1.8	33.9	2055	282	240	224
CFR-MC3/3C95	95	25	19x2.52	1.1	1.9	38.2	2654	350	298	278
CFR-MC3/3C120	120	35	37x2.03	1.2	2.0	42.6	3252	410	349	325
CFR-MC3/3C150	150	50	37x2.27	1.4	2.2	47.3	4188	472	403	375
CFR-MC3/3C180	185	70	37x2.52	1.6	2.3	51.9	5187	560	468	435
CFR-MC3/3C240	240	95	37x2.87	1.7	2.5	58.01	6610	660	560	521
CFR-MC3/3C300	300	120	67x2.50	1.8	2.6	69.5	7990	766	648	602
CFR-MC3/4C1.5	1.5	1.5	7x0.52	0.7	1.8	12.5	220	25	21	20
CFR-MC3/4C2.5	2.5	2.5	7x0.67	0.7	1.8	14.4	272	35	30	28
CFR-MC3/4C4	4	2.5	7x0.85	0.7	1.8	15.6	335	46	40	37
CFR-MC3/4C6	6	2.5	7x1.05	0.7	1.8	18.3	439	59	50	47
CFR-MC3/4C10	10	4	7x1.35	0.7	1.8	20.4	619	81	69	65
CFR-MC3/4C16	16	6	7x1.70	0.7	1.8	22.8	843	108	92	86
CFR-MC3/4C25	25	6	7x2.13	0.9	1.8	26.5	1170	146	125	117
CFR-MC3/4C35	35	10	7x2.52	0.9	1.8	29.2	1541	180	155	144
CFR-MC3/4C50	50	16	19x1.83	1.0	1.8	34.2	2164	221	188	176
CFR-MC3/4C70	70	25	19x2.17	1.1	1.8	39.5	2973	282	240	224
CFR-MC3/4C95	95	25	19x2.52	1.1	1.9	43.5	3771	350	298	278
CFR-MC3/4C120	120	35	37x2.03	1.2	2.0	48.2	4688	410	349	325
CFR-MC3/4C150	150	50	37x2.27	1.4	2.2	53.2	5833	472	403	375
CFR-MC3/4C185	185	70	37x2.52	1.6	2.3	58.4	7133	560	468	435
CFR-MC3/4C240	240	95	37x2.87	1.7	2.5	65.2	9203	660	560	521
CFR-MC3/4C300	300	120	67x2.50	1.8	2.6	71.6	11344	766	648	602
CFR-MC3/5C1.5	1.5	2.5	7x0.52	0.7	1.8	14.8	285	25	21	20
CFR-MC3/5C2.5	2.5	2.5	7x0.67	0.7	1.8	16.0	332	35	30	28
CFR-MC3/5C44	4	2.5	7x0.85	0.7	1.8	17.2	409	46	40	37
CFR-MC3/5C66	6	4	7x1.05	0.7	1.8	19.8	530	59	50	47
CFR-MC3/5C10	10	6	7x1.35	0.7	1.8	22.2	756	81	69	65
CFR-MC3/5C16	16	6	7x1.70	0.7	1.8	25.1	1050	108	92	86
CFR-MC3/5C25	25		7x2.13	0.9	1.8	28.7	1449	146	125	117
CFR-MC3/5C35	35	10	7x2.52	0.9	1.8	31.7	1920	180	155	144
CFR-MC3/5C50	50	16	19x1.83	1.0	1.8	36.7	2680	221	188	176
CFR-MC3/5C70	70	25	19x2.17	1.1	1.8	42.24	3691	282	240	224
CFR-MC3/5C95	95	25	19x2.52	1.1	1.9	46.4	4623	350	298	278
CFR-MC3/5C120	120	35	37x2.03	1.2	2.0	51.3	5816	410	349	325
CFR-MC3/5C150	150	50	37x2.27	1.4	2.2	57.0	7272	472	403	375
CFR-MC3/5C185	185	70	37x2.52	1.6	2.3	62.7	8880	560	468	435
CFR-MC3/5C240	240	95	37x2.87	1.7	2.5	70.4	11531	660	560	521
CFR-MC3/5C300	300	120	61x2.50	1.8	2.6	77.3	14221	766	648	602

These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature.

Znergy Cable
Fire Resistant Flexible Rubber
Power & Control | 110°C | LSZH | 0.6/1kV
Class 5 Flexible | WS52W



CFZ | SERIES
Znergy Cable

Power & Control 110°C | LSZH | 0.6/1kV
Class 5 Flexible | WS52W

Application

The Fire rated cables are designed to continue functioning during the course of a fire. This is for a specific period of time allowing for safe evacuation of building & premises by maintaining smoke control systems, emergency lighting and safety design systems, that require power. The cable will burn in controlled propagation that ensures circuit integrity during the fire.

Construction

- Class 5 stranded plain annealed copper wire conductor to IEC60228 | AS/NZS1125
- X-HF-110 LSZH insulated and HFS-110-TPS LSZH outer sheath - A medium splash oil resistant, ozone and UV resistant sheath.
- AS/NZS5000.1 | Glass Mica Tape Flame Barrier | WS52W - 120 minutes circuit integrity & moderate mechanical impact.

Feature & Benefits

- Meter marked medium splash oil resistant and medium impact low voltage industrial all rounder. .
- Flame retardant | Can be installed in open air, outdoor, in damp areas, in conduits and buried direct.
- Robust and Abrasion impact good. Fire Resistant - circuit integrity 120 minutes at 750°C fire test, as per IEC60331

Standards

- IEC60228 | AS/NZS1125 | AS/NZS3013 | AS/NZS5000.1 | IEC60331.1 | AS/NZS1660.5.5 | IEC60754-1&2 | IEC61034-1&2 |
- Temperature Range: -40°C to +110°
- Voltage Rating: 0.6/1 kV

Part Number	Cross Section mm²	Strands mm	Nominal insulation thickness mm	Overall diameter Min mm	Overall diameter Max mm	Approx Weight Kg/Km	Current Rating (Amps) TABLE 11/14 AS/NZS3808 Unenclosed Spaced 3 PHASE	Current Rating (Amps) TABLE 11/14 AS/NZS3808 Unenclosed Spaced from Surface 3 PHASE	Current Rating (Amps) TABLE 11/14 AS/NZS3808 Unenclosed Touching 3 PHASE
CFZ-SD3/1C6RD	6	84/0.3	0.8	8.2	8.8	136	70	61	57
CFZ-SD3/1C10RD	10	80/0.40	0.8	9.1	9.7	191	99	85	80
CFZ-SD3/1C16RD	16	128/0.40	0.8	10.4	11.2	256	130	112	105
CFZ-SD3/1C25RD	25	200/0.40	0.9	11.7	12.9	353	172	149	139
CFZ-SD3/1C35RD	35	280/0.40	0.9	12.7	14.0	463	214	184	172
CFZ-SD3/1C50RD	50	400/0.40	1.0	14.2	15.6	590	270	233	217
CFZ-SD3/1C70RD	70	356/0.50	1.1	15.9	17.5	858	340	292	273
CFZ-SD3/1C95RD	95	485/0.50	1.1	17.8	19.6	1130	410	353	329
CFZ-SD3/1C120RD	120	614/0.50	1.2	19.5	21.5	1401	487	418	390
CFZ-SD3/1C150RD	150	765/0.50	1.4	21.6	23.8	1742	562	482	450
CFZ-SD3/1C185RD	185	944/0.50	1.6	23.8	26.2	2137	644	553	516
CFZ-SD3/1C240RD	240	1225/0.50	1.7	26.5	29.2	2730	775	665	620
CFZ-SD3/1C300RD	300	1530/0.50	1.8	29.1	32.0	3374	895	766	714
CFZ-SD3/1C400RD	400	2035/0.50	2.0	32.6	35.9	4309	1079	918	855
CFZ-SD3/1C500RD	500	1768/0.6	2.2	36.2	39.8	5444	1260	1064	990
CFZ-SD3/1C630RD	630	2228/0.7	2.4	41.7	44.1	6712	1493	1240	1154

Znergy Cable
Fire Resistant Flexible Rubber
Power & Control | 110°C | LSZH | 0.6/1kV
Class 5 Flexible | WS52W



CFZ | SERIES
Znergy Cable

Power & Control 110°C | LSZH | 0.6/1kV
Class 5 Flexible | WS52W

Part Number	Cross Section mm²	Strands mm	Overall diameter Min mm	Overall diameter Max mm	Approx Weight Kg/Km	Current Rating (Amps) TABLE 12/15 AS/NZS3808 Fixed Unenclosed Spaced 2-3-4 Core	Current Rating (Amps) TABLE 12/15 AS/NZS3808 Unenclosed Touching 2-3-4 Core	Current Rating (Amps) TABLE 12/15 AS/NZS3808 Unenclosed Exposed to 3 PHASE
CFZ-MC3/2C1.5RD	2x1.5	30/0.25	9.8	10.5	126	30	28	26
CFZ-MC3/3C1.5RD	3x1.5	30/0.25	10.4	11.0	149	26	24	22
CFZ-MC10/4C1.5RD	4x1.5	30/0.25	11.4	12.2	173	26	24	22
CFZ-MC3/10C1.5RD	10x1.5	30/0.25	17.9	18.9	521	26	24	22
CFZ-MC3/3C2.5RD	3x2.5	50/0.25	11.7	12.5	196	34	32	29
CFZ-MC3/4C2.5RD	4x2.5	50/0.25	11.4	12.2	235	34	32	29
CFZ-MC3/3C4RD	3x4	56/03	12.7	13.5	261	45	42	39
CFZ-MC3/3C6RD	3x6	84/0.3	14.1	14.9	345	57	54	49
CFZ-MC3/4C2.5RD	4x2.5	50/0.25	12.8	13.6	228	34	32	29
CFZ-MC3/4C4RD	4x4	56/03	13.9	14.7	215	45	42	39
CFZ-MC3/4C6RD	4x6	84/0.3	15.6	16.5	410	57	54	49
CFZ-MC3/4C10RD	4x10	80/0.40	17.8	18.8	610	80	75	68

NOTE: Other configuration available as per customer need.
These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature
Znergy Cable is not liable for any errors, omissions or misprints, and reserves the right to make changes to any specification data.

Znergy Cable
Fire Resistant Flexible Rubber
Alarm Signal Cable | 110°C | LSZH | 250V
Class 5 Flexible | WS52W



Znergy Cable
OVERALL SCREENED INSTRUMENTATION
Instrumentation Pairs & Triads | 300V | PVC/PVC



TUS | SERIES
Znergy Cable

Alarm Signal Cable | 110°C | LSZH | 250V
Class 5 Flexible | WS52W

Part Number	Cross Section mm ²	Strands mm	Overall diameter Min mm	Overall diameter Max mm	Approx Weight Kg/Km	Short Circuit Current (Amps for 1 Second) AS/NZS3008 Table 51/52	Current Rating (Amps) TABLE 11/14 AS/NZS3808 Unenclosed Touching 2-3-4 PHASE	AS/NZS3013 Classification WSRating WS-WireSystem 5-120minutescircuitintegrityin fire 2-Mechanicalprotectionimpacttest is moderate W-circuitintegrityaftersubjectedto fire at 1050°C for 120 minutes than watersprayedfor 3 minutes
CFZ-A/2C.75RD	2x0.75	24/0.0.2	9.4	10.1	126	99	8	WS52W
CFZ-A/3C.75RD	3x0.75	24/0.0.2	10.1	10.6	149	99	8	WS52W
CFZ-A/4C.75RD	4x0.75	24/0.0.2	11.1	11.7	173	99	8	WS52W
CFZ-A/5C.75RD	5x0.75	24/0.0.2	12.2	12.9	521	99	8	WS52W
CFZ-A/10C.75RD	10x0.75	24/0.0.2	11.7	12.5	196	99	8	WS52W
CFZ-A/21C.75RD	21x0.75	24/0.0.2	11.4	12.2	235	99	8	WS52W
CFZ-A/2C1RD	2x1	32/0.2	9.4	10	261	132	22	WS52W
CFZ-A/3C1RD	3x1	32/0.2	10.4	11.1	345	132	18	WS52W
CFZ-A/4C1RD	4x1	32/0.2	11.3	11.9	228	132	18	WS52W
CFZ-A/5C1RD	5x1	32/0.2	12.2	12.9	215	132	12	WS52W

These ratings are based on 40°(ambient air temperature and 25°) ambient soil temperature

CSI | SERIES
Znergy Cable

Instrumentation Pairs & Triads | 300V | PVC/PVC

RoHS
compliant



Application

- This cable has multiple application for communication, data, alarm and various control type usage.
- From electrical measuring devices, sensing devices , to instrument panel and to control cabinets for multiple instrumentation application
- Control cabinets to supervisory consoles and panels.
- Other field application like Telemeters to recorders and annunciator

Construction

- Class 2 stranded plain copper wire conductor to IEC60228 | AS/NZS1125 |PVC Insulated and V-90 PVC UV outersheath- A medium splash oil resistant, ozone and UV resistant sheath.
- Overall Shield - Al-PET(with tinned copper wire drain wire).
- Filler & Binding Tape - non-hygroscopic

Feature & Benefits

- Meter marked medium splash oil resistant and medium impact low voltage industrial all rounder. .
- Pairs - white and black, each pair is numbered 1 & 2
- Triples - white, black and red, each triple is numbered 1, 2 & 3
- Fire Retardant PVC-FR Option available on request.

Standards

- National Norm: AS/NZS5000.1 | AS/NZS1125 | AS/NZS3008 | AS/NZS5000.3 |
- International Norm: IEC60228 | IEC60332.1 | BS EN 50288.7 |
- Temperature Range: 0°C to +90°
- Voltage Rating: 300V

number of core and nominal area mm2	number of wire In conductor nos	nominal thickness of insulation mm	type of overall screen	nominal area of tinned cu drain wire mm2	nominal thickness of outer sheath mm	nominal overall diameter mm	approx weight of cable kg/km	Max. resistance of conductor at 20°C Ω/k m
PAIR								
1Pairx0.5	7	0.6	Al-PET	0.5	0.9	6.6	58	36.0
2Pairx0.5	7	0.6	Al-PET	0.5	1.0	10.8	96	36.0
4Pairx0.5	7	0.6	Al-PET	0.5	1.1	12.7	149	36.0
6Pairx0.5	7	0.6	Al-PET	0.5	1.2	15.2	207	
8Pairx0.5	7	0.6	Al-PET	0.5	1.3	17.3	265	36.0
10Pairx0.5	7	0.6	Al-PET	0.5	1.3	19.5	318	36.0
12Pairx0.5	7	0.6	Al-PET	0.5	1.4	20.3	369	36.0
16Pairx0.5	7	0.6	Al-PET	0.5	1.5	22.7	471	36.0
20Pairx0.5	7	0.6	Al-PET	0.5	1.6	25.5	577	36.0
24Pairx0.5	7	0.6	Al-PET	0.5	1.7	28.4	688	36.0
36Pairx0.5	7	0.6	Al-PET	0.5	1.8	32.6	963	36.0
50Pairx0.5	7	0.6	Al-PET	0.5	2.0	38.7	1314	36.0
1Pairx1.0	7	0.6	Al-PET	0.5	0.9	7.2	74	18.1
2Pairx1.0	7	0.6	Al-PET	0.5	1.1	12.3	131	18.1
4Pairx1.0	7	0.6	Al-PET	0.5	1.1	14.3	202	18.1
6Pairx1.0	7	0.6	Al-PET	0.5	1.3	17.4	294	18.1
8Pairx1.0	7	0.6	Al-PET	0.5	1.3	19.5	368	18.1
10Pairx1.0	7	0.6	Al-PET	0.5	1.4	22.3	456	18.1
12Pairx1.0	7	0.6	Al-PET	0.5	1.5	23.3	531	18.1
16Pairx1.0	7	0.6	Al-PET	0.5	1.6	26.0	682	18.1
20Pairx1.0	7	0.6	Al-PET	0.5	1.7	29.2	839	18.1
24Pairx1.0	7	0.6	Al-PET	0.5	1.8	32.5	1000	18.1

number of core and nominal area mm2	number of wire in conductor nos	nominal thickness of insulation mm	type of overall screen	nominal area of tinned cu drain wire mm2	nominal thickness of outer sheath mm	nominal overall diameter mm	approx weight of cable kg/km	Max. resistance of conductor at 20°C Ω/k m
36Pairx1.0	7	0.6	Al-PET	0.5	2.0	37.6	1434	18.1
50Pairx1.0	7	0.6	Al-PET	0.5	2.3	44.9	1977	18.1
1Pairx1.5	7	0.7	Al-PET	0.5	0.9	8.1	94	12.1
2Pairx1.5	7	0.7	Al-PET	0.5	1.2	14.3	176	12.1
4Pairx1.5	7	0.7	Al-PET	0.5	1.2	16.6	279	12.1
6Pairx1.5	7	0.7	Al-PET	0.5	1.4	20.2	401	12.1
8Pairx1.5	7	0.7	Al-PET	0.5	1.5	22.9	520	12.1
10Pairx1.5	7	0.7	Al-PET	0.5	1.6	26.2	638	12.1
12Pairx1.5	7	0.7	Al-PET	0.5	1.6	27.1	737	12.1
16Pairx1.5	7	0.7	Al-PET	0.5	1.8	30.5	957	12.1
20Pairx1.5	7	0.7	Al-PET	0.5	1.9	34.2	1177	12.1
24Pairx1.5	7	0.7	Al-PET	0.5	2.0	38.1	1409	12.1
36Pairx1.5	7	0.7	Al-PET	0.5	2.3	44.3	2035	12.1
50Pairx1.5	7	0.7	Al-PET	0.5	2.6	52.7	2799	12.1
TRIAD								
1Triadx0.5	7	0.6	Al-PET	0.5	0.9	7.1	71	36.0
2Triadx0.5	7	0.6	Al-PET	0.5	1.0	11.9	121	36.0
4Triadx0.5	7	0.6	Al-PET	0.5	1.1	14.1	195	36.0
6Triadx0.5	7	0.6	Al-PET	0.5	1.2	16.9	275	36.0
8Triadx0.5	7	0.6	Al-PET	0.5	1.3	19.2	354	36.0
10Triadx0.5	7	0.6	Al-PET	0.5	1.4	22.0	438	36.0
12Triadx0.5	7	0.6	Al-PET	0.5	1.4	22.7	500	36.0
16Triadx0.5	7	0.6	Al-PET	0.5	1.5	25.4	642	36.0
20Triadx0.5	7	0.6	Al-PET	0.5	1.6	28.5	791	36.0
24Triadx0.5	7	0.6	Al-PET	0.5	1.7	31.8	943	36.0
36Triadx0.5	7	0.6	Al-PET	0.5	1.9	36.8	1355	36.0
50Triadx0.5	7	0.6	Al-PET	0.5	2.2	43.9	1871	36.0
1Triadx1.0	7	0.6	Al-PET	0.5	0.9	7.9	93	18.1
2Triadx1.0	7	0.6	Al-PET	0.5	1.1	13.6	169	18.1
4Triadx1.0	7	0.6	Al-PET	0.5	1.2	16.1	279	18.1
6Triadx1.0	7	0.6	Al-PET	0.5	1.3	19.4	397	18.1
8Triadx1.0	7	0.6	Al-PET	0.5	1.4	22.0	513	18.1
10Triadx1.0	7	0.6	Al-PET	0.5	1.5	25.2	636	18.1
12Triadx1.0	7	0.6	Al-PET	0.5	1.5	26.0	732	18.1
16Triadx1.0	7	0.6	Al-PET	0.5	1.6	29.1	946	18.1
20Triadx1.0	7	0.6	Al-PET	0.5	1.8	32.9	1182	18.1
24Triadx1.0	7	0.6	Al-PET	0.5	1.9	36.7	1410	18.1
36Triadx1.0	7	0.6	Al-PET	0.5	2.1	42.5	2036	18.1
50Triadx1.0	7	0.6	Al-PET	0.5	2.4	50.6	2808	18.1
1Triadx1.5	7	0.6	Al-PET	0.5	0.9	8.9	119	12.1
2Triadx1.5	7	0.6	Al-PET	0.5	1.2	15.8	228	12.1
4Triadx1.5	7	0.6	Al-PET	0.5	1.3	18.7	386	12.1
6Triadx1.5	7	0.6	Al-PET	0.5	1.4	22.6	552	12.1
8Triadx1.5	7	0.6	Al-PET	0.5	1.5	25.6	710	12.1
10Triadx1.5	7	0.6	Al-PET	0.5	1.7	29.5	893	12.1
12Triadx1.5	7	0.6	Al-PET	0.5	1.7	30.5	1032	12.1
16Triadx1.5	7	0.6	Al-PET	0.5	1.8	34.2	1336	12.1
20Triadx1.5	7	0.6	Al-PET	0.5	2.0	38.6	1666	12.1
24Triadx1.5	7	0.6	Al-PET	0.5	2.2	43.2	2006	12.1
36Triadx1.5	7	0.6	Al-PET	0.5	2.4	50.0	2897	2.1
50Triadx1.5	7	0.6	Al-PET	0.5	2.7	59.5	3989	12.1



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TABLE 4 CURRENT-CARRYING CAPACITIES

CABLE TYPE: TWO SINGLE-CORE (See Note 1)

INSULATION TYPE: THERMOPLASTIC (See Note 2)

MAXIMUM CONDUCTOR TEMPERATURE: 75°C

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Conductor size	Current-carrying capacity, A												Conductor size	Current-carrying capacity, A														
	Unenclosed													Enclosed														
	Spaced			Spaced from sur face			Touching			Exposed to sun				Wiring enclosure in air		Thermal insulation		Buried direct		Underground wiring enclosure								
																												
	Cu		Al	Cu		Al	Cu		Al	Cu		Al		Cu		Al	Cu	Al	Cu	Al	Cu	Al	Cu		Al	Cu	Al	
mm²	Solid/ Stranded	Flexible Solid/		Stranded	Flexible Solid/		Stranded	Flexible Solid/		Stranded	Flexible		mm²	Solid/ Stranded	Flexible			Cu	Al	Cu	Al	Cu	Al	Solid/ Stranded	Flexible			
1	16	17	—	16	17	—	13	13	—	8	8	—		1	13	14	—	11	—	6	—	18	—	18	19	—	21	—
1.5	21	21	—	21	21	—	16	17	—	10	10	—		1.5	18	18	—	14	—	8	—	23	—	23	23	—	26	—
2.5	30	29	—	29	28	—	23	22	—	13	13	—		2.5	24	24	—	20	—	12	—	32	—	32	31	—	36	—
4	40	38	—	39	38	—	31	30	—	18	17	—		4	32	31	—	25	—	16	—	41	—	41	40	—	47	—
6	51	49	—	49	48	—	40	38	—	22	21	—		6	41	40	—	33	—	20	—	52	—	52	50	—	58	—
10	69	69	—	67	67	—	54	54	—	30	29	—		10	54	54	—	44	—	27	—	69	—	69	68	—	77	—
16	92	91	72	89	88	69	72	71	56	39	38	30		16	70	69	54	56	43	36	28	122	95	89	87	69	99	77
25	124	121	96	119	115	92	97	94	75	50	49	39		25	94	91	73	75	58	48	37	158	123	116	112	90	129	100
35	153	150	119	145	143	113	119	117	92	61	59	47		35	112	110	87	90	70	59	46	190	147	139	136	108	155	120
50	187	189	145	177	179	137	146	147	113	72	73	56		50	138	139	107	110	86	—	—	225	174	168	168	130	186	145
70	238	238	184	223	224	173	184	185	143	89	89	69		70	170	169	132	136	105	—	—	277	215	206	205	160	228	177
95	295	287	229	276	269	214	230	223	178	107	104	83		95	212	206	164	169	131	—	—	332	257	252	244	195	278	215
120	344	341	267	321	317	249	267	265	208	122	120	95		120	242	237	188	193	150	—	—	378	294	287	282	223	316	245
150	395	393	307	367	365	285	308	306	239	137	135	106		150	282	278	219	225	175	—	—	424	329	329	324	255	354	274
185	459	450	357	424	416	331	358	351	279	154	150	120		185	320	312	249	256	199	—	—	480	374	373	363	291	408	317
240	549	541	427	505	498	394	428	422	334	177	173	138		240	381	373	298	305	238	—	—	556	434	438	429	342	472	368
300	636	624	495	582	571	456	495	486	388	198	192	155		300	—	—	—	—	—	—	—	628	491	496	493	388	546	425
400	744	752	583	676	682	535	577	583	456	221	218	175		400	—	—	—	—	—	—	—	713	564	575	572	454	621	487
500	867	876	685	780	787	624	668	675	535	245	240	196		500	—	—	—	—	—	—	—	805	644	649	663	520	721	570
630	1014	1036	808	897	914	730	770	785	627	269	266	219		630	—	—	—	—	—	—	—	904	737	750	754	611	816	652

NOTES:

1 Applies to non-armoured, sheathed or unsheathed cables.

2 The normal operating temperature of thermoplastic cables, including flexible cords installed as installation wiring, are based on a conductor temperature of 75 ° C. This is due to the risk of thermal deformation of insulation if the cables are clipped, fixed or otherwise installed in a manner which exposes the cable to severe mechanical pressure at higher temperatures.

V-90 and V-90HT insulated cables may be operated up to the maximum permissible temperatures 90 ° C and 105 ° C provided that the cable is installed in a manner that is not subject to, or is protected against,

severe mechanical pressure at temperatures higher than 75°C. Such applications also allow for cables to be used in—

(a) locations where the ambient temperature exceeds the normal 40 ° C, e.g. equipment wiring in luminaires and heating appliances, or in roof spaces affected by high summer temperatures; and (b) locations affected by bulk thermal insulation that restricts the dissipation of heat from the cable.

3 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same current-carrying capacities as those illustrated.

4 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 23, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 8 to 10.

(c) For a single circuit fixed to perforated or unperforated cable tray, see Table 23 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

5 To calculate the single-phase voltage drop of these configurations, multiply the appropriate three-phase voltage drop value in Table 40, Table 43 or Table 46 by 1.155.

6 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

7 For conductor sizes up to 10mm² in Column 22 the values are based on ratings for wiring in underground wiring enclosures.

8 Cables within the scope of AS/NZS 5000.2 (up to 16 mm²) may be rated to the values in the Tables covering 90°C insulated cables, subject to—
(a) information provided in Note 2; and

(b) any other relevant requirements of AS/NZS 3000.

TABLE 5 CURRENT-CARRYING CAPACITIES

CABLE TYPE: TWO SINGLE-CORE (See Note 1)

INSULATION TYPE: X-90, X-HF-90, R-EP-90, R-CPE-90, R-HF-90 OR R-CSP-90

MAXIMUM CONDUCTOR TEMPERATURE: 90°C (See Note 2)

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9	10	11	12	13															14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Conductor size	Current-carrying capacity, A												Conductor size	Current-carrying capacity, A																											
	Unenclosed													Enclosed																											
	Spaced			Spaced from sur face			Touching			Exposed to sun				Wiring enclosure in air		Thermal insulation		Buried direct		Underground wiring enclosure																					
																																									
	Cu		Al	Cu		Al	Cu		Al	Cu		Al		Cu		Al	Cu	Al	Cu	Al	Cu		Al	Cu	Al																
mm ²	Solid/ Stranded	Flexible Solid/		Stranded	Flexible Solid/		Stranded	Flexible Solid/		Stranded	Flexible	Al	mm ²	Solid/ Stranded	Flexible	Al	Cu	Al	Cu	Al	Cu	Al	Solid/ Stranded	Flexible	Al	Cu	Al														
1	20	21	—	20	21	—	16	16	—	12	13	—		1	16	17	—	13	—	8	—	20	—	20	21	—	24	—													
1.5	26	26	—	25	26	—	20	20	—	15	16	—		1.5	21	21	—	16	—	10	—	26	—	26	26	—	30	—													
2.5	36	35	—	36	34	—	28	27	—	21	21	—		2.5	30	28	—	24	—	14	—	36	—	36	35	—	41	—													
4	48	46	—	47	46	—	37	36	—	28	27	—		4	38	37	—	30	—	19	—	46	—	46	45	—	53	—													
6	61	59	—	60	58	—	47	46	—	36	34	—		6	47	46	—	38	—	24	—	58	—	58	56	—	66	—													
10	84	83	—	82	81	—	65	64	—	48	48	—		10	65	64	—	52	—	32	—	78	—	78	77	—	87	—													
16	112	110	87	108	106	84	86	85	67	64	63	50		16	84	82	65	67	52	43	33	139	107	100	98	78	112	87													
25	151	147	117	145	141	112	117	114	91	86	83	66		25	113	109	87	90	70	58	45	179	139	131	127	102	146	114													
35	186	183	144	177	174	137	144	141	111	105	103	81		35	135	132	105	108	84	72	56	215	167	157	154	122	175	136													
50	228	231	177	216	218	167	176	178	136	127	128	99		50	166	167	129	133	103	—	—	255	198	189	190	147	211	164													
70	291	292	226	273	274	212	224	225	174	160	161	124		70	204	204	159	164	127	—	—	313	243	233	232	181	258	200													
95	361	351	280	338	328	262	278	271	216	197	192	153		95	255	248	198	204	158	—	—	375	291	285	276	221	309	239													
120	422	418	328	393	389	305	325	322	253	229	226	178		120	292	286	226	233	181	—	—	427	332	325	319	252	358	278													
150	486	483	377	451	448	350	375	373	291	262	260	204		150	329	336	255	263	204	—	—	480	372	365	368	283	401	311													
185	565	555	439	522	512	406	436	428	340	303	296	236		185	387	377	301	309	241	—	—	543	423	423	412	329	463	359													
240	678	668	527	622	613	485	522	515	408	359	353	280		240	461	452	360	369	288	—	—	630	492	497	486	388	536	417													
300	787	772	612	718	705	562	605	594	473	413	404	323		300	—	—	—	—	—	—	—	711	556	562	548	440	620	482													
400	923	933	723	836	843	660	708	715	559	478	480	377		400	—	—	—	—	—	—	—	808	638	653	650	516	706	553													
500	1078	1090	850	966	975	772	821	830	656	550	552	439		500	—	—	—	—	—	—	—	913	729	739	733	590	800	632													
630	1261	1288	1003	1113	1135	904	950	969	772	629	639	511		630	—	—	—	—	—	—	—	1026	833	856	860	695	930	740													

NOTES:

1 Applies to non-armoured, sheathed or unsheathed cables.

2 The normal operating temperature of thermoplastic cables, including flexible cords installed as installation wiring, is based on a conductor temperature of 75 ° C. This is due to the risk of thermal deformation of insulation if the cables are clipped, fixed or otherwise installed in a manner that exposes the cable to severe mechanical pressure at higher temperatures.

V-90 and V-90HT insulated cables may be operated up to the maximum permissible temperatures 90 ° C and 105 ° C provided that the cable is installed in a manner that is not subject to, or is protected against, severe mechanical pressure at temperatures higher than 75 ° C. Such applications also allow for cables to be used in—

(a) locations where the ambient temperatures exceed the normal 40 ° C, e.g. equipment wiring in luminaires and heating appliances, or in roof spaces affected by high summer temperatures; and (b) locations affected by bulk thermal insulation that restricts the dissipation of heat from the cable.

3 For cables with a maximum conductor temperature of 105 ° C the applicable current ratings are those provided for copper conductors up to and including 10mm² size.

4 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same current-carrying capacities as those illustrated.

5 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 23, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 8 to 10.

(c) For a single circuit fixed to perforated or unperforated cable tray, see Table 23 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

6 To calculate the single-phase voltage drop of these configurations, multiply the appropriate three-phase voltage drop value in Table 40 or Table 43 by 1.155.

7 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

8 For conductor sizes up to 10 mm² in Column 22, the values are based on ratings for wiring in underground wiring enclosures.

TABLE 6 CURRENT-CARRYING CAPACITIES

CABLE TYPE: TWO SINGLE-CORE (See Note 1)

INSULATION TYPE: R-HF-110, R-E-110 OR X-HF-110

MAXIMUM CONDUCTOR TEMPERATURE: 110°C

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9		10	11	12	13	14	15	16	17	18
Conductor size	Current-carrying capacity, A								Conductor size	Current-carrying capacity, A								
	Unenclosed									Enclosed								
	Spaced		Spaced from sur face		Touching		Exposed to sun			Wiring enclosure in air		Thermal insulation		Buried direct	Underground wiring enclosure			
																		
	Cu		Cu		Cu		Cu			Cu		Cu	Cu	Cu	Cu		Cu	
mm²	Solid/ Stranded	Flexible Solid/	Stranded	Flexible Solid/	Stranded	Flexible Solid/	Stranded	Flexible	mm²	Solid/ Stranded	Flexible	Cu	Cu	Cu	Solid/ Stranded	Flexible	Cu	
1	25	26	24	26	20	21	17	18	1	20	21	16	10	23	23	24	26	
1.5	32	32	31	32	25	26	21	22	1.5	25	25	20	13	29	29	30	33	
2.5	45	43	44	42	36	34	30	29	2.5	35	33	28	18	40	40	39	46	
4	59	57	58	56	47	45	39	38	4	46	45	37	23	53	53	51	59	
6	75	73	73	70	59	57	50	48	6	58	56	46	30	66	66	64	74	
10	103	102	99	98	81	80	68	67	10	78	77	62	40	88	88	86	97	
16	137	135	131	129	107	105	89	88	16	104	102	83	53	154	115	112	127	
25	183	178	175	170	143	139	119	116	25	137	133	109	72	198	148	143	163	
35	225	221	214	210	176	172	146	143	35	165	167	132	88	238	177	176	195	
50	276	279	261	263	215	218	178	179	50	205	207	164	—	282	214	215	236	
70	349	351	328	329	272	273	224	224	70	255	263	204	—	346	262	266	288	
95	434	422	406	395	339	329	277	269	95	321	312	257	—	416	321	312	352	
120	505	500	471	466	394	390	321	318	120	369	364	296	—	473	366	359	400	
150	581	577	540	536	454	450	369	366	150	430	426	344	—	531	420	414	448	
185	673	660	624	611	527	516	427	418	185	493	481	394	—	601	477	464	517	
240	806	794	743	732	630	621	508	500	240	594	583	476	—	698	561	548	600	
300	934	916	857	841	730	716	586	575	300	—	—	—	—	789	648	631	694	
400	1094	1105	998	1006	853	860	682	687	400	—	—	—	—	898	738	734	790	
500	1278	1290	1155	1164	990	999	789	794	500	—	—	—	—	1018	837	855	921	
630	1498	1529	1334	1359	1146	1168	909	925	630	—	—	—	—	1148	973	977	1045	

NOTES:

1 Applies to non-armoured, sheathed or unsheathed cables.

2 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same current-carrying capacities as those illustrated.

3 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 23, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 6 and 7.

(c) For a single circuit fixed to perforated or unperforated cable tray, see Table 23 for the derating factor to be applied to the current-carrying capacities given in Columns 4 and 5.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

4 To determine the single-phase voltage drop of these configurations, refer to the appropriate value in Table 40, Table 41 or Table 46.

5 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

6 For conductor sizes up to 10 mm² in Column 15, the values are based on ratings for wiring in underground wiring enclosures.

TABLE 7 CURRENT-CARRYING CAPACITIES

CABLE TYPE: THREE SINGLE-CORE (See Note 1)

INSULATION TYPE: THERMOPLASTIC (See Note 2)

MAXIMUM CONDUCTOR TEMPERATURE: 75°C

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Conductor size	Current-carrying capacity, A												Conductor size	Current-carrying capacity, A														
	Unenclosed													Enclosed														
	Spaced			Spaced from sur face			Touching			Exposed to sun				Wiring enclosure in air			Thermal insulation		Buried direct		Underground wiring enclosure							
																												
	Cu		Al	Cu		Al	Cu		Al	Cu		Al		Cu		Al	Cu	Al	Cu	Al	Cu		Al	Cu	Al			
mm ²	Solid/ Stranded	Flexible Solid/		Stranded	Flexible Solid/		Stranded	Flexible Solid/		Stranded	Flexible	Al	mm ²	Solid/ Stranded	Flexible	Al	Cu	Al	Cu	Al	Cu	Al	Solid/ Stranded	Flexible	Al	Cu	Al	
1	16	16	—	14	14	—	13	13	—	8	8	—		1	12	13	—	10	—	6	—	16	—	16	16	—	19	—
1.5	20	21	—	17	18	—	16	17	—	10	10	—		1.5	15	15	—	12	—	8	—	20	—	20	20	—	24	—
2.5	29	27	—	25	24	—	23	22	—	13	13	—		2.5	21	20	—	17	—	12	—	27	—	27	26	—	33	—
4	38	37	—	33	32	—	31	30	—	18	17	—		4	28	27	—	23	—	16	—	36	—	36	35	—	43	—
6	49	47	—	42	41	—	40	38	—	22	21	—		6	35	34	—	28	—	20	—	45	—	45	43	—	53	—
10	67	66	—	58	57	—	54	54	—	30	29	—		10	47	46	—	37	—	27	—	59	—	59	58	—	70	—
16	89	88	69	77	75	59	72	71	56	39	38	30		16	62	61	48	50	39	36	28	104	81	78	76	60	90	70
25	120	117	93	103	100	80	97	94	75	50	49	39		25	81	78	63	64	50	48	38	134	104	100	97	78	117	91
35	148	145	115	127	125	98	119	117	92	61	59	47		35	100	98	78	80	62	59	46	160	124	122	119	94	140	108
50	181	183	141	156	157	121	146	147	113	72	73	56		50	119	120	92	95	74	—	—	190	147	144	145	112	168	131
70	230	231	179	197	198	153	184	185	143	89	89	69		70	152	152	118	122	94	—	—	233	181	180	180	140	205	159
95	287	279	222	246	239	191	230	223	178	107	104	83		95	183	178	142	147	114	—	—	279	216	217	210	168	250	194
120	335	331	260	287	284	223	267	264	208	122	120	95		120	217	213	169	173	135	—	—	317	247	252	247	196	283	220
150	385	383	298	330	328	256	308	305	239	137	135	106		150	244	241	190	195	152	—	—	356	276	283	279	220	317	246
185	447	438	347	383	376	299	357	350	278	154	149	120		185	284	277	222	227	177	—	—	402	313	325	316	253	365	284
240	535	528	417	457	451	358	426	420	334	176	172	138		240	331	336	269	265	207	—	—	465	364	377	376	295	422	329
300	620	609	483	529	519	415	492	484	387	197	191	155		300	388	379	305	311	244	—	—	524	412	434	423	341	488	380
400	726	734	570	615	621	488	573	578	455	219	216	175		400	442	461	351	353	281	—	—	593	471	492	504	391	553	434
500	846	855	669	710	717	571	661	668	532	242	237	196		500	523	520	421	418	337	—	—	668	537	571	566	459	641	507
630	990	1011	789	817	833	668	760	775	622	265	262	219		630	588	592	481	471	385	—	—	748	612	639	641	523	723	578

NOTES:

Applies to non-armoured, sheathed or unsheathed cables.

2 The normal operating temperature of thermoplastic cables, including flexible cords installed as installation wiring, is based on a conductor temperature of 75 ° C. This is due to the risk of thermal deformation of insulation if the cables are clipped, fixed or otherwise installed in a manner that exposes the cable to severe mechanical pressure at higher temperatures.

V-90 and V-90HT insulated cables may be operated up to the maximum permissible temperatures 90 ° C and 105 ° C provided that the cable is installed in a manner that is not subject to, or is protected against, severe mechanical pressure at temperatures higher than 75 ° C. Such applications also allow for cables to be used in—

(a) locations where the ambient temperatures exceed the normal 40 ° C, e.g. equipment wiring in luminaires and heating appliances, or in roof spaces affected by high summer temperatures; and

(b) locations affected by bulk thermal insulation that restricts the dissipation of heat from the cable.

3 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same current-carrying capacities as those illustrated.

4 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 23, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 8 to 10.

(c) For a single circuit fixed to perforated or unperforated cable tray, see Table 23 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

5 To determine the three-phase voltage drop of these configurations, refer to the appropriate value in Table 40, Table 41, Table 43, Table 44 or Table 46.

6 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

7 For conductor sizes up to 10mm² in Column 22, the values are based on ratings for wiring in underground wiring enclosures.

8 Cables within the scope of AS/NZS 5000.2 (up to 16 mm²) may be rated to the values in the Tables covering 90°C insulated cables, subject to—

(a) information provided in Note 2; and

(b) any other relevant requirements of AS/NZS 3000

TABLE 8 CURRENT-CARRYING CAPACITIES

CABLE TYPE: THREE SINGLE-CORE (See Note 1)

INSULATION TYPE: X-90, X-HF-90, R-EP-90, R-CPE-90, R-HF-90 OR R-CSP-90

MAXIMUM CONDUCTOR TEMPERATURE: 90°C AND 105°C (See Note 2)

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Conductor size	Current-carrying capacity, A												Conductor size	Current-carrying capacity, A													
	Unenclosed													Enclosed													
	Spaced			Spaced from sur face			Touching			Exposed to sun				Wiring enclosure in air		Thermal insulation		Buried direct		Underground wiring enclosure							
																											
	Cu		Al	Cu		Al	Cu		Al	Cu		Al		Cu		Al	Cu	Al	Cu	Al	Cu		Al	Cu	Al		
mm ²	Solid/ Stranded	Flexible Solid/		Stranded	Flexible Solid/		Stranded	Flexible Solid/		Stranded	Flexible		mm ²	Solid/ Stranded	Flexible	Al	Cu	Al	Cu	Al	Cu	Al	Solid/ Stranded	Flexible	Al	Cu	Al
1	19	20	—	16	17	—	16	16	—	12	13	—	1	15	15	—	12	—	8	—	18	—	18	19	—	22	—
1.5	25	25	—	21	22	—	20	20	—	15	16	—	1.5	18	19	—	15	—	10	—	22	—	22	23	—	27	—
2.5	35	33	—	30	29	—	28	27	—	21	21	—	2.5	25	24	—	20	—	14	—	31	—	31	30	—	38	—
4	46	45	—	40	38	—	37	36	—	28	27	—	4	33	31	—	26	—	19	—	40	—	40	38	—	49	—
6	59	57	—	50	49	—	47	46	—	36	34	—	6	42	41	—	34	—	24	—	50	—	50	49	—	60	—
10	81	80	—	69	69	—	65	64	—	48	48	—	10	56	55	—	45	—	32	—	67	—	67	66	—	79	—
16	108	106	84	92	91	71	86	85	67	64	63	50	16	72	73	56	58	45	43	33	117	91	86	85	66	101	79
25	146	142	113	125	121	97	117	114	91	86	83	66	25	97	94	75	77	60	58	45	151	117	113	109	87	132	103
35	180	177	140	154	151	119	144	141	111	105	103	81	35	120	118	93	96	75	72	56	180	140	137	134	106	158	122
50	221	223	171	188	191	146	176	178	136	127	128	99	50	143	144	111	114	89	—	—	214	166	163	163	126	190	147
70	282	283	219	240	241	186	224	225	174	160	161	124	70	183	183	142	146	114	—	—	262	203	203	203	158	232	180
95	350	341	271	298	290	232	278	271	216	197	192	153	95	220	214	171	176	137	—	—	313	243	244	237	190	276	214
120	410	406	318	349	346	271	325	322	253	229	226	178	120	261	256	203	209	162	—	—	356	277	284	279	221	320	248
150	472	470	366	403	400	313	375	372	291	262	260	203	150	295	291	229	236	183	—	—	400	310	320	316	249	358	277
185	560	540	427	468	459	365	435	427	339	302	296	235	185	335	334	261	268	209	—	—	452	352	363	357	283	413	321
240	660	651	513	560	553	438	521	514	407	358	352	280	240	399	391	312	320	250	—	—	523	409	426	416	333	477	371
300	766	752	596	648	637	508	602	591	472	410	402	322	300	469	458	368	375	294	—	—	589	463	491	479	385	552	430
400	899	909	705	756	764	599	702	709	557	474	477	376	400	534	533	424	427	339	—	—	668	530	557	554	442	626	491
500	1051	1062	829	874	884	703	812	821	652	544	546	437	500	633	630	509	506	407	—	—	752	604	648	642	520	707	559
630	1230	1256	978	1010	1030	824	938	956	765	621	630	507	630	714	719	583	571	466	—	—	843	688	727	729	593	820	654

NOTES:

Applies to non-armoured, sheathed or unsheathed cables.

2 The normal operating temperature of thermoplastic cables, including flexible cords installed as installation wiring, is based on a conductor temperature of 75 ° C. This is due to the risk of thermal deformation of insulation if the cables are clipped, fixed or otherwise installed in a manner that exposes the cable to severe mechanical pressure at higher temperatures.

V-90 and V-90HT insulated cables may be operated up to the maximum permissible temperatures 90 ° C and 105 ° C provided that the cable is installed in a manner that is not subject to, or is protected against, severe mechanical pressure at temperatures higher than 75 ° C. Such applications also allow for cables to be used in—

(a) locations where the ambient temperatures exceed the normal 40 ° C, e.g. equipment wiring in luminaires and heating appliances, or in roof spaces affected by high summer temperatures; and

(b) locations affected by bulk thermal insulation that restricts the dissipation of heat from the cable.

3 For cables with a maximum conductor temperature of 105 ° C, the applicable current ratings are those provided for copper conductors up to and including 10mm² size.

4 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same current-carrying capacities as those illustrated.

5 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 23, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 8 to 10.

(c) For a single circuit fixed to perforated or unperforated cable tray, see Table 23 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

6 To determine the three-phase voltage drop of these configurations, refer to the appropriate value in Table 40, Table 41, Table 43, Table 44 or Table 46.

7 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

8 For conductor sizes up to 10mm² in Column 21, the values are based on ratings for wiring in underground wiring enclosures.

TABLE 9 CURRENT-CARRYING CAPACITIES

CABLE TYPE: THREE SINGLE-CORE (See Note 1)

INSULATION TYPE: R-HF-110, R-E-110 OR X-HF-110

MAXIMUM CONDUCTOR TEMPERATURE: 110°C

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9		10	11	12	13	14	15	16	17	18
Conductor size	Current-carrying capacity, A									Conductor size	Current-carrying capacity, A							
	Unenclosed										Enclosed							
	Spaced		Spaced from sur face		Touching		Exposed to sun				Wiring enclosure in air		Thermal insulation		Buried direct	Underground wiring enclosure		
																		
	Cu		Cu		Cu		Cu				Cu		Cu	Cu	Cu	Cu		Cu
mm²	Solid/ Stranded	Flexible Solid/ Stranded	Stranded	Flexible Solid/ Stranded	Stranded	Flexible Solid/ Stranded	Stranded	Flexible		mm²	Solid/ Stranded	Flexible	Cu	Cu	Cu	Solid/ Stranded	Flexible	Cu
1	24	25	21	22	20	21	17	18		1	17	18	14	10	20	20	21	24
1.5	31	31	27	27	25	26	21	22		1.5	22	23	18	13	25	25	26	30
2.5	43	42	38	36	36	34	30	29		2.5	32	31	25	18	36	36	34	42
4	57	55	50	48	47	45	39	38		4	41	40	33	23	46	46	44	54
6	73	70	63	61	59	57	50	48		6	51	50	41	30	57	57	55	67
10	99	99	86	85	81	80	68	67		10	71	70	57	40	77	77	76	88
16	132	130	114	112	107	105	89	88		16	93	91	74	53	130	99	97	115
25	177	173	153	149	143	139	119	116		25	125	121	100	72	168	130	125	148
35	218	214	188	184	176	172	146	143		35	151	148	121	88	201	155	151	176
50	267	270	230	233	215	217	178	179		50	182	190	146	—	237	184	188	212
70	339	340	291	292	272	273	224	224		70	234	234	187	—	291	230	229	259
95	422	410	363	353	339	329	277	269		95	285	277	228	—	348	277	268	315
120	492	487	422	418	394	390	321	317		120	337	331	269	—	396	322	316	357
150	565	562	486	482	453	450	368	365		150	382	378	306	—	445	362	357	400
185	656	644	564	553	526	516	426	417		185	449	438	359	—	503	415	404	461
240	786	775	674	665	629	620	507	499		240	548	538	439	—	583	492	481	533
300	912	895	780	766	727	714	584	572		300	626	612	501	—	657	556	542	617
400	1069	1079	910	918	847	855	678	682		400	718	757	575	—	746	631	648	700
500	1248	1260	1053	1064	981	990	782	786		500	865	864	692	—	843	736	729	815
630	1462	1493	1217	1240	1132	1154	898	913		630	983	993	787	—	947	827	828	920

NOTES:

Applies to non-armoured, sheathed or unsheathed cables.

2 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same current-carrying capacities as those illustrated.

3 Derating factors may apply as follows:

- (a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 23, 25 and 26 for appropriate derating factors.
- (b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 6 and 7.
- (c) For a single circuit fixed to perforated or unperforated cable tray, see Table 23 for the derating factor to be applied to the current-carrying capacities given in Columns 4 and 5.
- (d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

4 To determine the three-phase voltage drop of these configurations, refer to the appropriate value in Table 40, Table 41 or Table 46.

5 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

6 For conductor sizes up to 10mm² in Column 15 the values are based on ratings for wiring in underground wiring enclosures.

TABLE 10 CURRENT-CARRYING CAPACITIES

CABLE TYPE: TWO-CORE SHEATHED (See Note 1)

INSULATION TYPE: THERMOPLASTIC (See Note 2)

MAXIMUM CONDUCTOR TEMPERATURE: 75°C

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24	25	26	27
Conductor size	Current-carrying capacity, A												Conductor size	Current-carrying capacity, A													
	Unenclosed									Enclosed				Thermal insulation										Buried direct		Underground wiring enclosure	
	Spaced			Touching			Exposed to sun			Wiring enclosure in air				Partially surrounded by thermal insulation, unenclosed		Partially surrounded by thermal insulation, in a wiring enclosure		Completely surrounded by thermal insulation, unenclosed									
																											
	Cu		Al	Cu		Al	Cu		Al	Cu		Al		Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu		Al	
mm ²	Solid/ Stranded	Flexible		Stranded	Flexible		Stranded	Flexible		Stranded	Flexible		mm ²	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Solid/ Stranded	Flexible	Al	
1	15	16	—	14	15	—	11	12	—	13	13	—		1	11	—	10	—	7	—	6	—	17	—	17	18	—
1.5	19	20	—	18	18	—	14	14	—	16	17	—		1.5	14	—	13	—	9	—	8	—	21	—	21	22	—
2.5	27	26	—	26	25	—	20	19	—	23	23	—		2.5	20	—	19	—	13	—	12	—	30	—	30	29	—
4	37	35	—	34	33	—	27	26	—	30	29	—		4	27	—	24	—	17	—	15	—	39	—	39	38	—
6	46	45	—	44	42	—	34	32	—	39	38	—		6	35	—	31	—	22	—	20	—	50	—	50	48	—
10	64	63	—	60	59	—	46	45	—	52	51	—		10	48	—	42	—	30	—	26	—	66	—	66	65	—
16	85	83	66	80	78	62	60	59	47	68	68	52		16	64	49	54	42	40	31	34	26	114	88	86	85	66
25	113	110	88	107	104	83	79	77	62	90	87	70		25	85	66	72	56	53	41	45	35	147	114	112	108	87
35	139	137	108	131	128	101	97	94	75	112	109	87		35	105	81	90	70	65	51	56	43	178	138	136	133	106
50	170	171	132	159	161	124	116	117	90	133	134	103		50	127	99	107	83	—	—	—	—	211	163	162	163	126
70	215	215	167	201	202	156	145	145	112	170	169	132		70	161	125	136	105	—	—	—	—	259	201	202	202	157
95	265	257	205	248	241	192	175	170	136	204	198	158		95	198	154	163	127	—	—	—	—	311	241	243	236	189
120	307	304	239	288	285	224	202	199	157	241	236	187		120	230	179	192	150	—	—	—	—	355	276	282	277	220
150	351	348	272	328	326	255	227	225	177	271	267	210		150	263	204	217	168	—	—	—	—	398	309	317	313	246
185	403	395	314	377	370	294	258	252	201	313	305	244		185	302	235	250	195	—	—	—	—	449	350	363	353	283
240	477	470	373	446	439	349	300	294	235	364	368	285		240	357	279	291	228	—	—	—	—	520	406	421	419	329
300	547	537	429	511	502	401	339	331	266	424	415	333		300	409	321	340	266	—	—	—	—	586	460	483	472	379
400	631	636	500	589	593	467	384	384	305	482	500	383		400	471	373	386	306	—	—	—	—	663	526	548	560	434
500	716	728	575	668	678	536	429	431	345	561	564	451		500	534	429	449	360	—	—	—	—	741	595	628	629	504

NOTES:

1 Applies to cables with or without earth core, armoured or unarmoured, including neutral screened cables.

2 The normal operating temperature of thermoplastic cables, including flexible cords installed as installation wiring, is based on a conductor temperature of 75 ° C. This is due to the risk of thermal deformation of insulation if the cables are clipped, fixed or otherwise installed in a manner that exposes the cable to severe mechanical pressure at higher temperatures.

V-90 and V-90HT insulated cables may be operated up to the maximum permissible temperatures 90 ° C and 105 ° C provided that the cable is installed in a manner that is not subject to, or is protected against, severe mechanical pressure at temperatures higher than 75 ° C. Such applications also allow for cables to be used in—

(a) locations where the ambient temperatures exceed the normal 40 ° C, e.g. equipment wiring in luminaires and heating appliances, or in roof spaces affected by high summer temperatures; and

(b) locations affected by bulk thermal insulation that restricts the dissipation of heat from the cable.

3 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same current-carrying capacities as those illustrated.

4 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 23, 25 and 26 for appropriate derating factors

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 23 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(c) For a single circuit fixed to unperforated cable tray, see Table 24 for the derating factor to be applied to the current-carrying capacities given in Columns 2 to 4.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

5 To calculate the single-phase voltage drop of these configurations, multiply the appropriate three-phase voltage drop value in Table 42, Table 45 or Table 48 by 1.155.

6 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

7 For conductor sizes up to 10mm² in Column 21, the values are based on ratings for wiring in underground wiring enclosures.

8 Cables within the scope of AS/NZS 5000 (up to 25 mm² and with a maximum permissible conductor operating temperature of not less than 90°C) may be rated to the values in the Table 11 covering 90°C insulated cables, subject to—

(a) information provided in Note 2; and

(b) any other relevant requirements of AS/NZS 3000.

Refer to Paragraph C3 of AS/NZS 3000 for details on simplified protective device selection (MCBs) for overload protection.

TABLE 11 CURRENT-CARRYING CAPACITIES

CABLE TYPE: TWO-CORE SHEATHED (See Note 1)

INSULATION TYPE: X-90, X-HF-90, R-EP-90, R-CPE-90, R-HF-90 OR R-CSP-90

MAXIMUM CONDUCTOR TEMPERATURE: 90°C AND 105°C (See Note 2)

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24	25	26	27
Conductor size	Current-carrying capacity, A												Conductor size	Current-carrying capacity, A													
	Unenclosed									Enclosed				Thermal insulation										Buried direct		Underground wiring enclosure	
	Spaced			Touching			Exposed to sun			Wiring enclosure in air				Partially surrounded by thermal insulation, unenclosed		Partially surrounded by thermal insulation, in a wiring enclosure		Completely surrounded by thermal insulation, unenclosed									
																											
	Cu		Al	Cu		Al	Cu		Al	Cu		Al		Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu		Al	
mm ²	Solid/ Stranded	Flexible		Stranded	Flexible		Stranded	Flexible		Stranded	Flexible		mm ²	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Solid/ Stranded	Flexible	Al	
1	18	19	—	17	18	—	15	16	—	16	16	—		1	14	—	12	—	9	—	8	—	19	—	19	20	—
1.5	24	24	—	22	23	—	19	20	—	20	20	—		1.5	18	—	16	—	11	—	10	—	24	—	24	25	—
2.5	34	32	—	31	30	—	27	26	—	28	27	—		2.5	25	—	23	—	16	—	14	—	34	—	34	33	—
4	45	43	—	42	40	—	36	35	—	37	35	—		4	33	—	29	—	21	—	18	—	45	—	45	43	—
6	57	55	—	53	51	—	46	44	—	46	44	—		6	42	—	37	—	27	—	23	—	56	—	56	54	—
10	78	78	—	73	72	—	63	62	—	63	62	—		10	58	—	51	—	36	—	32	—	75	—	75	74	—
16	104	103	81	97	96	75	83	82	64	82	80	63		16	78	60	66	51	49	38	41	32	132	102	98	95	75
25	140	136	109	131	128	102	111	108	86	110	106	85		25	105	81	88	68	66	51	55	43	170	132	128	124	99
35	173	169	134	162	158	125	136	134	106	132	129	102		35	129	100	106	82	81	63	66	51	205	159	154	150	119
50	211	213	163	197	199	153	165	167	128	162	163	126		50	158	122	130	101	—	—	—	—	244	189	185	186	144
70	268	269	208	250	251	194	208	209	162	200	207	155		70	200	155	160	124	—	—	—	—	300	233	228	231	177
95	331	322	257	309	300	239	255	248	198	250	242	194		95	247	192	200	155	—	—	—	—	360	279	279	271	216
120	385	381	299	359	355	279	295	292	230	285	289	222		120	287	223	228	177	—	—	—	—	410	319	318	318	247
150	441	438	342	411	408	319	336	333	261	332	328	257		150	328	255	265	206	—	—	—	—	460	357	365	360	283
185	509	499	396	473	464	369	385	377	300	377	375	293		185	379	295	301	235	—	—	—	—	520	405	413	407	322
240	604	596	472	562	554	439	454	446	354	448	439	350		240	449	351	358	280	—	—	—	—	603	471	485	475	379
300	694	682	544	645	633	505	518	507	406	523	511	410		300	516	404	418	328	—	—	—	—	680	533	558	544	437
400	804	811	636	745	751	590	594	597	470	596	595	472		400	596	472	477	378	—	—	—	—	771	610	633	631	501
500	915	932	734	848	862	680	671	679	538	695	699	557		500	678	544	556	446	—	—	—	—	860	691	728	729	583

NOTES:

1 Applies to cables with or without earth core, armoured or unarmoured, including neutral screened cables.

2 The normal operating temperature of thermoplastic cables, including flexible cords installed as installation wiring, is based on a conductor temperature of 75 ° C. This is due to the risk of thermal deformation of insulation if the cables are clipped, fixed or otherwise installed in a manner that exposes the cable to severe mechanical pressure at higher temperatures.

V-90 and V-90HT insulated cables may be operated up to the maximum permissible temperatures 90 ° C and 105 ° C provided that the cable is installed in a manner that is not subject to, or is protected against, severe mechanical pressure at temperatures higher than 75 ° C. Such applications also allow for cables to be used in—

(a) locations where the ambient temperatures exceed the normal 40 ° C, e.g. equipment wiring in luminaires and heating appliances, or in roof spaces affected by high summer temperatures; and

(b) locations affected by bulk thermal insulation that restricts the dissipation of heat from the cable.

3 For cables with a maximum conductor temperature of 105 ° C the applicable current ratings are those provided for copper conductors up to and including 10mm² size.

4 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same currentcarrying capacities as those illustrated.

5 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 24, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(c) For a single circuit fixed to unperforated cable tray, see Table 24 for the derating factor to be applied to the current-carrying capacities given in Columns 2 to 4.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

6 To calculate the single-phase voltage drop of these configurations, multiply the appropriate three-phase voltage drop value in Table 42, Table 45 or Table 48 by 1.155.

7 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

8 For conductor sizes up to 10mm² in Column 21, the values are based on ratings for wiring in underground wiring enclosures.

9 Cables within the scope of AS/NZS 5000 (up to 25 mm²) may be rated to the values in this Table covering90°C insulated cables, subject to—

(a) information provided in Note 2; and

(b) any other relevant requirements of AS/NZS 3000.

Refer to Paragraph C3 of AS/NZS 3000 for details on simplified protective device selection (MCBs) for overload protection.

TABLE 12 CURRENT-CARRYING CAPACITIES

CABLE TYPE: TWO-CORE SHEATHED (See Note 1)

INSULATION TYPE: R-HF-110, R-E-110 OR X-HF-110

MAXIMUM CONDUCTOR TEMPERATURE: 110°C

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7		8	9	10	11	12	13	14	15
Conductor size	Current-carrying capacity, A							Conductor size	Current-carrying capacity, A						
	Unenclosed								Enclosed						
	Spaced		Touching		Exposed to sun				Metallic wiring enclosure in air		Thermal insulation		Buried direct	Underground wiring enclosure	
															
	Cu		Cu		Cu				Cu		Cu	Cu	Cu	Cu	
mm²	Solid/Stranded	Flexible	Stranded	Flexible	Stranded	Flexible		mm²	Solid/Stranded	Flexible	Cu	Cu	Cu	Solid/Stranded	Flexible
1	23	24	22	23	20	21		1	19	20	15	11	22	22	23
1.5	29	30	28	28	25	26		1.5	24	24	19	14	28	28	29
2.5	41	40	39	38	36	34		2.5	33	32	27	19	39	39	37
4	55	53	51	50	47	45		4	45	43	36	26	51	51	49
6	69	67	65	63	59	57		6	56	54	45	33	64	64	62
10	95	94	89	88	81	80		10	76	75	60	45	85	85	84
16	126	124	118	116	107	105		16	102	100	81	59	145	111	109
25	168	163	158	154	142	138		25	133	129	107	79	188	144	139
35	206	202	194	190	174	170		35	166	163	133	97	226	175	171
50	251	254	236	238	211	213		50	200	202	160	—	268	208	209
70	317	318	298	299	265	266		70	256	257	205	—	330	260	259
95	392	381	367	357	326	317		95	312	303	250	—	396	313	304
120	455	450	426	421	377	372		120	368	362	294	—	452	363	357
150	519	515	486	482	429	425		150	417	412	333	—	507	409	403
185	598	586	559	547	491	481		185	486	474	389	—	573	468	456
240	708	698	662	652	580	570		240	588	577	470	—	665	554	541
300	815	799	760	745	664	650		300	670	656	536	—	751	626	611
400	941	949	878	884	763	767		400	768	801	615	—	853	711	727
500	1074	1091	1000	1014	866	877		500	905	913	724	—	957	819	820

NOTES:

1 Applies to cables with or without earth core, armoured or unarmoured, including neutral screened cables.

2 The normal operating temperature of thermoplastic cables, including flexible cords installed as installation wiring, is based on a conductor temperature of 75 ° C. This is due to the risk of thermal deformation of insulation if the cables are clipped, fixed or otherwise installed in a manner that exposes the cable to severe mechanical pressure at higher temperatures.

V-90 and V-90HT insulated cables may be operated up to the maximum permissible temperatures 90 ° C and 105 ° C provided that the cable is installed in a manner that is not subject to, or is protected against, severe mechanical pressure at temperatures higher than 75 ° C. Such applications also allow for cables to be used in—

(a) locations where the ambient temperatures exceed the normal 40 ° C, e.g. equipment wiring in luminaires and heating appliances, or in roof spaces affected by high summer temperatures; and

(b) locations affected by bulk thermal insulation that restricts the dissipation of heat from the cable.

3 For cables with a maximum conductor temperature of 105 ° C the applicable current ratings are those provided for copper conductors up to and including 10mm² size.

4 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same currentcarrying capacities as those illustrated.

5 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 24, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(c) For a single circuit fixed to unperforated cable tray, see Table 24 for the derating factor to be applied to the current-carrying capacities given in Columns 2 to 4.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

6 To calculate the single-phase voltage drop of these configurations, multiply the appropriate three-phase voltage drop value in Table 42, Table 45 or Table 48 by 1.155.

7 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

8 For conductor sizes up to 10mm² in Column 21, the values are based on ratings for wiring in underground wiring enclosures.

9 Cables within the scope of AS/NZS 5000 (up to 25 mm²) may be rated to the values in this Table covering 90°C insulated cables, subject to—

(a) information provided in Note 2; and

(b) any other relevant requirements of AS/NZS 3000.

Refer to Paragraph C3 of AS/NZS 3000 for details on simplified protective device selection (MCBs) for overload protection.

TABLE 13 CURRENT-CARRYING CAPACITIES

CABLE TYPE: THREE-CORE AND FOUR-CORE (See Note 1)

INSULATION TYPE: THERMOPLASTIC (See Note 2)

MAXIMUM CONDUCTOR TEMPERATURE: 75°C

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24	25	26	27
Conductor size	Current-carrying capacity, A												Conductor size	Current-carrying capacity, A													
	Unenclosed									Enclosed				Thermal insulation										Buried direct		Underground wiring enclosure	
	Spaced			Touching			Exposed to sun			Wiring enclosure in air				Partially surrounded by thermal insulation, unenclosed		Partially surrounded by thermal insulation, in a wiring enclosure		Completely surrounded by thermal insulation, unenclosed									
																											
	Cu		Al	Cu		Al	Cu		Al	Cu		Al		Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu		Al	
mm²	Solid/ Stranded	Flexible		Stranded	Flexible		Stranded	Flexible		Stranded	Flexible		mm²	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Solid/ Stranded	Flexible	Al	
1	13	13	—	12	13	—	9	10	—	11	11	—		1	9	—	9	—	6	—	5	—	14	—	14	15	—
1.5	16	17	—	15	16	—	12	12	—	14	14	—		1.5	12	—	11	—	8	—	7	—	18	—	18	18	—
2.5	23	22	—	22	21	—	17	16	—	20	19	—		2.5	17	—	16	—	11	—	10	—	25	—	25	24	—
4	31	30	—	29	28	—	23	22	—	25	24	—		4	23	—	20	—	15	—	13	—	33	—	33	32	—
6	40	38	—	37	36	—	29	28	—	33	32	—		6	30	—	26	—	19	—	16	—	42	—	42	40	—
10	54	54	—	51	51	—	39	38	—	44	43	—		10	41	—	35	—	25	—	22	—	55	—	55	54	—
16	72	71	56	68	67	53	51	50	40	58	57	45		16	54	42	47	36	34	26	29	23	96	75	73	71	56
25	97	94	75	91	89	71	67	65	52	76	73	59		25	73	57	60	47	46	35	38	29	125	97	94	91	73
35	120	117	93	112	110	87	82	80	64	94	92	73		35	90	69	75	58	56	43	47	36	150	117	114	112	89
50	146	148	113	137	138	106	99	100	77	112	112	87		50	109	85	89	69	—	—	—	—	178	138	136	137	105
70	185	185	143	172	173	134	123	123	96	142	142	111		70	138	107	114	88	—	—	—	—	219	170	170	169	132
95	228	222	177	213	207	165	150	145	116	177	172	137		95	170	132	142	110	—	—	—	—	263	204	208	201	161
120	265	262	206	247	244	192	172	169	134	202	199	157		120	198	154	162	126	—	—	—	—	300	233	237	232	184
150	303	301	235	282	280	219	194	192	151	228	229	177		150	226	175	182	142	—	—	—	—	336	261	266	265	207
185	348	342	272	324	318	253	220	215	172	263	257	206		185	259	203	211	165	—	—	—	—	379	296	304	296	237
240	412	407	323	383	378	301	256	251	200	316	309	248		240	307	240	253	198	—	—	—	—	438	344	359	351	281
300	472	464	372	438	430	345	288	282	227	—	—	—		300	—	—	—	—	—	—	—	—	493	388	404	394	318
400	544	549	434	504	508	402	326	326	260	—	—	—		400	—	—	—	—	—	—	—	—	557	444	468	467	374
500	616	627	498	571	580	461	363	365	294	—	—	—		500	—	—	—	—	—	—	—	—	620	501	522	523	422

NOTES:

Applies to cables with or without earth core, armoured or non-armoured, including neutral screened cables.

2 The normal operating temperature of thermoplastic cables, including flexible cords installed as installation wiring, is based on a conductor temperature of 75°C. This is due to the risk of thermal deformation of insulation if the cables are clipped, fixed or otherwise installed in a manner that exposes the cable to severe mechanical pressure at higher temperatures.

V-90 and V-90HT insulated cables may be operated up to the maximum permissible temperatures 90°C and 105°C provided that the cable is installed in a manner that is not subject to, or is protected against, severe mechanical pressure at temperatures higher than 75°C. Such applications also allow for cables to be used in—

(a) locations where the ambient temperatures exceed the normal 40°C, e.g. equipment wiring in luminaires and heating appliances, or in roof spaces affected by high summer temperatures; and

(b) locations affected by bulk thermal insulation that restricts the dissipation of heat from the cable.

3 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same current-carrying capacities as those illustrated.

4 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 24, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(c) For a single circuit fixed to unperforated cable tray, see Table 24 for the derating factor to be applied to the current-carrying capacities given in Columns 2 to 4.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

5 To determine the three-phase voltage drop of these configurations, refer to the appropriate value in Table 42, Table 45 or Table 48.

6 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

7 For conductor sizes up to 10mm² in Column 21, the values are based on ratings for wiring in underground wiring enclosures.

8 Cables within the scope of AS/NZS 5000 (up to 25 mm²) may be rated to the values in the Table 14 covering 90°C insulated cables, subject to—

(a) information provided in Note 2; and

(b) any other relevant requirements of AS/NZS 3000.

Refer to Paragraph C3 of AS/NZS 3000 for details on simplified protective device selection (MCBs) for overload protection.

TABLE 14 CURRENT-CARRYING CAPACITIES

CABLE TYPE: THREE-CORE AND FOUR-CORE (See Note 1)

INSULATION TYPE: X-90, X-HF-90, R-EP-90, R-CPE-90, R-HF-90 OR R-CSP-90

MAXIMUM CONDUCTOR TEMPERATURE: 90°C AND 105°C (See Note 2)

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24	25	26	27
Conductor size	Current-carrying capacity, A												Conductor size	Current-carrying capacity, A													
	Unenclosed									Enclosed				Thermal insulation										Buried direct		Underground wiring enclosure	
	Spaced			Touching			Exposed to sun			Wiring enclosure in air				Partially surrounded by thermal insulation, unenclosed		Partially surrounded by thermal insulation, in a wiring enclosure		Completely surrounded by thermal insulation, unenclosed									
																											
	Cu		Al	Cu		Al	Cu		Al	Cu		Al		Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu		Al			
mm ²	Solid/ Stranded	Flexible		Stranded	Flexible		Stranded	Flexible		Stranded	Flexible	Al	mm ²	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Solid/ Stranded	Flexible	Al	
1	16	16	—	14	15	—	13	13	—	13	14	—		1	12	—	10	—	7	—	6	—	16	—	16	17	—
1.5	20	20	—	19	19	—	16	17	—	16	17	—		1.5	15	—	13	—	9	—	8	—	20	—	20	21	—
2.5	28	27	—	26	26	—	23	22	—	24	23	—		2.5	21	—	19	—	13	—	12	—	29	—	29	28	—
4	38	36	—	35	34	—	30	29	—	30	29	—		4	28	—	24	—	18	—	15	—	37	—	37	36	—
6	48	46	—	45	43	—	39	37	—	38	37	—		6	36	—	30	—	22	—	19	—	46	—	46	45	—
10	66	66	—	62	61	—	53	52	—	53	52	—		10	49	—	42	—	31	—	26	—	63	—	63	62	—
16	88	87	68	83	81	64	70	69	54	68	67	53		16	66	51	55	42	41	32	34	26	110	85	81	79	63
25	119	116	93	111	108	86	94	92	73	91	89	71		25	89	69	73	57	56	43	46	36	143	111	107	103	83
35	147	144	114	137	135	106	115	113	89	114	111	88		35	110	85	91	71	69	53	57	44	172	133	130	127	101
50	180	182	140	168	170	130	140	142	109	136	136	105		50	134	104	108	84	—	—	—	—	204	159	155	155	120
70	229	230	178	213	214	165	177	177	137	173	173	134		70	170	132	138	107	—	—	—	—	251	195	193	193	150
95	283	275	220	263	256	204	217	211	168	209	202	162		95	210	163	167	129	—	—	—	—	302	234	233	226	181
120	330	327	256	306	303	238	251	248	195	246	242	192		120	245	190	197	153	—	—	—	—	344	267	270	266	210
150	377	375	293	350	348	272	285	283	222	277	274	216		150	280	218	222	172	—	—	—	—	385	299	304	300	236
185	436	428	340	404	396	315	327	320	255	322	314	251		185	323	252	257	201	—	—	—	—	435	340	348	339	272
240	517	511	405	479	472	375	385	379	302	386	379	303		240	383	300	309	242	—	—	—	—	504	395	411	402	322
300	594	584	467	549	539	432	439	430	345	—	—	—		300	—	—	—	—	—	—	—	—	567	446	463	452	365
400	685	692	546	632	638	504	502	504	400	—	—	—		400	—	—	—	—	—	—	—	—	640	510	524	537	417
500	779	794	629	718	730	579	566	573	457	—	—	—		500	—	—	—	—	—	—	—	—	714	577	601	602	485

NOTES:

1 Applies to cables with or without earth core, armoured or non-armoured, including neutral screened cables.

2 The normal operating temperature of thermoplastic cables, including flexible cords installed as installation wiring, is based on a conductor temperature of 75 ° C. This is due to the risk of thermal deformation of insulation if the cables are clipped, fixed or otherwise installed in a manner that exposes the cable to severe mechanical pressure at higher temperatures.

V-90 and V-90HT insulated cables may be operated up to the maximum permissible temperatures 90 ° C and 105 ° C provided that the cable is installed in a manner that is not subject to, or is protected against, severe mechanical pressure at temperatures higher than 75 ° C. Such applications also allow for cables to be used in—

(a) locations where the ambient temperatures exceed the normal 40 ° C, e.g. equipment wiring in luminaires and heating appliances, or in roof spaces affected by high summer temperatures; and

(b) locations affected by bulk thermal insulation that restricts the dissipation of heat from the cable.

3 For cables with a maximum conductor temperature of 105 ° C the applicable current ratings are those provided for copper conductors up to and including 10mm² size.

4 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same currentcarrying capacities as those illustrated.

5 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 24, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 26 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(c) For a single circuit fixed to unperforated cable tray, see Table 24 for the derating factor to be applied to the current-carrying capacities given in Columns 2 to 4.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

6 To determine the three-phase voltage drop of these configurations, refer to the appropriate value in Table 42, Table 45 or Table 48.

7 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

8 For conductor sizes up to 10mm² in Column 21, the values are based on ratings for wiring in underground wiring enclosures

9 Cables within the scope of AS/NZS 5000 (up to 25 mm²) may be rated to the values in Table 11 covering 90°C insulated cables, subject to—

(a) information provided in Note 2; and

(b) any other relevant requirements of AS/NZS 3000.

Refer to Paragraph C3 of AS/NZS 3000 for details on simplified protective device selection (MCBs) for overload protection.

TABLE 15 CURRENT-CARRYING CAPACITIES

CABLE TYPE: THREE-CORE AND FOUR-CORE SHEATHED (See Note 1)

INSULATION TYPES: R-HF-110, R-E-110 OR X-HF-110

MAXIMUM CONDUCTOR TEMPERATURE: 110°C

REFERENCE AMBIENT TEMPERATURE: 40°C IN AIR, 25°C IN GROUND

1	2	3	4	5	6	7		8	9	10	11	12	13	14	15
Conductor size	Current-carrying capacity, A							Conductor size	Current-carrying capacity, A						
	Unenclosed								Enclosed						
	Spaced		Touching		Exposed to sun				Metallic wiring enclosure in air		Thermal insulation		Buried direct	Underground wiring enclosure	
															
	Cu		Cu		Cu				Cu		Cu	Cu	Cu	Cu	
mm²	Solid/Stranded	Flexible	Stranded	Flexible	Stranded	Flexible	mm²	Solid/Stranded	Flexible	Cu	Cu	Cu	Solid/Stranded	Flexible	
1	20	21	18	19	17	18		1	16	17	13	9	19	19	20
1.5	25	26	24	24	22	22		1.5	20	21	16	12	24	24	24
2.5	35	34	33	32	30	29		2.5	29	27	23	17	33	33	31
4	47	45	44	42	40	39		4	38	36	30	22	43	43	41
6	59	57	56	54	50	49		6	47	46	38	28	53	53	51
10	81	80	76	75	69	68		10	64	65	51	38	71	71	71
16	107	106	101	99	91	89		16	86	84	68	50	122	93	91
25	144	140	135	131	121	118		25	116	112	93	67	158	122	118
35	177	173	166	162	148	145		35	140	137	112	83	190	146	143
50	216	218	202	204	180	182		50	174	175	139	—	226	177	178
70	272	273	255	255	227	227		70	217	217	173	—	277	217	217
95	337	327	314	306	278	271		95	270	263	216	—	333	267	259
120	391	387	364	360	322	318		120	311	306	249	—	379	304	298
150	447	444	416	413	367	364		150	360	356	288	—	426	346	341
185	515	505	479	470	421	412		185	411	402	329	—	481	391	381
240	611	602	567	559	496	488		240	498	489	398	—	558	463	453
300	701	688	650	638	567	555		300	—	—	—	—	629	522	509
400	810	817	751	756	651	655		400	—	—	—	—	713	608	606
500	921	936	852	865	737	746		500	—	—	—	—	798	680	680

NOTES:

1 Applies to cables with or without earth core, armoured or non-armoured, including neutral screened cables.

2 Refer to Tables 3(1), 3(2), 3(3) and 3(4) for cable configurations deemed to have the same current-carrying capacities as those illustrated.

3 Derating factors may apply as follows:

(a) The current-carrying capacities apply to single circuits. For grouped cable circuits, see Clause 3.5.2 and Tables 22, 24, 25 and 26 for appropriate derating factors.

(b) For a single circuit fixed to the underside of a ceiling or similar horizontal surface, see Table 22 for the derating factor to be applied to the current-carrying capacities given in Columns 5 to 7.

(c) For a single circuit fixed to unperforated cable tray, see Table 24 for the derating factor to be applied to the current-carrying capacities given in Columns 2 to 4.

(d) For ambient temperature and depth of laying factors, see Tables 27 and 28.

4 To determine the three-phase voltage drop of these configurations, refer to the appropriate value in Table 42 or Table 48.

5 These ratings are based on 40°C ambient air temperature and 25°C ambient soil temperature. For other conditions, see Clause 3.5.3.

6 For conductor sizes up to 10mm² in Column 13, the values are based on ratings for wiring in underground wiring enclosures.



- 1.All products are manufactured under ISO certified practise.
- 2.All products carry full Test Report under ISO audit
- 3.All products have Compliance Certification under ISO audit
4. NATA endorsed Lab tested cable