



THAI WONDERFUL WIRE CABLE

The absolute solution to your need.

- WIRE AND CABLE
- POWER CORD
- WIRE HARNESS

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MADE IN THAILAND



OUR BACKGROUND

1990

Manufactory was established in CHONBURI with investment capital 100,000,000 Bahts.
Set up the office in BANGKOK

1991

Started production "CHRISMAS WIRE" product
Product approved "UL, CSA" standard
Started production "HOOK-UP WIRE, COMPUTER CABLE and FLEXIBLE CORDS" products.

1992

Started production "WIRE HARNESS & POWER SUPPLY CORDS" products

1993

Product approved "TIS and TOT standards" (Thailand)

1994

Product approved "T-MARK standard" (JAPAN)

1995

Product approved "VDE, SEV, DEMKO, SEMKO, NEMKO, OVE, SWISS, IMQ, CEBEC FIMKO, KEMA standard"
(EUROPEAN COUNTRIES)

1996

Increased investment capital to 130,000,000 Bahts Manufactory apporved quality system "ISO 9002:1994" (BVQI)

1997

Product approved "-F- mark" (JAPAN) Head office move to BANGNA BANGKOK
Increased investment capital to 200,000,000 Bahts

1998

Started production "COMMUNICATION CABLE" product.
Move the Wire Harness & Power cords production line to new Building
Product approved "NF" (FRANCE)

1999

Manufactory apporved quality system "ISO-9002:1994" (MASIC)

2001

Changed products to Lead free PVC (RoHS)

2002

Manufactory apporved quality system "ISO-9002:1994" (UL)
Manufactory updated quality system "ISO-9002:1994" to ISO-9001:2000 (MASIC, UL and BVQI)

2003

All Products are RoHs Compliance.
Manufactory approved "ISO 14001:1996" (BVQI)
Product Approved "K-mark" (Korea)

2004

Product Approved "UL Halogen Free", set up ICP Machine (RoHS Checked)

2005

Started production "ALUMINIUM CABLE" Product

2006

Update ISO 14001:1996 to "ISO 14001:2004"

2008

Started production "Cross-link PE & PVC Wire" Products

2009

Manufactory approved ISO/TS 16949:2009 (UL)

2010

Investment in Vietnam, set up New factory Wonderful Vietnam

2011

Start Production at Vietnam factory

2012

Start production UTP Cable CAT5E, CAT 6

2013

Start Production Cross-link wire by E-beam Machine

2015

Start Production Rubber Cable



CERTIFICATION

ISO QUALITY SYSTEM



ISO 9001 : 2008

Certificate Registration No438909 QM08

ISO/TS 16949 : 2009

Certificate Registration No438909 TS09

**The manufacture of thermoplastic insulation wires and cables,
wiring harness assemblies, power supply cord, and cord set per
safety standard requirement and customer requirements**

Manufacture of wire cable and wiring harness



**The manufacture of wires, cables and associated connectors
wire harnesses and power supply cords for electrical
appliance, computers and telecommunication equipment**

STANDARD OF PRODUCT LIST

UL	1007	1015	1032	1061	1095	1185	1195	1208	1354	1365
	1430	1431	1500	1533	1569	1571	1617	1618	1640	1672
	1691	1792	1865	1879	10002	10138	10272	10368	10369	10602
	10800	10913	11079	11338	2464	2468	2547	2854	2919	2990
	20080	20276	20288	21016	21099	21100	21143	21307	21311	21451
	21452	21453	21454	21456	21456	21472	21473	21474	21476	21520
	3173	3266	3271	3289	3302	3317	3320	3363	3364	3385
	3386	3398	3443	3610	3619	3766	4478			
	SPT-1 CMR	SPT-2 CMG	SPT-3 CM	NISPT-1 CAT. 5	NISPT-2 CAT. 5E	SVT CAT. 6	SJT	ST	CXTW	XTW
CUL	I/II	A/B	TR-32	TR-64	TEW	REW	CL1251	FT-1	FT-2	
CSA	TR-32	TR-64	FT-1	FT-2						
	SPT-1 TXF	SPT-2 TXFW	SPT-3 TEW	NISPT-1	NISPT-2	SVT	SJT	ST	SJTW	
PSE	HIV VVF	VSF HHFF	HVSF	VFF	HVFF	VCTF	VCTFK	HVCTF	HVCTFK	VCT
CB (IEC)	VDE IMQ	NEMKO SNI	SEMKO CCC	FIMKO KTL	OVE	DENKO	KEMA	SWISS	CEBEC	NF
	H03VV-F H05V-K		H03VVH2-F H05V2-F		H05VV-F H07V-K		H05VVH2-F		H05V2V2-F	
TIS	IEC01 (THW)	IEC02 (THW-F)	IEC05 (IV)	IEC06 (VSF)	IEC43	IEC52 (VKF)	IEC53 (VCT)	IEC57 (VCT-G)		
TOT	GW	DW	AP	AP8	JW	SW				
AS/NZ5	GTSA	LTSA	AP	AP8	JW	SW				



UL 1007, 1569 Hook-up Wire

80° C, 105° C 300 V

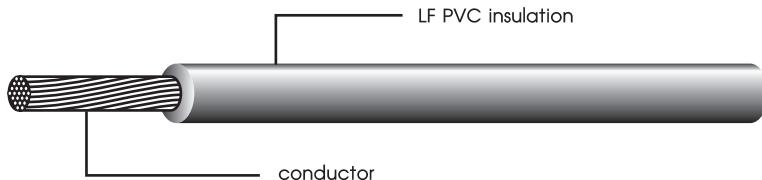
Applications:

- For general purpose internal wiring of electronic and electrical equipment

Construction:

Product Description:

- Tinned, (stranded or solid) copper conductor, or OS-1, 30-16 AWG
- Rating : UL 1007 80°C 300 V
UL 1569 105°C 300 V
- Pass UL VW-1 & CUL FT1 flame test. OS-1 is available
- Uniform thickness of wire to ensure easy stripping and cutting.
- Resistant to acids, oils, alkalines, moisture and fungus.
- Insulation : PVC / LF



UL Style & CUL Type	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	mm	
UL 1569 UL 1007 CUL TR-64 (Stranded)	30	7/0.102	0.38	1.10	11500	3500	381.00
	28	7/0.127		1.20	11500	3500	239.00
	26	7/0.160		1.30	10000	3050	150.00
	24	11/0.160		1.40	2000	610	94.20
	22	17/0.160		1.60	2000	610	59.40
	20	21/0.180		1.80	2000	610	36.70
	18	34/0.180		2.10	2000	610	23.20
	16	26/0.253		2.40	2000	610	14.60
UL 1569 UL 1007 CUL TR-64 (OS-1)	26	7/0.160	0.38	1.30	2000	610	150.00
	24	7/0.203		1.45	2000	610	94.20
	22	7/0.253		1.60	2000	610	59.40
	20	7/0.320		1.80	2000	610	36.70
	18	7/0.404		2.10	2000	610	23.20
	16	7/0.488		2.30	2000	610	14.60
UL 1569 UL 1007 CUL TR-64 (Solid)	26	1/0.404	0.38	1.25	2000	610	143.00
	24	1/0.511		1.35	2000	610	89.30
	22	1/0.643		1.50	2000	610	56.40
	20	1/0.813		1.65	2000	610	35.20
	18	1/1.024		1.85	2000	610	22.20
	16	1/1.290		2.15	2000	610	14.00



UL 1015 Hook-up Wire

105° C 600 V

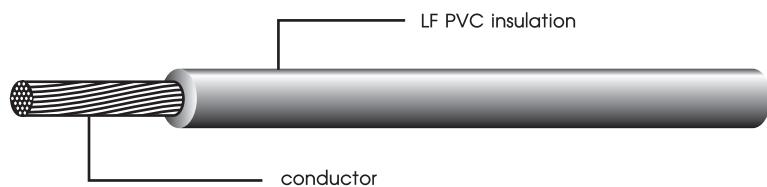
Applications:

- For Internal wiring of appliances

Construction:

Product Description:

- Solid or Stranded, tinned or bare copper conductor or OS-1, 30-2 AWG
- Rated temperature 105° C Rated voltage 600 V
- Uniform thickness of wire to ensure easy stripping and cutting.
- Resistant to acids, oils, alkalines, moisture and fungus
- Pass UL VW-1& CUL FT1 flame test
- OS- 1 is available
- Insulation : PVC / LF



Style & CUL Type	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	ft/coil	
UL 1015 CUL (TEW) (Stranded)	30	7/0.102	0.76	1.85	2000	610	381.00
	28	7/0.127		1.90	2000	610	239.00
	26	7/0.160		2.05	2000	610	150.00
	24	11/0.160		2.20	2000	610	94.20
	22	17/0.160		2.40	2000	610	59.40
	20	21/0.180		2.55	2000	610	36.70
	18	34/0.180		2.80	2000	610	23.20
	16	26/0.253		3.10	2000	610	14.60
	14	41/0.253		3.50	1000	305	8.96
	12	65/0.253		3.90	1000	305	5.64
	10	105/0.253		5.10	1000	305	3.54
	8	165/0.253	1.25	7.40	305	100	2.23
	6	266/0.253		8.90	305	100	1.40
	4	420/0.253		10.50	305	100	0.88
UL 1015 CUL (TEW) (OS-1)	22	7/0.254	0.76	2.38	2000	610	59.40
	20	7/0.320		2.55	2000	610	36.70
	18	7/0.404		2.80	2000	610	23.20
UL 1015 CUL (TEW) (Solid)	26	1/0.404	0.76	2.00	2000	610	143.00
	24	1/0.511		2.10	2000	610	89.30
	22	1/0.643		2.25	2000	610	56.40
	20	1/0.813		2.40	2000	610	35.20
	18	1/1.024		2.65	2000	610	22.20
	16	1/1.290		2.90	2000	610	14.00
	14	1/1.630		3.25	2000	610	8.78
	12	1/2.050		3.65	1000	305	5.53
	10	1/2.588		4.20	1000	305	3.47



1032 Hook-up Wire

90° C 1000 V

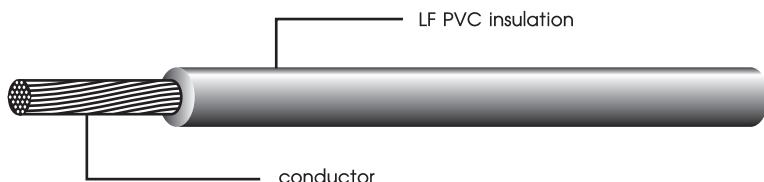
Applications:

- For internal wiring of appliances

Construction:

Product Description:

- Stranded, tinned or bare copper conductor, 30-2 AWG
- Color-coded PVC insulation (Lead Free)
- Rated temperature 90° C.
- Rated voltage 1000 V (DC)
- Uniform thickness of wire to ensure easy stripping and Cutting
- Resistant to acids, oil, alkalines moisture and fungus.
- Pass UL VW-1 flame test.



UL Style & CUL Type	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20° C
	AWG	No./mm			mm	mm	
UL 1032 CUL I A	24	7/0.203	0.76	2.20	2000	610	94.20
	22	7/0.253		2.35	2000	610	59.40
	20	21/0.180		2.55	2000	610	36.70
	18	34/0.180		2.80	2000	610	23.20



UL 1095 Hook-up Wire

80° C 300 V

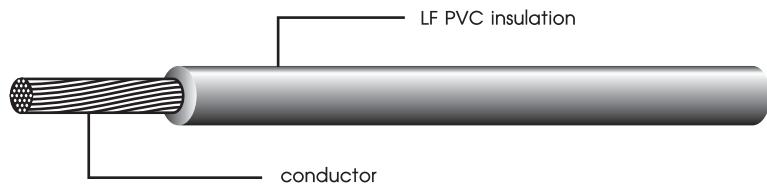
Applications:

- Internal wiring in electronic appliance.
- Cash register.
- Time-recording machines.
- Electronic, medical or dental equipment.

Construction:

Product Description:

- Stranded or solid,tinned or bare copper conductor, 30-16 AWG
- Uniform thickness of wire to ensure easy stripping and cutting.
- Rated temperature : 80° C. Rated voltage: 300 V
- Pass UL VW-1& CUL FT1 flame test.
- Insulation : PVC / LF



UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20° C
	AWG	No./mm			mm	mm	
UL 1095 (Stranded)	30	7/0.102	0.34	0.95	10000	3050	381.00
	28	7/0.127		1.05	10000	3050	239.00
	26	7/0.160		1.15	10000	3050	150.00
	24	7/0.203		1.30	2000	610	94.20
	22	7/0.253		1.45	2000	610	59.40
	20	7/0.320		1.60	2000	610	36.70
	18	7/0.404		1.90	2000	610	23.20
	16	26/0.253		2.25	2000	610	14.60
UL 1095 (Solid)	30	1/0.253	0.34	0.90	10000	3050	361.00
	28	1/0.320		1.00	10000	3050	227.00
	26	1/0.404		1.05	10000	3050	143.00
	24	1/0.511		1.15	2000	610	89.30
	22	1/0.643		1.30	2000	610	56.40
	20	1/0.813		1.45	2000	610	35.20
	18	1/1.024		1.65	2000	610	22.20
	16	1/1.29		1.95	2000	610	14.00



UL 1430, UL1431 Hook-up Wire

105 °C 300 V 600 V

Applications:

- For use in internal wiring of electrical and electronic equipment.
- For use in internal wiring of high temperature and temperature elevation appliances.

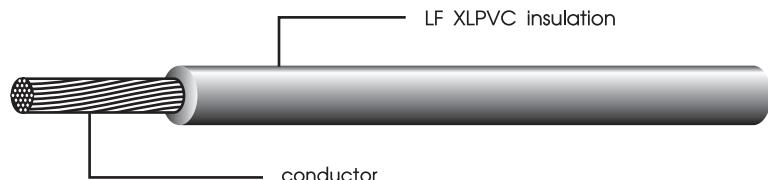
Product Description:

- Solid or Stranded, Tinned or bare Copper Conductor 30~16AWG

Rating : UL 1430 105°C 300 V

: UL 1431 105°C 600 V

- XLPVC insulation as RoHS complied wire and stable thermally.
- Pass UL VW-1 flame test.



XLPVC Style : UL 1430, UL 1431

UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	ft/coil	
UL 1430 (Stranded)	30	7/0.102	0.39	1.10	11500	3050	381.00
	28	7/0.127		1.20	11500	3500	239.00
	26	7/0.160		1.30	10000	3500	150.00
	24	11/0.160		1.40	2000	610	94.20
	22	17/0.160		1.66	2000	610	59.40
	20	21/0.180		1.90	2000	610	36.70
	18	34/0.180		2.20	2000	610	23.20
	16	26/0.253		2.50	2000	610	14.60
UL 1431 (Stranded)	30	7/0.102	0.76	1.90	2000	610	381.00
	28	7/0.127		2.00	2000	610	239.00
	26	7/0.160		2.10	2000	610	150.00
	24	11/0.160		2.20	2000	610	94.20
	22	17/0.160		2.35	2000	610	59.40
	20	21/0.180		2.55	2000	610	36.70
	18	34/0.180		2.80	2000	610	23.20
	16	26/0.253		3.10	2000	610	14.60



UL 1571 Hook-up Wire

80° C 30 V

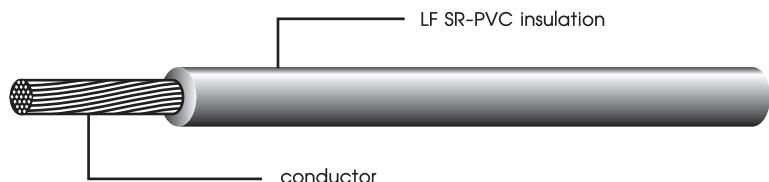
Applications:

- Internal wiring of electronic appliance
- Cash register
- Time-recording machines
- Electronic, medical or dental equipment

Construction:

Product Description:

- Solid or stranded, tinned copper conductor.
- Uniform thickness of wire to ensure easy stripping and cutting.
- Rated temperature: 80° C. Rated voltage: 30 V
- Pass UL VW-1 & CUL FT1 flame test.
- Insulation : SR-PVC / LF UL1571



UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20° C
	AWG	No./mm			mm	ft/coil	
UL 1571 (Stranded)	30	7/0.101	0.25	0.80	11480	3500	381.00
	28	7/0.102		0.90	11480	3500	239.00
	26	7/0.160		1.00	11480	3500	150.00
	24	7/0.203		1.10	2000	610	94.20
	22	7/0.253		1.30	2000	610	59.40
	20	7/0.320		1.50	2000	610	36.70
	18	7/0.404		1.70	2000	610	23.20



UL 1617 UL 1618 UL 1672

Double Insulated Hook-Up Wire

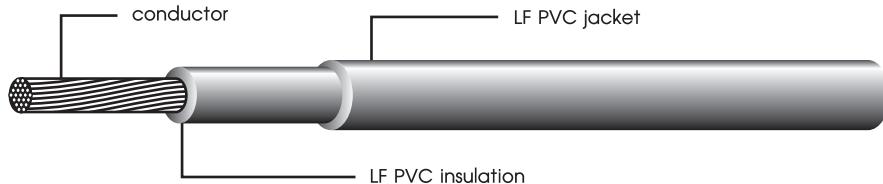
Applications:

- Internal wiring of electronic and electrical equipment.

Construction:

Product Description:

- Solid or stranded, tinned copper conductor.
- Rating : UL 1617 - 105°C, 600 V.
UL 1618 - 80°C, 300 V.
UL 1672 - 105°C, 300 V.
- Uniform thickness of wire to ensure easy stripping and cutting.
- Pass UL VW-1& CUL FT1 flame test.
- Insulation & Jacket : PVC / LF



UL Style	Conductor		Insulation Thickness	Jacket Thickness	Overall Diameter (Approx)	Standard Put-up		Conductor Resistance at 20°C
	AWG	No./mm				mm	mm	
UL 1617 CUL AWM T1 (Stranded)	26	7/0.160	0.76	0.25	2.60	2000	610	150.00
	24	11/0.160			2.70	2000	610	94.20
	22	17/0.160			2.90	2000	610	59.40
	20	21/0.180		0.40	3.40	2000	610	36.70
	18	34/0.180			3.60	2000	610	23.20
	16	26/0.253			3.90	2000	610	14.60
	14	41/0.253			4.30	2000	610	8.96
	12	65/0.253			4.80	2000	610	5.64
	10	105/0.253			5.80	2000	610	3.54
UL 1618 CUL AWM T1 (Stranded)	26	7/0.160	0.38	0.40	2.10	2000	610	150.00
	24	11/0.160			2.30	2000	610	94.20
	22	17/0.160			2.40	2000	610	59.40
	20	21/0.180			2.60	2000	610	36.70
	18	34/0.180			2.90	2000	610	23.20
	16	26/0.253			3.20	2000	610	14.60
	14	41/0.253			3.50	2000	610	8.96
	12	65/0.253			4.00	2000	610	5.64
	10	105/0.253			5.10	2000	610	3.54
	24	11/0.160		0.40	2.30	2000	610	94.20
UL 1672 CUL AWM T1	22	17/0.160			2.40	2000	610	59.40
	20	21/0.180			2.60	2000	610	36.70
	18	24/0.180			2.90	2000	610	23.20



UL 3173 Hook-up Wire

125°C 600 V

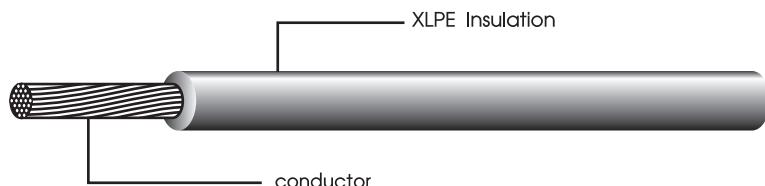
Applications:

- For use in internal wiring of electrical and electronic equipment.
- Lead wires of motors.

Product Description:

- Solid or Stranded, Tinned or bare Copper Conductor or OS-1 , 26~10AWG.
- Rated temperature: 125°C , Rated voltage: 600 V
- XLPE insulation as RoHS complied wire and stable thermally.
- Oil / Chemical resistance is excellent.
- Uniform thickness of wire to ensure easy stripping and cutting.
- Pass UL VW-1 flame test.
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.

Construction :



UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	ft/coil	
UL 3173 (Stranded)	26	7/0.160	0.76	2.00	10000	3050	150.00
	24	11/0.160		2.13	2000	610	94.20
	22	17/0.160		2.28	2000	610	59.40
	20	21/0.180		2.47	2000	610	36.70
	18	34/0.180		2.73	2000	610	23.20
	16	26/0.253		3.01	2000	610	14.60
	14	65/0.253		3.39	1000	305	8.96
	12	65/0.253		3.88	305	100	5.64
	10	105/0.253		4.92	305	100	3.54
UL 3173 (OS-1)	26	7/0.160	0.76	2.00	2000	610	150.00
	24	7/0.203		2.13	2000	610	94.20
	22	7/0.253		2.28	2000	610	59.40
	20	7/0.320		2.48	2000	610	36.70
	18	7/0.404		2.73	2000	610	23.20
	16	7/0.488		2.98	2000	610	14.60
UL 3173 (Solid)	26	1/0.404	0.76	1.92	2000	610	143.00
	24	1/0.511		2.03	2000	610	89.30
	22	1/0.643		2.16	2000	610	56.40
	20	1/0.813		2.33	2000	610	35.20
	18	1/0.024		2.54	2000	610	22.20
	16	1/0.290		2.81	2000	610	14.00



UL 3266 Hook-Up Wire

125° C 300 V

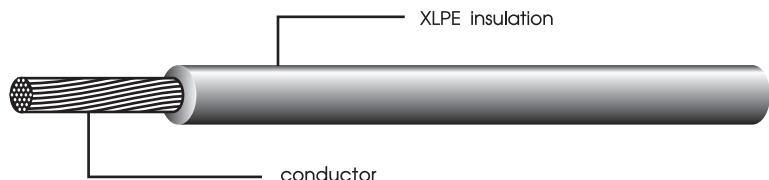
Applications:

- Use for general electric equipment internal wiring

Product Description:

- Solid or Stranded, Tinned or bare Copper Conductor 32~10AWG.
- Rated temperature: 125°C , Rated voltage: 300 V
- XLPE insulation as RoHS complied wire and stable thermally.
- Uniform thickness of wire to ensure easy stripping and cutting.
- Pass UL VW-1 flame test.
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.

Construction:



UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard put-up		Conductor Resistance at 20°C
	AWG	NO./mm			mm	mm	
UL 3266 (Stranded)	30	7/0.102	0.38	1.10	11500	3500	381.00
	28	7/0.127		1.15	11500	3500	239.00
	26	7/0.160		1.20	10000	3050	150.00
	24	11/0.160		1.40	2000	610	94.20
	22	17/0.160		1.55	2000	610	59.40
	20	21/0.180		1.75	2000	610	36.70
	18	34/0.180		2.10	2000	610	23.20
	16	26/0.253		2.30	2000	610	14.60
	14	41/0.253		2.70	2000	610	8.96



UL 3271 Hook-up Wire

125°C 600 V

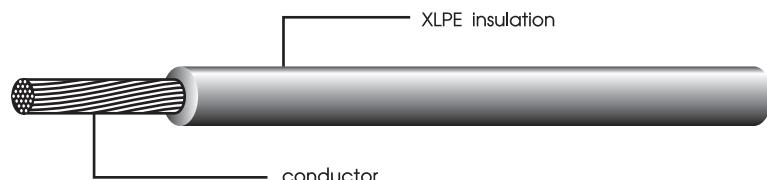
Applications:

- For use in internal wiring of electrical and electronic equipment.
- Lead wires of motors.

Product Description:

- Solid or Stranded , Tinned or bare Copper Conductor or OS-1 , 30~16AWG
- Rated temperature: 125°C , Rated voltage: 600 V
- XLPE insulation as RoHS complied wire and stable thermally.
- Oil / Chemical resistance is excellent.
- Uniform thickness of wire to ensure easy stripping and cutting.
- Pass UL VW-1 flame test.
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.

Construction :



UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	ft/coil	
UL 3271 (Stranded)	30	7/0.102	0.76	1.83	11500	3500	381.00
	28	7/0.127		1.90	11500	3500	239.00
	26	7/0.160		2.00	10000	3050	150.00
	24	11/0.160		2.13	2000	610	94.20
	22	17/0.160		2.29	2000	610	59.40
	20	21/0.180		2.47	2000	610	36.70
	18	34/0.180		2.73	2000	610	23.20
	16	26/0.253		3.01	2000	610	14.60
UL 3271 (OS-1)	26	7/0.160		2.00	2000	610	150.00
	24	7/0.203		2.13	2000	610	94.20
	22	7/0.253		2.80	2000	610	59.40
	20	7/0.320		2.48	2000	610	36.70
	18	7/0.404		2.73	2000	610	23.20
	16	7/0.488		2.98	2000	610	14.60
UL 3271 (Solid)	26	1/0.404		1.92	2000	610	143.00
	24	1/0.551		2.03	2000	610	89.30
	22	1/0.643		2.16	2000	610	56.40
	20	1/0.813		2.33	2000	610	35.20
	18	1/1.024		2.54	2000	610	22.20
	16	1/1.290		2.81	2000	610	14.00



UL 3289, 3398 Hook-up Wire

150°C 300 V/600 V

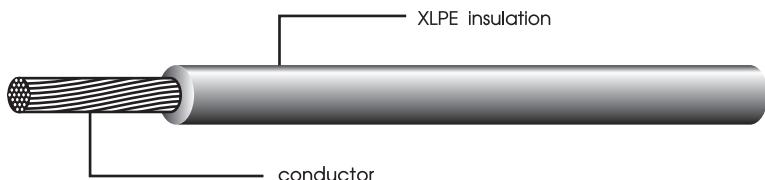
Applications:

- For use in internal wiring of electrical and electronic equipment.
- High temperature resistance wire.

Product Description:

- Solid or Stranded , Tinned or bare Copper Conductor 30-16AWG.
- Rated temperature:
- Rating : UL 3289 150°C, 600 V
: UL 3398 150°C, 600 V
- XLPE insulation as RoHS complied wire and stable thermally.
- High temperature resistance is excellent compared with normal XLPE wire.
- Pass UL VW-1 flame test.
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.

Construction :



UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	ft/coil	
UL 3398 (Stranded)	30	7/0.102	0.38	1.07	11500	3500	381.00
	28	7/0.127		1.15	11500	3500	239.00
	26	7/0.160		1.25	10000	3050	150.00
	24	11/0.160		1.37	2000	610	94.20
	22	17/0.160		1.52	2000	610	59.40
	20	21/0.180		1.71	2000	610	36.70
	18	34/0.180		1.97	2000	610	23.20
	16	26/0.253		2.25	2000	610	14.60
UL 3398 (Solid)	26	1/0.404	0.76	1.23	2000	610	143.00
	24	1/0.511		1.35	2000	610	89.30
	22	1/0.643		1.50	2000	610	56.40
	20	1/0.813		1.70	2000	610	35.20
	18	1/1.024		1.94	2000	610	22.20
	16	1/1.290		2.25	2000	610	14.00
UL 3289 (Stranded)	30	7/0.102	0.76	1.83	11500	3500	381.00
	28	7/0.127		1.91	11500	3500	239.00
	26	7/0.160		2.01	10000	3050	150.00
	24	11/0.160		2.13	2000	610	94.20
	22	17/0.160		2.28	2000	610	59.40
	20	21/0.180		2.47	2000	610	36.70
	18	34/0.180		2.73	2000	610	23.20
	16	26/0.253		3.01	2000	610	14.60
UL 3289 (Solid)	26	1/0.404	0.76	1.99	2000	610	143.00
	24	1/0.511		2.11	2000	610	89.30
	22	1/0.643		2.26	2000	610	56.40
	20	1/0.813		2.46	2000	610	35.20
	18	1/1.024		2.70	2000	610	22.20
	16	1/1.290		3.01	2000	610	14.00



UL 3302 Hook-up Wire

105°C 30 V

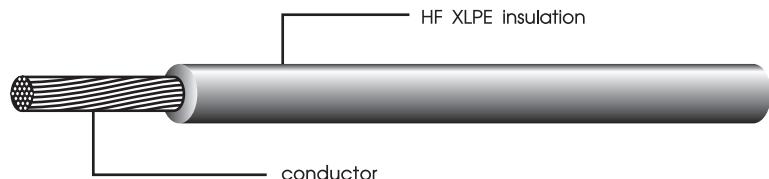
Applications:

- For use in Internal wiring of electrical and electronic equipment.
- High temperature resistance wire.

Product Description:

- Solid , OS-1 or Stranded , Tinned or bare Copper Conductor 32~16 AWG.
- Rated temperature: 105°C , Rated voltage: 30 V
- Halogen free XLPE insulation as RoHS complied wire and stable thermally.
- Small outer diameter saves space.
- Pass UL VW-1 flame test.

Construction :



Halogen Free Style : UL 3302

UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	ft/coil	
UL 3302 (Stranded)	32	7/0.080	0.15	0.54	11500	3500	563.00
	30	7/0.102		0.61	11500	3500	381.00
	28	7/0.127		0.68	11500	3500	239.00
	26	0/0.160		0.78	10000	3050	150.00
	24	11/0.160		0.91	2000	610	94.20
	22	17/0.160		1.06	2000	610	59.40
	20	21/0.180	0.20	1.35	2000	610	36.70
	18	34/0.180	0.25	1.71	2000	610	23.20
	16	26/0.253		1.99	2000	610	14.60
UL 3302 (OS-1)	26	7/0.160	0.15	0.78	2000	610	150.00
	24	7/0.203		0.91	2000	610	94.20
	22	7/0.253		1.06	2000	610	59.40
	20	7/0.320	0.20	1.36	2000	610	36.70
	18	7/0.404	0.25	1.71	2000	610	23.20
	16	7/0.488		1.96	2000	610	14.60
UL 3302 (Solid)	26	1/0.404	0.15	0.70	2000	610	143.00
	24	1/0.511		0.81	2000	610	89.30
	22	1/0.643		0.94	2000	610	56.40
	20	1/0.813	0.20	1.21	2000	610	35.20
	18	1/1.024	0.25	1.52	2000	610	22.20
	16	1/1.290		1.79	2000	610	14.00



UL 1061 Hook-up Wire

80° C 300 V

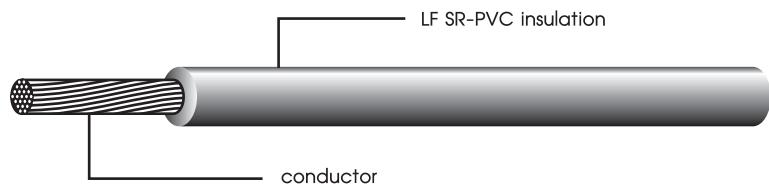
Applications:

- Internal wiring of computer, office equipment and other electronic & electrical equipment.

Construction:

Product Description:

- (Solid or Stranded) tinned copper conductor or OS-1, 30-16 AWG.
- Rated temperature 80° C Rated voltage: 300 V
- Uniform thickness of wire to ensure easy stripping and cutting.
- Pass UL VW-1 & CUL FT1 flame test. OS-1 is available
- Insulation : SR-PVC / LF



UL Style & CUL Type	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	ft/coil	
UL 1061 CUL IA (Stranded)	30	7/0.102	0.25	0.80	11480	3500	381.00
	28	7/0.127		0.90	11480	3500	239.00
	26	7/0.160		1.00	11480	3500	150.00
	24	7/0.203		1.10	2000	610	94.20
	22	7/0.253		1.30	2000	610	59.40
	20	7/0.320		1.50	2000	610	36.70
	18	7/0.404		1.70	2000	610	23.20
	16	26/0.253		2.00	2000	610	14.60
UL 1061 CUL IA (Solid)	30	1/0.253		0.76	11480	3500	361.00
	28	1/0.320		0.83	11480	3500	227.00
	26	1/0.404		0.90	11480	3500	143.00
	24	1/0.511		1.02	2000	610	89.30
	22	1/0.643		1.15	2000	610	56.40
	20	1/0.813		1.32	2000	610	35.20
	18	1/1.024		1.52	2000	610	22.20
	16	1/1.290		1.80	2000	610	14.00
UL 1061 CUL IA (OS-1)	26	7/0.160		1.00	4000	1220	150.00
	24	7/0.203		1.10	2000	610	94.20
	22	7/0.253		1.30	2000	610	59.40
	20	7/0.320		1.50	2000	610	36.70
	18	7/0.404		1.80	2000	610	23.20



UL 3317 Hook-up Wire

105°C 300 V

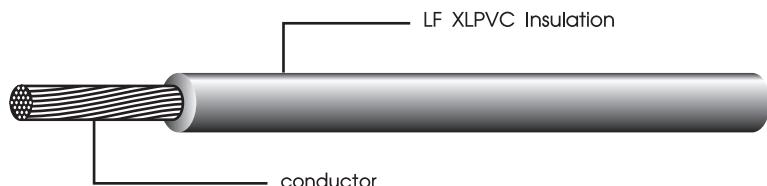
Applications:

- For use in internal wiring of electrical and electronic equipment.
- For use in internal wiring of high temperature and temperature elevation appliances.

Product Description:

- Solid or Stranded, Tinned or bare Copper Conductor 14~10AWG
- Rated temperature: 105°C , Rated voltage: 300 V
- XLPVC insulation as RoHS complied wire and stable thermally.
- Pass UL VW-1 flame test.

Construction :



XLPVC Style : UL 3317

UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	mm	
UL 3317 (Stranded)	14	41/0.253	0.39	2.11	1000	305	8.96
	12	65/0.253		2.46	305	100	5.64
	10	105/0.253		4.18	305	100	3.54



UL 3363 UL 3364

Double Insulated Hook-Up Wire

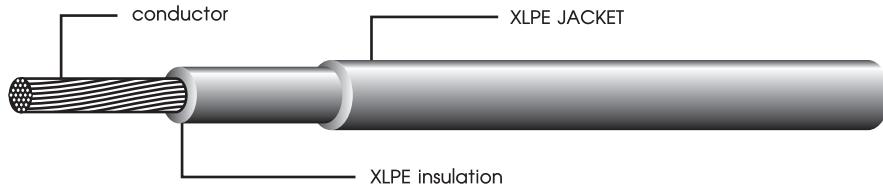
Applications:

- Internal wiring of electronic and electrical equipment.

Construction:

Product Description:

- Solid or stranded, tinned copper conductor.
- Rating : UL 3364 : 125°C 600 V.
UL 3363 : 125°C 300 V.
- Uniform thickness of wire to ensure easy stripping and cutting.
- Pass UL VW-1 flame test.
- Insulation & Jacket : XLPE
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.



UL Style	Conductor		Insulation Thickness	Jacket Thickness	Overall Diameter (Approx)	Standard Put-up		Conductor Resistance at 20°C
	AWG	No./mm				mm	mm	
UL 3364 (Stranded)	26	7/0.160	0.76	0.25	2.60	2000	610	150.00
	24	11/0.160			2.70	2000	610	94.20
	22	17/0.160			2.90	2000	610	59.40
	20	21/0.180		0.40	3.40	2000	610	36.70
	18	34/0.180			3.60	2000	610	23.20
	16	26/0.253			3.90	2000	610	14.60
	14	41/0.253			4.30	2000	610	8.96
	12	65/0.253			4.80	2000	610	5.64
	10	105/0.253			5.80	2000	610	3.54
UL 3363 (Stranded)	24	11/0.160	0.38	0.40	2.30	2000	610	94.20
	22	17/0.160			2.40	2000	610	59.40
	20	21/0.180			2.60	2000	610	36.70
	18	24/0.180			2.90	2000	610	23.20



UL 3385 Hook-up Wire

105°C 300 V

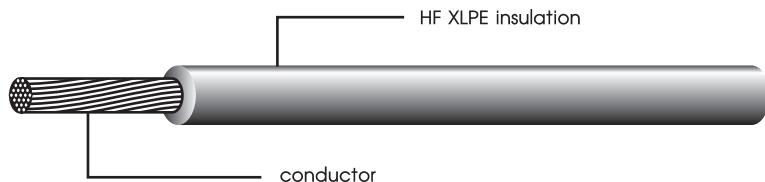
Applications:

- For general purpose internal wiring of electronic and electrical equipment

Construction:

Product Description:

- Tinned, (stranded or solid) copper conductor or OS-1, 32-16 AWG
- Rating : UL 3385 105°C 300 V
- Pass UL VW-1 & CUL FT1 flame test. OS-1 is available
- Uniform thickness of wire to ensure easy stripping and cutting.
- Resistant to acids, oils, alkalines, moisture and fungus.
- Insulation : XLPE / HF



Halogen Free Style : UL 3385

UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	mm	
UL 3385 (Stranded)	30	7/0.102	0.38	1.10	11500	3500	381.00
	28	7/0.127		1.20	11500	3500	239.00
	26	7/0.160		1.30	10000	3050	150.00
	24	11/0.160		1.40	2000	610	94.20
	22	17/0.160		1.60	2000	610	59.40
	20	21/0.180		1.80	2000	610	36.70
	18	34/0.180		2.10	2000	610	23.20
	16	26/0.253		2.40	2000	610	14.60
UL 3385 (OS-1)	26	7/0.160	0.38	1.30	2000	610	150.00
	24	7/0.203		1.45	2000	610	94.20
	22	7/0.253		1.60	2000	610	59.40
	20	7/0.320		1.80	2000	610	36.70
	18	7/0.404		2.10	2000	610	23.20
	16	7/0.488		2.30	2000	610	14.60
UL 3385 (Solid)	26	1/0.404	0.38	1.25	2000	610	143.00
	24	1/0.511		1.35	2000	610	89.30
	22	1/0.643		1.50	2000	610	56.40
	20	1/0.813		1.65	2000	610	35.20
	18	1/1.024		1.85	2000	610	22.20
	16	1/1.290		2.15	2000	610	14.00



UL 3386 Hook-up Wire

105° C 600 V

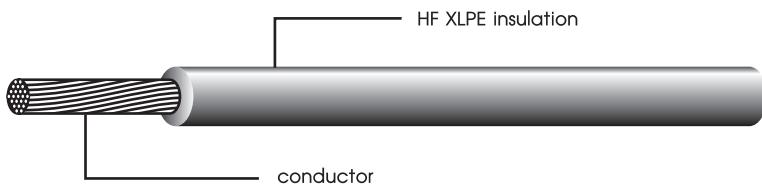
Applications:

- For Internal wiring of appliances

Construction:

Product Description:

- Solid or Stranded, tinned or bare copper conductor or OS-1, 30-4 AWG
- Rated temperature 105° C Rated voltage:600V
- Uniform thickness of wire to ensure easy stripping and cutting.
- Resistant to acids, oils, alkalines, moisture and fungus
- Pass UL VW-1 flame test
- OS-1 is available
- Insulation : XLPE / HF



Halogen Free Style : UL 3386

UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	mm	
UL 3386 (Stranded)	30	7/0.102	0.76	1.85	2000	610	381.00
	28	7/0.127		1.90	2000	610	239.00
	26	7/0.160		2.05	2000	610	150.00
	24	11/0.160		2.20	2000	610	94.20
	22	17/0.160		2.40	2000	610	59.40
	20	21/0.180		2.55	2000	610	36.70
	18	34/0.180		2.80	2000	610	23.20
	16	26/0.253		3.10	2000	610	14.60
	14	41/0.253		3.50	1000	305	8.96
	12	65/0.253		3.90	1000	305	5.64
	10	105/0.253		5.10	1000	305	3.54
	8	165/0.253	1.25	7.40	305	100	2.23
	6	266/0.253		8.90	305	100	1.40
	4	420/0.253		10.50	305	100	0.88
UL 3386 (OS-1)	22	7/0.254	0.76	2.38	2000	610	59.40
	20	7/0.320		2.55	2000	610	36.70
	18	7/0.404		2.80	2000	610	23.20
UL 3386 (Solid)	26	1/0.404	0.76	2.00	2000	610	143.00
	24	1/0.511		2.10	2000	610	89.30
	22	1/0.643		2.25	2000	610	56.40
	20	1/0.813		2.40	2000	610	35.20
	18	1/1.024		2.65	2000	610	22.20
	16	1/1.290		2.90	2000	610	14.00
	14	1/1.630		3.25	2000	610	8.78
	12	1/2.050		3.65	1000	305	5.53
	10	1/2.588		4.20	1000	305	3.47



UL 3443 Hook-up Wire

105°C 300 V

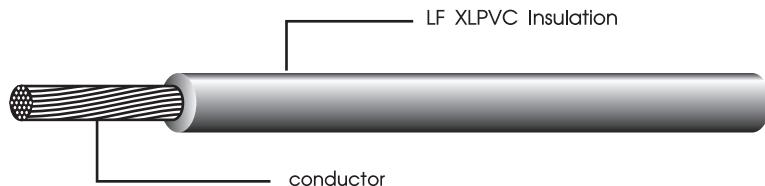
Applications:

- For use in internal wiring of electrical and electronic equipment, especially for compact size type.

Product Description:

- Solid or Stranded, Tinned or bare Copper Conductor 30~14AWG
- Rated temperature: 105°C , Rated voltage: 300 V
- XLPVC insulation as RoHS complied wire and stable thermally.
- Excellent mechanical strength.
- Pass UL VW-1 flame test.

Construction :



XLPVC Style : UL 3443

UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	mm	
UL 3443 (Stranded)	30	7/0.102	0.26	0.83	11500	3500	381.00
	28	7/0.127		0.90	11500	3500	239.00
	26	7/0.160		1.00	10000	3050	150.00
	24	11/0.160		1.13	2000	610	94.20
	22	17/0.160		1.28	2000	610	59.40
	20	21/0.180		1.47	2000	610	36.70
	18	34/0.180		1.73	2000	610	23.20
	16	26/0.253		2.01	2000	610	14.60
UL 3443 (OS-1)	26	7/0.160	0.26	1.00	2000	610	150.00
	24	7/0.203		1.13	2000	610	94.20
	22	7/0.253		1.28	2000	610	59.40
	20	7/0.320		1.48	2000	610	36.70
	18	7/0.404		1.73	2000	610	23.20
	16	7/0.488		1.98	2000	610	14.60
UL 3443 (Solid)	26	1/0.404	0.26	0.92	2000	610	143.00
	24	1/0.511		1.03	2000	610	89.30
	22	1/0.643		1.16	2000	610	56.40
	20	1/0.813		1.33	2000	610	35.20
	18	1/1.024		1.54	2000	610	22.20
	16	1/1.290		1.81	2000	610	14.00



UL 3610 Hook-Up Wire

105°C 300V

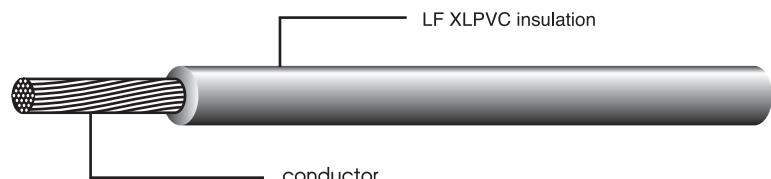
Applications:

- Internal wiring of electronic equipment, mobile equipment and small electronic equipment.

Product Description:

- Solid or Stranded, Tinned or bare Copper Conductor 30-16 AWG
- Rated temperature 105°C Rated voltage 300 V.
- Cross-linked PVC insulation
- Uniform insulation thickness of wire to ensure easy stripping and cutting
- Environmental testing pass RoHS
- pass VW-1 & FT1 flame test

Construction:



UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard put-up		Conductor Resistance at 20°C
	AWG	NO./mm			mm	ft / coil	
UL 3610 (Stranded)	30	7/0.102	0.16	0.65	11500	3500	381.00
	28	7/0.127		0.71	11500	3500	239.00
	26	7/0.160		0.82	10000	3050	150.00
	24	11/0.160		0.95	2000	610	94.20
	22	17/0.160		1.55	2000	610	59.40
	20	21/0.180		1.30	2000	610	36.70
	18	34/0.180		1.55	2000	610	23.20
	16	26/0.253		1.85	2000	610	14.60



UL 10272 Hook-Up Wire

80° C 150 V

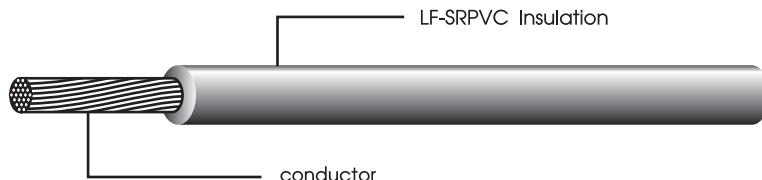
Applications:

- Internal wiring of electronic equipment and small electronic equipment.

Product Description:

- Solid or Stranded, Tinned or bare Copper Conductor 36-20 AWG
- Rated temperature 80°C Rated voltage 150 V.
- Lead free PVC insulation
- Uniform insulation thickness of wire to ensure easy stripping and cutting
- Environmental testing pass RoHS
- pass VW-1 & FT1 flame test

Construction:



UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard put-up		Conductor Resistance at 20°C
	AWG	NO./mm			mm	ft / coil	
UL 10272 (Stranded)	30	7/0.102	0.16	0.67	11500	3500	381.00
	28	7/0.127		0.80	11500	3500	239.00
	26	7/0.160		0.88	10000	3050	150.00
	24	7/0.203		0.98	2000	610	94.20
	22	7/0.253		1.13	2000	610	59.40
	20	7/0.320		1.32	2000	610	36.70



UL 10368 Hook-up Wire

105° C 300 V

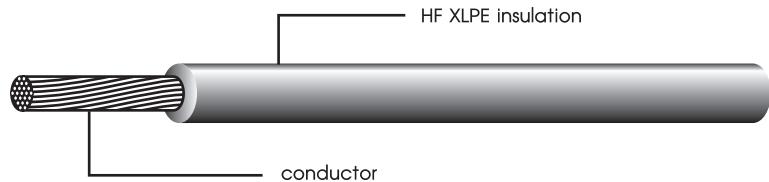
Applications:

- Internal wiring of computer, office equipment and other electronic & electrical equipment.

Construction:

Product Description:

- (Solid or Stranded) tinned copper conductor or OS-1, 30-16 AWG.
- Rated temperature 105° C Rated voltage: 300 V
- Uniform thickness of wire to ensure easy stripping and cutting.
- Pass UL VW-1 & CUL FT1 flame test. OS-1 is available
- Insulation : XLPE / HF UL10368
- Halogen free XLPE insulation as RoHS complied wire and stable thermally.



Halogen Free Style : UL 10368

UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	mm	
UL 10368 (Stranded)	30	7/0.102	0.25	0.80	11480	3500	381.00
	28	7/0.127		0.90	11480	3500	239.00
	26	7/0.160		1.00	11480	3500	150.00
	24	7/0.203		1.10	2000	610	94.20
	22	7/0.253		1.30	2000	610	59.40
	20	7/0.320		1.50	2000	610	36.70
	18	7/0.404		1.70	2000	610	23.20
	16	26/0.253		2.00	2000	610	14.60
UL 10368 (Solid)	30	1/0.253	0.25	0.76	11480	3500	361.00
	28	1/0.320		0.83	11480	3500	227.00
	26	1/0.404		0.90	11480	3500	143.00
	24	1/0.511		1.02	2000	610	89.30
	22	1/0.643		1.15	2000	610	56.40
	20	1/0.813		1.32	2000	610	35.20
	18	1/1.024		1.52	2000	610	22.20
	16	1/1.290		1.80	2000	610	14.00
UL 10368 (OS-1)	26	7/0.160	0.25	1.00	4000	1220	150.00
	24	7/0.203		1.10	2000	610	94.20
	22	7/0.253		1.30	2000	610	59.40
	20	7/0.320		1.50	2000	610	36.70
	18	7/0.404		1.80	2000	610	23.20



UL 10369 Hook-up Wire

105° C 600 V

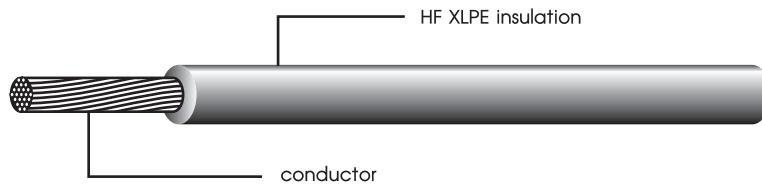
Applications:

- Internal wiring of computer, office equipment and other electronic & electrical equipment.

Construction:

Product Description:

- (Solid or Stranded) tinned copper conductor or OS-1, 30-16 AWG.
- Rated temperature 105° C Rated voltage: 600 V
- Uniform thickness of wire to ensure easy stripping and cutting.
- Pass UL VW-1 flame test.
- Insulation : XLPE / HF
- Halogen free XLPE insulation as RoHS complied wire and stable thermally.



Halogen Free Style : UL 10369

UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	mm	
UL 10369 (Stranded)	30	7/0.102	0.50	1.30	11480	3500	381.00
	28	7/0.122		1.40	11480	3500	239.00
	26	7/0.160		1.45	11480	3500	150.00
	24	11/0.160		1.60	2000	610	94.20
	22	17/0.160		1.75	2000	610	59.40
	20	21/0.180		1.95	2000	610	36.70
	18	34/0.180		2.20	2000	610	23.20
	16	26/0.253		2.50	2000	610	14.60
UL 10369 (Solid)	30	1/0.253	0.50	1.25	11480	3500	361.00
	28	1/0.320		1.35	11480	3500	227.00
	26	1/0.404		1.40	11480	3500	143.00
	24	1/0.511		1.50	2000	610	89.30
	22	1/0.643		1.65	2000	610	56.40
	20	1/0.813		1.80	2000	610	35.20
	18	1/1.024		2.00	2000	610	22.20
	16	1/1.290		2.30	2000	610	14.00
UL 10369 (OS-1)	26	7/0.160	0.50	1.50	4000	1220	150.00
	24	7/0.203		1.60	2000	610	94.20
	22	7/0.253		1.80	2000	610	59.40
	20	7/0.320		2.00	2000	610	36.70
	18	7/0.404		2.20	2000	610	23.20



UL 10602 Hook-up Wire

80° C 300 V

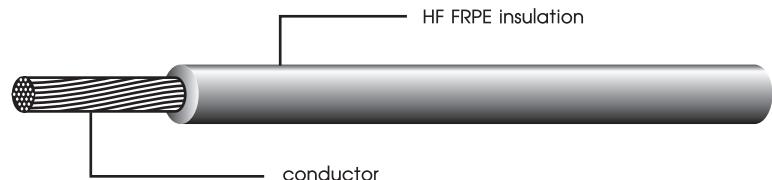
Applications:

- Internal wiring in electronic appliance.
- Cash register.
- Time-recording machines.
- Electronic, medical or dental equipment.

Construction:

Product Description:

- Stranded or solid,tinned or bare copper conductor, 30-16 AWG
- Uniform thickness of wire to ensure easy stripping and cutting.
- Rated temperature : 80° C. Rated voltage: 300 V
- Pass VW-1 flame test.
- Insulation : FRPE / HF
- Halogen free XLPE insulation as RoHS complied wire and stable thermally.



Halogen Free Style : UL 10602

UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm			mm	mm	
UL 10602 (Stranded)	30	7/0.102	0.34	0.95	10000	3050	381.00
	28	7/0.127		1.05	10000	3050	239.00
	26	7/0.160		1.15	10000	3050	150.00
	24	7/0.203		1.30	2000	610	94.20
	22	7/0.253		1.45	2000	610	59.40
	20	7/0.320		1.60	2000	610	36.70
	18	7/0.404		1.90	2000	610	23.20
	16	26/0.253		2.25	2000	610	14.60
UL 10602 (Solid)	30	1/0.253	0.34	0.90	10000	3050	361.00
	28	1/0.320		1.00	10000	3050	227.00
	26	1/0.404		1.05	10000	3050	143.00
	24	1/0.511		1.15	2000	610	89.30
	22	1/0.643		1.30	2000	610	56.40
	20	1/0.813		1.45	2000	610	35.20
	18	1/1.024		1.65	2000	610	22.20
	16	1/1.290		1.95	2000	610	14.00



UL 10913 Hook-Up Wire

80° C 300 V

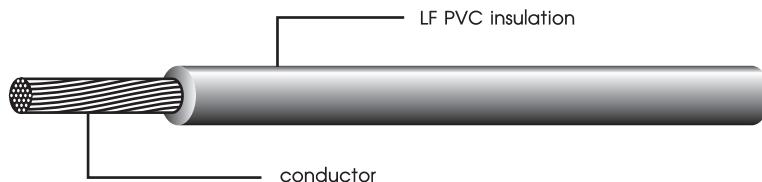
Applications:

- Internal wiring of appliances and electronic equipment

Product Description:

- Solid or Stranded, Tinned or bare Copper Conductor 32-16 AWG
- Rated temperature 80°C Rated voltage 300 V.
- Lead free PVC insulation
- Uniform insulation thickness of wire to ensure easy stripping and cutting
- Environmental testing pass RoHS
- Pass VW-1 & FT1 flame test

Construction:



UL Style	Conductor		Insulation Thickness	Overall Diameter (Approx)	Standard put-up		Conductor Resistance at 20°C
	AWG	NO./mm			mm	ft / coil	
UL 10913 (Stranded)	30	7/0.102	0.50	1.31	11500	3500	381.00
	28	7/0.127		1.39	11500	3500	239.00
	26	7/0.160		1.44	10000	3050	150.00
	24	11/0.160		1.62	2000	610	94.20
	22	17/0.160		1.78	2000	610	59.40
	20	21/0.180		1.97	2000	610	36.70
	18	34/0.180		2.33	2000	610	23.20
	16	26/0.253		2.52	2000	610	14.60



<PS> E Standard Power Cable

JIS C - 3307 (IV), JIS C-3317 (HIV) 60°C / 75°C 600V PVC Cable



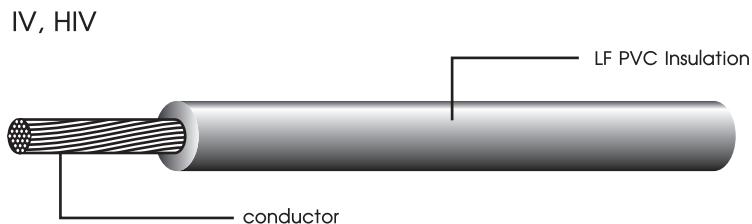
Applications :

- Suitable for indoor small electronic instrument

Product Description:

- Solid or Stranded bare copper
- PVC insulation (lead free) for IV 60°C 600V
- Heat resistant PVC insulation (lead free) for HIV 75°C 600V
- Environmental testing pass RoHS
- Pass VW-1 flame test

Construction:



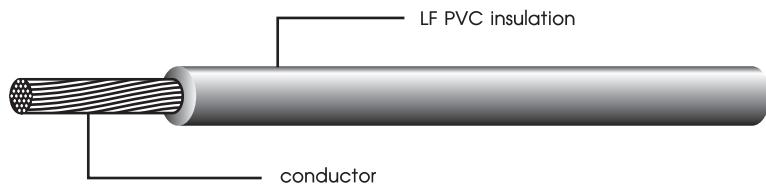
Wire Size		Conductor NO./mm	Insulation Thickness mm	Overall Diameter (Approx.) mm	Standard Put - Up M/Coil	Withstand Current	
mm	mm ²					IV A	HIV A
1.2	-	1/1.200	0.80	2.80	300	19	23
1.6	-	1/1.600	0.80	3.20	300	27	33
2.0	-	1/2.000	0.80	3.60	300	35	43
2.6	-	1/2.600	1.00	4.60	300	48	59
3.2	-	1/3.200	1.20	5.60	300	62	76
4.0	-	1/4.000	1.40	6.80	300	81	99
5.0	-	1/5.000	1.60	8.20	200	107	131
-	0.9	7/0.400	0.80	2.80	300	17	21
-	1.25	7/0.450	0.80	3.00	300	19	23
-	2.0	7/0.600	0.80	3.40	300	27	33
-	3.5	7/0.800	0.80	4.00	300	37	45
-	5.5	7/1.000	1.00	5.00	300	49	60
-	8	7/1.200	1.20	6.00	300	61	75
-	14	7/1.600	1.40	7.60	300	88	108
-	22	7/2.000	1.60	9.20	200	115	141
-	38	7/2.600	1.80	11.50	100	162	198

**SINGLE CORE FLEXIBLE PVC INSULATED****Applications:**

- For general purpose internal wiring of electronic and electrical equipment.

Product Description:

- Annealed Stranded Copper Conductor
- Color-coded PVC insulation. (Lead Free)
- Rated temperature: HVSF = 75°C, 105°C VSF = 60°C.
- Rate voltage : 300 V.
- Ref. JIS C 3306

Construction:

Wire Size mm ²	Conductor NO/mm	Insulation Thickness mm	OVERALL DIAMETER mm (Approx)	CONDUCTOR RESISTANCE Ω/KM/20°C	STANDARD PUT-UP M/COIL
0.50	20/0.180	0.80	2.50	36.70	500
0.75	30/0.180		2.80	24.40	
1.25	50/0.180		3.10	14.70	
2.00	41/0.250		3.40	9.50	



EU PVC insulation Single Core

IEC 02, IEC 06, IEC 08, VDE 0281-3, HD21.3, IEC60227-3

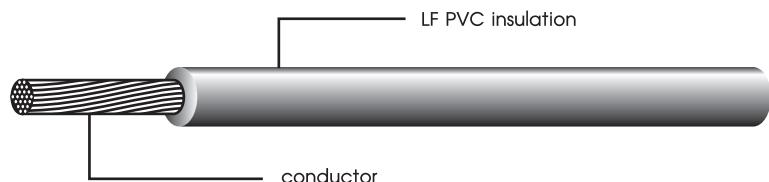
Applications:

- For internal wiring of electronic equipment

Product Description:

- Stranded bare copper conductor 0.5 - 6.0 mm²
- Color - code PVC insulation conductor (Lead Free)
- Raled temperature 70°C
- Rated Voltage : 300/500V
- Resistant to acids, oils, alkalines, moisture and fungus
- Flame applied 60S

Construction:



Type	Conductor		Insulation Thickness mm.	Overall diameter (Approx) mm.	Standard Put - up		Conductor Resistance at 20 °C
	mm ²	No/mm.			Ft/Coil	M/Coil	
H05V-K IEC 06	0.75	16/0.203	0.60	2.20	2000	610	24.40
	1.25	24/0.203		2.40			14.70
	2.00	32/0.203		2.60			9.50
H07V-K IEC 02	1.50	30/0.253	0.80	3.10	2000	610	13.30
	2.50	50/0.253		3.70	1000	305	7.98
	4.00	80/0.253		4.30	328	100	4.95
	6.00	72/0.253		5.00	328	100	3.30
H05V2-K IEC 08	0.75	16/0.203	0.60	2.20	2000	610	24.40
	1.25	24/0.203		2.40			14.70
	2.00	32/0.203		2.60			9.50



UL 2468 Flat Ribbon Wire

80° C 300 V

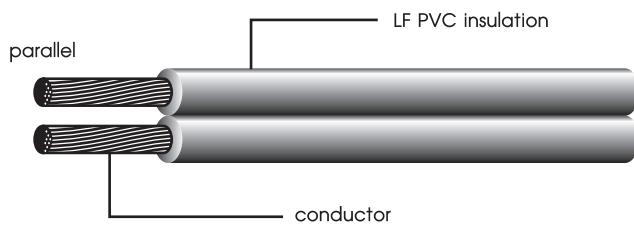
Applications:

- For use in internal wiring of appliances, computers.

Product Description:

- OS-1 Tinned, Stranded copper conductor, 32-16 AWG
- Rated temperature: 80° C. Rated voltage: 300 V
- Pass VW-1 flame test.
- Resistant to acids, alkalines, moisture and fungus.
- Insulation : PVC / LF

Construction:



UL Style CUL Type	Conductor		Core	Insulation Thickness	Overall Diameter (Approx.)	Standard Put-Up
	AWG	No/mm				
UL 2468 CUL I A (AWM)	26	1/1.290	2	0.45	1.40 x 2.90	610
		7/0.160			1.40 x 3.40	
		7/0.160			1.40 x 3.90	
	24	11/0.160			1.50 x 3.10	
		7/0.203			1.50 x 4.00	
	22	17/0.160			1.60 x 3.20	
	18	7/0.404			2.15 x 4.30	
		41/0.160			2.10 x 4.20	



UL 4478 UL 21016 Flat Ribbon Wire

105°C 300 V

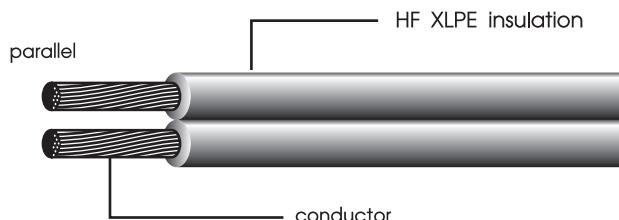
Applications:

- For use in internal wiring of electrical and electronic equipment
- Soldering to PCB wire-trap type connector.

Product Description:

- OS-1 Tinned, Stranded copper conductor, 32~16 AWG
- Rated temperature: 105°C . Rated voltage: 300 V
- Resistant to acids, alkalines, moisture and fungus.
- Halogen free XLPE insulation as RoHS complied wire and stable thermally.
- Pass UL VW-1& CUL FT1 flame test. OS-1 is available
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.

Construction :



Halogen Free Style : UL 4478 UL 21016

UL Style	Conductor		Core	Insulation Thickness	Overall Diameter (Approx.)	Standard Put-Up	Conductor Resistance at 20°C
	AWG	No./mm					
UL 4478 UL 21016	32	7/0.080	2	0.25	0.74 x 1.49	610	456.74
			3		0.74 x 2.23	610	
			4		0.74 x 2.98	610	
	30	7/0.102	2		0.81 x 1.62	610	381.00
			3		0.81 x 2.44	610	
			4		0.81 x 3.25	610	
	28	7/0.127	2		0.89 x 1.78	610	239.00
			3		0.89 x 2.66	610	
			4		0.89 x 3.55	610	
	26	7/0.160	2		0.99 x 1.98	610	150.00
			3		0.99 x 2.97	610	
			4		0.99 x 3.96	610	
	24	11/0.160	2		1.11 x 2.23	610	94.20
			3		1.11 x 3.34	610	
			4		1.11 x 4.45	610	
	22	17/0.160	2		1.26 x 2.52	610	59.40
			3		1.26 x 3.79	610	
			4		1.26 x 5.05	610	
	20	21/0.180	2		1.45 x 2.91	610	36.70
			3		1.45 x 4.36	610	
			4		1.45 x 5.81	610	
	18	34/0.180	2		1.71 x 3.42	610	23.20
			3		1.71 x 5.14	610	
			4		1.71 x 6.85	610	
	16	26/0.253	2		1.99 x 3.98	610	14.60
			3		1.99 x 5.97	610	
			4		1.99 x 7.96	610	



UL 21311 Flat Ribbon Wire

80 ° C 300 V

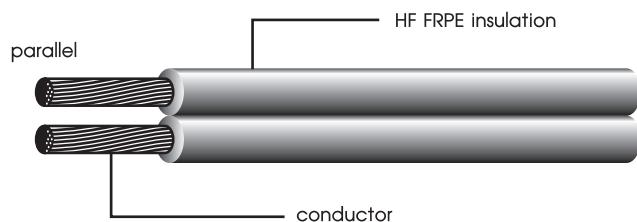
Applications:

- For use in internal wiring of appliances, computers.

Product Description:

- OS-1 Tinned, Stranded copper conductor, 32-16 AWG
- Rated temperature: 80 ° C. Rated voltage: 300 V
- Pass VW-1 flame test.
- Resistant to acids, alkalines, moisture and fungus.
- Insulation : FRPE / HF
- Halogen free XLPE insulation as RoHS complied wire and stable thermally.
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.

Construction:



Halogen Free Style : UL 21311

UL Style CSA Type	Conductor		Core	Insulation Thickness	Overall Diameter (Approx.)	Standard Put-Up	Conductor Resistance at 20°C
	AWG	No/mm					
UL 21311	26	1/1.290	2	0.45	1.40 x 2.90	610	150.00
		7/0.160			1.40 x 3.40		
		7/0.160			1.40 x 3.90		
	24	11/0.160			1.50 x 3.10		94.20
		7/0.203			1.50 x 4.00		
	22	17/0.160			1.60 x 3.20		59.40
		7/0.404			2.15 x 4.30		
	18	41/0.160			2.10 x 4.20		23.20



UL 1185, 2854 Shield Wire

80° C 300 V / 30 V

Applications:

- For use in recording studios, sound systems and electronic circuits.

Construction:

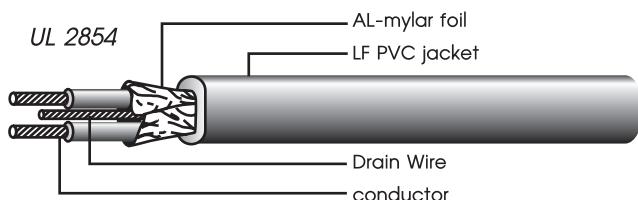
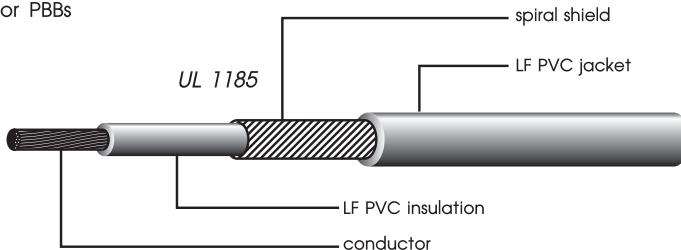
Product Description:

UL 1185 : 80°C 300 V

- Stranded or solid,tinned copper conductor. PVC insulation (Lead Free)
- Tinned copper wire spiral shield.
- PVC jacketed single core. (Lead Free)
- Use of spiral shield allows for fast simple termination.
- Pass UL VW-1& CUL FT1 flame test.

UL 2854 : 80°C 30 V

- Stranded, solid, tinned or top-coated copper conductor.
- Semi Rigid PVC Insulation. (Lead Free)
- Drain wire between insulated cores. and AL-Mylar foil
- Overall aluminum foil shield.
- Color-coded PVC jacketed flat twin. (Lead Free)
- Pass UL VW-1& CUL FT1 flame test.
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.



UL Style & CUL Type	Conductor		No. OF Core	Insulation Thickness mm	Spiral Shield No./mm	Jacket Thickness mm	Overall Diameter (Approx) mm	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm						ft/coil	M/coil	
UL 1185 CUL AWM	30	7/0.102	1	0.38	37/0.102	0.40	2.20	2000	610	381.00
	28	7/0.127	1		39/0.102		2.30	2000	610	239.00
	26	7/0.160	1		30/0.127		2.50	2000	610	150.00
	24	11/0.160	1		35/0.127		2.60	2000	610	94.20
UL 2854	28	7/0.127	2	0.25	Al-mylar	0.45	1.75 x 3.05	2000	610	239.00
	26	7/0.160	2		Al-mylar		1.85 x 3.35	2000	610	150.00
	24	7/0.203	2		Al-mylar		2.00 x 3.65	2000	610	94.20
	26	7/0.160	3	0.25	57/0.102		3.20	2000	610	150.00
	24	7/0.203	3		72/0.102		3.50	2000	610	94.20



UL 1533 2547 Shield Wire

Applications:

UL 1533 For use in recording studios, sound systems and electronic circuits
UL 2547 Internal wiring of electronic equipment

Construction:

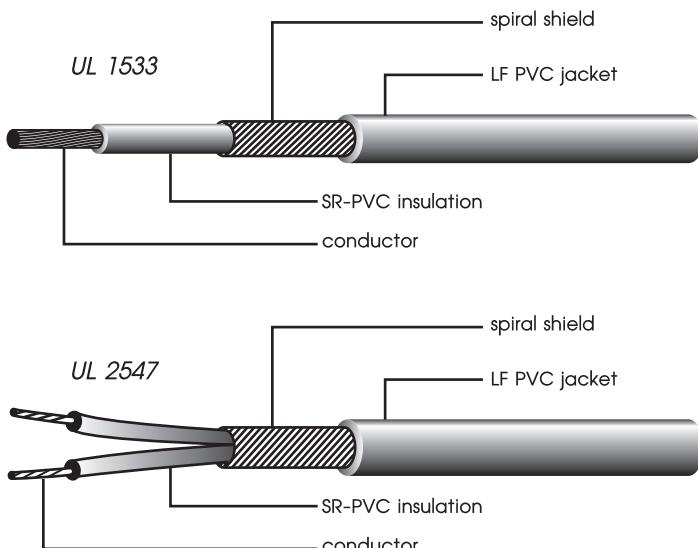
Product Description:

UL 1533

- Solid or stranded, tinned copper conductor, 30-16 AWG
- Tinned copper wire spiral shield.
- Insulation / Jacket : UL 1533 : SR-PVC (LF) / PVC (LF)
- Rated temperature: 80°C.
- Voltage not specified.
- Pass UL VW-1 & CUL FT1 flame test.
- Use of spiral shield allows for fast and simple termination.

UL 2547

- Solid or stranded, tinned copper conductor.
- Insulation / Jacket : UL 2547 : SR-PVC (LF) / PVC (LF)
- Tinned copper wire overall spiral shield.
- Color-coded PVC jacket. (Lead Free)
- Rated temperature: 80°C
- Voltage not specified.
- Pass UL VW-1 & CUL FT1 flame test.
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.



UL Style & CUL Type	Conductor		Insulation Thickness	Spiral Shield	Overall Diameter (Approx)	Standard Put-Up		Conductor Resistance at 20°C
	AWG	No./mm				mm	No./mm	
UL 1533 CUL AWM I A (1-core)	30	7/0.102	0.25	26/0.120	1.70	2000	610	381.00
	28	7/0.127		29/0.120	1.80	2000	610	239.00
	26	7/0.160		32/0.120	2.00	2000	610	150.00
	24	7/0.203		35/0.120	2.20	2000	610	94.20
	22	17/0.160		41/0.120	2.40	2000	610	59.40
	20	26/0.160		45/0.120	2.60	2000	610	36.70
UL 2547 (2-core)	30	7/0.102	0.25	36/0.120	2.70	2000	610	381.00
	28	7/0.127		40/0.120	2.70	2000	610	239.00
	26	7/0.160		45/0.120	3.00	2000	610	150.00
	24	7/0.203		50/0.120	3.20	2000	610	94.20
UL 2547 (3-core)	30	7/0.102	0.25	54/0.120	2.80	2000	610	381.00
	28	7/0.127		50/0.120	3.00	2000	610	239.00
	26	7/0.160		55/0.120	3.20	2000	610	150.00
	24	7/0.203		61/0.120	3.35	2000	610	94.20



UL 1640, 21099 Shield Wire

80 ° C 30 V

Applications:

Internal wiring of audio video equipments.

Construction:

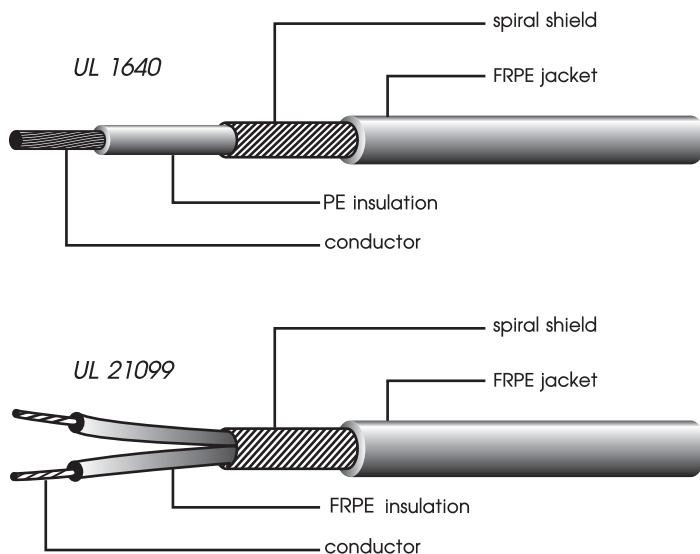
Product Description:

UL 1640

- Solid or stranded, tinned copper conductor,
- Tinned copper wire spiral shield.
- Insulation / Jacket : UL 1640 : PE (HF) / PE (HF)
- Use of spiral shield allows for fast and simple termination.
- Rated temperature: 80 ° C. Rated voltage: 30 volts.
- Pass VW-1 flame test
- Minimum insulation resistance: 1,000 MΩ/km at 20 ° C.

UL 21099

- Solid or stranded, tinned copper conductor.
- Tinned copper wire overall spiral shield.
- Insulation / Jacket : UL 21099 : FRPE (HF) / FRPE (HF)
- Rated temperature : 80 ° C. Rated voltage: 30 volts
- Pass VW-1 flame test
- Minimum insulation resistance: 1,000 MΩ/km at 20 ° C.
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.



Halogen Free style : UL 1640, UL 21099

UL Style	Conductor			Insulation		Spiral Shield		Jacket Thick-ness	Overall Diameter (Approx)	Max. Cond. Resis.	Standard Capacitance	Standard Put-Up		Conductor Resistance at 20 ° C					
	AWG	No./mm	Outer Dia	Thick-ness	Outer Dia	No./mm	Outer Dia												
							ft/coll					M/coll							
UL 1640 (1-core)	30	7/0.102	0.306	0.25	0.80	26/0.120	1.00	0.25	1.50	410	105	2000	610		381.00				
	28	7/0.127	0.381		0.90	30/0.120	1.10	0.30	1.65	236	126	2000	610		239.00				
	26	7/0.160	0.480		1.00	32/0.120	1.20	0.35	2.00	148	130	2000	610		150.00				
	24	7/0.203	0.613		1.10	35/0.120	1.30	0.40	2.20	151	115	2000	610		94.20				
UL 21099 (2-core)	30	7/0.102	0.306	0.25	0.80	36/0.120	1.80	0.30	2.40	393	100	2000	610		381.00				
	28	7/0.127	0.381		0.90	40/0.120	2.00	0.30	2.50	249	119	2000	610		239.00				
	26	7/0.160	0.480		1.00	45/0.120	2.20	0.35	2.90	152	110	2000	610		150.00				
	24	7/0.203	0.613		1.10	50/0.120	2.40	0.35	3.20	93	110	2000	610		94.20				
UL 21099 (3-core)	30	7/0.102	0.306	0.25	0.80	(-)	1.90	0.30	2.60	393	115	2000	610		381.00				
	28	7/0.127	0.381		0.90	(-)	2.10	0.30	3.00	249	126	2000	610		239.00				
	26	7/0.160	0.480		1.00	(-)	2.30	0.35	3.10	152	110	2000	610		150.00				
	24	7/0.203	0.609		1.10	(-)	2.60	0.35	3.40	93	120	2000	610		94.20				



Applications:

Internal wiring of audio video equipments.

Product Description:

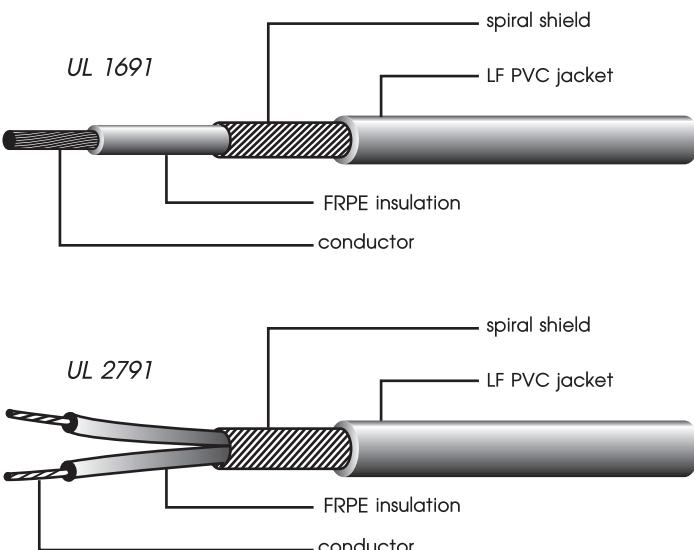
UL 1691

- Solid or stranded, tinned copper conductor,
- Tinned copper wire spiral shield.
- Insulation / Jacket : UL 1691 : FRPE (LF) PVC (LF)
- Use of spiral shield allows for fast and simple termination.
- Rated temperature: 80°C. Rated voltage: 30 V
- Pass VW-1 flame test.
- Minimum insulation resistance: 1,000 MΩ/km at 20°C.

UL 2791

- Solid or stranded, tinned copper conductor.
- Tinned copper wire overall spiral shield.
- Insulation / Jacket : UL 2791 : FRPE (LF) PVC (LF)
- Rated temperature : 80°C. Rated voltage: 30 V
- Pass VW-1 & CUL FT1 flame test
- Minimum insulation resistance: 1,000 MΩ/km at 20°C.
- Insulation material of these wires doesn't use any PBDEs or PBBs as flame retardants at all.

Construction:



UL Style	Conductor			Insulation		Spiral Shield		Jacket Thick-ness	Overall Diameter (Approx)	Max. Cond. Resis.	Standard Capacitance	Standard Put-Up		Conductor Resistance at 20°C				
	AWG	No./mm	Outer Dia	Thick-ness	Outer Dia	No./mm	Outer Dia					Pf/m	ft/coll	M/coll				
				mm	mm							mm	mm	mm				
UL 1691 (1-core)	30	7/0.102	0.306	0.25	0.80	26/0.120	1.00	0.25	1.50	410	105	2000	610	381.00				
	28	7/0.127	0.381		0.90	30/0.120	1.10	0.30	1.65	236	126	2000	610	239.00				
	26	7/0.160	0.480		1.00	32/0.120	1.20	0.35	2.00	148	130	2000	610	150.00				
	24	7/0.203	0.613		1.10	35/0.120	1.30	0.40	2.20	151	115	2000	610	94.20				
UL 2791 (2-core)	30	7/0.102	0.306	0.25	0.80	36/0.120	1.80	0.30	2.40	393	100	2000	610	381.00				
	28	7/0.127	0.381		0.90	40/0.120	2.00	0.30	2.50	249	119	2000	610	239.00				
	26	7/0.160	0.480		1.00	45/0.120	2.20	0.35	2.90	152	110	2000	610	150.00				
	24	7/0.203	0.613		1.10	50/0.120	2.40	0.35	3.20	93	110	2000	610	94.20				
UL 2791 (3-core)	30	7/0.102	0.306	0.25	0.80	(-)	1.90	0.30	2.60	393	115	2000	610	381.00				
	28	7/0.127	0.381		0.90	(-)	2.10	0.30	3.00	249	126	2000	610	239.00				
	26	7/0.160	0.480		1.00	(-)	2.30	0.35	3.10	152	110	2000	610	150.00				
	24	7/0.203	0.609		1.10	(-)	2.60	0.35	3.40	93	120	2000	610	94.20				



UL 2562

80°C 300V Audio & Video Paralled Coaxial Cable

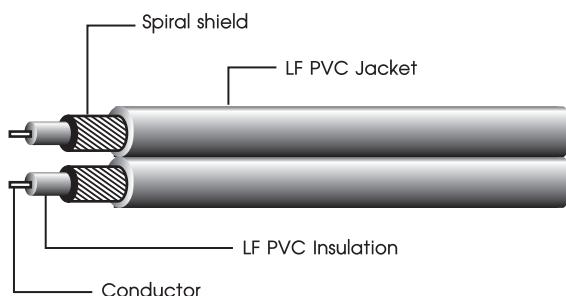
Applications:

- For internal wiring of Electric Equipment

Product Description:

- 24, 26 AWG stranded tinned or bare copper
- PVC insulation PVC jacket (Lead Free), 80°C 300V.
- normally used at audio and video data transfer
- pass VW-1 flame test

Construction:



Conductor		Insulation Thickness mm	Sprial Shield No./mm	Jacket Thickness mm	Overall Diameter (Approx.) mm	Standard Put-Up	
AWG	No./mm					ft/coil	M/coil
26 x 2	10/0.127	0.40	30/0.120	0.40	2.80 x 5.60	1000	305
26 x 3	10/0.127		30/0.120		2.80 x 8.40	1000	305
24 x 2	11/0.160		35/0.120		4.00 x 8.00	1000	305
24 x 3	11/0.160		35/0.120		4.00 x 12.00	1000	305



Applications:

UL 10800 -For use in recording studios, sound systems and electronic circuits

UL 21307 -Internal wiring of electronic equipment

Construction:

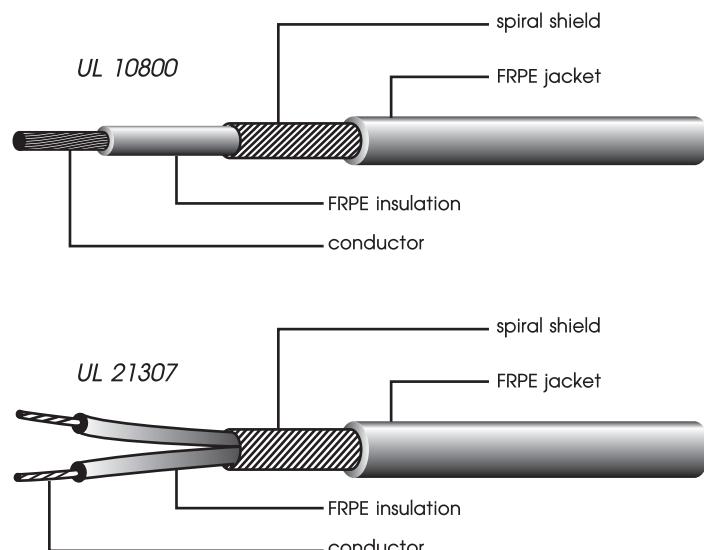
Product Description:

UL 10800

- Solid or stranded, tinned copper conductor, 30-16 AWG
- Tinned copper wire spiral shield.
- Insulation / Jacket : UL 10800 : FRPE (HF) / FRPE (HF)
- Rated temperature: 80° C.
- Voltage : 300 V
- Pass VW-1 flame test.
- Use of spiral shield allows for fast and simple termination.

UL 21307

- Solid or stranded, tinned copper conductor.
- Insulation / Jacket : UL 21307 : FRPE (HF) / FRPE (HF)
- Tinned copper wire overall spiral shield.
- Rated temperature: 80° C
- Voltage : 300 V
- Pass VW-1 flame test.



Halogen Free Style : UL 10800, UL 21307

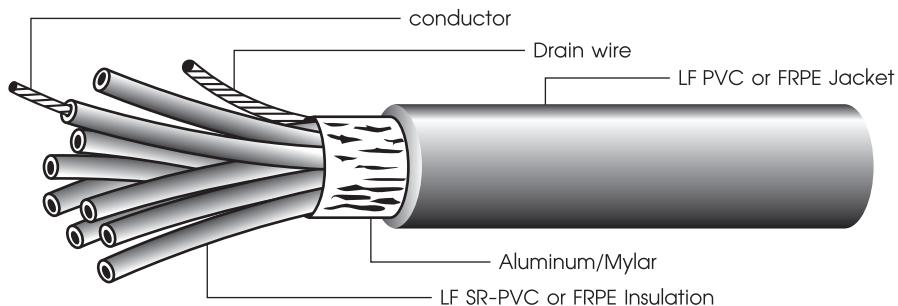
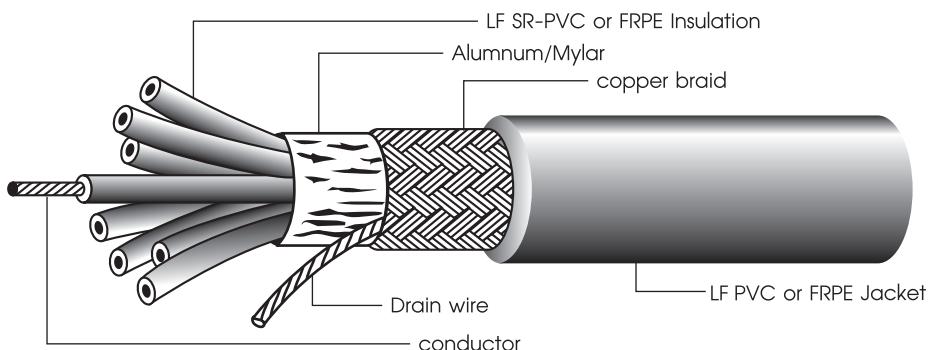
UL Style	Conductor		Insulation Thickness	Spiral Shield	Overall Diameter (Approx)	Standard Put-Up	
	AWG	No./mm				ft/coil	M/coil
UL 10800 (1-core)	30	7/0.102	0.25	26/0.120	1.70	2000	610
	28	7/0.127		29/0.120	1.80	2000	610
	26	7/0.160		32/0.120	2.00	2000	610
	24	7/0.203		35/0.120	2.20	2000	610
	22	17/0.160		41/0.120	2.40	2000	610
	20	26/0.160		45/0.120	2.60	2000	610
UL 21307 (2-core)	30	7/0.102	0.25	36/0.120	2.70	2000	610
	28	7/0.127		40/0.120	2.70	2000	610
	26	7/0.160		45/0.120	3.00	2000	610
	24	7/0.203		50/0.120	3.20	2000	610
UL 21307 (3-core)	30	7/0.102	0.25	54/0.120	2.80	2000	610
	28	7/0.127		50/0.120	3.00	2000	610
	26	7/0.160		55/0.120	3.20	2000	610
	24	7/0.203		61/0.120	3.35	2000	610

80°C 300V/30V Computer cable (Core Type)**Product Description:**

- Tinned stranded copper conductor.
- Insulation / Jacket : UL 2464 : SR-PVC (LF) / PVC (LF)
UL 21143 : FRPE (HF) / FRPE (HF)
- Cores cabled under aluminum mylar shield.
- Tinned stranded copper drain wire
- Unpaired computer and data transmission cable.
- Rating : UL 2464, 21143 : 80°C, 300 V
- Pass VW-1 flame test.

Applications :

- Sound broadcast, audio, instrumentation and computer cables for EIA RS-232 applications

Construction:**Aluminum / mylar Shield Type****Aluminum / mylar and Braid Shield Type**



UL 2464, 21143

80° C 300 V Computer cable (Core Type)

AL - Mylar Foil shield Type

Halogen Free style : UL 21143

UL Style & CUL Type	Conductor		No. OF Core	Insulation Thickness	Jacket Thickness	Overall Diameter (Approx)	Standard Put-Up	
	AWG	No./mm					mm	mm
UL 2464 CUL I / IIA (AWM)	28	7/0.127	3 4 5 6 7 8 9 10 15 25 37 50	0.25	0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.85 1.00 1.00 1.00 1.00	3.70 3.90 4.20 4.50 4.50 4.80 5.10 5.20 5.80 7.60 8.30 9.50	1000 1000 1000 1000 1000 1000 1000 1000 1000 500 500 500 500	305 305 305 305 305 305 305 305 305 152 152 152 152
UL 2464 CUL I / IIA (AWM)	26	7/0.160	3 4 5 6 7 8 9 10 15 25 37 50	0.25	0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.80 0.85 1.00 1.00 1.00	3.90 4.20 4.50 4.80 4.80 5.10 5.40 5.70 6.40 8.00 9.20 10.40	1000 1000 1000 1000 1000 1000 1000 1000 1000 500 500 500	305 305 305 305 305 305 305 305 305 152 152 152
UL 2464 CUL I / IIA (AWM)	24	7/0.203	3 4 5 6 7 8 9 10 15 25 37 50	0.25	0.80 0.80 0.80 0.80 0.80 0.80 0.85 0.85 0.85 1.00 1.00 1.00	4.20 4.50 4.90 5.20 5.20 5.50 5.80 6.20 6.90 8.60 9.80 11.40	1000 1000 1000 1000 1000 1000 1000 1000 1000 500 500 500	305 305 305 305 305 305 305 305 305 152 152 152
UL 2464 CUL I / IIA (AWM)	22	7/0.253	3 4 5 6 7 8 9 10 15 25 37 50	0.25	0.80 0.80 0.80 0.80 0.80 0.85 0.85 0.85 0.85 1.00 1.00 1.00	4.70 5.10 5.50 5.80 5.80 6.30 6.70 6.80 7.80 10.00 11.30 12.90	1000 1000 1000 1000 1000 1000 1000 1000 1000 500 500 500	305 305 305 305 305 305 305 305 305 152 152 152
UL 2464 CUL I / IIA (AWM)	18	34/0.180	2 3 4 5	0.38	0.80 0.80 1.00 1.00	6.20 6.40 7.50 7.70	1000 1000 1000 500	305 305 305 152



UL 2464, 21143

80° C 300 V Computer cable (Core Type)

AL - Mylar Foil & Braid shield Type

Halogen Free style : UL 21143

UL Style & CUL Type	Conductor		No. OF Core	Insulation Thickness	Braid Shield	Jacket Thickness	Overall Diameter (Approx)	Standard Put-Up	
	AWG	No./mm						mm	ft/coil
UL 2464 CUL I / IIA (AWM)	28	7/0.127	0.25	3	16/5/0.127	0.80	4.30	1000	305
				4	16/5/0.127	0.80	4.60	1000	305
				5	16/6/0.127	0.80	4.80	1000	305
				6	16/6/0.127	0.80	5.20	1000	305
				7	16/6/0.127	0.80	5.20	1000	305
				8	16/6/0.127	0.80	5.40	1000	305
				9	16/6/0.127	0.80	5.70	1000	305
				10	16/8/0.127	0.80	5.80	1000	305
				15	16/8/0.127	0.85	6.40	1000	305
				25	24/8/0.127	1.00	8.10	500	152
				37	24/8/0.127	1.00	8.90	500	152
				50	24/8/0.127	1.00	10.10	500	152
UL 2464 CUL I / IIA (AWM)	26	7/0.160	0.25	3	16/5/0.127	0.80	4.50	1000	305
				4	16/5/0.127	0.80	4.80	1000	305
				5	16/6/0.127	0.80	5.10	1000	305
				6	16/6/0.127	0.80	5.40	1000	305
				7	16/6/0.127	0.80	5.40	1000	305
				8	16/6/0.127	0.80	5.70	1000	305
				9	16/8/0.127	0.80	6.00	1000	305
				10	16/8/0.127	0.80	6.30	1000	305
				15	16/8/0.127	0.85	7.00	1000	305
				25	24/6/0.127	1.00	8.60	500	152
				37	24/7/0.127	1.00	9.70	500	152
				50	24/8/0.127	1.00	11.00	500	152
UL 2464 CUL I / IIA (AWM)	24	7/0.203	0.25	3	16/5/0.127	0.80	4.70	1000	305
				4	16/5/0.127	0.80	5.10	1000	305
				5	16/6/0.127	0.80	5.60	1000	305
				6	16/6/0.127	0.80	5.70	1000	305
				7	16/8/0.127	0.80	5.70	1000	305
				8	16/8/0.127	0.80	6.20	1000	305
				9	16/8/0.127	0.85	6.40	1000	305
				10	16/8/0.127	0.85	6.70	1000	305
				15	24/8/0.127	0.85	7.40	1000	305
				25	24/8/0.127	1.00	9.10	500	152
				37	24/8/0.127	1.00	10.30	500	152
				50	24/10/0.127	1.00	11.90	500	152
UL 2464 CUL I / IIA (AWM)	22	7/0.253	0.25	3	16/6/0.127	0.80	5.30	1000	305
				4	16/6/0.127	0.80	5.60	1000	305
				5	16/6/0.127	0.80	6.10	1000	305
				6	16/8/0.127	0.80	6.30	1000	305
				7	16/8/0.127	0.80	6.30	1000	305
				8	16/8/0.127	0.85	6.90	1000	305
				9	24/8/0.127	0.85	7.30	1000	305
				10	24/8/0.127	0.85	7.40	1000	305
				15	24/8/0.127	0.85	8.30	1000	305
				25	24/8/0.127	1.00	10.60	500	152
				37	24/10/0.127	1.00	11.90	500	152
				50	24/10/0.127	1.00	13.50	500	152
UL 2464 CUL I / IIA (AWM)	18	34/0.180	0.38	2	16/6/0.127	0.80	6.30	1000	305
				3	16/8/0.127	0.80	6.60	1000	305
				4	24/8/0.127	0.85	7.60	1000	305
				5	24/8/0.127	0.85	7.90	500	152

80° C 30V Computer cable (Pair Type)

Applications:

Foil Shield Type:

- Sound broadcast, audio, instrumentation and computer cables for EIA RS-232 applications

Braid Shield Type:

- computer cables for EIA RS-232 and CAD/CAM application

Product Description:

Foil Shield Type

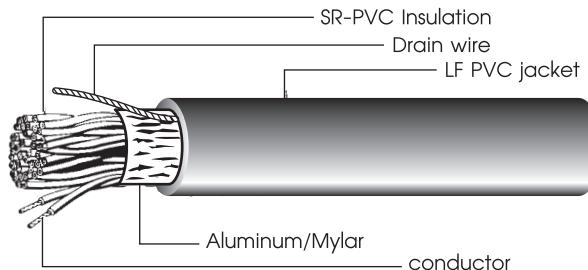
- Tinned stranded copper conductor.
- Insulation / Jacket : UL 20276 : SR-PVC (LF) / PVC (LF)
UL 21100 : FRPE (HF) / FRPE (HF)
- Paired cores cabled under aluminum mylar shield
- Tinned stranded copper drain wire.
- Paired computer and data transmission cable.
- Rated temperature; 80° c. Rated voltage: 300 V
- Pass VW-1 flame test.

Braid Shield Type

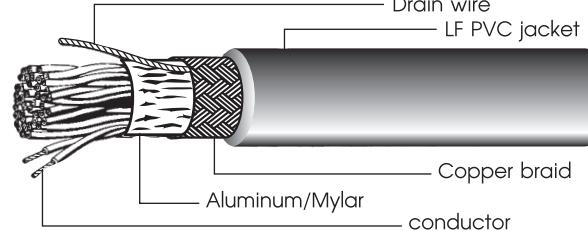
- Tinned stranded copper conductor.
- Insulation / Jacket : UL 20276 : SR-PVC (LF) / PVC (LF)
UL 21100 : FRPE (HF) / FRPE (HF)
- Paired cores cabled under aluminum mylar shield
- Tinned stranded copper drain wire.
- Tinned Copper braid shield, 85% coverage
- Paired computer and data transmission cable.
- Rating : UL 20276, 21100 : 80°C, 30 V
- Pass VW-1 flame test.

Construction:

Foil Shield Type



Braid Shield Type



Halogen Free style : UL 21100

UL Style & CUL Type	Conductor		No. OF Pair	Insulation Thickness mm	Braid Shield	Jacket Thickness mm	Overall Diameter (Approx) mm	Standard Put-Up	
	AWG	No./mm						ft/coil	M/coil
UL 20276 CUL I / IIA (AWM) (Foil Shield)	24	7/0.203	4	0.25	-	0.85	6.6	1000	305
			6	0.25	-	0.85	7.2	500	152
			7	0.25	-	0.85	7.8	500	152
			8	0.25	-	0.85	8.0	500	152
			9	0.25	-	0.85	8.6	500	152
			10	0.25	-	1.02	9.0	500	152
			15	0.25	-	1.02	10.6	500	152
			19	0.25	-	1.02	11.6	500	152
			25	0.25	-	1.02	12.5	500	152
			50	0.25	-	1.02	17.7	500	152
UL 20276 CUL I / IIA (AWM) (Braid Shield)	24	7/0.203	2	0.25	16/8/0.127	0.80	6.3	1000	305
			3	0.25	16/8/0.127	0.85	6.9	1000	305
			4	0.25	24/8/0.127	0.85	7.2	500	152
			5	0.25	24/8/0.127	0.85	7.4	500	152
			6	0.25	24/8/0.127	0.85	7.7	500	152
			7	0.25	24/8/0.127	1.02	8.3	500	152
			8	0.25	24/8/0.127	1.02	8.5	500	152
			10	0.25	24/8/0.127	1.02	9.5	500	152
			12	0.25	24/10/0.127	1.02	10.1	500	152
			15	0.25	24/10/0.127	1.02	11.2	500	152
			18	0.25	24/10/0.127	1.02	12.1	500	152
			25	0.25	24/10/0.127	1.02	13.0	500	152



UL 20276, 21100

80°C 30V Computer cable (Pair Type)

AL - Mylar Foil & Braid Shield Type

Halogen Free style : UL 21100

UL Style	Conductor		No. OF Pair	Insulation Thickness	Braid Shield	Jacket Thickness	Overall Diameter (Approx.)	Standard Put-Up	
	AWG	No./mm		mm	No./mm	mm	mm	ft/coil	M/coil
UL 20276 UL 21100 (Foil Shield)	26	7/0.160	0.25	6	-	0.85	6.70	500	152
				7	-	0.85	7.10	500	152
				8	-	0.85	7.40	500	152
				9	-	0.85	7.70	500	152
				10	-	0.85	8.20	500	152
				15	-	1.00	9.50	500	152
				20	-	1.00	10.60	500	152
				25	-	1.00	11.60	500	152
UL 20276 UL 21100 (Foil Shield)	24	7/0.203	0.25	6	-	0.85	7.50	500	152
				7	-	0.85	7.80	500	152
				8	-	0.85	8.10	500	152
				9	-	0.85	8.50	500	152
				10	-	1.00	9.00	500	152
				15	-	1.00	10.40	500	152
				20	-	1.00	11.90	500	152
				25	-	1.00	12.80	500	152
UL 20276 UL 21100 (Braid Shield)	26	7/0.160	0.25	6	24/8/0.127	0.85	7.30	500	152
				7	24/8/0.127	0.85	7.60	500	152
				8	24/8/0.127	0.85	8.00	500	152
				9	24/8/0.127	0.85	8.20	500	152
				10	24/8/0.127	1.00	8.60	500	152
				15	24/10/0.127	1.00	10.10	500	152
				20	24/10/0.127	1.00	11.20	500	152
				25	24/10/0.127	1.00	12.20	500	152
UL 20276 UL 21100 (Braid Shield)	24	7/0.203	0.25	6	24/8/0.127	0.85	8.10	500	152
				7	24/8/0.127	0.85	8.40	500	152
				8	24/8/0.127	0.85	8.70	500	152
				9	24/8/0.127	0.85	9.10	500	152
				10	24/8/0.127	1.00	9.60	500	152
				15	24/10/0.127	1.00	11.00	500	152
				20	24/10/0.127	1.00	12.50	500	152
				25	24/10/0.127	1.00	13.40	500	152



UL 20276, 21100

80° C 30 V Computer cable (Core Type)

AL - Mylar Foil & Braid Shield Type

Halogen Free style : UL 21100

UL Style & CSA Type	Conductor		No. OF Core	Insulation Thickness	Braid Shield	Jacket Thickness	Overall Diameter (Approx)	Standard Put-Up	
	AWG	No./mm		mm	No./mm	mm	mm	ft/coil	M/coil
UL 20276 UL 21100	30	7/0.102	0.25	5	16/6/0.127	0.80	4.30	1000	305
				6	16/6/0.127	0.80	4.80	1000	305
				7	16/6/0.127	0.80	4.80	1000	305
				8	16/6/0.127	0.80	5.00	1000	305
				9	16/6/0.127	0.80	5.30	1000	305
				10	16/6/0.127	0.80	5.40	1000	305
				15	16/8/0.127	0.90	6.10	1000	305
				20	16/8/0.127	1.00	6.80	1000	305
				25	24/8/0.127	1.00	7.20	500	152
UL 20276 UL 21100	28	7/0.127	0.25	5	16/6/0.127	0.80	4.80	1000	305
				6	16/6/0.127	0.80	5.20	1000	305
				7	16/6/0.127	0.80	5.20	1000	305
				8	16/6/0.127	0.80	5.40	1000	305
				9	16/6/0.127	0.80	5.70	1000	305
				10	16/8/0.127	0.80	5.80	1000	305
				15	16/8/0.127	0.90	6.50	1000	305
				20	16/8/0.127	1.00	7.90	1000	305
				25	16/8/0.127	1.00	8.10	500	152
UL 20276 UL 21100	26	7/0.160	0.25	5	16/6/0.127	0.80	5.10	1000	305
				6	16/6/0.127	0.80	5.40	1000	305
				7	16/6/0.127	0.80	5.40	1000	305
				8	16/6/0.127	0.80	5.70	1000	305
				9	16/8/0.127	0.80	6.00	1000	305
				10	16/8/0.127	0.80	6.30	1000	305
				15	16/8/0.127	0.90	7.10	1000	305
				20	16/8/0.127	1.00	7.80	1000	305
				25	24/6/0.127	1.00	8.60	500	152
UL 20276 UL 21100	24	7/0.203	0.25	5	16/6/0.127	0.80	5.60	1000	305
				6	16/6/0.127	0.80	5.70	1000	305
				7	16/8/0.127	0.80	5.70	1000	305
				8	16/8/0.127	0.80	6.20	1000	305
				9	16/8/0.127	0.80	6.40	1000	305
				10	16/8/0.127	0.90	6.80	1000	305
				15	24/8/0.127	0.90	7.50	1000	305
				20	24/8/0.127	1.00	8.60	1000	305
				25	24/6/0.127	1.00	9.10	500	152
UL 20276 UL 21100	22	7/0.253	0.25	5	16/6/0.127	0.80	6.10	1000	305
				6	16/8/0.127	0.80	6.30	1000	305
				7	16/8/0.127	0.80	6.30	1000	305
				8	16/8/0.127	0.90	6.90	1000	305
				9	24/8/0.127	0.90	7.40	1000	305
				10	24/8/0.127	0.90	7.50	1000	305
				15	24/8/0.127	0.90	8.30	1000	305
				20	24/8/0.127	1.00	9.20	1000	305
				25	24/6/0.127	1.00	10.60	500	152



UL 20276, 21100

80° C 30 V Computer cable (Core Type)

AL - Mylar Foil shield Type

Halogen Free style : UL 21100

UL Style & CSA Type	Conductor		No. OF Core	Insulation Thickness	Jacket Thickness	Overall Diameter (Approx)	Standard Put-Up	
	AWG	No./mm		mm	mm	mm	ft/coil	M/coil
UL 20276 UL 21100	30	7/0.102	5	0.25	0.80	3.80	1000	305
			6		0.80	4.10	1000	305
			7		0.80	4.10	1000	305
			8		0.80	4.30	1000	305
			9		0.80	4.70	1000	305
			10		0.80	4.80	1000	305
			15		0.90	5.50	1000	305
			20		1.00	6.30	1000	305
			25		1.00	6.70	500	152
			5		0.80	4.20	1000	305
UL 20276 UL 21100	28	7/0.127	6	0.25	0.80	4.50	1000	305
			7		0.80	4.50	1000	305
			8		0.80	4.80	1000	305
			9		0.80	5.10	1000	305
			10		0.80	5.20	1000	305
			15		0.90	5.90	1000	305
			20		1.00	7.40	1000	305
			25		1.00	7.60	500	152
			5		0.80	4.50	1000	305
			6		0.80	4.80	1000	305
UL 20276 UL 21100	26	7/0.16	7	0.25	0.80	4.80	1000	305
			8		0.80	5.10	1000	305
			9		0.80	5.40	1000	305
			10		0.80	5.70	1000	305
			15		0.90	6.40	1000	305
			20		1.00	7.30	1000	305
			25		1.00	8.00	500	152
			5		0.80	4.90	1000	305
			6		0.80	5.20	1000	305
			7		0.80	5.20	1000	305
UL 20276 UL 21100	24	7/0.203	8	0.25	0.80	5.50	1000	305
			9		0.80	5.80	1000	305
			10		0.90	6.30	1000	305
			15		0.90	7.00	1000	305
			20		1.00	8.10	1000	305
			25		1.00	8.60	500	152
			5		0.80	5.50	1000	305
			6		0.80	5.80	1000	305
			7		0.80	5.80	1000	305
			8		0.90	6.40	1000	305
UL 20276 UL 21100	22	7/0.253	9	0.25	0.90	6.80	1000	305
			10		0.90	6.90	1000	305
			15		0.90	7.90	1000	305
			20		1.00	8.90	1000	305
			25		1.00	10.00	500	152



Single-Core Stranded ISO Cable

Applications:

- For use in internal wiring of automobile and electronic equipment.
- The dimension, test methods, and requirements for Single-core cables is based upon and refers to ISO 6722-2 and GMW15626
- 60 V cables intended for use in road vehicle applications where the nominal system voltage is <60 Vdc or 25 Vac

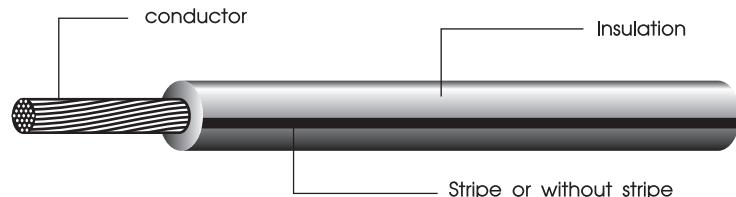
Product Description:

- Stranded Bare Copper conductor 0.13 ~ 16 SQMM
- Color code insulation with or without stripe
- RoHS complied wire.

Product Description:

Cable Style	Insulation Materials	Temperature Rating
FLRY-A	PVC	-40°C ~ 85°C
FLR2Y-A	PE	-40°C ~ 85°C
FLR2X(21X)-A	XLPE	-40°C ~ 125°C
FLR11Y-A	PU	-40°C ~ 125°C
FLR91X-A	XLPE	-40°C ~ 150°C

Construction :



ISO / TS 16949 : 2009 - GMW15626 (Thin Wall Style)

Style	Conductor		Nom. Insulation Thickness	Overall Diameter(mm)		Standard Put-Up	Conductor Resistance at 20°C
	Size (mm ²)	No/mm (Max)		mm	min		
FLRY-A FLR2Y-A FLR2X(21X)-A FLR11Y-A FLR91X-A	0.13	7/0.16	0.25	0.95	1.05	3000	136.00
	0.22	7/0.21	0.25	1.10	1.20	500	84.80
	0.35	7/0.27	0.25	1.20	1.30	500	54.40
	0.50	19/0.19	0.28	1.40	1.60	500	37.10
	0.75	19/0.24	0.30	1.70	1.90	500	24.70
	1.00	19/0.27	0.30	1.90	2.10	500	18.50
	1.25	19/0.30	0.30	2.10	2.30	500	14.90
	1.50	19/0.33	0.30	2.20	2.40	500	12.70
	2.00	19/0.38	0.35	2.50	2.80	500	9.42
	2.50	37/0.28	0.35	2.70	3.00	500	7.60
	3.00	37/0.34	0.40	3.10	3.40	500	6.15
	4.00	37/0.38	0.40	3.40	3.70	500	4.71
	5.00	37/0.43	0.40	3.90	4.20	200	3.94
	6.00	37/0.45	0.40	4.00	4.30	200	3.14
	8.00	50/0.46	0.40	4.60	5.00	200	2.38
	10.00	63/0.46	0.60	5.30	6.00	200	1.82
	12.00	154/0.33	0.60	5.80	6.50	200	1.52
	16.00	105/0.46	0.65	6.40	7.20	200	1.16



FLRY-B , FLR2Y-B , FLR2X(21X)-B , FLR11Y-B , FLR91X-B

Single-Core Stranded ISO Cable

Applications:

- For use in internal wiring of automobile and electronic equipment.
- The dimension, test methods, and requirements for Single-core cables is based upon and refers to ISO 6722-2 and GMW15626
- 60 V cables intended for use in road vehicle applications where the nominal system voltage is <60 Vdc or 25 Vac

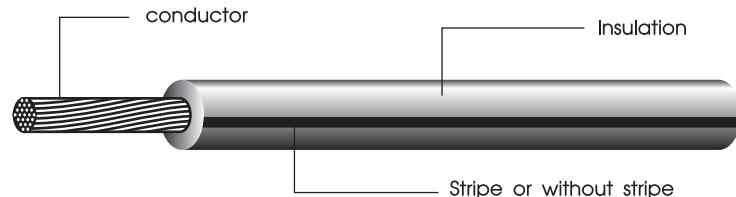
Product Description:

- Stranded Bare Copper conductor 0.35 ~ 16 SQMM
- Color code insulation with or without stripe
- RoHS complied wire.

Product Description:

Cable Style	Insulation Materials	Temperature Rating
FLRY-B	PVC	-40°C ~ 85°C
FLR2Y-B	PE	-40°C ~ 85°C
FLR2X(21X)-B	XLPE	-40°C ~ 125°C
FLR11Y-B	PU	-40°C ~ 125°C
FLR91X-B	XLPE	-40°C ~ 150°C

Construction :



ISO / TS 16949 : 2009 - GMW15626 (Thin Wall Style)

Style	Conductor		Nom. Insulation Thickness	Overall Diameter(mm)		Standard Put-Up	Conductor Resistance at 20°C
	Size (mm²)	No/mm (Max)		mm	min		
FLRY-B FLR2Y-B FLR2X(21X)-B FLR11Y-B FLR91X-B	0.35	12/0.21	0.25	1.20	1.40	500	54.40
	0.50	16/0.21	0.28	1.40	1.60	500	37.10
	0.75	24/0.21	0.30	1.70	1.90	500	24.70
	1.00	32/0.21	0.30	1.90	2.10	500	18.50
	1.50	30/0.26	0.30	2.20	2.40	500	12.70
	2.00	28/0.31	0.35	2.50	2.80	500	9.42
	2.50	50/0.26	0.35	2.70	3.00	500	7.60
	3.00	44/0.31	0.40	3.10	3.40	500	6.15
	4.00	56/0.31	0.40	3.40	3.70	500	4.71
	5.00	70/0.31	0.40	3.90	4.20	200	3.94
	6.00	84/0.31	0.40	4.00	4.30	200	3.14
	8.00	98/0.33	0.40	4.60	5.00	200	2.38
	10.00	80/0.41	0.60	5.30	6.00	200	1.82
	12.00	96/0.41	0.60	5.80	6.50	200	1.52
	16.00	126/0.41	0.65	6.40	7.20	200	1.16



Single-Core Stranded ISO Cable

Applications:

- For use in internal wiring of automobile and electronic equipment.
- The dimension, test methods, and requirements for Single-core cables is based upon and refers to ISO 6722-2 and GMW15626
- 60 V cables intended for use in road vehicle applications where the nominal system voltage is <60 Vdc or 25 Vac
- 600 V cables intended for use in road vehicle applications where the nominal system voltage is 60 Vdc to 600 Vdc (or 25 Vac to 600 Vac).

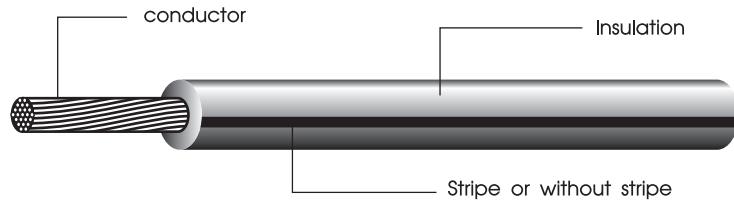
Product Description:

- Stranded Bare Copper conductor 0.50 ~ 16 SQMM
- Color code insulation with or without stripe
- RoHS compiled wire.

Product Description:

Cable Style	Insulation Materials	Temperature Rating
FLY-A	PVC	-40°C ~ 85°C
FL2Y-A	PE	-40°C ~ 85°C
FL2X(21X)-A	XLPE	-40°C ~ 125°C
FL11Y-A	PU	-40°C ~ 125°C
FL91X-A	XLPE	-40°C ~ 150°C

Construction :



ISO / TS 16949 : 2009 - GMW15626 (Thick Wall Style)

Style	Conductor		Nom. Insulation Thickness	Overall Diameter(mm)		Standard Put-Up	Conductor Resistance at 20°C
	Size (mm ²)	No/mm (Max)		mm	min		
FLY-A	0.50	19/0.19	0.60	2.00	2.30	500	37.10
	0.75	19/0.24	0.60	2.20	2.50	500	24.70
	1.00	19/0.27	0.60	2.40	2.70	500	18.50
	1.25	19/0.30	0.60	2.40	2.95	500	14.90
	1.50	19/0.33	0.60	2.70	3.00	500	12.70
	2.00	19/0.38	0.60	3.00	3.30	500	9.42
	2.50	37/0.28	0.70	3.30	3.60	500	7.60
	3.00	37/0.34	0.70	3.80	4.10	500	6.15
	4.00	37/0.38	0.80	4.00	4.40	500	4.71
	5.00	37/0.43	0.80	4.50	4.90	200	3.94
	6.00	37/0.45	0.80	4.60	5.00	200	3.14
	8.00	50/0.46	0.80	5.00	5.90	200	2.38
	10.00	63/0.46	1.00	5.90	6.50	200	1.82
	12.00	154/0.33	1.00	6.60	7.40	200	1.52
	16.00	105/0.46	1.00	7.70	8.30	200	1.16



FLY-B , FL2Y-B , FL2X(21X)-B , FL11Y-B , FL91X-B

Single-Core Stranded ISO Cable

Applications:

- For use in internal wiring of automobile and electronic equipment.
- The dimension, test methods, and requirements for Single-core cables is based upon and refers to ISO 6722-2 and GMW15626
- 60 V cables intended for use in road vehicle applications where the nominal system voltage is <60 Vdc or 25 Vac
- 600 V cables intended for use in road vehicle applications where the nominal system voltage is 60 Vdc to 600 Vdc (or 25 Vac to 600 Vac).

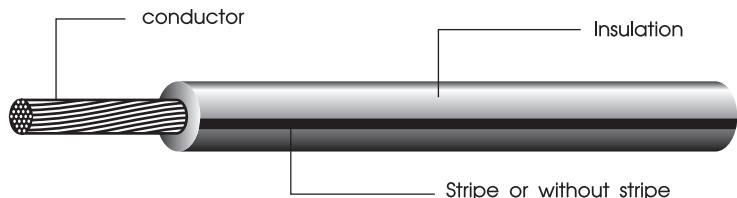
Product Description:

- Stranded Bare Copper conductor 0.50 ~ 16 SQMM
- Color code insulation with or without stripe
- RoHS complied wire.

Product Description:

Cable Style	Insulation Materials	Temperature Rating
FLY-B	PVC	-40°C ~ 85°C
FL2Y-B	PE	-40°C ~ 85°C
FL2X(21X)-B	XLPE	-40°C ~ 125°C
FL11Y-B	PU	-40°C ~ 125°C
FL91X-B	XLPE	-40°C ~ 150°C

Construction :



ISO / TS 16949 : 2009 - GMW15626 (Thick Wall Style)

Style	Conductor		Nom. Insulation Thickness	Overall Diameter(mm)		Standard Put-Up	Conductor Resistance at 20°C
	Size (mm²)	No/mm (Max)		mm	min		
FLY-B FL2Y-B FL2X(21X)-B FL11Y-B FL91X-B	0.50	16/0.21	0.60	2.00	2.30	500	37.10
	0.75	24/0.21	0.60	2.20	2.50	500	24.70
	1.00	32/0.21	0.60	2.40	2.70	500	18.50
	1.50	30/0.26	0.60	2.70	3.00	500	12.70
	2.00	28/0.31	0.60	3.00	3.30	500	9.42
	2.50	50/0.26	0.70	3.30	3.60	500	7.60
	3.00	44/0.31	0.70	3.80	4.10	500	6.15
	4.00	56/0.31	0.80	4.00	4.40	500	4.71
	5.00	70/0.31	0.80	4.50	4.90	200	3.94
	6.00	84/0.31	0.80	4.60	5.00	200	3.14
	8.00	98/0.33	0.80	5.00	5.90	200	2.38
	10.00	80/0.41	1.00	5.90	6.50	200	1.82
	12.00	96/0.41	1.00	6.60	7.40	200	1.52
	16.00	126/0.41	1.00	7.70	8.30	200	1.16



AUTOMOBILE WIRE TYPE AV, AVF

A: Low-voltage wires for automobiles, V : Polyvinyl Chloride, S : Slim, F : Flexible conductor

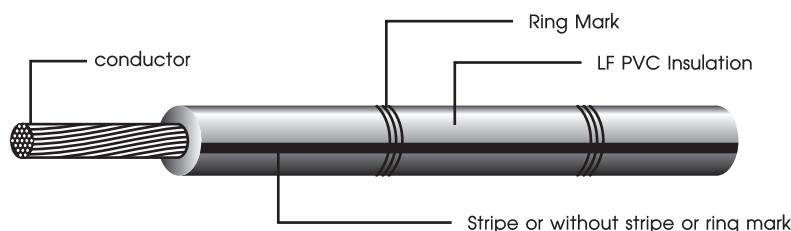
Applications:

- Wires used in low voltage circuits in automobiles (vehicles and motorcycles).
- General purpose wires for automobiles ; they are used in low voltage circuits such as starting, charging, lighting, signal and instrument panel circuits. Standard : JIS C 3406 60°C

Product Description:

- Stranded Copper conductor 0.5 - 8.0 SQMM
- Color code lead free PVC insulation with or without stripe or ring mark

Construction:



ISO / TS 16949 : 2009

Nominal size *1	Conductor (Annealed copper stranded conductors)			Insulation	Overall diameter		Conductor resistance (20°C) Ω/Km	Current limit (*2)	Approx. weight (Kg/Km)	Standard Put - Up (M/coil) *3
	Construction (No./mm)	Calculated area (mm ²)	Outer diameter (mm)		Thickness (mm)	Standard (mm)				
AV										
0.5	7/0.32	0.56	1.00	0.60	2.30	2.40	32.70	13	5.36	500
0.85	11/0.32	0.88	1.20	0.60	2.50	2.60	20.80	18	7.19	500
1.25	16/0.32	1.28	1.50	0.60	2.80	2.90	14.30	24	9.71	500
2.0	26/0.32	2.09	1.90	0.60	3.25	3.40	8.81	33	14.48	500
3.0	41/0.32	3.29	2.40	0.70	3.95	4.10	5.99	45	22.20	500
5.0	65/0.32	5.22	3.00	0.80	4.75	4.90	3.52	58	33.91	500
8.0	50/0.45	7.95	3.70	0.90	5.65	5.80	2.32	75	50.15	500
AVF										
0.5f	20/0.18	0.50	0.90	0.60	2.30	2.40	3.27	13	5.15	500
0.75f	30/0.18	0.76	1.10	0.60	2.50	2.60	2.24	15	6.71	500
1.25f	50/0.18	1.27	1.50	0.60	2.80	2.90	1.47	24	9.65	500

*1 The "f" in the nominal size column indicates a flexible conductor with a finer wire diameter.

*2 The Current limit data is for conductor temperature of 80°C (maximum allowable temperature) nad an ambient temperature of 40°C

*3 Standard packing shapes shall be coils. However, the products which length are indicated in () shall be wound on drums



AUTOMOBILE WIRE TYPE AVS, AVSF, AVSS, AVSSF

A: Low-voltage wires for automobiles, V : Polyvinyl Chloride, S : Slim, F : Flexible conductor

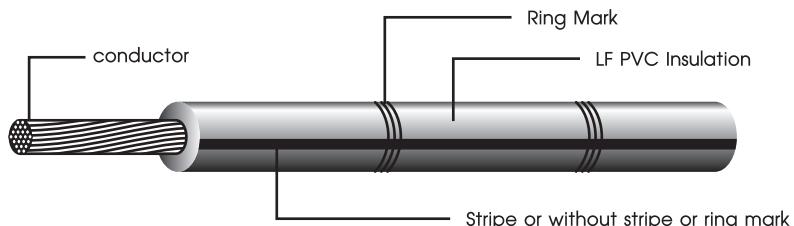
Applications:

- Wires used in low voltage circuits in automobiles (vechicles and motorcycles).
- General purpose wires for automobiles ; they are used in low voltage circuits such as starting, charging, lighting, signal and instrument panel circuits. Standard : JASO D 611 80°C

Product Description:

- Stranded Copper conductor 0.3 ~ 5.0 SQMM
- Color code lead free PVC insulation with or without stripe or ring mark

Construction:



ISO / TS 16949 : 2009

Nominal size *1	Conductor (Annealed copper stranded conductors)			Insulation	Overall diameter		Conductor resistance (20°C) Ω/Km	Current limit (A) *2	Approx. weight (Kg/Km)	Standard Put - Up (M/coil) *3
	Construction (No./mm)	Calculated area (mm²)	Outer diameter (mm)		Thickness (mm)	Standard (mm)				
AVS										
0.3	7/0.26	0.37	0.80	0.50	1.83	1.90	50.20	10	3.45	500
0.5	7/0.32	0.56	1.00	0.50	2.03	2.10	32.70	13	4.66	500
0.85	16/0.26	0.84	1.20	0.50	2.23	2.30	22.00	18	6.29	500
0.85	11/0.32	0.88	1.20	0.50	2.23	2.30	20.80	18	6.42	500
1.25	16/0.32	1.28	1.50	0.50	2.53	2.60	14.30	24	8.85	500
2.0	26/0.32	2.09	1.90	0.50	3.00	3.10	8.81	33	13.54	500
3.0	41/0.32	3.29	2.40	0.60	3.70	3.80	5.59	45	4.21	100
5.0	65/0.32	5.22	3.00	0.70	4.50	4.60	3.52	58	6.50	100
AVSF										
0.3 f	15/0.18	0.38	0.80	0.50	1.80	1.90	48.90	10	3.42	500
0.5 f	20/0.18	0.50	0.90	0.50	2.00	2.10	36.70	13	4.37	500
0.75 f	30/0.18	0.76	1.10	0.50	2.20	2.30	24.40	15	5.87	500
1.25 f	50/0.18	1.27	1.50	0.50	2.50	2.60	14.70	18	8.70	500
2.0 f	37/0.26	1.96	1.80	0.50	2.90	3.10	9.50	24	12.70	500
AVSS										
0.3	7/0.26	0.37	0.80	0.30	1.43	1.50	50.20	10	2.67	500
0.5	7/0.32	0.56	1.00	0.30	1.63	1.70	32.70	13	3.78	500
0.85	19/0.24	0.85	1.20	0.30	1.83	1.90	21.70	18	5.36	500
0.85	7/0.4	0.87	1.20	0.30	1.83	1.90	20.80	18	5.43	500
1.25	19/0.29	1.25	1.50	0.30	2.13	2.20	14.90	24	7.61	500
2.0	19/0.37	2.04	1.90	0.40	2.73	2.80	9.00	33	12.43	500
AVSSF										
0.3 f	19/0.16	0.38	0.80	0.30	1.40	1.50	48.80	10	2.66	500
0.5 f	19/0.19	0.53	1.00	0.30	1.60	1.70	34.60	13	3.63	500
0.75 f	19/0.23	0.78	1.20	0.30	1.80	1.90	23.60	15	5.02	500
1.25 f	37/0.21	1.28	1.50	0.30	2.10	2.20	14.60	18	7.64	500
2.0 f	37/0.26	1.96	1.80	0.40	2.60	2.70	9.50	24	11.71	500

*1 The "f" in the nominal size column indicates a flexible conductor with a finer wire diameter.

*2 The Current limit data is for conductor temperature of 80°C (maximum allowable tempurature) nad an ambient temperature of 40°C

*3 Standard packing shapes shall be coils. However, the products which length are indicated in () shall be wound on drums



AUTOMOBILE WIRE TYPE AEX, AEXF

A: Low-voltage wires for automobiles, E : Polyethyline, X : Crosslinked, F : Flexible conductor

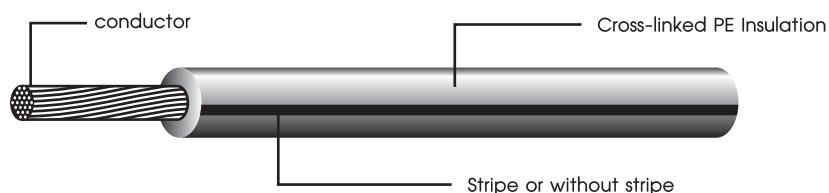
Applications:

- Wires used in low voltage circuits in automobiles (vechicles and motorcycles).
- General purpose wires for automobiles ; they are used in low voltage circuits such as starting, charging, lighting, signal and instrument panel circuits. Standard : JASO D 611 120°C

Product Description:

- Stranded Copper conductor 0.5 - 8.0 SQMM
- Color code Cross-link PE insulation with or without stripe

Construction:



ISO / TS 16949 : 2009

Nominal size *1	Conductor (Annealed copper stranded conductors)			Insulation	Overall diameter		Conductor resistance (20°C) Ω/Km	Current limit (A) *2	Approx. weight (Kg/Km)	Standard Put - Up (M/coil) *3
	Construction (No./mm)	Calculated area (mm ²)	Outer diameter (mm)		Thickness (mm)	Standard (mm)				
AEX										
0.5	7/0.32	0.56	1.00	0.50	2.20	2.20	35.60	14	4.59	500
0.85	11/0.32	0.88	1.20	0.50	2.20	2.40	22.00	20	6.34	500
1.25	16/0.32	1.28	1.50	0.60	2.70	2.90	15.10	26	9.38	500
2.0	26/0.32	2.09	1.90	0.60	3.10	3.40	9.30	40	13.91	500
3.0	41/0.32	3.29	2.40	0.70	3.80	4.10	5.90	50	4.30	100
5.0	65/0.32	5.22	3.00	0.80	4.60	4.90	3.72	70	6.61	100
8.0	50/0.45	7.95	3.70	0.80	5.30	5.60	2.45	90	9.57	100
AEXF										
0.5f	20/0.18	0.50	0.90	0.50	2.20	2.20	38.60	14	4.37	500
0.75f	30/0.18	0.76	1.10	0.50	2.20	2.40	25.80	16	5.87	500
1.25f	50/0.18	1.27	1.50	0.60	2.70	2.90	15.50	26	9.32	500

*1 The "f" in the nominal size column indicates a flexible conductor with a finer wire diameter.

*2 The Current limit data is for conductor temperature of 80°C (maximum allowable tempurature) nad an ambient temperature of 40°C

*3 Standard packing shapes shall be coils. However, the products which length are indicated in () shall be wound on drums



AUTOMOBILE WIRE TYPE AVX, AVXF

A: Low-voltage wires for automobiles, V : Polyvinyl Chloride, X : Crosslinked, F : Flexible conductor

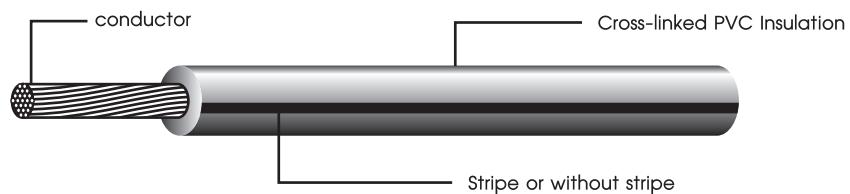
Applications:

- Wires used in low voltage circuits in automobiles (vehicles and motorcycles).
- General purpose wires for automobiles ; they are used in low voltage circuits such as starting, charging, lighting, signal and instrument panel circuits. Standard : JASO D 611 100°C

Product Description:

- Stranded Copper conductor 0.5 ~ 8.0 SQMM
- Color code Cross-link PVC insulation with or without stripe

Construction:



ISO / TS 16949 : 2009

Nominal size *1	Conductor (Annealed copper stranded conductors)			Insulation	Overall diameter		Conductor resistance (20°C) Ω/Km	Current limit (*2)	Approx. weight (Kg/Km)	Standard Put - Up (M/coil) *3
	Construction (No./mm)	Calculated area (mm²)	Outer diameter (mm)		Thickness (mm)	Standard (mm)				
AVX										
0.5	7/0.32	0.56	1.00	0.50	2.00	2.20	34.60	13	4.59	500
0.85	11/0.32	0.88	1.20	0.50	2.20	2.40	22.00	18	6.34	500
1.25	16/0.32	1.28	1.50	0.60	2.70	2.90	15.10	24	9.38	500
2.0	26/0.32	2.09	1.90	0.60	3.10	3.40	9.30	33	13.91	500
3.0	41/0.32	3.29	2.40	0.70	3.80	4.10	5.90	45	4.30	100
5.0	65/0.32	5.22	3.00	0.80	4.60	4.90	3.72	58	6.61	100
8.0	50/0.45	7.95	3.70	0.80	5.30	5.60	2.45	75	9.57	100
AVXF										
0.5f	20/0.18	0.50	0.90	0.50	2.00	2.20	38.60	13	4.37	500
0.75f	30/0.18	0.76	1.10	0.50	2.20	2.40	25.80	15	5.87	500
1.25f	50/0.18	1.27	1.50	0.60	2.70	2.90	15.50	24	9.32	500

*1 The "f" in the nominal size column indicates a flexible conductor with a finer wire diameter.

*2 The Current limit data is for conductor temperature of 80°C (maximum allowable temperature) nad an ambient temperature of 40°C

*3 Standard packing shapes shall be coils. However, the products which length are indicated in () shall be wound on drums

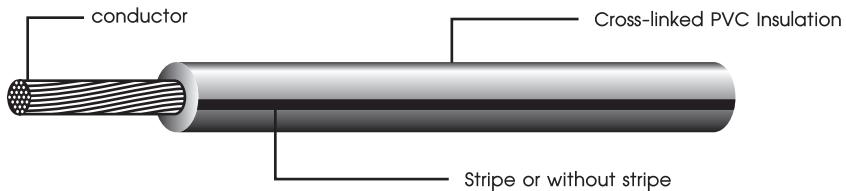


Applications:

- Thin wall cable for automotive electric circuits, motorcycles and off-road vehicles.
- Standard wall cable for general purpose in automotive electric, motorcycles and off-road vehicles.
- For heavy-duty trucks, helping provide extreme resistance.

Product Description:

- TXL, GXL Auto and Motorcycle Cables. Thin wall, cross-linked polyolefin insulated wires.
- Conductor-soft-annealed copper according to ASTM B3
- Insulation-Cross-linked polyethylene (PE) with heat-resistant according to SAE J1128 and RoHS Compliant.
- Temperature rate: -40°C ~ +125°C
- High temperature resistant and flame retardant.
- Provides higher reliability in heat resistance than conventional general wires due to emission bridging.



Construction:

Type	Conductor		Insulation		INSULATION RESISTANCE (IN WATER) MEGA OHM/KM (MINIMUM)
	Size	Construction	Nominal Thickness	Nominal Diameter	
	AWG	No/mm	mm	mm	
TXL	8	50/0.450	0.56	4.80	50
	10	19/0.750	0.50	4.00	
	12	19/0.450	0.46	3.20	
	14	19/0.360	0.40	2.60	
	16	19/0.290		2.30	
	18	19/0.240		2.00	
	20	7/0.320		1.80	
	22	7/0.260		1.60	
GXL	8	50/0.450	0.94	5.60	50
	10	19/0.750	0.79	4.50	
	12	19/0.450	0.66	3.60	
	14	19/0.360	0.58	3.00	
	16	19/0.280		2.70	
	18	19/0.230		2.30	
	20	7/0.320		2.20	
	22	7/0.260		2.00	



AUTOMOBILE WIRE CAVS, CAVUS, CIVUS

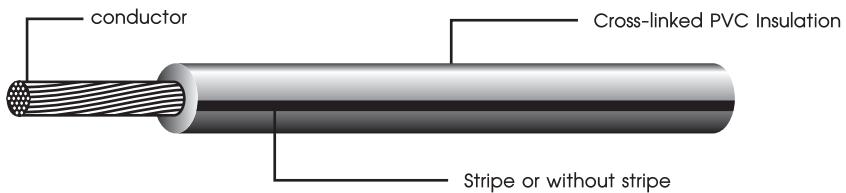
Applications:

- Wire harness of low-voltage and low-tension circuits for automobiles.
- Thin wall cables for automobiles type 2, 3

Product Description:

- Compact round stranded, annealed copper conductor
- Rated temperature : 80°C, Rated voltage : 25V AC and 60V DC
- PVC insulation (Lead free)
- Conformity to JASO D611.

Construction:



Type	Conductor		Insulation			Conductor Resistance at 20°C Ohm/Km
	Size	Contruction	Nominal	Nominal	Nominal	
	mm ²	No/mm	Thickness	Diameter	Diameter	
CAVS	0.30	7/0.253 (COMPRESS)	0.35	1.40	1.50	52.20
	0.50	7/0.320 (COMPRESS)		1.60	1.70	32.70
	0.85	11/0.320 (COMPRESS)		1.80	1.90	20.80
	1.25	16/0.320 (COMPRESS)		2.10	2.20	14.30
CAVUS	0.22	7/0.203 (COMPRESS)	0.20	0.95	1.05	84.40
	0.30	7/0.260 (COMPRESS)		1.10	1.20	52.20
	0.50	7/0.320 (COMPRESS)		1.30	1.40	32.70
	0.85	11/0.400 (COMPRESS)		1.50	1.60	20.80
	1.25	16/0.320 (COMPRESS)		1.80	1.90	14.30
CIVUS	0.22	7/0.203 (COMPRESS)	0.20	0.95	1.05	84.40
	0.35	7/0.253 (COMPRESS)		1.10	1.20	54.40
	0.50	7/0.320 (COMPRESS)		1.25	1.40	37.10
	0.75	11/0.320 (COMPRESS)		1.40	1.60	24.70
	1.25	16/0.320 (COMPRESS)		1.80	2.00	14.90

**UL 1500, UL 10002**

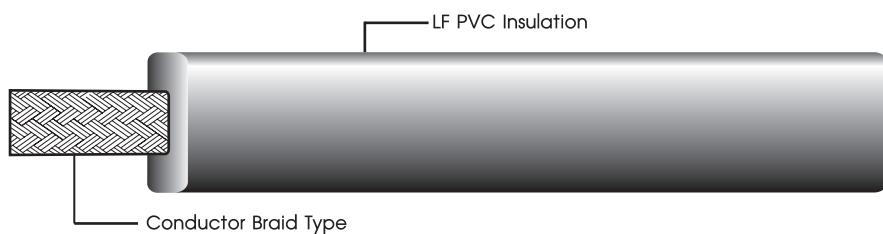
Applications:

- Internal wiring of Appliance

Product Description:

- Solid or stranded, tinned or bare copper 26 - 9 AWG
- PVC insulation (Lead Free)
- Rated temperature : 105°C, Rated voltage : 600v For UL 1500, 300v For UL 10002
- Pass UL VW-1 flame test

Construction:



UL Style	Conductor		Width of Braid mm	Insulation Thickness mm	Overall Diameter (Approix.) mm	Standard Put-Up	
	AWG	No./mm				ft/coil	M/coil
UL 1500	20	48/0.12	2.0	0.78	1.80 x 3.60	2000	610
	19	64/0.12	3.0		1.90 x 4.60		
	18	80/0.12	3.7		1.90 x 5.40		
	17	96/0.12	4.3		1.90 x 6.10		
	16	128/0.12	5.0		1.90 x 6.90		
	15	144/0.12	5.5		1.90 x 7.20		
	14	192/0.12	6.0		1.90 x 7.60		
	13	144/0.16	6.6		2.00 x 8.30		
	12	144/0.18	7.0		2.00 x 8.60		
	11	192/0.18	7.8		2.00 x 9.50		
UL 10002	18	1614/0.2	3.2	0.56	2.05 x 3.70	2000	610
	15	1618/0.2	3.2	0.64	2.30 x 5.20		



TOT Coaxial Cable

**1.5/75 Ohms Coaxial Cable
2.5/75 Ohms Coaxial Cable**

Applications:

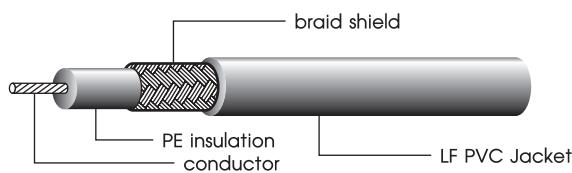
- Transmission media for 2 Mbps digital transmission system
- This cable cover the requirement of coaxial cable supplied to TOT

Product Description:

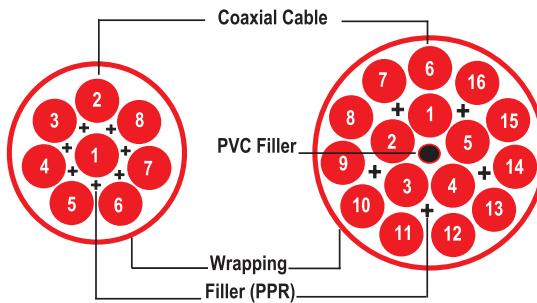
- Bare copper conductor and shield
- Coaxial cable structures accommodated in 3 kinds of core capacities
 - a) Single core (1)
 - b) 8 Cores
 - c) 16 Cores
- The cover of multi-core are 2 kinds
 - a) Wrapping
 - b) Jacket
- Complied With TOT : TES-105-003-01 for 1.5/75 Ohms
TES-105-001-03 for 2.5/75 Ohms

Construction:

a) Single core



b) Multi Core



a). Multi-Core Coaxial Cable (8 Cores) b). Multi-Core Coaxial Cable (16 Cores)

Single Core

Cable Type	Inner Conductor mm	Insulation		Outer Conductor		Sheath		Overall Diameter (Approx.) mm	Impedance Ohms	Nominal Attenuation dB/KM	Insulation Resistance Mohms/Km	Conductor Resistance Ohms-Km	Standard Put - Up (M/Drum)
		Material	Thickness mm	Material	braid shield mm	Material	Thickness mm						
1.5C/75 Ohms	0.26	LD-PE	0.67	BC	16/5/0.102	LF-PVC	0.40	2.90	75	69	1000	968	500
2.5C/75 Ohms	0.40	LD-PE	1.00	BC	16/6/0.127	LF-PVC	0.50	4.00	75	52	1000	145	500

Multi Core

Cable Type	No. of Core	Cover Type	Wrapping Thickness mm	Overall Diameter (Apporx) mm	Standard Put - Up (M/Drum)
1.5C/75 Ohms	8	Jacket	35 x 0.25	9.70	500
	16		50 x 0.25	13.50	250
	8	Wrapping	35 x 0.25	13.40	500
	16		50 x 0.25	17.85	250
2.5C/75 Ohms	8	Jacket	50 x 0.25	13.30	500
	16		50 x 0.25	18.80	250
	8	Wrapping	50 x 0.25	17.00	500
	16		50 x 0.25	21.30	250



Coaxial Cable

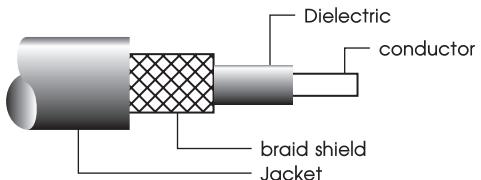
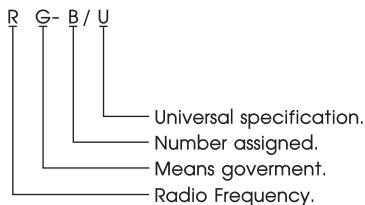
Product Description:

Signal transmission in electronic applications and data communications is changing in a dramatic way. Cables now have to accommodate faster signal speeds over longer distances with less signal loss. Additionally, new shielding requirements to meet FCC signal loss. Additionally, new shielding requirements to meet FCC RFI/EMI emission controls, tougher fire regulations requiring low toxicity materials in plenum installations and demands for high density wiring are factors which have been considered in creating many of our new coaxial and data cable products. The TWF products in this section are designed to meet these needs for safe and reliable transmission of voice, video or data.

Construction:



Type Designation :



Type	UL Style	Conductor		Insulation		Braid Shield			Jacket		Nom. Imped.	Nom. Capacitance	Attenuation 100MHz	Standard Put-Up	
		No./mm	MTRL	mm	MTRL	No./mm	No./mm	MTRL	mm	MTRL				dB-km	ft-coil
RG-6/U	1354	1/1.024	BC	4.57	LDPE F	16/5/0.16	16/8/0.16	T.C	7.4±0.20	PVC	75	56.80	69	328	100
RG-6/U	1354	1/1.024	BC	4.57	LDPE-F	16/5/0.16	-	T.C	7.4±0.20	PVC	75	56.80	70	328	100
RG-8/U	1354	7/0.724	BC	7.24	LDPE	24/8/0.18	-	B.C	10.3±0.20	PVC	52	96.8	69	328	100
RG-8A/U	1354	7/0.724	BC	7.24	LDPE	24/8/0.18	-	B.C	10.3±0.20	NC-PVC	52	96.8	69	328	100
RG-11/U	1354	7/0.404	TC	7.24	LDPE	24/8/0.18	-	B.C	10.3±0.20	PVC	75	67.3	76	328	100
RG-11A/U	1354	7/0.404	TC	7.24	LDPE	24/8/0.18	-	B.C	10.3±0.20	NC-PVC	75	67.3	76	328	100
RG-58/U	1354	1/0.813	BC	2.95	LDPE	16/7/0.127	-	T.C	4.95±0.15	PVC	53.5	93.5	138	328	100
RG-58A/U	1354	19/0.18	TC	2.95	LDPE	16/7/0.127	-	T.C	4.95±0.15	PVC	50	93.5	174	328	100
RG-58C/U	1354	19/0.18	TC	2.95	LDPE	16/7/0.127	-	T.C	4.95±0.15	NC-PVC	50	93.5	174	328	100
RG-59/U	1354	1/0.643	CCS	3.71	LDPE	16/7/0.16	-	B.C	6.15±0.15	PVC	73	68.9	125	328	100
RG-59A/U	1354	1/0.643	CCS	3.71	LDPE	16/7/0.16	-	T.C	6.15±0.15	NC-PVC	73	68.9	125	328	100
RG-59B/U	1071	1/0.584	CCS	3.71	LDPE	16/7/0.16	-	B.C	6.15±0.15	NC-PVC	73	68.9	112	328	100
RG-62/U	1354	1/0.643	CCS	3.71	LDPE	16/7/0.16	-	B.C	6.15±0.15	PVC	93	44.3	102	328	100
RG-62A/U	1478	1/0.643	CCS	3.71	LDPE	16/7/0.16	-	B.C	6.15±0.15	NC-PVC	93	44.3	102	328	100
RG-174/U	1354	7/0.16	CCS	1.52	LDPE	16/5/0.10	-	T.C	2.54±0.15	NC-PVC	50	110	259	328	100
RG-213/U	-	7/0.752	BC	7.24	LDPE	24/8/0.18	-	B.C	10.3±0.20	NC-PVC	50	100	69	328	100

Attenuation is measured at 100MHz

BC-bare copper wire

TC-tinned copper wire

CCS-Copper clad steel wire

NC PVC NON-Contaminating polyvinyl chloride

PE-Polyethylene

PVC-Polyvinyl chloride

Coaxial Cable

Applications:

- For use with communication and signal control systems.

Construction:

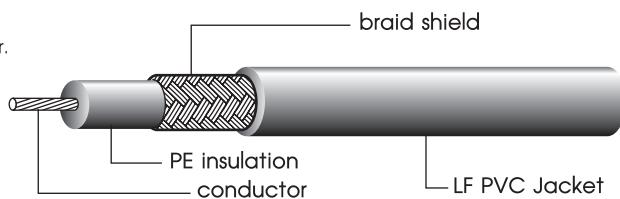
Product Description:

- Copper or copper coated steel conductor.
- Transparent PE insulation.
- Bare copper braid shield, 95% coverage.
- Color-coded PVC jacket (Lead Free).
- Low losses and low propagation delays. Crosstalk kept to Minimum.
- Refers to JIS C 3501.

Type Designation:

3 C - 2 VCS

Strand inner conductor.
 Copper-clad steel wire inner conductor.
 Single braided outer conductor.
 Double braided outer conductor.
 Solid PE dielectric core.
 Characteristic impedance 75 Ω (C)
 Characteristic impedance 50 Ω (D)
 Approx. diameter of dielectric core.



Cable TYPE No.	UL Style	Inner Conductor		Insulation		Braid Shield		Jacket Thickness	Overall Diameter	Characterisal Impedance (10MHz)	Nominal Attenuation (10MHz)	Insulation Resistance	Conductor Resistance 20° C Max	Standard Put-Up	
		Material	No./mm	Material	mm	Material	C/N/mm							Ω·km	M/coil
1.5C-2V	1365	C.C.S	1/0.26	LD-PE	0.67	B.C	16/5/0.102	0.4	2.90	75±3	96	1,000	968	328	100
2.5C-2V	1150	B.C	1/0.4	LD-PE	1.00	B.C	16/6/0.127	0.5	3.90	75±3	52	1,000	145	328	100
3C-2V	1071	B.C	1/0.5	LD-PE	1.30	B.C	16/7/0.127	0.8	5.40	75±3	42	1,000	91.4	328	100
5C-2V	1071	B.C	1/0.8	LD-PE	2.05	B.C	16/8/0.160	0.9	7.40	75±3	27	1,000	35.9	328	100
7C-2V	1354	B.C	7/0.405	LD-PE	3.05	B.C	24/7/0.180	1.0	10.30	75±3	22	1,000	20.7	328	100
10C-2V	-	B.C	7/0.50	LD-PE	3.95	B.C	24/9/0.160	1.5	13.00	75±3	18	1,000	13.1	328	100
1.5D-2V	1107	B.C	7/0.18	LD-PE	0.53	B.C	16/5/0.100	0.4	2.90	50±3	85	1,000	110	328	100
2.5D-2V	1150	B.C	1/0.80	LD-PE	0.95	B.C	16/7/0.120	0.5	4.30	50±3	45	1,000	35.9	328	100
3D-2V	1150	B.C	7/0.32	LD-PE	1.00	B.C	16/6/0.120	0.8	5.30	50±3	46	1,000	33.3	328	100
5D-2V	1150	B.C	1/1.40	LD-PE	1.70	B.C	24/7/0.120	0.9	7.30	50±3	27	1,000	11.7	328	100
8D-2V	1354	B.C	7/0.80	LD-PE	2.70	B.C	24/8/0.160	1.2	11.10	50±3	20	1,000	5.13	328	100
10D-2V	-	B.C	1/2.90	LD-PE	3.40	B.C	24/10/0.20	1.2	13.10	50±3	14	1,000	2.67	328	100



Twinaxial Cable Composed Cable

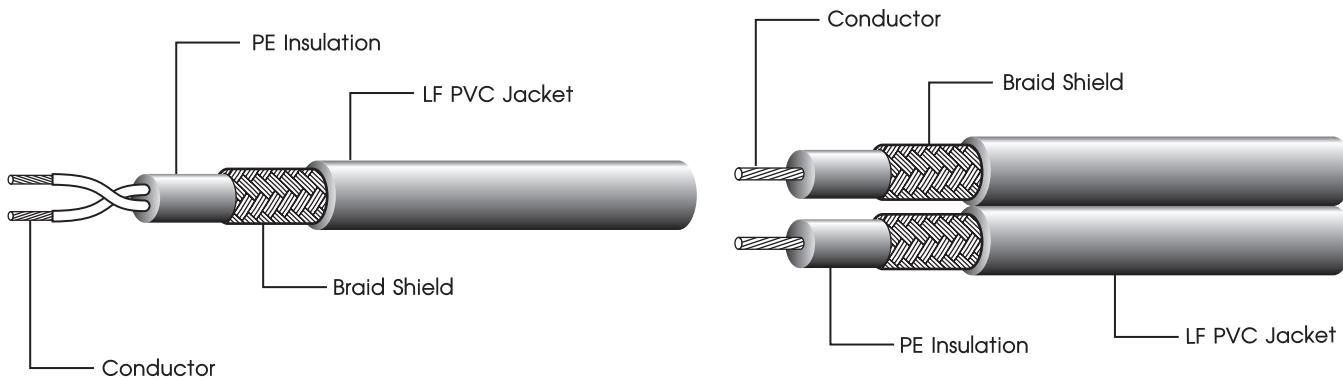
Applications:

- Recommended for RF applications requiring
- a cross-talk free, balanced operation.

Product Description:

- Twinaxial transmission line cables offer low - loss signal transmission
- which remain unaffected by outside signal or noise fields.

Construction:



Type	Conductor		Ins. MTRL	Braid Shield		Nomi. O.D.	Jacket MTRL	Nomi. Imped	Nomi. CAP	Atten	Standard Put-Up	
	No./mm	MTRL		No./mm	MTRL						ohm	pF/m
UL 2092	7/0.254	TCU	PE	16/6/0.127	TCu	4.8±0.10	PVC	78	64.6	246	1000	305
UL 2448	1/1.290x2C	ACU	Foamed PE	24/8/0.160	BCu	11.18±0.20	PVC	124	35.8	95	500	152
IBM P/M 7362211 UL 2498	7/0.320x2C	ACU/ACU	PE	24/7/0.160	TCu	8.26±0.15	PVC	100	50.9	135	500	152
UL 2582	7/0.320x2C	TCU	PE	16/8/0.160	TCu	6.17±0.15	PVC	78	64.6	246	1000	305
UL 2668	19/0.127x2C	TCU	PE	24/8/0.180	TCu	8.89±0.20	PVC	150	28.9	141	500	152
RG-59B/U Dual UL 20063	1/0.584x2C	CCS	PE	16/7/0.160	BCu	6.15±0.15x 12.3±0.30	NCPVC	75	67.3	125	500	152

ACU : bare copper wire

TCU : tinned copper wire

CCS: copper clad steel wire.

PVC: polyvinyl chloride

NCPVC: non-contaminating polyvinyl chloride

PE: polyethylene



Universal Serial Bus Cable

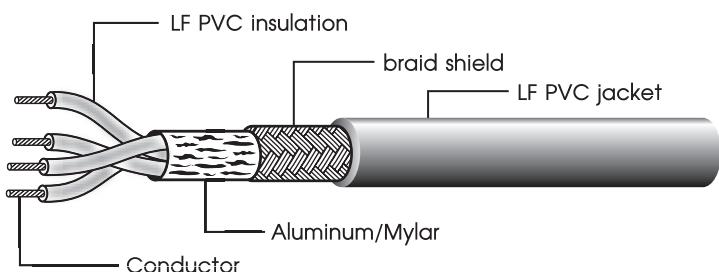
(USB Fully Rated Type)

Product Description:

The development for the USB (Universal Serials Bus) cable comes from three considerations as follow:

- It is connection from PC to telephone and fax.
- This cable is easy to use, from PC's I/O interfaces serial or parallel ports to keyboard/mouse/joystick interfaces, etc, do not have the attributes of plug and play.
- It is a fast, bidirectional, is chromous, low-cost, dynamically attachable serial interface that is consistent with the requirements of the PC platform of today and tomorrow.

Construction:



UL,CSA Style	No.of Pairs & Cores	AWG	Jacket O.D.	D.C. Resistance Ω/km	Frequence Impedance		Frequence Attenuation		Frequence Delay Time			
					MHz	ohm	MHz	dB	MHz	ns/m		
					Shield							
UL 2990 ULCM CSA FT4	1 Pair & 2 Cores	28AWG (1 Pair) 28AWG (2 Cores)	4.30mm	232 (28AWG) 232 (28AWG)	1 f 16	90±15%	0.064	4.8	1	6.0		
			Aluminum Foil + 65% Tinned Copper Braid				0.256	6.7	f			
	1 Pair & 2 Cores	28AWG (1 Pair) 26AWG (2 Cores)	5.00mm	232 (28AWG) 145 (26AWG)			0.512	8.2	16			
			Aluminum Foil + 65% Tinned Copper Braid				0.772	9.4				
	1 Pair & 2 Cores	28AWG (1 Pair) 24AWG (2 Cores)	5.30mm	232 (28AWG) 90.9 (24AWG)			1.000	12.0				
			Aluminum Foil + 65% Tinned Copper Braid				4.000	24.0				
	1 Pair & 2 Cores	28AWG (1 Pair) 22AWG (2 Cores)	5.60mm	232 (28AWG) 57.4 (22AWG)			8.000	35.0				
			Aluminum Foil + 65% Tinned Copper Braid				10.000	38.0				
	1 Pair & 2 Cores	28AWG (1 Pair) 20AWG (2 Cores)	6.00mm	232 (28AWG) 35.8 (20AWG)			16.000	48.0				
			Aluminum Foil + 65% Tinned Copper Braid									



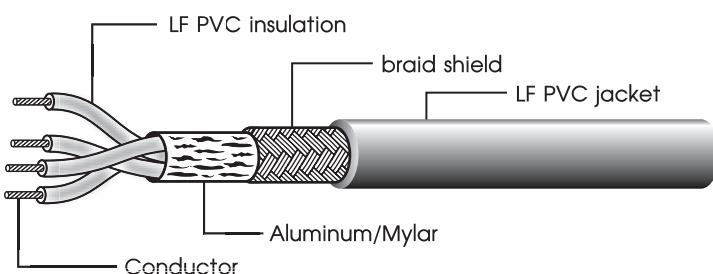
Universal Serial Bus Cable (SUB-Channel Type)

Product Description:

The development for the USB (Universal Serials Bus) cable comes from three considerations as follow:

- It is connection from PC to telephone and fax.
- This cable is easy to use, from PC's I/O interfaces serial or parallel ports to keyboard/mouse/joystick interfaces, etc, do not have the attributes of plug and play.
- It is a fast, bidirectional, is chromous, low-cost, dynamically attachable serial interface that is consistent with the requirements of the PC platform of today and tomorrow.

Construction:



UL,CSA Style	No.of Paris & Cores	AWG	Jacket O.D.	D.C. Resistance Ω/km	Frequency Impedance		Frequency Attenuation		Frequency Delay Time	
					Shield	MHz	ohm	MHz	dB	MHz
						1.5	1.5	1.5	1.5	1.5
UL 2990 ULCM CSA FT4	2 Cores & 2 Cores	28AWG (2 Cores) 28AWG (2 Cores)	4.20mm	232 (28AWG) 232 (28AWG)	90±15%	1	0.064	4.8	1	7.7
	2 Cores & 2 Cores	28AWG (2 Cores) 26AWG (2 Cores)		232 (28AWG) 145 (26AWG)		1.5	0.256	6.7	1.5	
	2 Cores & 2 Cores	28AWG (2 Cores) 24AWG (2 Cores)	4.70mm	232 (28AWG) 90.9 (24AWG)		1.5	0.512	8.2	1.5	
	2 Cores & 2 Cores	28AWG (2 Cores) 22AWG (2 Cores)		232 (28AWG) 57.4 (22AWG)		1.5	0.772	9.4	1.5	
	2 Cores & 2 Cores	28AWG (2 Cores) 20AWG (2 Cores)	5.50mm	232 (28AWG) 35.8 (20AWG)		1.5	1.000	12.0	1.5	



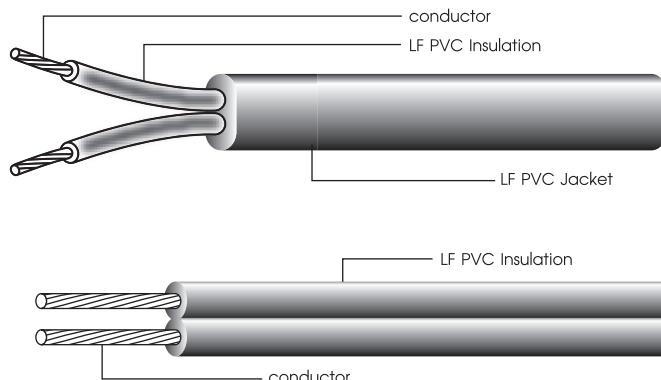
Applications:

- SPT-1 SPT-2; NISPT-1, NISPT-2 For use in household clocks, fans, radios and similar appliances.
- SPT-3: For heavy-duty use in damp location: especially suitable for refrigerators and room-size air conditioners.
- UL 20288: For use in chain link of chain suspended lighting fixtures.

Construction:

Product Description:

- Bare stranded copper conductor.
- Color-coded PVC insulation. (Lead Free)
- Rated temperature: 60° C or 105° C. Rated voltage: 300 V
- Pass UL VW-1 & CSA flame test.



UL Style & CSA Type	Conductor		No. OF Core	Insulation Thickness mm	Overall Diameter mm	Standard Put-Up	
	AWG	No./mm				ft/coil	M/coil
SPT-1	18	41/0.160	2	0.76	2.70 x 5.40	1000	305
	18	41/0.160	3		2.70 x 8.00	1000	305
SPT-2	18	41/0.160	2	1.14	3.50 x 7.00	1000	305
	16	65/0.160	2		3.70 x 7.20	1000	305
	18	41/0.160	3		3.50 x 8.60	1000	305
	16	65/0.160	3		3.80 x 9.60	1000	305
SPT-3	18	41/0.160	2	1.52	4.40 x 8.70	1000	305
	16	65/0.160	2	1.52	4.6 x 9.10	1000	305
	14	41/0.253	2	2.03	6.00 x 10.80	500	152
	12	65/0.253	2	2.41	7.40 x 14.00	500	152
	10	105/0.253	2	2.79	9.10 x 18.20	500	152
	18	41/0.160	3	1.52	4.40 x 10.70	1000	305
	16	65/0.160	3	1.52	4.75 x 11.80	500	152
	14	41/0.253	3	2.03	6.00 x 14.50	500	152
	12	65/0.253	3	2.41	7.00 x 15.40	500	152
	10	105/0.253	3	2.79	9.10 x 18.80	500	152
UL 20288	18	41/0.160	2	1.02	3.25 x 5.80	1000	305
NISPT-1	18	41/0.160	2	INSU	JKT THICK	Thick Bet. Cond.	Overall Dia (APPROX)
				0.38	0.55	0.38	3.10 x 5.60
NISPT-2	18	41/0.160	2	0.76	0.55	0.51	3.90 x 7.30
	16	65/0.160	2	0.76	0.55	0.51	4.20 x 7.80
							305

Applications:

- Unshielded : for light-duty portable tools, mixers and vacuum cleaners.
- Shielded : for power supply cord of computers to eliminate EMI and RFI.

Product Description:

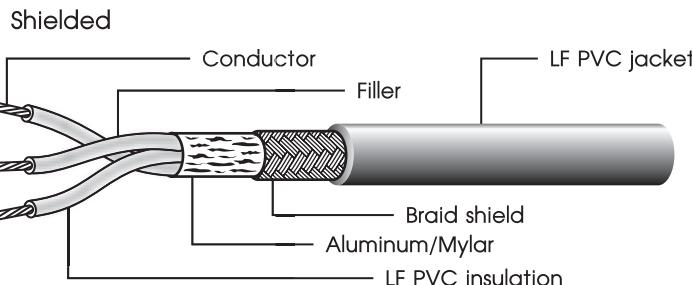
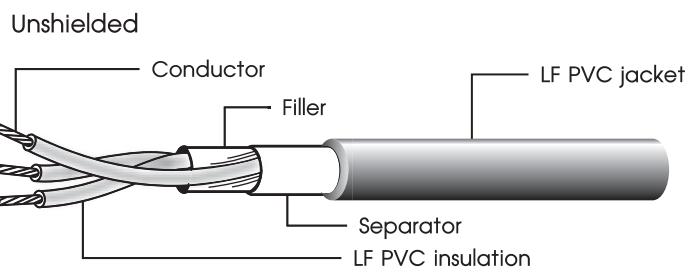
Unshielded:

- Bare stranded copper conductor.
- Color-coded PVC insulation. (Lead free)
- Cores twisted together with fillers.
- Separator over core.
- PVC jacketed water-resistant type. (Lead Free)
- Rated temperature: 60 °C, 105 °C. Rated voltage: 300 V
- Passes VW-1 flame test.

Shielded:

- Bare stranded copper conductor.
- Color-coded PVC insulation. (Lead free)
- Cores twisted together with filler.
- Aluminium mylar.
- Bare copper braid shield, 65-85% coverage.
- PVC jacket. (Lead Free)
- Rated temperature: 60 °C, and 105 °C.
- Rated voltage: 300 V
- Passes VW-1 flame test.

Construction:



UL Style & CSA Type	Conductor		Insulation Thickness	Braid Shield	Jacket Thickness	Overall Diameter (Approx)	Standard Put-Up	
	AWG	No./mm	mm	No./mm	mm	mm	ft/coil	M/coil
SVT (unshielded)	18x2C	41/0.160	0.38	-	0.760	5.90	1000	305
	18x3C	41/0.160		-	0.760	6.30	1000	305
SVT (shielded)	18x3C	41/0.160	0.38	16/8/0.120	0.760	7.20	1000	305
SVT (shielded)	18x2C	41/0.160	0.38	AL/Mylar	0.760	5.90	1000	305
	18x3C	41/0.160			0.760	6.30	1000	305



UL/CSA SJT Power Cable

Applications:

- Unshielded : for portable hand tools, washing machines, polishers, sanders, vibrators, shop lights, therapeutic machines, dish washers, medical equipment, and office machines.
- Shielded : for power supply cord of computers to eliminate EMI and RFI.

Product Description:

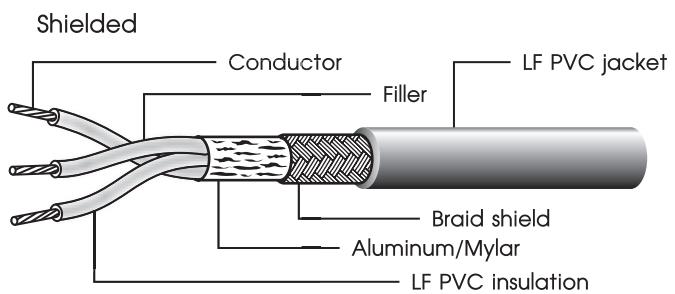
Unshielded:

- Bare stranded copper conductor, 18-10 AWG
- Color-coded PVC insulation. (Lead Free)
- Cores twisted together with fillers.
- Separator overcore.
- PVC jacketed water-resistant type. (Lead Free)
- Rated temperature: 60 °C, 105 °C. Rated voltage: 300 V
- Pass VW-1 flame test.

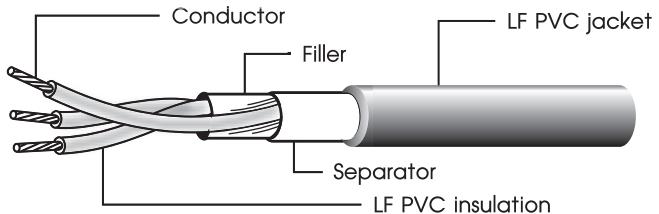
Shielded:

- Bare stranded copper conductor, 18-10 AWG
- Color-coded PVC insulation. (Lead Free)
- Cores twisted together with filler.
- Mylar applied overtwisted cores.
- Aluminium mylar.
- Bare copper braid shield, 85% coverage.
- Rated temperature: 60 °C, and 105 °C.
- Rated voltage: 300 V
- Pass VW-1 flame test.
- PVC Jacket (Lead Free)

Construction:



Unshielded



UL Style & CSA Type	Conductor		Insulation Thickness	Braid Shield	Jacket Thickness	Overall Diameter (Approx.)	Standard Put-Up	
	AWG	No./mm					ft/coil	M/coil
SJT	18x2C	41/0160	0.76	-	0.76	7.30	1000	305
	16x2C	26/0.253		-		8.10	1000	305
	14x2C	41/0.253		-		8.80	1000	305
SJT (Shielded)	18x3C	41/0.160		24/7/0.127		8.60	1000	305
	16x3C	26/0.253		24/7/0.127		9.30	1000	305
	14x3C	41/0.253		24/7/0.160		10.30	1000	305



Applications:

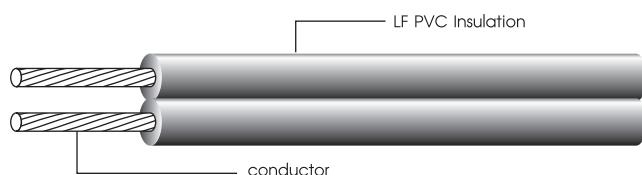
- For use as wiring in Christmas lighting sets.

Construction:

Product Description:

- Bare stranded copper conductor.
- Color-coded PVC insulation. (Lead Free)
- XTW: braidless parallel cords.
- CXTW Single Cord.
- Pass VW-1 flame test.
- Rated temperature: 105°C, 300V

Parallel Type



UL Style & CSA Type	Conductor		Core No.	Insulation Thickness mm	Overall Diameter (Approx.) mm	Standard Put-Up	
	AWG	No./mm				ft/coil	M/coil
UL XTW CSA SPT-1 (Parallel)	20	26/0.160	2	0.76	2.50 x 5.00	2000	610
	18	41/0.160	2		2.80 x 5.60	2000	610
UL CXTW UL (Single)	22	17/0.160	1	0.76	2.30	2000	610
	20	26/0.160	1		2.50	2000	610
	18	41/0.160	1		2.80	2000	610



IEC & AUSTRALIA Power Cable

VDE 0281, IEC-60227, HD 21.5, AS 3191

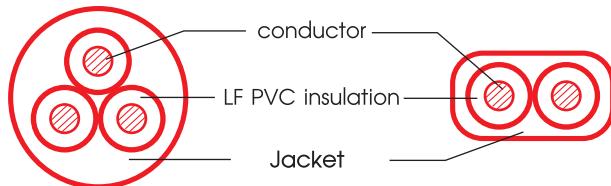
Applications:

- Power supply wire.
- Suitable for indoor small electrical instruments.

Product Description:

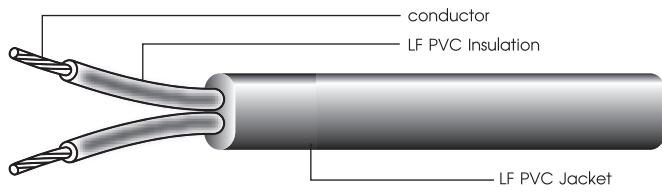
H05VVF2-F, H03VVH2-F/LTSA-F & H03VV-F/LTSA-2, LTSA-3

- Bare stranded copper conductor
- Color-coded PVC insulation and jacket (Lead Free)
- Braided parallel cord
- Rated temperature : 70°C
- Rated voltage : 300/300V; 250/250V
H05VV-F/GTSA-2, GTSA-3 & GTSA-2F
- Bare stranded copper conductor
- Color-coded PVC insulation and jacket (Lead Free)
- Braided parallel cord
- Rated temperature : 70°C
- Rated voltage : 300/500V; 250/440V
H05V2V2-F/GTSA-2, GTSA-3 & GTSA-2F
- Bare stranded copper conductor
- Color-coded PVC insulation and jacket (Lead Free)
- Cores twisted together
- Rated temperature : 90°C
- Rated voltage : 300/500V; 250/440V

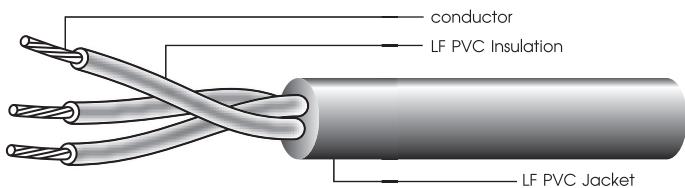


Construction:

H03VVH2-F/LTSA-2F & GTSA-2F H05VVF2-F



H03VV-F/LTSA-2, LTSA-3 & H05VV-F/GTSA-2, GTSA-3 H05V2V2-F



Product	Type	Conductor		Insulation Thickness	Jacket Thickness	Overall Diameter (Approx)	Standard Put-Up	
		Size mm ²	No./mm					
		mm	mm					
LIGHT DUTY	H03VVH2-F/ LTSA-2F	0.75x2C	24/0.203	0.50	0.60	3.50x5.70	250	
	HO3VV-F	LTSA-2	0.75x2C			5.50	250	
		LTSA-3	0.75x3C			6.60	250	
ORDINARY DUTY	HO5VV-F H05V2V2-F	GTSA-2	0.75x2C	24/0.203	0.60	6.60	250	
		GTSA-2	1.0x2C	32/0.203		7.20	250	
		GTSA-2	1.5x2C	30/0.253		8.00	250	
	HO5VV-F H05V2V2-F	GTSA-3	0.75x3C	24/0.203	0.60	7.20	250	
		GTSA-3	1.0x3C	32/0.203		7.40	250	
		GTSA-3	1.5x3C	30/0.253		8.50	250	
ORDINARY DUTY	GTSA-2F	0.75x2C	24/0.203	0.60	0.80	4.00x6.30	250	
*VDE APPROVE ONLY	H05V2V2-F GTSA-2F	0.75x2C	42/0.150	0.6	0.80	3.90x6.30	250	
		1.00x2C	32/0.203	0.6	0.80	4.20x6.80	250	
*VDE APPROVE ONLY	HO5VV-F	GTSA-2	2.5x2C	50/0.253	0.8	1.10	9.70	100
		GTSA-3	2.0x3C	41/0.253	0.7	0.90	8.90	100
		GTSA-3	2.5x3C	5/0.253	0.8	1.10	10.30	100
		GTSA-2	2.0x2C	41/0.253	0.7	0.80	8.20	250

- European 10 countries and Australia approved safety mark are printed on wire surface.

- Type GTSA-2F is only approved Australia safety mark



<PS>E Standard Power Cable

Applications:

- Suitable for indoor small electronic instruments.

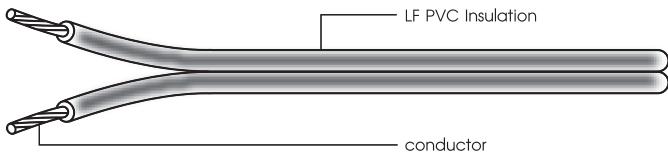
Product Description:

- Type VFF : • Bare stranded copper conductor.
• PVC insulated flat twin cord. (Lead Free)
- Type VCTF : • Bare stranded copper conductor.
• Color-coded PVC insulation.
• Cores twisted together.
• PVC jacketed cord type. (Lead Free)
- Type VCTFK : • Bare stranded copper conductor.
• Color-coded PVC insulation. (Lead Free)
• PVC jacketed cord, oval type. (Lead Free)
- Rating : VFF, VCTF, VCTFK : 60°C, 300 V
: HVFF, HVCTF, HVCTFK : 75°C, 300 V
: VCT : 60°C, 600 V

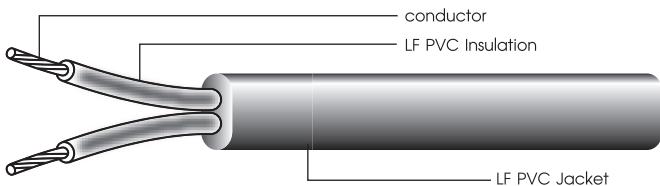


Construction:

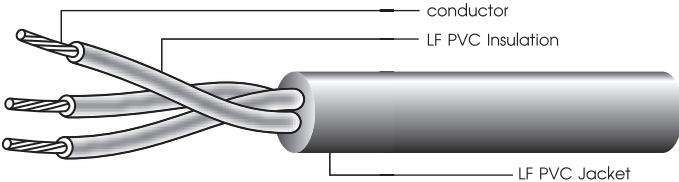
VFF/HVFF



VCTF/HVCTF



VCTF/HVCTF



Type	Conductor		Insulation Thickness	Jacket Thickness	Overall Diameter (Approx)	Conductor Resistance	Standard Put-Up
	Size	No./mm					
	mm ²						
VFF HVFF	0.5X2c	20/0.180	0.8	-	2.5x5.00	36.70	250
	0.75X2c	30/0.180		-	2.70x5.40	24.40	250
	1.25X2c	50/0.180		-	3.10x6.20	14.70	250
	2.00X2c	41/0.253		-	3.40x6.80	9.50	250
VCTF HVCTF	0.75X2c	30/0.180	0.6	1.0	6.70	25.10	250
	1.25X2c	50/0.180			7.40	15.10	250
	2.00X2c	37/0.260			8.00	9.79	250
	0.75X3c	30/0.180			7.00	25.10	250
	1.25X3c	50/0.180			7.80	15.10	250
	2.00X3c	41/0.253			8.50	9.79	250
	0.75X4c	30/0.180			7.60	25.1	250
	1.25X4c	50/0.180			8.50	15.10	250
	2.00X4c	30/0.260			9.30	9.70	250
VCTFK HVCTFK	0.75X2c	30/0.180	0.6	1.0	4.30x6.60	24.40	250
	1.25X2c	50/0.180			4.70x7.40	14.70	250
	2.00X2c	41/0.253			5.00x8.00	9.50	250
VCT	0.75X2c	30/0.180	0.8	1.7	8.90	24.40	250
	0.75X4c	30/0.180			10.00	24.40	250
	1.25X2c	50/0.180			9.60	14.70	250
	1.25X4c	50/0.180			11.10	14.70	250
	2.00X4c	41/0.253			12.00	9.55	250
	3.5X4c	65/0.253			13.70	5.95	250



<PS> E Standard Power Cable

JIS C - 3342 60°C 600V PVC-PVC Flat Type



Applications :

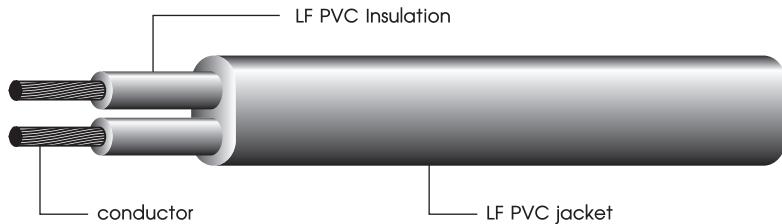
- Suitable for indoor small electronic instrument

Product Description:

- Solid or Stranded bare copper
- PVC insulation PVC jacket (lead free)
- Environmental testing pass ROHS
- Pass VW-1 flame test

Construction:

VVF Flat Type



Wire Size		Conductor NO./mm	NO. of core	Insulation Thickness mm	Jacket Thickness mm	Overall Diameter (Approx.) mm	Maximum Conductor resistance mΩ - Km	Minimum insulation resistance mΩ - Km	Standard Put - Up M/Coil
mm	mm ²								
1.0	-	1/1.000	2	0.80	1.5	5.60x8.20	22.8	50	100
1.2	-	1/1.200		0.80		5.80x8.60	15.8		
1.6	-	1/1.600		0.80		6.20x9.40	8.92		
2.0	-	1/2.000		0.80		6.60x10.50	5.65		
2.6	-	1/2.600		1.00		7.60x12.50	3.35		
3.2	-	1/3.200		1.20		8.60x14.50	2.21		
-	2.0	7/0.600		0.80		6.40x9.80	9.24		
-	3.5	7/0.800		0.80		7.00x11.00	5.20		
-	5.5	7/1.000		1.00		8.00x13.00	3.33		
-	8	7/1.200		1.20		9.00x15.00	2.31		
1.0	-	1/1.000	3	0.80	1.5	5.60x11.00	22.8	50	100
1.2	-	1/1.200		0.80		5.80x11.50	15.8		
1.6	-	1/1.600		0.80		6.20x13.00	8.92		
2.0	-	1/2.000		0.80		6.60x14.00	5.65		
2.6	-	1/2.600		1.00		7.60x17.00	3.35		
3.2	-	1/3.200		1.20		8.60x20.00	2.21		
-	2.0	7/0.600		0.80		6.40x13.50	9.24		
-	3.5	7/0.800		0.80		7.00x15.00	5.20		
-	5.5	7/1.000		1.00		8.00x18.00	3.33		
-	8.0	7/1.200		1.20		9.00x21.00	2.31		



<PE> E Standard Rubber Cable

JIS C-3301 70°C 300V Flat Type

Applications :

- Used mainly for indoor pendant luminaires or small electric appliances

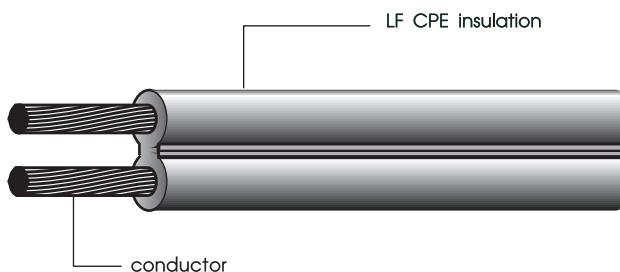


Product Description:

- Stranded bare copper
- Chlorosulfonated polyethylene rubber-insulation
- RoHS complied cable
- Pass JIS C3005 4.26.2B Inclined flame test.

Construction:

HHFF Flat Type



Number of cores	Conductor		Outside diameter	Insulation Thickness	Overall Diameter (Approx)	Colnductor Resistance 20°C	Standard Put-Up
	Size	No./mm					
	mm ²	mm	mm	mm	mm	ohm/km	M/coil
2 cores	0.75	30/0.180	1.10	0.60	4.40 x 6.80	24.40	250
	1.25	50/0.180	1.50		4.80 x 7.60	14.70	250
	2.00	37/0.260	1.80		5.10 x 8.20	9.50	250



Applications:

- Power supply cable

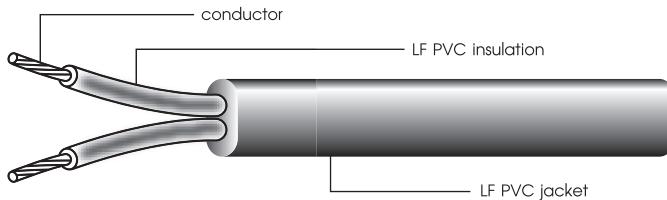


TIS 11-2553

Product Description:

- Bare stranded copper conductor.
- Color code Lead Free PVC Insulation and LF PVC Jetcket
- Rate temperature 70°C .Rated voltage : 300V
- TIS 11- PART 5 - 2553
- Support to Plug TIS 166 - 2549

Construction:



60227 IEC 52 VKF

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED, FLAT TYPE

Reference standard : TIS 11 Part 5-2553, Table 7

Number of core	Nominal cross sectional area (mm ²)	Class of conductor	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter		Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
					Minimum (mm)	Maximum (mm)					
2	0.5	5	0.5	0.6	3.0 x 4.9	3.7 x 5.9	39.0	0.012	10	28	100/C
	0.75	5	0.5	0.6	3.2 x 5.2	3.8 x 6.3	26.0	0.010	12	35	100/C

60227 IEC 53 VKF

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED, FLAT TYPE

Reference standard : TIS 11 Part 5-2553, Table 9

Number of core	Nominal cross sectional area (mm ²)	Class of conductor	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter		Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
					Minimum (mm)	Maximum (mm)					
2	0.75	5	0.6	0.8	3.7 x 6.0	4.5 x 7.2	26.0	0.011	12	43	100/C
	1	5	0.6	0.8	3.9 x 6.2	4.7 x 7.5	19.5	19.5	15	50	100/C



Applications:

- Power supply cable

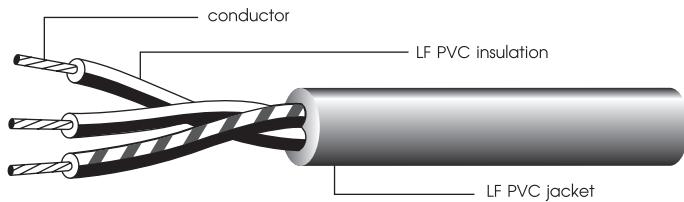
Product Description:

- Bare stranded copper conductor.
- Color code Lead Free PVC Insulation and LF PVC Jetcket
- Rate temperature 70°C .Rated voltage : 750V
- Ground insulation color - Green/Yellow color
- TIS 11- PART 5 - 2553
- Support to Plug TIS 166 - 2549



TIS 11-2553

Construction:



60227 IEC 52 VCT

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED, ROUND TYPE

Reference standard : TIS 11 Part 5-2553, Table 7

Number of core	Nominal cross sectional area (mm ²)	Class of conductor	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter		Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
					Minimum (mm)	Maximum (mm)					
2	0.5	5	0.5	0.6	4.6	5.9	39.0	0.012	10	40	100/C
	0.75	5	0.5	0.6	4.9	6.3	26.0	0.010	12	48	100/C
3	0.5	5	0.5	0.6	4.9	6.3	39.0	0.012	8	47	100/C
	0.75	5	0.5	0.6	5.2	6.7	26.0	0.010	10	58	100/C

60227 IEC 53 VCT or 60227 IEC 53 VCT-G

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED, ROUND TYPE

Reference standard : TIS 11 Part 5-2553, Table 9

Number of core	Nominal cross sectional area (mm ²)	Class of conductor	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter		Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
					Minimum (mm)	Maximum (mm)					
2	0.75	5	0.6	0.8	5.7	7.2	26.0	0.011	12	60	100/C
	1	5	0.6	0.8	5.9	7.5	19.5	0.010	14	70	100/C
	1.5	5	0.7	0.8	6.8	8.6	13.3	0.010	18	93	100/C
	2.5	5	0.8	1.0	8.4	10.6	7.98	0.009	25	140	100/C
3	0.75	5	0.6	0.8	6.0	7.6	26.0	0.011	10	70	100/C
	1	5	0.6	0.8	6.3	8.0	19.5	0.010	12	82	100/C
	1.5	5	0.7	0.9	7.4	9.4	13.3	0.010	16	115	100/C
	2.5	5	0.8	1.1	9.2	11.4	7.98	0.009	21	175	100/C
4	0.75	5	0.6	0.8	6.6	8.3	26.0	0.011	10	84	100/C
	1	5	0.6	0.9	7.1	9.0	19.5	0.010	12	105	100/C
	1.5	5	0.7	1.0	8.4	10.5	13.3	0.010	16	145	100/C
	2.5	5	0.8	1.1	10.1	12.5	7.98	0.009	21	215	100/C
5	0.75	5	0.6	0.9	7.4	9.3	26.0	0.011	10	105	100/C
	1	5	0.6	0.9	7.8	9.8	19.5	0.010	12	125	100/C
	1.5	5	0.7	1.1	9.3	11.6	13.3	0.010	16	175	100/C
	2.5	5	0.8	1.2	11.2	13.9	7.98	0.009	21	265	100/C



Applications:

- Power supply cable

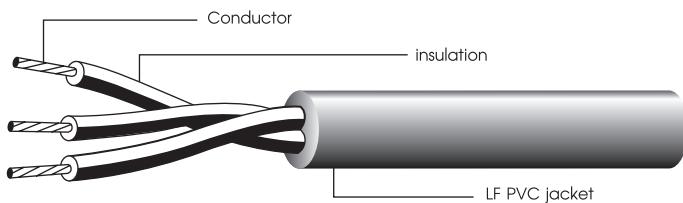


TIS 11-2553

Product Description:

- Bare stranded copper conductor.
- Color code Lead Free PVC Insulation and LF PVC Jacket
- Rate temperature 70°C .Rated voltage : 750V
- TIS 11- PART 101 - 2553
- Support to Plug TIS166-2549

Construction:



VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED, ROUND TYPE

Reference standard : TIS 11 Part 101-2553, Table 7

Number of core	Nominal cross sectional area (mm ²)	Class of conductor	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter maximum	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ·km)	Continuous current rating in free air maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
1	4	5	0.9	1.4	8.6	4.95	0.0084	41	90	100/C
	6	5	0.9	1.4	9.4	3.30	0.0071	53	120	100/C
	10	5	1.1	1.8	12.0	1.91	0.0068	74	210	100/C
	16	5	1.1	1.8	13.5	1.21	0.0050	99	270	100/C
	25	5	1.3	2.2	16.0	0.780	0.0048	129	410	100/C
	35	5	1.3	2.2	17.5	0.554	0.0041	160	550	500/D
2	4	5	0.9	1.6	14.5	4.95	0.0084	34	230	100/C
	6	5	0.9	1.6	16.0	3.30	0.0071	44	320	100/C
	10	5	1.1	1.8	20.0	1.91	0.0068	63	500	500/D
	16	5	1.1	2.2	23.0	1.21	0.0050	82	700	500/D
	25	5	1.3	2.4	27.5	0.780	0.0048	108	1000	500/D
	35	5	1.3	2.6	31.0	0.554	0.0041	133	1400	500/D
3	4	5	0.9	1.6	15.5	4.95	0.0084	29	280	100/C
	6	5	0.9	1.8	17.5	3.30	0.0071	38	390	100/C
	10	5	1.1	2.0	21.5	1.91	0.0068	53	650	500/D
	16	5	1.1	2.4	25.0	1.21	0.0050	71	900	500/D
	25	5	1.3	2.6	30.0	0.780	0.0048	94	1300	500/D
	35	5	1.3	2.8	33.5	0.554	0.0041	116	1700	500/D
4	4	5	0.9	1.8	17.0	4.95	0.0084	29	350	100/C
	6	5	0.9	2.0	19.5	3.30	0.0071	38	490	100/C
	10	5	1.1	2.2	24.0	1.91	0.0068	53	800	500/D
	16	5	1.1	2.6	28.0	1.21	0.0050	71	1100	500/D
	25	5	1.3	2.8	33.5	0.780	0.0048	94	1700	500/D
	35	5	1.3	3.1	37.0	0.554	0.0041	116	2200	500/D



PVC insulated, Single Core

Applications:

- Building Wire and Cable

Product Description:

- Bare stranded copper conductor.
- Color code Lead Free PVC Insulation
- Rate temperature 70°C .Rated voltage : 750V
- TIS 11- PART 3 - 2553



TIS 11-2553

LF PVC Insulation

Construction:



conductor

60227 IEC 01 THW

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE

Reference standard : TIS 11 Part 3-2553, Table 1

Nominal cross sectional area (mm²)	Class of conductor	Insulation thickness nominal (mm)	Overall diameter		Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
			Minimum (mm)	Maximum (mm)					
1.5	1	0.7	2.6	3.2	12.1	0.011	21	21	100/C
1.5	2	0.7	2.7	3.3	12.1	0.010	21	22	100/C
2.5	1	0.8	3.2	3.9	7.41	0.010	29	32	100/C
2.5	2	0.8	3.3	4.0	7.41	0.009	29	35	100/C
4	1	0.8	3.6	4.4	4.61	0.0085	39	47	100/C
4	2	0.8	3.8	4.6	4.61	0.0077	39	50	100/C
6	1	0.8	4.1	5.0	3.08	0.0070	49	65	100/C
6	2	0.8	4.3	5.2	3.08	0.0065	49	70	100/C
10	1	1.0	5.3	6.4	1.83	0.0070	69	110	100/C
10	2	1.0	5.6	6.7	1.83	0.0065	69	120	100/C
16	2	1.0	6.4	7.8	1.15	0.0500	92	180	100/C

60227 IEC 02 THW (F)

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE

Reference standard : TIS 11 Part 3-2553, Table 3

Nominal cross sectional area (mm²)	Class of conductor	Insulation thickness nominal (mm)	Overall diameter		Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
			Minimum (mm)	Maximum (mm)					
1.5	5	0.7	2.8	3.4	13.3	0.10	21	24	100/C
2.5	5	0.8	3.4	4.1	7.98	0.009	28	37	100/C
4	5	0.8	3.9	4.8	4.95	0.007	38	54	100/C
6	5	0.8	4.4	5.3	3.30	0.0060	48	75	100/C
10	5	1.0	5.7	6.8	1.91	0.0056	69	130	100/C
16	5	1.0	6.7	8.1	1.21	0.0046	92	185	100/C

60227 IEC 05 IV

450/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE

Reference standard : TIS 11 Part 3-2553, Table 3

Nominal cross sectional area (mm²)	Class of conductor	Insulation thickness nominal (mm)	Overall diameter		Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
			Minimum (mm)	Maximum (mm)					
0.5	1	0.6	1.9	2.3	3.60	0.015	11	8.8	100/C
0.75	1	0.6	2.1	2.5	24.5	0.012	14	12.0	100/C
1	1	0.6	2.2	2.7	18.1	0.011	16	14.0	100/C

60227 IEC 06 (F)

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE

Reference standard : TIS 11 Part 3-2553, Table 3

Nominal cross sectional area (mm²)	Class of conductor	Insulation thickness nominal (mm)	Overall diameter		Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
			Minimum (mm)	Maximum (mm)					
0.5	5	0.6	2.1	2.5	39.0	0.013	11	9	100/C
0.75	5	0.6	2.2	2.7	26.0	0.011	14	12	100/C
1	5	0.6	2.4	2.8	19.5	0.010	16	15	100/C



TOT : OES-004-040-01 , OES-004-041-01 , OES-004-046-01

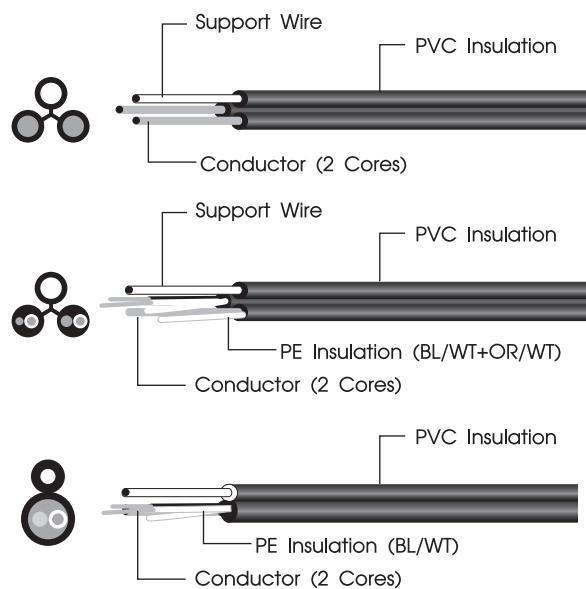
Applications:

- For extending and open wire or distribution cable pair from a pole or cable terminal to building

Product Description:

- PVC or PE Insulated and self Supported Telephone Drop Wire.
- Copper Conductor 0.90 MM or 0.50 MM.
- Black Color PVC Insulation for 2 cores.
- Color code PE Insulation for 2 pairs and Black Color PVC jacket.
- Blue/White Color PE Insulation for 1 pair and Black Color PE jacket.
- TOT Specification : OES-004-040-01 for 2 cores.
- TOT Specification : OES-004-041-01 for 2 pairs.
- TOT Specification : OES-004-046-01 for 1 pair.

Construction :



Wire Size	Number/Nominal Copper Diameter (No./MM)	Number/Nominal Support wire Diameter (No./MM)	Insulation Thickness MM	Jacket Thickness MM	Overall Diameter (Approx) MM	Minimum Insulation Resistance MΩ/KM/20°C	Standard Put - UP M/Coil	Cable Weight (Approx) Kgs/Coil
0.90 mm x 2C	1/0.912	1/1.200	1.05	-	8.50	400	200	12
0.90 mm x 2C	1/0.912	1/1.200	1.05	-	8.50	400	300	18
0.90 mm x 2C	1/0.912	1/1.200	1.05	-	8.50	400	500	30
0.90 mm x 2P	1/0.912	1/1.200	0.50	1.10	10.50	1600	200	26
0.50 mm x 1P	1/0.511	1/1.200	0.35	1.10	9.00	16000	200	8
0.50 mm x 1P	1/0.511	1/1.200	0.35	1.10	9.00	16000	300	12



GROUND WIRE

TOT : OES-003-092-01

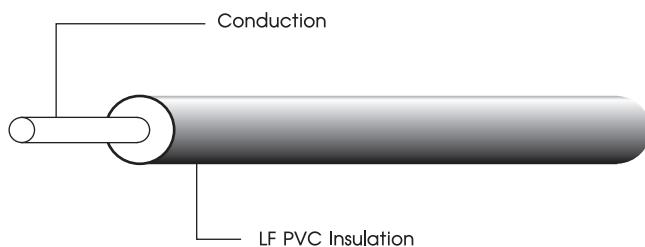
Applications:

- Inside and Outside Grounding

Product Description:

- Solid Tinned Copper conductor 14-6 AWG
- Black color Lead Free PVC Insulation
- TOT Specification: OES-003-092-01
- Issued Date: October, 1998

Construction:



Wire Size AWG	Number/Nominal Copper Diameter (No./MM)	Insulation Thickness MM	Overall Diameter (Approx) MM	Maximum Conductor Resistance Ω/KM/20°C	Cable Weight (Approx) KG/Coil	Standard Put - Up M/Coil
14	1/1.640	1.00	3.64	9.2	6.17	200
12	1/2.08	1.00	4.00	5.6	8.85	200
10	1/2.65	1.00	4.65	3.6	13.14	200
6	1/4.15	1.90	7.95	1.4	26.59	150



PVC Jumper Wire

TOT : OES-003-093-02

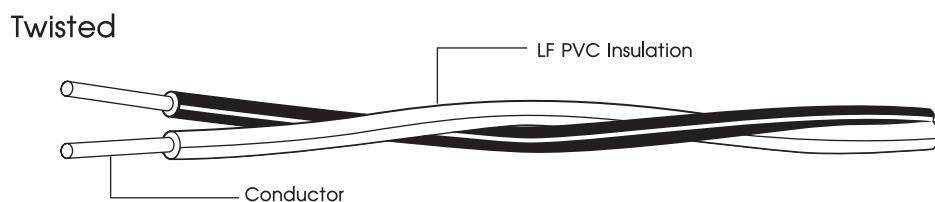
Applications:

- Cross connecting purpose and main distribution frame wiring by TOT

Product Description:

- PVC INSULATION JUMPER WIRE
- Solid tinned Copper Conductor 0.50 - 0.65 MM
- Color Code Lead Free PVC insulation
- Two PVC insulated Conductors twisted into pair

Construction:



Wire Size (MM)	Number/Nominal Copper Diameter (No./MM)	Insulation Thickness MM	Overall Diameter (Approx) MM	Minimum Insulation Resistance MΩ/KM/20 C	Maximum Conductor Resistance Ω /KM/20 C	Cable Weight (Approx) KG/KM	Standard Put - Up M/Coil
0.50	1/0.511	0.30	1.10	200	95.10	5	200
0.65	1/0.643	0.30	1.25	200	60.70	10	200



FR-PE Jumper Wire

TOT : OES-003-110-01

Applications:

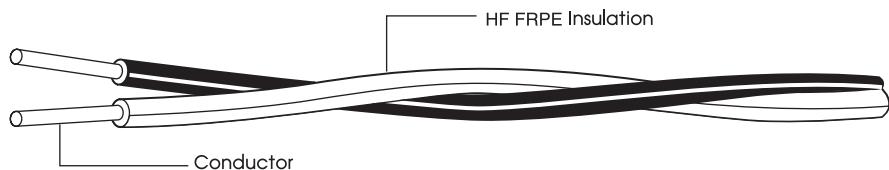
- Indoor application : Termination in the exchange building, RSU and customer premise/building etc.
- Outdoor application : Termination in CAB, DLC-RT, MSAN and DSLAM etc.

Product Description:

- FR-PE Jumper Wire
- Solid Tinned copper Conductor 0.511 mm.
- Color Code FR-PE insulation.
- Two FR-PE insulated Conductors twisted into pair.

Construction:

Twisted



Halogen Free PE Jumper Wire

Wire Size (mm)	No./Nominal Copper Diameter (No./mm)	Insulation Thickness (mm)	Overall Diameter (Approx) (mm)	Minimum Insulation Resistance MΩ km/20°C	Maximum Conductor Resistance Ω /km/20°C	Cable Weight (Approx) Kg/Km	Standard Put - Up M/Coil
0.511	1/0.511	0.20	0.91	10,000	95.10	5.2	200



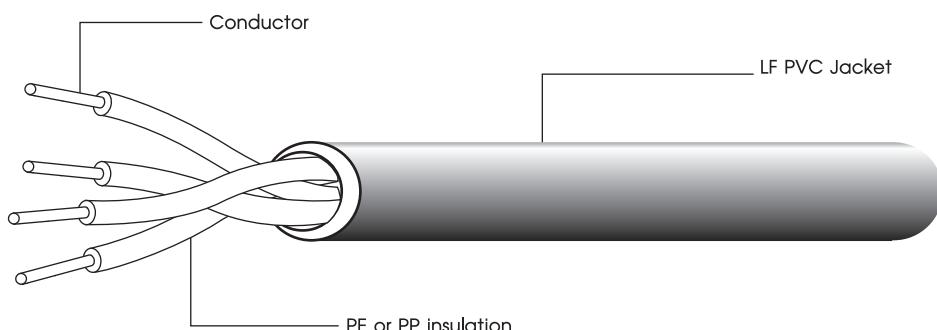
Applications:

- General use inside a telephone

Product Description:

- Bare Solid copper conductor
- Solid hight density polyethylene or polypropylene
- Insulation Color : red, Green, Yellow, Black, White and Black
- Lead Free PVC jacket

Construction:

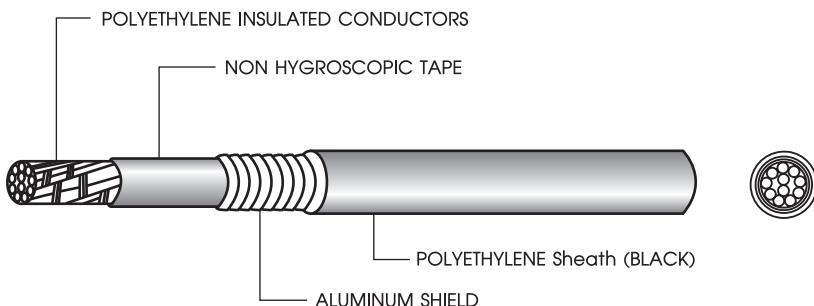


NO of CORE	Conductor diameter mm	Insulaton thickness mm	Jacket thickness mm	Overall diameter (approx.) mm	Cable weight (approx.) kg/km	Insulation color	Standard Length Put - Up m
2	0.500	0.20	0.40	2.60	9	RD, GR	150/C
3				2.80	11	RD, GR, YL	150/C
4				3.00	14	RD, GR, YL, BK	150/C
5				3.30	17	RD, GR, YL, BK, WT	150/C
6				3.50	20	RD, GR, YL, BK, WT, BR	150/C
2	0.650	0.25	0.40	2.90	12	RD, GR	150/C
3				3.00	15	RD, GR, YL	150/C
4				3.30	19	RD, GR, YL, BK	150/C
5				3.60	23	RD, GR, YL, BK, WT	150/C
6				4.00	28	RD, GR, YL, BK, WT, BR	150/C



AP : ALPETH SHEATHED CABLE

TOT : OES-004- 002-01



Applications:

For exchange area telephone distribution lines, principally for aerial installation by attachment to a support stand. It may be used however, in underground ducts where there is no damage due to mechanical abuse.

Construction:

Conductor : 0.4, 0.5, 0.65 or 0.9 mm annealed copper, solid
 Insulation : Polyethylene.
 Pairs : Two insulated conductors twisted
 Lay-up : Unit construction for cables more than 25 pairs.
 : Concentric for cables up to 25 pairs
 Core-covering : Non-hygroscopic tape with a high dielectric strength
 Shield : Aluminium tape, thickness 0.2 mm laid on with overlap.
 : The aluminium tape is corrugated for every size of cables.
 Sheath : Polyethylene (Black)

Conductor diameter (mm)	Number of pairs	Sheath thickness (mm)	Approximate overall diameter (mm)	Approximate cable weight (Kg/Km)	Standard Put - Up (m/D)
0.400	4	1.5	9.60	72.7	1,000
	5	1.5	10.00	79.1	1,000
	6	1.5	10.10	82.4	1,000
	10	1.5	10.80	99.3	1,000
	12	1.5	11.10	106.3	1,000
	15	1.5	11.60	118.6	1,000
	16	1.5	11.80	124.0	1,000
	20	1.5	12.40	140.3	1,000
	25	1.5	13.10	159.2	1,000
	30	1.5	13.80	180.2	1,000
	50	1.5	15.90	252.8	1,000
	75	1.5	18.00	338.3	1,000
	100	1.5	19.70	422.7	1,000
	150	1.5	22.30	579.8	1,000
	200	1.5	24.70	738.3	1,000
	300	1.8	29.40	1,076.9	1,000
	400	1.8	32.90	1,384.1	1,000
	600	2.0	39.40	2,005.9	500
	900	2.3	47.10	2,938.6	500

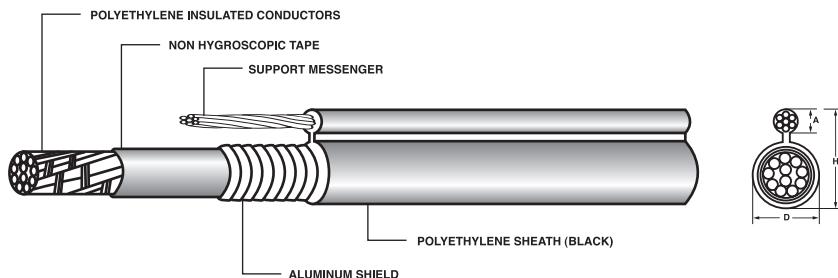
Conductor diameter (mm)	Number of pairs	Sheath thickness (mm)	Approximate overall diameter (mm)	Approximate cable weight (Kg/Km)	Standard Put - Up (m/D)
0.650	3	1.5	10.8	92.7	1,000
	4	1.5	11.3	103.8	1,000
	5	1.5	11.9	115.4	1,000
	6	1.5	12.1	124.1	1,000
	10	1.5	13.2	160.8	1,000
	12	1.5	13.7	179.5	1,000
	15	1.5	14.5	206.1	1,000
	16	1.5	14.8	216.1	1,000
	20	1.5	15.8	251.3	1,000
	25	1.5	16.9	295.6	1,000
	30	1.5	17.9	340.5	1,000
	50	1.5	21.2	570.3	1,000
	75	1.5	24.5	708.2	1,000
	100	1.5	27.2	903.5	1,000
	150	1.8	31.8	1,310.5	1,000
	200	2.0	36.1	1,714.9	500
	300	2.0	42.8	2,473.9	500
	400	2.3	48.8	3,266.1	500
	600	2.5	58.3	4,776.7	250
	900	2.8	70.0	7,043.9	250
0.900	3	1.5	12.6	127.9	1,000
	4	1.5	13.5	147.9	1,000
	5	1.5	14.3	169.6	1,000
	6	1.5	14.7	186.9	1,000
	10	1.5	16.4	255.4	1,000
	12	1.5	17.0	287.4	1,000
	15	1.5	18.3	339.3	1,000
	16	1.5	18.7	356.6	1,000
	20	1.5	20.1	425.5	1,000
	25	1.5	21.7	506.3	1,000
	30	1.5	23.2	589.4	1,000
	50	1.5	28.0	904.7	1,000
	75	1.8	33.4	1,314.0	1,000
	100	2.0	38.2	1,717.7	500
	150	2.0	44.7	2,464.1	500
	200	2.3	51.0	3,253.2	250
	300	2.5	60.9	4,746.1	250
	400	2.8	69.6	6,287.1	250

D : Drum



AP8 : FIGURE 8 ALPETH SHEATHED CABLE

TOT : OES-004- 004-01



Applications:

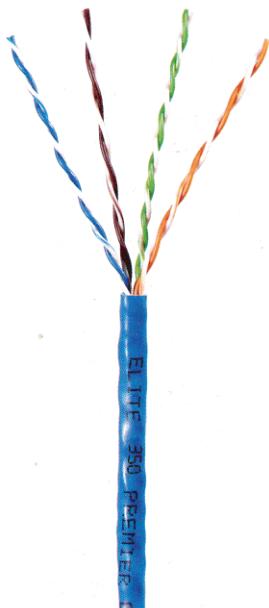
For exchange area telephone distribution lines. It is designed, especially for aerial installation by using the support messenger.

Construction:

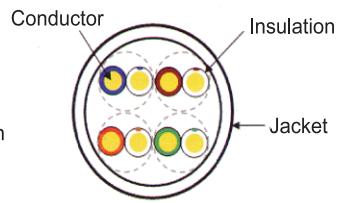
Conductor	: 0.4, 0.5, 0.65 or 0.9 mm annealed copper, solid
Insulation	: Polyethylene.
Pairs	: Two insulated conductors twisted
Lay-up	: Unit construction for cables more than 25 pairs. Concentric for cables up to 25 pairs
Core-covering	: Non-hygroscopic tape with a high dielectric strength
Shield	: Aluminium tape, thickness 0.2 mm laid on with overlap. The aluminium tape is corrugated for every size of cables.
Support messenger	: 7/2.03 mm extra high strength grade galvanized steel wire, breaking load 29572 N (3,016 Kg).
Sheath	: Polyethylene (Black).

Conductor diameter (mm)	Number of pairs	Support messenger wire diameter (mm)	Nominal sheath thickness (mm)	Approx. overall dimension (mm)			Approximate cable weight (Kg/Km)	Standard Put - Up (m/D)	Conductor diameter (mm)	Number of pairs	Support messenger wire diameter (mm)	Nominal sheath thickness (mm)	Approx. overall dimension (mm)			Approximate cable weight (Kg/Km)	Standard Put - up (m/D)		
				Support messenger	Cable core	d							d	D	H				
0.400	4	6.09	1.6	1.50	9.3	9.6	21.6	324.7	1,000	0.650	3	6.09	1.6	1.50	9.3	10.8	22.8	344.7	1,000
	5	6.09	1.6	1.50	9.3	10.0	22.0	331.1	1,000		4	6.09	1.6	1.50	9.3	11.3	23.3	355.8	1,000
	6	6.09	1.6	1.50	9.3	10.1	22.1	334.4	1,000		5	6.09	1.6	1.50	9.3	11.9	23.9	367.4	1,000
	10	6.09	1.6	1.50	9.3	10.8	22.8	351.3	1,000		6	6.09	1.6	1.50	9.3	12.1	24.1	376.1	1,000
	12	6.09	1.6	1.50	9.3	11.1	23.1	358.3	1,000		10	6.09	1.6	1.50	9.3	13.2	25.2	412.8	1,000
	15	6.09	1.6	1.50	9.3	11.6	23.6	370.6	1,000		12	6.09	1.6	1.50	9.3	13.7	25.7	431.5	1,000
	16	6.09	1.6	1.50	9.3	11.8	23.8	376.0	1,000		15	6.09	1.6	1.50	9.3	14.5	26.5	458.0	1,000
	20	6.09	1.6	1.50	9.3	12.4	24.4	392.3	1,000		16	6.09	1.6	1.50	9.3	14.8	26.8	468.0	1,000
	25	6.09	1.6	1.50	9.3	13.1	25.1	411.2	1,000		20	6.09	1.6	1.50	9.3	15.8	27.8	503.3	1,000
	30	6.09	1.6	1.50	9.3	13.8	25.8	432.2	1,000		25	6.09	1.6	1.50	9.3	16.9	28.9	547.6	1,000
	50	6.09	1.6	1.50	9.3	15.9	27.9	504.8	1,000		30	6.09	1.6	1.50	9.3	17.9	29.9	592.5	1,000
	75	6.09	1.6	1.50	9.3	18.0	30.0	590.2	1,000		50	6.09	1.6	1.50	9.3	21.2	33.3	759.3	500
	100	6.09	1.6	1.50	9.3	19.7	31.7	674.7	1,000		75	6.09	1.6	1.50	9.3	24.5	36.6	960.2	500
	150	6.09	1.6	1.50	9.3	22.3	34.3	831.8	500		100	6.09	1.6	1.50	9.3	27.2	39.3	1,155.4	500
	200	6.09	1.6	1.50	9.3	24.7	36.8	990.3	500										
0.500	4	6.09	1.6	1.50	9.3	10.4	22.4	337.6	1,000	0.900	3	6.09	1.6	1.50	9.3	12.6	24.6	379.8	1,000
	5	6.09	1.6	1.50	9.3	10.9	22.9	346.1	1,000		4	6.09	1.6	1.50	9.3	13.5	25.5	399.9	1,000
	6	6.09	1.6	1.50	9.3	11.0	23.0	351.0	1,000		5	6.09	1.6	1.50	9.3	14.3	26.3	421.6	1,000
	10	6.09	1.6	1.50	9.3	11.9	23.9	376.1	1,000		6	6.09	1.6	1.50	9.3	14.7	26.7	438.9	1,000
	12	6.09	1.6	1.50	9.3	12.3	24.3	387.5	1,000		10	6.09	1.6	1.50	9.3	16.4	28.4	507.3	1,000
	15	6.09	1.6	1.50	9.3	13.0	25.0	405.9	1,000		12	6.09	1.6	1.50	9.3	17.0	29.0	539.4	1,000
	16	6.09	1.6	1.50	9.3	13.2	25.2	412.8	1,000		15	6.09	1.6	1.50	9.3	18.3	30.3	591.2	1,000
	20	6.09	1.6	1.50	9.3	14.0	26.0	438.1	1,000		16	6.09	1.6	1.50	9.3	18.7	30.7	608.6	1,000
	25	6.09	1.6	1.50	9.3	14.9	26.9	466.1	1,000		20	6.09	1.6	1.50	9.3	20.1	32.2	677.5	1,000
	30	6.09	1.6	1.50	9.3	15.6	27.6	495.2	1,000		25	6.09	1.6	1.50	9.3	21.7	33.8	758.3	500
	50	6.09	1.6	1.50	9.3	18.3	30.3	603.7	1,000		30	6.09	1.6	1.50	9.3	23.2	35.3	841.4	500
	75	6.09	1.6	1.50	9.3	21.0	33.0	736.9	1500		50	6.09	1.6	1.50	9.3	28.0	40.1	1,156.7	500
	100	6.09	1.6	1.50	9.3	23.2	35.3	863.9	500										
	150	6.09	1.6	1.50	9.3	26.4	39.1	1,130.1	500										

D : Drum



Enhanced High performance ANSI/TIA/EIA 568-C.2 compliant Category 5 ENHANCED UTP cables for mission critical LAN applications or future proofing your Structured Cabling Systems. These cables are characterized to 350MHz, Powersum NEXT tested and are manufactured at our UL and BSI Certified ISO-9001 state-of-the-art manufacturing and testing facility. For installer friendly, high performance cables at affordable prices,



CABLE DATA

TYPE	PRODUCT NO.	INSULATION THICKNESS (mm/inch)	DIAMETER (mm/inch)	WEIGHT (lb/kg)	FLAME RETARDANT RATING
Solid	TUR2404P03	0.192 / 0.0076	4.8 / 0.189	18.2 / 8.3	CMR
	TUP2404P03	0.180 / 0.0071	4.5 / 0.177	19.4 / 8.8	CMP
	TUL2404P03	0.192 / 0.0076	4.8 / 0.189	18.4 / 8.3	CMP
Stranded	TPM2404P03	0.193 / 0.0076	5.3 / 0.209	20.6 / 9.3	CM
	TPR2404P03	0.193 / 0.0076	5.3 / 0.209	20.6 / 9.3	CMR

PRODUCT ELECTRICAL CHARACTERISTICS (SOLID)

- Features: Impedance 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 40nS/100M

APPLICATIONS

- 10 BASE T(IEEE 802.3)
- 100 BASE T(IEEE 802.3U)
- 100Vg-any LAN(IEEE 802.12)
- TOKEN RING(IEEE 805.5)
- TP-PMD9ANSI X3T9.5
- 100 MbPS CDDI
- ATM 155

FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.0	68.3	66.3	65.3	63.3	63.8	60.8	20.0
25	10.4	47.3	36.9	44.3	33.9	35.8	32.8	24.3
31.25	11.7	45.9	34.2	42.9	31.2	33.9	30.9	23.6
62.5	17.0	41.4	24.4	38.4	21.4	27.8	24.8	21.5
100	22.0	38.3	16.3	35.3	13.3	23.8	20.8	20.1
155	28.1	35.5	7.4	32.5	4.4	20.0	17.0	18.8
200	32.4	33.8	2	30.8	N.A	17.7	14.7	18.0
240	36	32.6	N.A	29.6	N.A	16.2	13.2	17.4
300	41	31.2	N.A	28.2	N.A	14.2	11.2	16.8
350	44.9	30.1	N.A	27.1	N.A	12.9	9.9	16.3

INDUSTRY STANDARDS

- UL/CSA LISTED CM, CMR, CMP
- UL, ETL AND 3P VERIFIED TO
- ANSI/TIA/EIA568-C.2
- CATEGORY 5 ENHANCED
- ISO/IEC 11801
- NEMA WC 63.1
- PrEN 50288-3-1

PRODUCT ELECTRICAL CHARACTERISTICS (STRANDED)

- Features: Impedance 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 40nS/100M

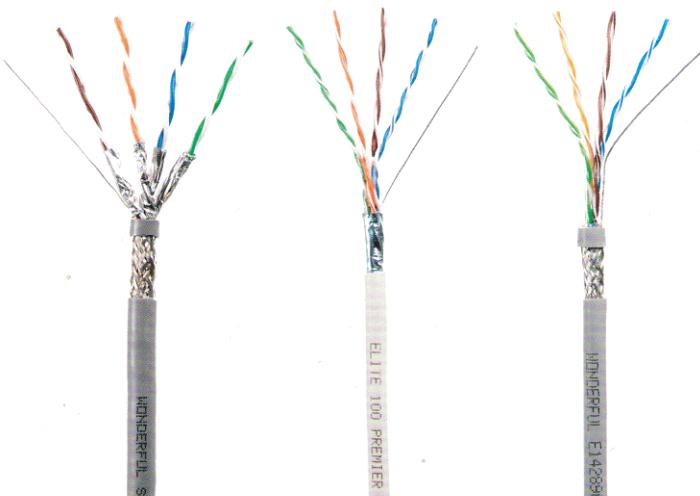
FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.4	68.3	65.9	65.3	62.9	63.8	60.8	20.0
25	12.5	47.3	34.8	44.3	31.8	35.8	32.8	24.2
31.25	14.0	45.9	31.9	42.9	28.9	33.9	30.9	23.3
62.5	20.4	41.4	21.0	38.4	18.0	27.8	24.8	20.7
100	26.4	38.3	11.9	35.3	8.9	23.8	20.8	19.0
155	33.7	35.5	3	32.5	0	20.0	17.0	17.4
200	38.9	33.8	NA	30.8	NA	17.7	14.7	16.4
240	43.2	32.6	NA	29.6	NA	16.2	13.2	15.7
300	49.2	31.2	NA	28.2	NA	14.2	11.2	14.9
350	53.9	30.1	NA	27.1	NA	12.9	9.9	14.3

PRODUCT DESCRIPTION

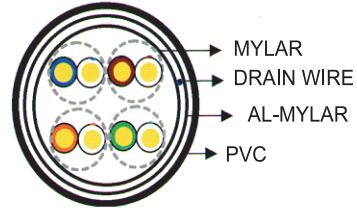
CONDUCTOR: 24 AWG BARE SOLID/STRANDED COPPER INSULATION: HDPE, FRPE, FEP RIPCORD: UNDER JACKET JACKET: FRPVC



350MHz FTP CABLE



Enhanced High performance ANSI/TIA/EIA 568-C.2 compliant Category 5 ENHANCED UTP cables for mission critical LAN applications or future proofing your Structured Cabling Systems. These cables are characterized to 350MHz, Powersum NEXT tested and are manufactured at our UL and BSI Certified ISO-9002 state-of-the-art manufacturing and testing facility. For installer friendly, high performance cables at affordable prices,



CABLE DATA

TYPE	PRODUCT NO.	INSULATION THICKNESS (mm/inch)	DIAMETER (mm/inch)	WEIGHT (lb/kg)	FLAME RETARDANT RATING
Solid	TSR2404P03	0.245 / 0.0096	6.1 / 0.240	27.3 / 12.4	CMR
	TSP2404P03	0.230 / 0.0091	5.8 / 0.228	28.7 / 13.0	CMP
	TSL2404P03	0.245 / 0.0096	6.1 / 0.240	28.0 / 12.7	LSOH
Stranded	TAR2404P03	0.220 / 0.0087	5.7 / 0.224	23.5 / 10.7	CM
	TAL2404P03	0.220 / 0.0087	5.7 / 0.224	23.8 / 10.8	LSOH

Solid vs. Stranded Cable

Solid-conductor cable is designed for backbone and horizontal cable runs. Use it for runs between two wiring closets or from the wiring closet to a wallplate. Solid cable shouldn't be bent, flexed, or twisted repeatedly. Its attenuation is lower than that of stranded-conductor cable.

Stranded cable is for use in shorter runs between network interface cards (NICs) and wallplates or between concentrators and patch panels, hubs, and other rackmounted equipment. Stranded-conductor cable is much more flexible than solid-core cable. However, attenuation is higher in stranded-conductor cable, so the total length of stranded cable in your system should be kept to a minimum to reduce signal degradation.

PRODUCT ELECTRICAL CHARACTERISTICS (SOLID)

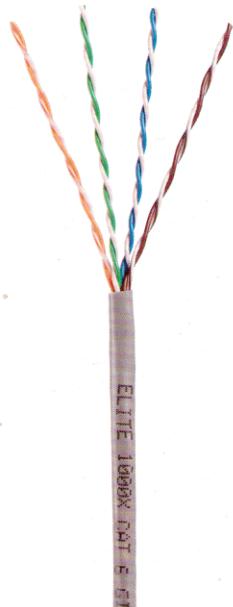
- Features: Impedance 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 40nS/100M

FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.0	65.3	63.3	62.3	60.3	63.8	60.8	20.0
31.25	11.7	42.9	31.2	39.9	28.2	33.9	30.9	23.5
62.5	17.0	38.4	21.4	35.4	18.4	27.8	24.8	21.5
100	22.0	35.3	13.3	32.3	10.3	23.8	20.8	20.1
155	28.1	32.5	4.4	29.5	1.4	20.0	17.0	18.8
200	32.4	30.8	N.A	27.8	N.A	17.7	14.7	18.0
300	41	28.2	N.A	25.2	N.A	14.2	11.2	16.8
350	44.9	27.1	N.A	24.1	N.A	12.9	9.9	16.3

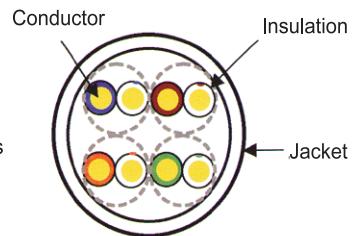
PRODUCT ELECTRICAL CHARACTERISTICS (STRANDED)

- Features: Impedance 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 40nS/100M

FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.4	65.3	62.9	62.3	59.9	63.8	60.8	20.0
31.25	14.0	42.9	28.9	39.9	25.9	33.9	30.9	23.3
62.5	20.4	38.4	18.0	35.4	15.0	27.8	24.8	20.7
100	26.4	35.3	8.9	32.3	5.9	23.8	20.8	19.0
155	33.7	32.5	0	29.5	N.A	20.0	17.0	17.4
200	38.9	30.8	N.A	27.8	N.A	17.7	14.7	16.4
240	43.2	29.6	N.A	25.6	N.A	16.2	13.2	15.7
300	49.2	28.2	N.A	25.2	N.A	14.2	11.2	14.9
350	53.9	27.1	N.A	24.1	N.A	12.9	9.9	14.3



High performance ANSI/TIA/EIA 568-C.2.1 CAT 6 compliant Category 6 UTP cables for mission critical LAN applications or future proofing your Structured Cabling Systems. These cables are characterized to 350MHz, Powersum NEXT tested and are manufactured at our UL and BSI Certified ISO-9001 state-of-the-art manufacturing and testing facility. For installer friendly, high performance cables at affordable prices,



■ CABLE DATA

TYPE	PRODUCT NO.	INSULATION THICKNESS (mm/inch)	DIAMETER (mm/inch)	WEIGHT (lb/kg)	FLAME RETARDANT RATING
Solid	TUR2404X03	0.220 / 0.0087	6.1 / 0.240	26.1 / 11.8	CMR
	TUP2404X03	0.210 / 0.0083	6.0 / 0.236	29.1 / 13.2	CMP
	TUL2404X03	0.220 / 0.0085	6.1 / 0.240	26.2 / 11.9	LSOH
Stranded	TPM2404X03	0.202 / 0.0080	5.4 / 0.213	20.7 / 9.4	CM
	TPL2404X03	0.202 / 0.0080	5.4 / 0.213	21.0 / 9.5	LSOH

■ PRODUCT ELECTRICAL CHARACTERISTICS (SOLID)

- Features: Impedance 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 30nS/100M

■ APPLICATIONS

- 10 BASE T(IEEE 802.3)
- 100 BASE T(IEEE 802.3U)
- 100VG-any LAN(IEEE 802.12)
- TOKEN RING(IEEE 805.5)
- TP-PMD9ANSI X3T9.5)
- 100 MbPS CDDI
- ATM 155
- ATM622 1000 Base-T

FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.0	74.3	72.3	72.3	70.3	67.8	64.8	20.0
31.25	10.7	51.9	41.2	49.9	39.2	37.9	34.9	23.6
62.5	15.4	47.4	32.0	45.1	30.0	31.8	28.8	21.5
100	19.8	44.3	24.5	42.3	22.5	27.8	24.8	20.1
155	25.1	41.5	16.4	39.5	14.4	23.9	20.9	18.8
200	29.0	39.8	10.8	37.8	8.8	21.7	18.7	18.0
250	32.8	38.3	5.5	36.3	3.5	19.8	16.8	17.3
300	36.4	37.2	0.8	35.2	0	18.2	15.2	16.8
400	43.0	35.3	N.A	33.3	N.A	15.7	12.7	15.9

■ INDUSTRY STANDARDS

- UL/CSA LISTED CM, CMR, CMP, LSOH
- UL, ETL AND 3P VERIFIED TO ANSI/TIA/EIA568-C.2.1 CAT6
- ISO/IEC 11801 class E
- NEMA WC 66
- PrEN 50288-6-1

■ PRODUCT ELECTRICAL CHARACTERISTICS (STRANDED)

- Features: Impedance 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 30nS/100M

FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.4	74.3	71.9	72.3	69.9	67.8	67.8	20.0
31.25	12.8	51.9	39.1	49.9	37.1	37.9	34.9	23.3
62.5	18.5	47.4	28.9	45.1	26.9	31.8	28.8	20.7
100	23.8	44.3	20.5	42.3	18.5	27.8	27.8	19.0
155	30.2	41.5	11.3	39.5	9.3	23.9	23.9	17.4
200	34.8	39.8	5.0	37.8	3.0	21.7	21.7	16.4
250	39.3	38.3	0	36.3	N.A	19.8	19.8	15.6
300	43.7	37.2	N.A	35.2	N.A	18.2	15.3	14.9
400	51.6	35.3	N.A	33.3	N.A	15.7	12.8	13.8

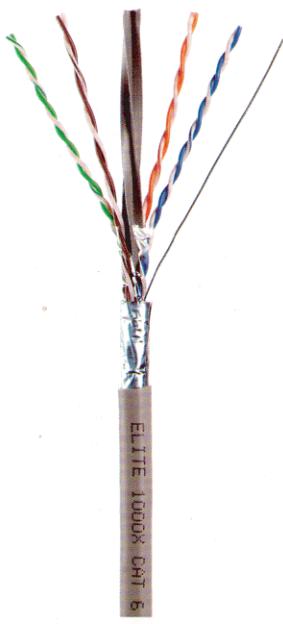
■ PRODUCT DESCRIPTION

CONDUCTOR: 23 AWG BARE SOLID/24AWG STRANDED COPPER INSULATION: HDPE, FEP RIPCORD: UNDER JACKET JACKET: FRPVC, LSOH

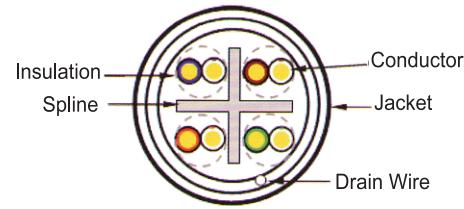


CATEGORY 6

400MHz FTP CABLE



High performance ANSI/TIA/EIA 568-C.2.1 CAT 6 compliant Category 6 UTP cables for mission critical LAN applications or future proofing your Structured Cabling Systems. These cables are characterized to 450MHz, Powersum NEXT tested and are manufactured at our UL and BSI Certified ISO-9001 state-of-the-art manufacturing and testing facility. For installer friendly, high performance cables at affordable prices,



CABLE DATA

TYPE	PRODUCT NO.	INSULATION THICKNESS (mm/inch)	DIAMETER (mm/inch)	WEIGHT (lb/kg)	FLAME RETARDANT RATING
Solid	TSR2404X	0.245 / 0.0096	7.2 / 0.283	32.2 / 14.6	CMR
	TSP2404X	0.230 / 0.0096	7.0 / 0.276	33.9 / 15.4	CMP
	TSL2404X	0.245 / 0.0096	7.2 / 0.283	33.0 / 15.0	LSOH
Stranded	TAR2404X	0.220 / 0.0087	7.1 / 0.280	30.8 / 14.0	CMR

PRODUCT ELECTRICAL CHARACTERISTICS (SOLID)

- Features: Impedance 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 30nS/100M

APPLICATIONS

- 10 BASE T(IEEE 802.3)
- 100 BASE T(IEEE 802.3U)
- 100 Vg-any LAN(IEEE 802.12)
- TOKEN RING(IEEE 805.5)
- TP-PMD9ANSI X3T9.5)
- 100 MbPS CDDI
- ATM 155
- ATM 622 1000 Base-T

FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.0	74.3	72.3	72.3	70.3	70.3	64.8	20.0
31.25	10.7	51.9	41.2	49.9	39.2	39.2	34.9	23.6
62.5	15.4	47.4	32.0	45.1	30.0	30.0	28.8	21.5
100	19.8	44.3	24.5	42.3	22.5	22.5	24.8	20.1
155	25.1	41.5	16.4	39.5	14.4	14.4	20.9	18.8
200	29.0	39.8	10.8	37.8	8.8	8.8	18.7	18.0
250	32.8	38.3	5.5	36.3	3.5	3.5	16.8	17.3
300	36.4	37.2	0.8	35.2	0	0	15.2	16.8
400	43.0	35.3	N.A	33.3	N.A	N.A	12.7	15.9

INDUSTRY

STANDARDS

- UL/CSA LISTED CM, CMR, CMP, LSOH
- UL, ETL AND 3P VERIFIED TO ANSI/TIA/EIA568-C.2.1 CAT 6
- ISO/IEC 11801 class E
- NEMA WC 66
- PrEN 50288-6-1

PRODUCT ELECTRICAL CHARACTERISTICS (STRANDED)

- Features: Impedance 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 30nS/100M

FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.4	74.3	71.9	72.3	69.9	67.8	67.8	20.0
31.25	12.8	51.9	39.1	49.9	37.1	37.9	34.9	23.3
62.5	18.5	47.4	28.9	45.1	26.9	31.8	28.8	20.7
100	23.8	44.3	20.5	42.3	18.5	27.8	27.8	19.0
155	30.2	41.5	11.3	39.5	9.3	23.9	23.9	17.4
200	34.8	39.8	5.0	37.8	3.0	21.7	21.7	16.4
250	39.3	38.3	0	36.3	N.A	19.8	19.8	15.6
300	43.7	37.2	N.A	35.2	N.A	18.3	15.3	14.9
400	51.6	35.3	N.A	33.3	N.A	15.8	12.8	13.8

PRODUCT DESCRIPTION

CONDUCTOR: 23 AWG BARE

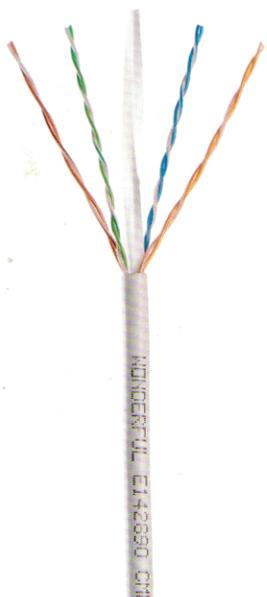
SOLID COPPER

INSULATION: HDPE, FEP

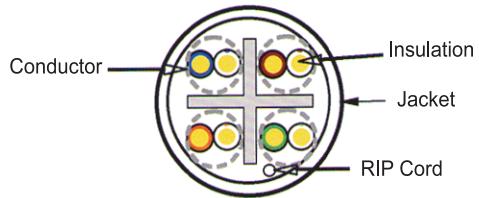
SHIELD: Mylar-Aluminum/Mylar tape

RIPCORD: UNDER JACKET

JACKET: FRPVC



Enhanced High performance ANSI/TIA/EIA 568-C.2.1 CAT 6 compliant Category 6 ENHANCED UTP cables for mission critical LAN applications or future proofing your Structured Cabling Systems. These cables are characterized to 600MHz, Powersum NEXT tested and are manufactured at our UL and BSI Certified ISO-9001 state-of-the-art manufacturing and testing facility. For installer friendly, high performance cables at affordable prices,



■ CABLE DATA

PRODUCT NO.	INSULATION THICKNESS (mm/inch)	DIAMETER (mm/inch)	WEIGHT (lb/kg)	FLAME RETARDANT RATING
TUR2304X03	0.220 / 0.0087	6.1 / 0.240	26.1 / 11.8	CMR
TUP2304X03	0.210 / 0.0083	6.0 / 0.236	29.1 / 13.2	CMP
TUL2304X03	0.220 / 0.0085	6.1 / 0.240	26.2 / 11.9	LSOH

■ PRODUCT ELECTRICAL CHARACTERISTICS

- Features: Impedance 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 30nS/100M

FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.0	76.3	74.3	74.3	72.3	67.8	64.8	20.0
31.25	10.7	53.9	43.2	51.9	41.2	37.9	34.9	23.6
62.5	15.4	49.4	34.4	47.1	31.7	31.8	28.8	21.5
100	19.8	46.3	26.5	44.3	24.5	27.8	24.8	20.1
155	25.1	43.5	18.4	41.5	16.4	23.9	20.9	18.8
200	29.0	41.8	12.8	39.8	10.8	21.7	18.7	18.8
250	32.8	40.3	7.5	38.3	5.5	19.8	16.8	17.3
300	36.4	39.2	2.8	37.2	0.8	18.2	15.2	16.8
400	43.0	37.2	N.A	35.2	N.A	15.7	12.7	15.9
550	51.8	37.2	N.A	33.2	N.A	12.9	9.9	14.9
600	54.5	36.6	N.A	32.6	N.A	12.2	9.2	14.7

■ APPLICATIONS

- 10 BASE T(IEEE 802.3)
- 100 BASE T(IEEE 802.3U)
- 100 Vg-any LAN(IEEE 802.12)
- TOKEN RING(IEEE 805.5)
- TP-PMD9ANSI X3T9.5)
- n100 MbPS CDDI
- ATM 155
- ATM 622 1000 Base-T

■ INDUSTRY STANDARDS

- UL/CSA LISTED CM, CMR, CMP, LSOH
- UL, ETL AND 3P VERIFIED TO ANSI/TIA/EIA568-C.2.1 CAT 6
- ISO/IEC 11801 class E
- NEMA WC 66
- PrEN 50288-6-1

■ PRODUCT DESCRIPTION

CONDUCTOR: 23 AWG BARE SOLID COPPER

INSULATION: HDPE, FEP

RIPCORD: UNDER JACKET

JACKET: FRPVC

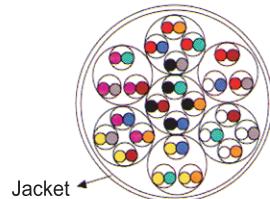


CATEGORY 5E

100MHz UTP 25Pairs CABLE



High performance ANSI/TIA/EIA 568-C.2
can plant backbone cables for Structured Cabling System



■ CABLE DATA

PRODUCT NO.		INSULATION THICKNESS (mm/inch)	DIAMETER (mm/inch)	WEIGHT (lb/kg)	FLAME RETARDANT RATING
TUR2425N		0.97 / 0.0382	13.6 / 0.535	136.0 / 61.7	CMR
TUL2425N		0.97 / 0.0382	13.6 / 0.535	136.9 / 62.1	LSOH

■ PRODUCT ELECTRICAL CHARACTERISTICS

- Features: Impedence 100 +/- 15 ohms
- Mutual Capacitance, MAX. nf/1000ft 17.1
- DC Resistance, MAX. Ohms/1000ft 28.6
- DC Resistance, unbalance of a pair: 5% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 30nS/100M

FREQUENCY (MHz)	ATT MAX. (dB/100m)	NEXT MIN.(dB)	ACR MIN.(dB)	PS.NEXT MIN.(dB)	PS.ACR MIN.(dB)	ELFEXT MIN.(dB/100m)	PS.ELFEXT MIN.(dB/100m)	RL MIN.(dB)
1	2.0	65.3	63.3	62.3	60.3	63.8	60.8	20.0
4	4.1	56.3	52.2	53.3	49.2	51.7	48.7	23.0
8	5.8	51.8	46.0	48.8	43.0	45.7	42.7	24.5
10	6.5	50.3	43.8	47.3	40.8	43.8	40.8	25.0
16	8.2	47.3	39.1	44.3	36.1	39.7	36.7	25.0
20	9.3	45.8	36.5	42.8	33.5	37.8	34.8	25.0
25	10.4	44.3	33.9	41.3	30.9	35.8	32.8	24.3
31.25	11.7	42.9	31.2	39.9	28.2	33.9	30.9	23.6
62.5	17.0	38.4	21.4	35.4	18.4	27.8	24.8	21.5
100	22.0	35.3	13.3	32.3	10.3	23.8	20.8	20.1

■ APPLICATIONS

- 10 BASE T(IEEE 802.3)
- 100 BASE T(IEEE 802.3U)
- 100 Vg-any LAN(IEEE 802.12)
- TOKEN RING(IEEE 805.5)
- TP-PMD9ANSI X3T9.5)
- 100 MbPS CDDI
- ATM 155

■ INDUSTRY STANDARDS

- UL/CSA LISTED CMR, LSOH
- UL, ETL AND 3P VERIFIED TO ANSI/TIA/EIA568-C.2
- CATEGORY 5 ENHANCED
- ISO/IEC 11801
- NEMA WC 63.1
- PrEN 50288-3-1

■ PRODUCT DESCRIPTION

CONDUCTOR: 24 AWG BARE SOLID

INSULATION: HDPE, FREP

RIPCORD: UNDER JACKET

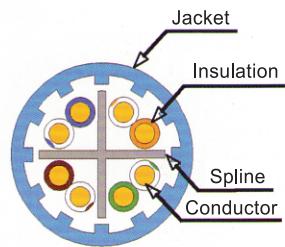
JACKET: FRPVC

UTP Augmented 4 Pairs/23AWG



■ PRODUCT FEATURE

- GREAT PERFORMANCE WITH HEADROOM OF UTP to 6dB
- 10GS LAN SUPPORTS IEEE 802.3an 10G BASE-T STANDARD, AND TIA/EIA 568-C.2-10 DRAFT.7
- ALL MATERIALS COMPLY WITH ROHS STANDARD
- TEST RANGE FROM 1 TO 750 MHz



■ CABLE DATA

PRODUCT NO.	DIAMETER (mm/inch)	WEIGHT (lb/kg)	FLAME RETARDANT RATING	Packaging Put-Up
TUR2304S03XX	8.0 / 0.31	40.1 / 18.2	CMR	1,000ft Reel
TUP2304S03XX	8.0 / 0.31	47.3 / 21.5	CMP	1,000ft Reel

■ PRODUCT DESCRIPTION

- Jacket: Low-smoke, flame-retardant PVC
- Insulation: PE/FEP
- Spline: PE/REP
- Conductor: 23 AWG Solid bare copper
- Cable assembly: 4 pair cabled together with a spline core separator

■ PRODUCT ELECTRICAL CHARACTERISTICS

- Features: Impedance 100 +/- 15 ohms(10-550MHz)
- DC Resistance, unbalance of a pair: 3% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 25nS/100M

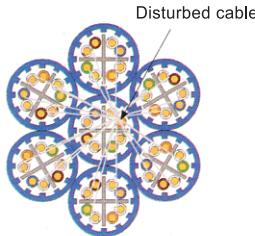
REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INS LOSS (dB/100m)	RETURN LOSS (dB/100m)	NEXT (dB/100m)	PS NEXT (dB/100m)	ACRF (dB/100m)	PS ACRF (dB/100m)	PROP DELAY		ALIEN CROSSTALK	
							PS ANEXT (dB/100m)	PS AACRF (dB/100m)	PS ANEXT (dB/100m)	PS AACRF (dB/100m)
1.0	2.0	20.0	78.3	76.3	71.8	68.8	570.0	67.0	67.0	67.0
4.0	3.7	24.2	69.3	67.3	59.8	56.8	552.0	67.0	66.2	
8.0	5.2	26.3	64.8	62.8	53.7	50.7	546.7	67.0	60.1	
10.0	5.9	27.0	63.3	61.3	51.8	48.8	545.4	67.0	58.2	
16.0	7.4	27.0	60.2	58.2	47.7	44.7	543.0	67.0	54.1	
20.0	8.3	27.0	58.8	56.8	45.8	42.8	542.0	67.0	52.2	
25.0	9.3	26.3	57.3	55.3	43.8	40.8	541.2	67.0	50.2	
31.25	10.4	25.6	55.9	53.9	41.9	38.9	540.4	67.0	48.3	
62.5	14.9	23.5	51.4	49.4	35.9	32.9	538.6	65.6	42.3	
100.0	19.0	22.1	48.3	46.3	31.8	28.8	537.6	52.5	38.2	
155.0	24.0	20.8	45.4	43.4	28.0	25.0	536.9	59.6	34.4	
200.0	27.5	20.0	43.8	41.8	25.8	22.8	536.5	58.0	32.2	
250.0	31.0	19.3	42.3	40.3	23.8	20.8	536.3	56.5	30.2	
300.0	34.2	18.8	41.1	39.3	22.3	19.3	536.1	55.3	28.7	
350.0	37.2	18.3	40.1	38.1	20.9	17.9	535.9	54.3	27.3	
400.0	40.0	17.9	39.3	37.3	19.8	16.8	535.8	53.5	26.2	
500.0	45.3	17.5	37.8	35.8	17.8	14.8	535.6	52.0	24.2	
550.0	47.7	17.2	37.2	35.2	-	-	-	-	-	
600.0	50.1	16.9	36.6	34.6	-	-	-	-	-	
650.0	52.4	16.7	36.1	34.1	-	-	-	-	-	
750	56.8	16	35.2	33.2	-	-	-	-	-	

■ 6-around-1 cable test configuration:

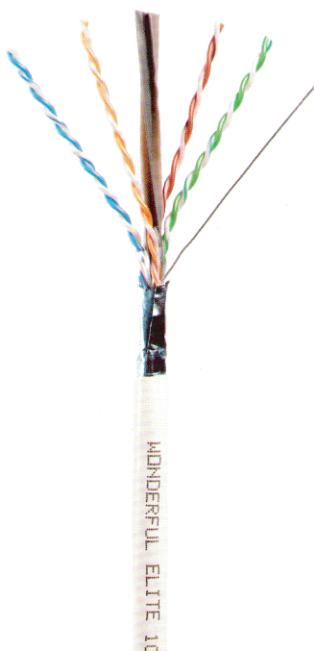
This test is for measuring alien crosstalk loss between pairs of adjacent cables in a 7-cable assembly consisting of the same design. Measure the ANEXT loss and AFEXT loss between each of the pairs of the disturbed cable and each pair of every disturbing cable. This will result in 96 measurements each for ANEXT loss and AFEXT loss.

Elite 10GS family-cables are under the 6-around-1 cable



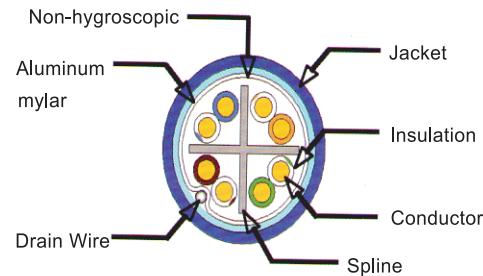


FTP Augmented 4 Pairs/23AWG



■ PRODUCT FEATURE

- ELITE 10GS-F SUPPORTS IEEE 802.3an 10G BASE-T STANDARD, AND TIA/EIA 568-C.2-10 DRAFT.9
- ALL MATERIALS COMPLY WITH ROHS STANDARD
- TEST RANGE FROM 1 TO 650 MHz
- SMALLER OD COMPARES TO ELITE



■ CABLE DATA

PRODUCT NO.	DIAMETER (mm/inch)	WEIGHT (lb/kg)	FLAME RETARDANT RATING	Packaging Put-Up
TSR2304S03XX	7.6 / 0.30	40.3 / 18.3	CMR	1,000ft Reel
TSP2304S03XX	7.6 / 0.30	45.6 / 20.7	CMP	1,000ft Reel

■ PRODUCT DESCRIPTION

- Jacket: Low-smoke, flame-retardant PVC
- Insulation: PE/FEP
- Spline: PE/REP
- Conductor: 23 AWG Solid bare copper
- Cable assembly: 4 pair cabled together with a spline core separator

■ PRODUCT ELECTRICAL CHARACTERISTICS

- Features: Impedance 100 +/- 15 ohms(10-550MHz)
- DC Resistance, unbalance of a pair: 3% MAX
- Capacitance unbalance(pair to ground): 330pF/100m MAX.
- Propagation delay skew: 25nS/100M

■ Augmented Category 6 (Category 6a)

This TIA is working to complete a new specification that will define enhanced performance standards for unshielded twisted pair cable systems.

Draft specification ANSI/TIA/EIA-568-C.2-10 specifies cable systems, called "Augmented Category 6" or more frequently as "Category 6a", that operate at frequencies up to 500 MHz and will provide up to 10 Gbit/s bandwidth. The new specification has limits on alien crosstalk in cabling systems.

Augmented Category 6 specifies cable operating at minimum frequency of 500 MHz, for both shielded and unshielded. It can support future 10 Gbit/s applications up to the maximum distance of 100 meters on a 4-connector channel

REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INS LOSS (dB/100m)	RETURN LOSS (dB/100m)	NEXT (dB/100m)	PS NEXT (dB/100m)	ACRF (dB/100m)	PS ACRF (dB/100m)	PROP			ALIEN CROSSTALK	
							DELAY (dB/100m)	PS ANEXT (dB/100m)	PS AACRF (dB/100m)	min	min
1.0	2.0	20.0	74.3	72.3	71.8	68.8	570.0	71.0	71.0		
4.0	3.7	24.2	65.3	63.3	59.8	56.8	552.0	71.0	70.2		
8.0	5.2	26.3	59.8	58.8	53.7	50.7	546.7	71.0	64.1		
10.0	5.9	27.0	59.3	57.3	51.8	48.8	545.4	71.0	62.2		
16.0	7.4	27.0	56.2	54.2	47.7	44.7	543.0	71.0	58.1		
20.0	8.3	27.0	54.8	52.8	45.8	42.8	542.0	71.0	56.2		
25.0	9.3	26.3	53.3	51.3	43.8	40.8	541.2	71.0	54.2		
31.25	10.4	25.6	51.9	49.9	41.9	38.9	540.4	71.0	52.3		
62.5	14.9	23.5	47.4	45.4	35.9	32.9	538.6	69.6	46.3		
100.0	19.0	22.1	44.3	42.3	31.8	28.8	537.6	66.5	42.2		
155.0	24.0	20.8	41.4	39.4	28.0	25.0	536.9	63.6	38.4		
200.0	27.5	20.0	39.8	37.8	25.8	22.8	536.5	52.0	36.2		
250.0	31.0	19.3	38.3	36.3	23.8	20.8	536.3	60.5	34.2		
300.0	34.2	18.8	37.1	35.3	22.3	19.3	536.1	59.3	32.7		
350.0	37.2	18.3	36.1	34.1	20.9	17.9	535.9	58.3	31.3		
400.0	40.0	17.9	35.3	33.3	19.8	16.8	535.8	57.5	30.2		
500.0	45.3	17.5	33.8	31.8	17.8	14.8	535.6	56.0	28.2		
550.0	47.7	17.2	33.2	31.2	-	-	-	-	-		
600.0	50.1	16.9	32.6	30.6	-	-	-	-	-		
650.0	52.4	16.7	32.1	30.1	-	-	-	-	-		



"AMERICAN WIRE GAUGE"

Gage	Diameter		Area			Weight	No./mm
	Mils	Millimeter	Circular Mils	Square Inch	Square Millimeter		
A.W.G	Mils	mm	cm	in	mm	kg/km	
1	289.3	7.348	83.694	0.06573	42.41	377	1/7.348
		8.508				379	19/1.690
		8.500				379	37/1.210
		8.480				377	61/0.940
2	257.6	6.544	66.358	0.05212	33.63	299	1/6.543
		7.410				299	7/2.470
		7.551				299	19/1.500
		7.590				302	37/1.080
4	204.3	5.189	41.738	0.03278	21.15	188	1/5.189
		5.960				188	7/1.960
		5.991				188	19/1.190
		5.992				188	37/0.853
		6.032				192.70	133/0.455
		6.036				191	420/0.254
6	162	4.115	26.244	0.02061	13.3	118.20	1/4.115
		4.770				119	7/1.560
		4.829				121	19/0.954
		4.749				118	37/0.676
		4.803				121	266/0.254
8	128.5	3.264	16.512	0.01297	8.368	74.39	1/3.264
		3.690				74.13	7/1.230
		3.771				74.60	19/0.749
		3.760				74.40	37/0.536
		3.783				75	133/0.284
10	101.9	2.588	10.384	0.008156	5.262	46.78	1/2.588
		2.961				47.73	7/0.987
		3.005				47.40	19/0.597
		3.017				47.80	105/0.254
		2.974				46.40	259/0.160
12	80.81	2.053	6.53	0.005129	3.309	29.42	1/2.050
		2.325				29.43	7/0.775
		2.366				29.37	19/0.470
		2.374				29.58	65/0.254
		2.395				30.10	168/0.16
14	64.08	1.628	4.106	0.003225	2.081	18.50	1/1.630
		1.845				18.53	7/0.615
		1.877				18.50	19/0.373
		1.885				18.66	41/0.254
		1.894				18.81	105/0.160
16	50.82	1.291	2.583	0.002029	1.309	11.64	1/1.290
		1.464				11.67	7/0.488
		1.502				11.83	26/0.254
		1.483				11.65	65/0.160
		1.024				7.313	1/1.020
18	40.3	1.212	1.624	0.001275	0.8226	7.99	7/0.404
		1.178				7.28	16/0.254
		1.198				7.54	34/0.180
		1.163				7.16	41/0.160
		0.8118				4.60	1/0.813
20	30	0.9600	1.021	0.0008019	0.5174	5.01	7/0.320
		0.9421				4.65	21/0.180
		0.9305				4.54	26/0.160
		0.6439				2.895	1/0.643
22	25.35	0.7650	642.6	0.0005047	0.3256	3.186	7/0.254
		0.7524				2.97	17/0.160
		0.5106				1.82	1/0.511
24	20.1	0.6000	404	0.0003173	0.2047	1.96	7/0.200
		0.60525				1.92	11/0.160
		0.4049				1.145	1/0.404
26	15.94	0.4740	254.1	0.0001996	0.1288	1.223	7/0.160
		0.3211				0.7198	1/0.320
		0.3810				0.7903	7/0.127
30	10.03	0.2548	100.6	0.0007901	0.05097	0.4531	1/0.254
		0.30				0.490	7/0.102
32	7.95	0.2091	63.2	0.00004964	0.03203	0.2847	1/0.203



UL 1581 Table 30.2, 30.3, 30.4 Conductor Resistance (20°C Max)

AWG	Solid Copper		Strand Copper	
	Bare	Tinned	Bare	Tinned
32	542.00 Ohm/Km	563.00 Ohm/Km	-	-
30	347.00 Ohm/Km	361.00 Ohm/Km	354.00 Ohm/Km	381.00 Ohm/Km
28	218.00 Ohm/Km	227.00 Ohm/Km	223.00 Ohm/Km	239.00 Ohm/Km
26	138.00 Ohm/Km	143.00 Ohm/Km	140.00 Ohm/Km	150.00 Ohm/Km
24	85.90 Ohm/Km	89.30 Ohm/Km	87.50 Ohm/Km	94.20 Ohm/Km
22	54.30 Ohm/Km	56.40 Ohm/Km	55.00 Ohm/Km	59.40 Ohm/Km
20	33.90 Ohm/Km	35.20 Ohm/Km	34.60 Ohm/Km	36.70 Ohm/Km
18	21.40 Ohm/Km	22.20 Ohm/Km	21.80 Ohm/Km	23.20 Ohm/Km
16	13.50 Ohm/Km	14.00 Ohm/Km	13.70 Ohm/Km	14.60 Ohm/Km
14	8.45 Ohm/Km	8.78 Ohm/Km	8.62 Ohm/Km	8.96 Ohm/Km
12	5.31 Ohm/Km	5.53 Ohm/Km	5.43 Ohm/Km	5.64 Ohm/Km
10	3.34 Ohm/Km	3.48 Ohm/Km	3.40 Ohm/Km	3.55 Ohm/Km
8	2.10 Ohm/Km	2.16 Ohm/Km	21.4 Ohm/Km	2.23 Ohm/Km
6	1.32 Ohm/Km	1.36 Ohm/Km	1.35 Ohm/Km	1.40 Ohm/Km

Conductor Resistance (DIN VDE 0295, IEC 60228, HD 383)

The values are extracted from DIN VDE 0295 (equivalent with the international standard IEC 60228 and HD 383), according to cross-sections and conductor classes, beginning with nominal cross-section of 0.5 mm². The diameters of the single wires of each bunched conductor are not permitted to exceed the maximum stated values (ref. DIN VDE 0295), which are required to conform the maximum resistance value of the bunched conductors at 20°C.

Nominal Cross-section in mm ²	Copper conductor plain wires (Ohm/km)		Copper conductor tinned wires	
	class 1 & 2	class 5 & 6	class 1 & 2	class 5 & 6
0.05	-	380	-	392
0.08	-	237	-	244
0.11	-	170	-	175
0.126	-	150	-	155
0.14	-	134	-	138
0.22	-	96	-	99
0.25	-	76	-	79
0.34	-	53	-	56
0.5	36	39	36.7	40.1
0.75	24.5	26	24.8	26.7
1	18.1	19.5	18.2	20
1.5	12.1	13.3	12.2	13.7
2.5	7.41	7.98	7.56	8.21
4	4.61	4.95	4.7	5.09
6	3.08	3.3	3.11	3.39
10	1.83	1.91	1.84	1.95
16	1.15	1.21	1.16	1.24
25	0.272*	0.78	0.734	0.795
35	0.524*	0.554	0.529	0.56
50	0.387*	0.386	0.391	0.93
70	0.268*	0.272	0.27	0.277
95	0.193*	0.206	0.195	0.21
120	0.153*	0.161	0.154	0.164
150	0.124*	0.129	0.126	0.32
185	0.0991	0.106	0.1	0.108
240	0.0754	0.0801	0.0762	0.0817
300	0.0601	0.0641	0.0607	0.0654
400	0.047	0.0486	0.0475	0.0495
500	0.0366	0.0384	0.0369	0.0391
630	0.0283	0.0287	0.0286	0.0292

class 1 = single conductor conductor for single and multi conductor cables
 class 5 = multi conductor conductor for single and multi conductor cables
 class 5 = fine wire copper conductor for single and multi conductor cables
 class 6 = extra wire copper conductor for single and multi conductor cables
 * for mineral-insulated cables (class 1 up to 150 mm²)



เปรียบเทียบสายไฟ มอก.11-2531 และ มอก.11-2553

มอก.11-2531

ชนิดสาย	ขนาดสาย (ตร.มม.)	แรงดันไฟฟ้า (V)
THW (T.4)	0.5, 0.75, 1.0	750
	1.5 - 400	750
	500	750
IV (T.1)	0.5, 0.75, 1.0	300
	1.5 - 150	300
VSF (T.10)	0.5, 0.75, 1.0	300
	1.5 - 2.5	300

มอก.11 เล่ม 3-2553

ชนิดสาย	ขนาดสาย (ตร.มม.)	แรงดันไฟฟ้า (V)	หมายเหตุ
IEC 05 (IV)	0.5, 0.75, 1.0	300/500	ไม่มีเกณฑ์
IEC 01 (THW)	1.5 - 400	450/750	
IEC 02 (THW-f)	1.5 240	450/750	
IEC 05 (IV)	0.5, 0.75, 1.0	300/500	THW ชนิดลวดฟอยล์
IEC 01 (THW)	1.5 - 150	450/750	
IEC 06	0.5, 0.75, 1.0	300/500	
IEC 02 (THW-f)	1.5 - 2.5	450/700	

มอก.11-2531

ชนิดสาย	ขนาดสาย (ตร.มม.)	แรงดันไฟฟ้า (V)
VCT 2-3 แกน (T.9)	2 x 0.5, 3 x 0.5	750
VCT 2 แกน (T.9)	2 x 0.75, 2 x 1.0, 2 x 1.5, 2 x 2.5	750
VCT 3 แกน (T.9)	3 x 0.75, 3 x 1.0, 3 x 1.5, 3 x 2.5	750
VCT 4 แกน (T.9)	4 x 0.75, 4 x 1.0, 4 x 1.5, 4 x 2.5	750
VCT/G 2 แกน (T.15)	2 x 1/1, 2 x 1.5/1, 2 x 2.5/1.5	750
VCT/G 3 แกน (T.15)	3 x 1/1, 3 x 1.5/1, 3 x 2.5/1.5	750
VCT/G 4 แกน (T.15)	4 x 1/1, 4 x 1.5/1, 4 x 2.5/1.5	750
VKF (T.10)	2 x 0.5	300
	2 x 0.75, 2 x 1.0, 2 x 1.5, 2 x 2.5	300

มอก.11 เล่ม 5-2553

ชนิดสาย	ขนาดสาย (ตร.มม.)	แรงดันไฟฟ้า (V)	หมายเหตุ
IEC 52 (VCT)	2 x 0.5, 3 x 0.5	300/300	4 แกนผ่าน
IEC 53 (VCT)	2 x 0.75, 2 x 1.0, 2 x 1.5, 2 x 2.5	300/500	
	3 x 0.75, 3 x 1.0, 3 x 1.5, 3 x 2.5	300/500	
	4 x 0.75, 4 x 1.0, 4 x 1.5, 4 x 2.5	300/500	
IEC 53 (VCT/G)	3 x 1.0, 3 x 1.5, 3 x 2.5	300/500	ไฟชั้น
	4 x 1.0, 4 x 1.5, 4 x 2.5	300/500	3 x 1.0 แทน 2x 1/1
	5 x 1.0, 5 x 1.5, 5 x 2.5	300/500	เพิ่มต้น
	2 x 0.5	300/500	
IEC 52 (VKF)	2 x 0.75, 2 x 1.0, 2 x 1.5, 2 x 2.5	300/500	

มอก.11-2531

ชนิดสาย	ขนาดสาย (ตร.มม.)	แรงดันไฟฟ้า (V)
VAF (T.2)	2 x 0.5	300
	2 x 1.0, 2 x 1.5, 2 x 2.5, 2 x 4	300
	2 x 6, 2 x 10, 2 x 16	300
	2 x 25	300
VAF/G (T.11)	2 x 1/1, 2 x 1.5/1, 2 x 2.5/1.5, 2 x 4/2.5	300
	2 x 6/4, 2 x 10/4, 2 x 16/6	300
VCT 2 แกน (T.9)	2 x 4, 2 x 6, 2 x 10, 2 x 16, 2 x 25, 2 x 35	750
VCT 3 แกน (T.9)	3 x 4, 3 x 6, 3 x 10, 3 x 16, 3 x 25, 3 x 35	750
VCT 4 แกน (T.9)	4 x 4, 4 x 6, 4 x 10, 4 x 16, 4 x 25, 4 x 35	750

มอก.11 เล่ม 101-2553

ชนิดสาย	ขนาดสาย (ตร.มม.)	แรงดันไฟฟ้า (V)	หมายเหตุ
ไม่มีเกณฑ์			
VAF	2 x 1.0, 2 x 1.5, 2 x 2.5, 2 x 4	300/500	
	2 x 6, 2 x 10, 2 x 16	300/500	
ไม่มีเกณฑ์			
VAF/G	2 x 1/1, 2 x 1.5/1.5, 2 x 2.5/2.5, 2 x 4/4	300/500	
	2 x 6/6, 2 x 10/10, 2 x 16/16	300/500	
VCT 2 แกน	2 x 4, 2 x 6, 2 x 10, 2 x 16, 2 x 25, 2 x 35	450/750	
VCT 3 แกน	3 x 4, 3 x 6, 3 x 10, 3 x 16, 3 x 25, 3 x 35	450/750	
VCT 4 แกน	4 x 4, 4 x 6, 4 x 10, 4 x 16, 4 x 25, 4 x 35	450/750	

*สีของจำนวนที่ใช้

Phase

2 แกน	ฟ้า / น้ำตาล
3 แกน	น้ำตาล / ดำ / เทา
4 แกน	ฟ้า / น้ำตาล / ดำ / เทา

Phase + G

2 แกน + สายดิน	ฟ้า / น้ำตาล + เงิน/แฉกเหลือง
3 แกน + สายดิน	น้ำตาล / ดำ / เทา + เงิน/แฉกเหลือง
4 แกน + สายดิน	ฟ้า / น้ำตาล / ดำ / เทา + เงิน/แฉกเหลือง



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