

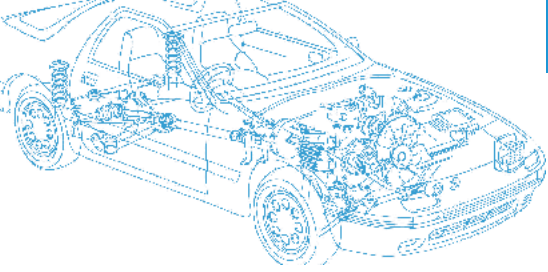


Caledonian Cables



Automotive Cables





Automotive Cable

Company Profile

Caledonian, established in 1978, offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. Our superior products provide leading edge within every cable series and for every application.

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard, ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Caledonian & Addison, produces a wide range of cables for communication, power and electronics in its primary plants in UK, Italy and Spain. To stay in front. we continually keep expanding our manufacturing capabilities in more low cost region such as Romania, Taiwan, Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible, scalable global system that delivers superior operational performance and optimal results for our customers.

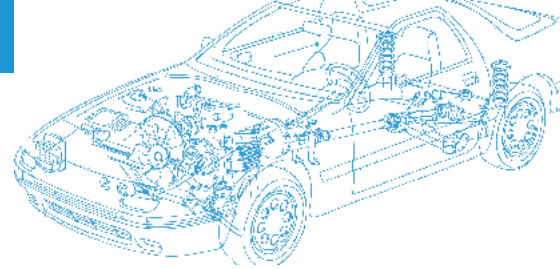
Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing, logistic services, and vertically integrated with our E commerce technologies, to optimize customer operations by lowering costs and reducing time to market.

Caledonian & Addison has been respected for its high standards of quality, excellent service level. competitive pricing and a unique and innovative spirit. With our latest technologies, we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning, we are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industryspecific solutions. Caledonian & Addison has established an extensive network of design, manufacturing, and logistics facilities in the world's major markets to serve the growing outsourcing needs of both multinational and regional customers.



Automotive Cable



Our Certificates


QAS International

REGISTRATION CERTIFICATE

This document certifies that the administration systems of

Caledonian Cables Limited / Addison Technology Limited
Marchants Industrial Centre, Mill Lane, Laughton, Lewes, Sussex, BN8 6AJ, United Kingdom

have been assessed and approved by QAS International
to the following management systems, standards and guidelines:

ISO 9001 : 2008
With the permitted exclusion of clauses 7.3 Design and Development

The approved administration systems apply to the following:

The manufacture and supply of electrical cables and
ancillary power equipment to customers internationally.

Original Approval **6th September 1997**

Current Certificate **7th February 2016**

Certificate Expiry **7th February 2017**

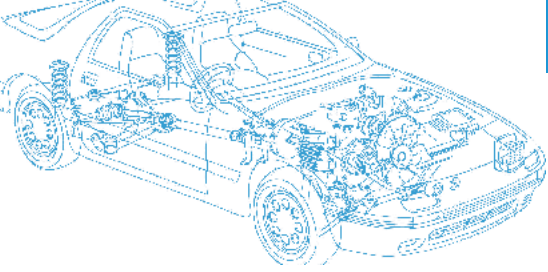
Certificate Number **A6211**

Signed: Certification Officer 

On behalf of QAS International

This certificate remains valid while the holder maintains their quality administration systems in accordance with the standards and guidelines stated above, which will be audited annually by QAS International. The holder is entitled to display the above registration mark for the duration of this certificate, which should be returned to QAS International upon reasonable request.
Issuing Office: QAS International, 20A Oxford Street, Malmesbury, Wiltshire SN16 9AX, UK





Automotive Cable

Code Designation

1. Type of wire (German abbreviations)

FL=automotive wire

FLZ=automotive ignition wire

2. Conductor Materials (excluding electrolytic copper)

M=materials other than E-Cu or electrical resistance alloys

W=resistance wires

3. Characteristics of insulation materials

no abbreviation=normal thickness

R=reduced insulation thickness

U=ultra thin insulation

S=Increased insulation

4. Insulation and Sheath Materials

Germany Standard

Y=soft-PVC (polyvinyl chloride)

YW=soft-PVC, heat-resistant, hot-pressure resistant

4Y=PA (polyamide)

6Y=FEP (tetrafluoroethylene hexafluoropropylene)

7Y=ETFE (ethylene tetrafluoroethylene)

11Y=TPE-U (thermoplastic polyurethane elastomer)

13Y=TPE-E (thermoplastic polyester elastomer)

2X=XLPE (polyethylene cross-linked)

4G=EVA (ethylene/vinyl acetate)

2G=SiR(Silicone rubber)

Japanese Standard

A= automotive low tension cable

V=polyvinyl chloride insulation

S=thin wall insulation

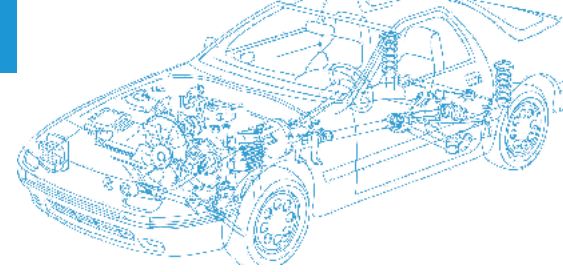
SS=extreme thin wall insulation

XX=cross linked insulation

T=twisted



Automotive Cable



E=polyethylene

EB=electric bond

HEB=heavy duty electric bond

HD=heavy duty

C=compacted

American Standard

TWP=thin wall, thermoplastic insulation low-tension cable for accumulator.

GPT=thermoplastic insulation low-tension cable.

TXL=thin-wall low-tension cables for automobiles.

GXL=cross linked polyolefin insulation low-tension cables for automobiles.

SXL=cross linked polyolefin insulation special purpose low-tension cables for automobiles.

HDT=heavy duty, thermoplastic insulation low-tension cable for automobiles.

SGT=starter or ground, general purpose thermoplastic insulated

STX=APC conductor, thin wall XLPO insulation

SGX=APC conductor, general purpose XLPO insulation

WTA=soft annealed copper conductor ultra thin wall PVC insulation

WTC=soft annealed copper conductor ultra thin wall PVC insulation

5. Shielding

B=screen (film, foil) shield

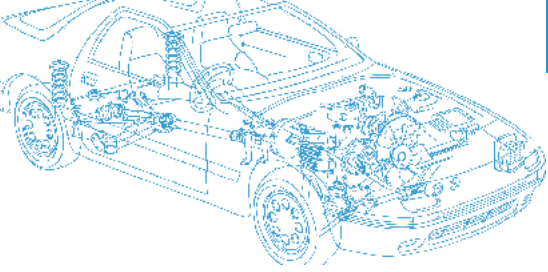
C=copper wire braiding

6. Special Designs

F=flat cable

Z=multi-core separable cable





Automotive Cable

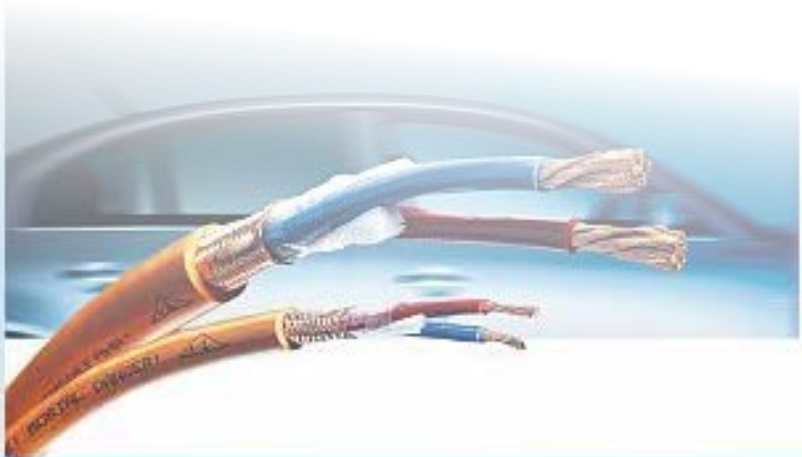
Examples:

1. Single-core cables

FLY 1X0.5	
FL	automotive cable
Y	PVC insulation
1X0.5	nominal cross-section 0.5mm ²

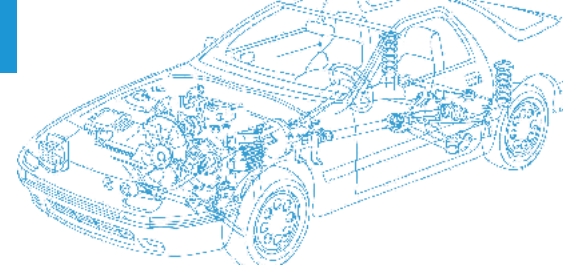
2. Multi-core cables

FLRYCY 9X0.08	
FL	automotive cable
R	reduced insulation thickness
Y	PVC insulation
C	braiding of copper wires
Y	PVC sheath
9X0.08	9 core, nominal cross-section 0.08mm ²





Automotive Cable



Color Coding

Basic colour

Code	Color
Bu	Blue
Bn	Brown
Ye	Yellow
Gn	Green
Gy	Grey
Nt	Nature
Rd	Red
Bk	Black
Pu	Violet
Wh	White

Color code of wires

1. 1st colour

basic colour (Colors according to DIN 47002 and DIN IEC 304).

2. 2nd colour

2 stripes on opposite sides

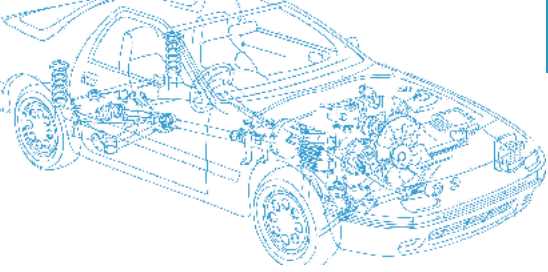
width of stripe: min. 14% of circumference both stripes together max. 35%, Minimum width of one stripe 7%).

3. 3rd colour

rings 3 mm wide (+/-1mm) halves max. 1 mm displaced

distance between rings: 6 to 20 mm

Conductor Specifications



Automotive Cable

Bare Copper

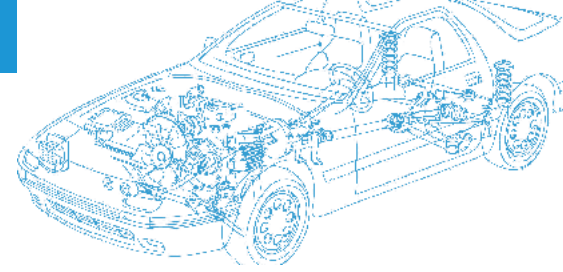
Copper wire	Cu-ETP1 according to DIN EN 13602
Melting point copper	1083°C
Conductivity at 20°C	58.5m/(Ωmm ²)
Density	8.925 kg/dm ³
Advantages	low priced

Tin Plated Copper

Copper wire	Cu-ETP1 according to DIN EN 13602
Tin	Sn 99, 90 DIN 1704
Melting point	copper: 1083 °C, Tin: 232 °C
Conductivity at 20 °C	57.5 m/(Ωmm ²)
Density	8.925 kg/dm ³
Advantages	good soldering ability
	Protection of insulation mix
	Good protection against corrosion



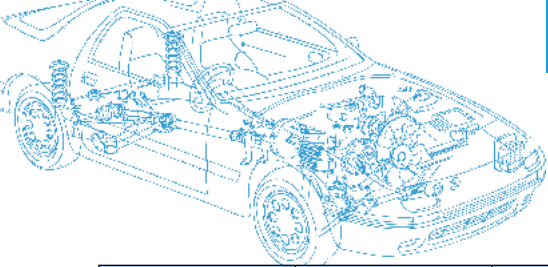
Automotive Cable



Insulation and Sheath Materials

Abbreviation	Insulation Material Chemical description	Short symbol Acc. To DIN 76722	Classification Acc. to ISO 6722	Continuous Duty Temperature (3000h) °C	Thermal overload capacity °C/48h	Cold bending Resistance °C
PVC	Polyvinyl Chloride	Y(YW)	A/B	90/105	140	-40
PVC	Polyvinyl chloride-cold-resistant	YK	B	105	110	-50
PA	Polyamide	4Y	-	105	140	-50
XLPE	Polyethylene, cross-linked	12X		125	150	-40
TPE-E	Thermoplastic Polyester elastomer	13Y	C	125	150	-40
TPE-S	Thermoplastic polystyrene block copolymer	31Y	C	125	150	-40
TPE-O	Thermoplastic polyolefine elastomer	91Y	C	125	150	-40
TPE-U (PUR)	Thermoplastic polyether polyurethane	11Y	C	125	150	-50
PVC-P	Hot-pressure resistant, heat-resistant	YW		125	140	-40
SIR	Silicone rubber	2G	F	200	225	-80
EVA	Ethylene-vinyl acetate	4G	C	130	160	-40
PTFE	Polytetrafluoroethylene	5Y	H	260	305	-90
ETFE	Ethylen tetrafluoroethylene	7Y	E	180	230	-65
FEP	Tetrafluoroethylene hexafluoropropylene	6Y	F	210	240	-65

Abbreviation	Specific resistance at 20°C Ω×cm	Shore hardness A/D	Tensile strength M Pa	Elongation at break %	Abrasion	Flame Retardant
PVC	>10 ¹²	85A-95A	>10	>150	+	+
PVC	>10 ¹²	80A-95A	>10	>150	+	+
PA	>10 ¹²	72D	>40	>300	++	-
XLPE	>10 ¹⁴	95A	>10	>200	+	+
TPE-E	>10 ¹⁰	40D-78D	>25	>300	++	-
TPE-S	>10 ¹⁰	50D-65D	>15	>200	-	+
TPE-O	>10 ¹⁴	87A/-	>10	>300	-	+/-



Automotive Cable

Abbreviation	Specific resistance at 20°C $\Omega \times \text{cm}$	Shore hardness A/D	Tensile strength M Pa	Elongation at break %	Abrasion	Flame Retardant
TPE-U (PUR)	$>10^9$	75A-54D	>30	>300	++	-
PVC-P	$>10^{12}$	92A-97A	>15	>150	+	+
SIR	$>10^{16}$	40A-90A	6-20	>150	-	+
EVA	$>10^{13}$	80A-90	>10	>200	+	-
PTFE	$>10^{18}$	55D-65D	>20	>200	++	++
ETFE	$>10^{16}$	75D-80	>30	>150	++	+(+)
FEP	$>10^{16}$	55D-60	>15	>200	++	++

Abbreviation	Resistant against				
	Oil	Fuel	Breaking Fluid	Acid/Lye	Organic media
PVC	+	+	-	+	-
PVC	+	+	-	+	-
PA	++	++	+	+	+
XLPE	+	+	-	+	+
TPE-E	++	++	+	-	+
TPE-S	+	+	-	+	-
TPE-O	-	-	-	+	-
TPE-U (PUR)	++	++	+	+	+
PVC-P	+	+	-	+	-
SIR	+	+	++	+	+
EVA	+	+	+	+	+
PTFE	++	++	++	++	++
ETFE	++	++	++	++	++
FEP	++	++	++	++	++



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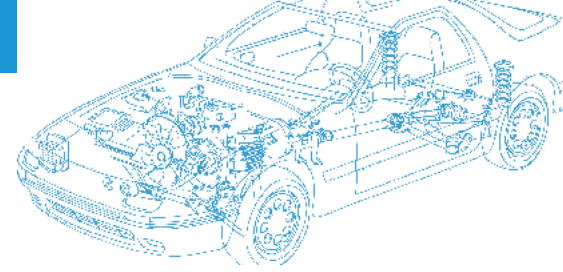
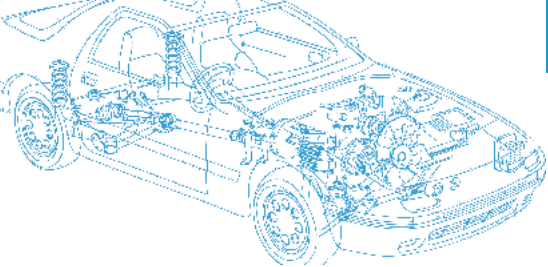


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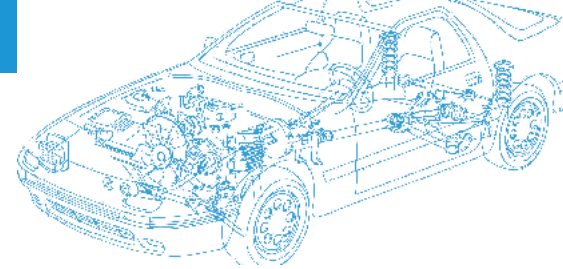
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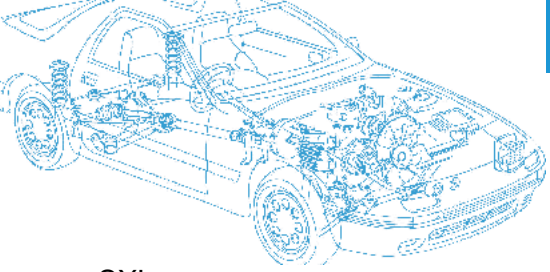
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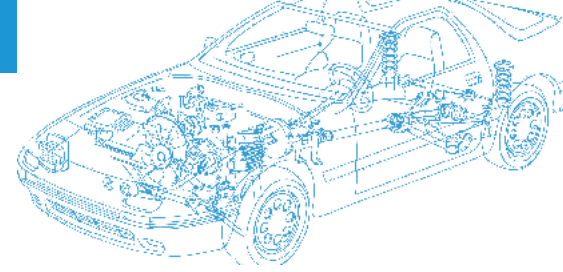


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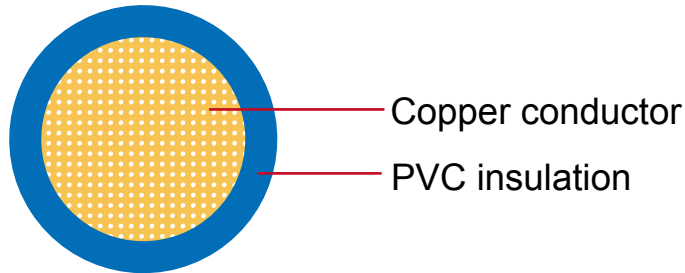


FLY

Application:

This PVC insulated single-core unshielded low-tension wire is used for automobiles.

Construction:



Copper conductor

PVC insulation

Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PVC

Standard Compliance: ISO 6722 Class B

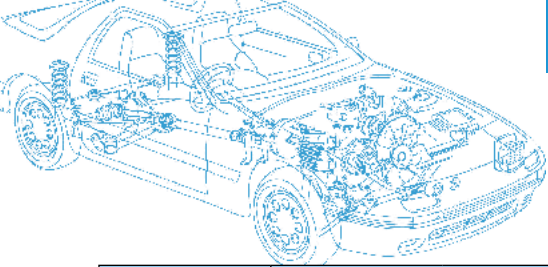
Special Properties:

Conductors >6mm² are suitable for use as battery cables

Technical Parameters:

Operating temperature: - 40°C to +105°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.50	16/0.21	1.00	37.10	0.48	2.00	2.30	8
1x0.75	24/0.21	1.20	24.70	0.48	2.20	2.50	12
1x1.00	32/0.21	1.35	18.50	0.48	2.40	2.70	15
1x1.50	30/0.26	1.70	12.70	0.48	2.70	3.00	20
1x2.00	40/0.26	2.00	9.42	0.60	2.90	3.20	26
1x2.50	50/0.26	2.20	7.60	0.70	3.30	3.70	32
1x3.00	60/0.26	2.50	6.00	0.70	3.50	3.90	37
1x4.00	56/0.31	2.75	4.71	0.80	4.00	4.40	49
1x6.00	84/0.31	3.30	3.14	0.80	4.60	5.00	68
1x10.00	80/0.41	4.50	1.82	0.80	6.00	6.50	117



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Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
	mm ²	no./mm	mm	mΩ/m	mm	mm	kg/km
1x16.00	126/0.41	6.30	1.16	0.80	7.50	8.30	193
1x25.00	196/0.41	7.80	0.74	1.04	9.50	10.40	274
1x35.00	276/0.41	9.00	0.53	1.04	10.60	11.60	397
1x50.00	400/0.41	10.50	0.37	1.20	12.90	13.50	547
1x70.00	555/0.41	12.50	0.26	1.20	14.80	15.50	769
1x95.00	740/0.41	14.80	0.20	1.28	17.00	18.00	990
1x120.00	960/0.41	16.50	0.15	1.60	18.70	19.70	1250

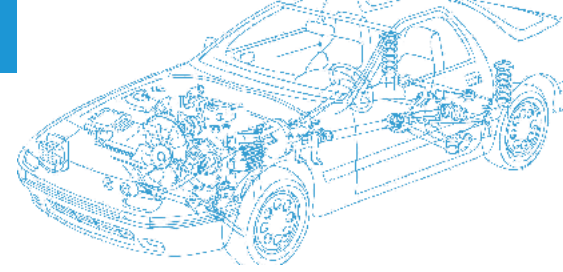
*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



Application:

This PVC insulated single-core unshielded low-tension wire is used for automobiles, Motorcycles and other motor vehicles.

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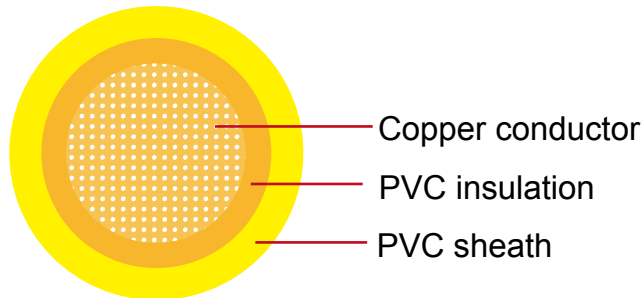


FLYY

Application:

This PVC insulated single-core unshielded low-tension wire is used for automobiles, Motorcycles and other motor vehicles

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PVC

Sheath: PVC

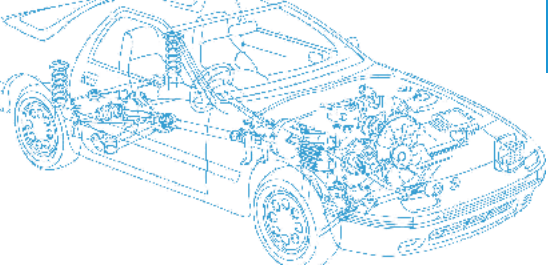
Standard Compliance: ISO 6722 Class B

Technical Parameters:

Operating temperature: - 40°C to 105°C

Nominal Cross-section	Conductor			Insulation		Cable			Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Diameter of Core	Sheath Thickness nom.	Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
1x0.50	16/0.21	1.00	37.10	0.60	2.10	0.40	2.70	3.10	14
1x0.75	24/0.21	1.20	24.70	0.60	2.30	0.40	3.00	3.30	17
1x1.00	32/0.21	1.35	18.50	0.60	2.50	0.40	3.20	3.60	20
1x1.50	30/0.26	1.70	12.70	0.60	2.80	0.50	3.70	4.10	28
1x2.00	40/0.26	2.00	9.42	0.60	3.00	0.50	3.90	4.30	33
1x2.50	50/0.26	2.20	7.60	0.70	3.50	0.50	4.30	4.80	41

*Note: Other configurations, sizes, colors and length not specified herein are available upon request



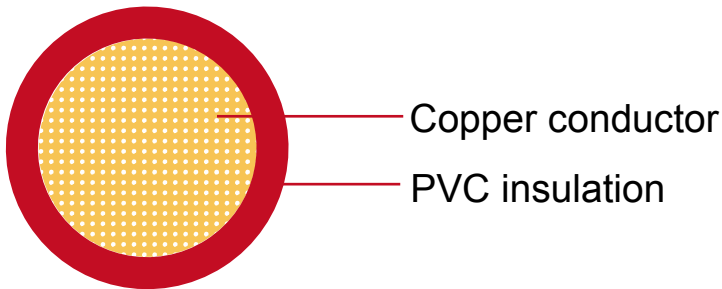
Automotive Cable

FLYW

Application:

This PVC insulated single-core wire is used for automobiles, motorcycles and other motor vehicles. It has good heat resistance.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN13602

Insulation: PVC

Standard Compliance: ISO 6722 Class C

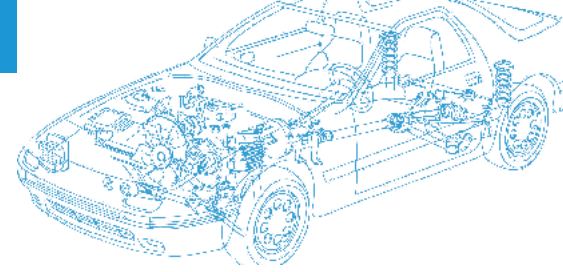
Technical Parameters:

Operating temperature: - 40°C to 125°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.50	16/0.20	1.00	37.10	0.48	2.00	2.30	8
1x0.75	24/0.20	1.20	24.70	0.48	2.20	2.50	11
1x1.00	32/0.20	1.35	18.50	0.48	2.40	2.70	15
1x1.50	30/0.25	1.70	12.70	0.48	2.70	3.00	20
1x2.50	50/0.25	2.20	7.60	0.56	3.30	3.60	32
1x4.00	56/0.31	2.75	4.71	0.64	4.00	4.40	48
1x6.00	84/0.31	3.30	3.14	0.64	4.60	5.00	68
1x10.00	80/0.40	4.50	1.82	0.80	6.00	6.50	117
1x16.00	126/0.40	5.20	1.16	0.80	8.00	8.30	193
1x25.00	196/0.40	6.50	0.70	1.04	10.10	10.40	274
1x35.00	276/0.40	7.70	0.50	1.04	11.30	11.60	397
1x50.00	396/0.40	9.20	0.30	1.20	13.20	13.50	547
1x70.00	556/0.40	11.00	0.20	1.20	15.20	15.50	769
1x95.00	741/0.40	14.80	0.20	1.28	17.00	18.00	990

*Note: Other configurations, sizes, colors and length not specified herein are available upon request

Automotive Cable

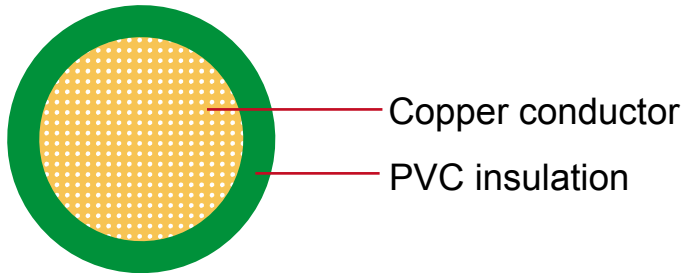


FLRYW

Application:

This PVC insulated automotive cable is used for cable harnesses.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

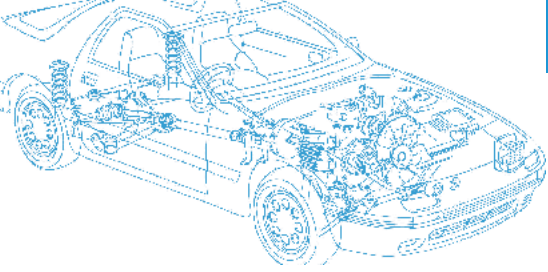
Insulation: PVC insulation

Standard: ISO 6722 Class C

Technical Parameters:

Operating temperature: -40°C to $+125^{\circ}\text{C}$

Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical resistance at 20°C max.	Thickness min.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm^2	no./mm	mm	$\text{m}\Omega/\text{m}$	mm	mm	mm	kg/km
1x0.35	12/0.21	0.90	55.5	0.20	1.1	1.2	4.5
1x0.50	16/0.21	1.10	38.2	0.20	1.2	1.4	6.6
1x0.75	24/0.21	1.20	25.4	0.24	1.7	1.9	9
1x1.00	32/0.21	1.35	19.1	0.24	1.9	2.1	11
1x1.50	30/0.26	1.70	13.0	0.24	2.2	2.4	16
1x2.00	50/0.26	1.90	9.69	0.28	2.5	2.8	22
1x2.50	45/0.31	2.20	7.80	0.28	2.7	3.0	26
1x3.00	56/0.31	2.40	6.36	0.28	2.9	3.2	32.5
1x4.00	56/0.31	2.75	4.80	0.32	3.4	3.7	42
1x6.00	84/0.31	3.30	3.20	0.32	4.0	4.3	61
1x10.0	80/0.31	4.50	1.85	0.48	5.4	5.8	108
1x16.0	126/0.41	6.30	1.18	0.52	6.4	6.5	170
1x25.0	196/0.41	7.20	0.76	0.52	7.9	8.7	265
1x30.0	224/0.41	8.30	0.68	0.64	8.7	9.60	322
1x35.0	276/0.41	8.50	0.54	0.64	9.4	10.40	391
1x40.0	308/0.41	9.60	0.50	0.71	10.0	11.10	443
1x50.0	396/0.41	10.50	0.38	0.71	11.0	12.20	522
1x60.0	296/0.51	11.60	0.33	0.80	12.0	13.30	605
1x70.0	360/0.51	12.50	0.26	0.80	13.0	14.40	698
1x95.0	475/0.51	14.80	0.16	0.90	15.3	16.70	749



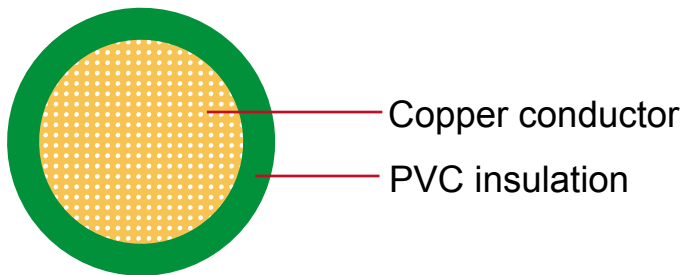
Automotive Cable

FLYK

Application:

This PVC insulated automotive cable is used for cars, trucks and other vehicles.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PVC insulation (Cold resistant)

Standard: ISO 6722 Class B

Special properties:

Cold bending test according to ISO 6722 at -50°C .

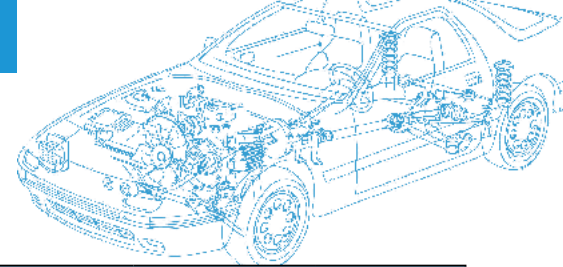
Short-term and long-term ageing according to ISO 6722, Class B.

Technical Parameters:

Operating temperature: -50°C to $+105^{\circ}\text{C}$

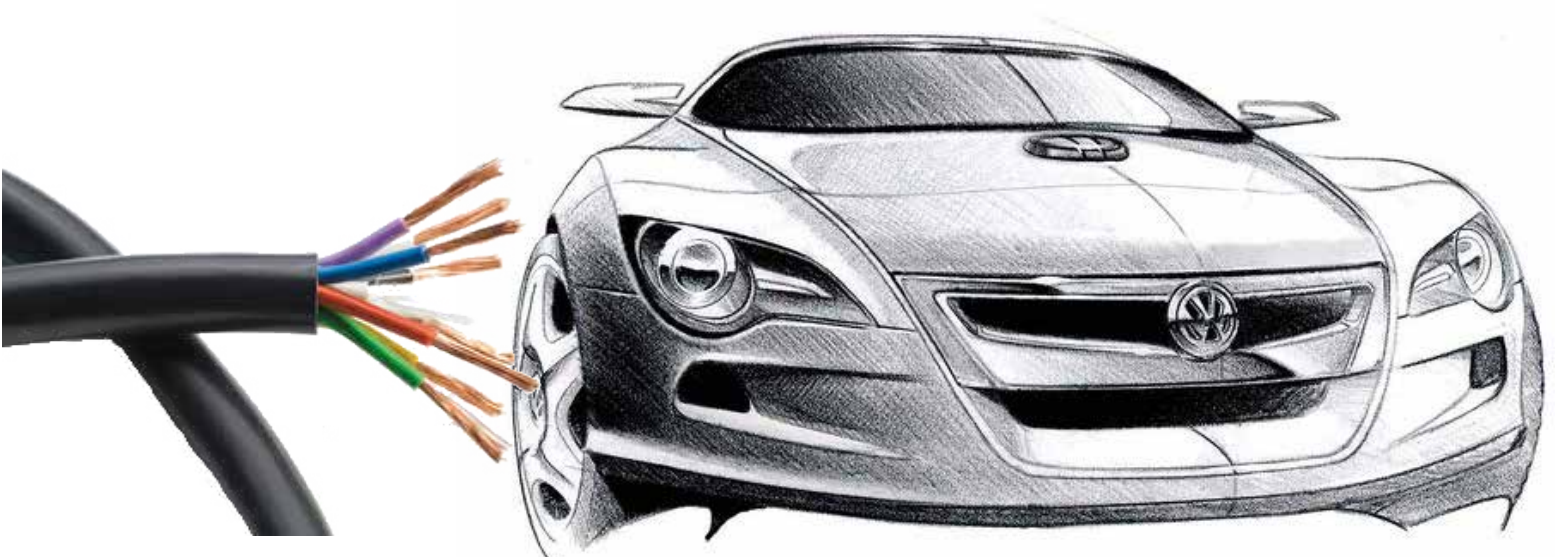
Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm^2	no./mm	mm	$\text{m}\Omega/\text{m}$	mm	mm	mm	kg/km
1x0.50	28/0.16	1.1	37.7	0.6	2.0	2.3	9
1x0.75	42/0.16	1.3	25.1	0.6	2.2	2.5	12
1x1.00	57/0.16	1.5	18.8	0.6	2.4	2.7	15
1x1.50	84/0.16	1.8	12.7	0.6	2.7	3.0	20
1x2.50	140/0.16	2.3	7.54	0.7	3.5	3.9	32

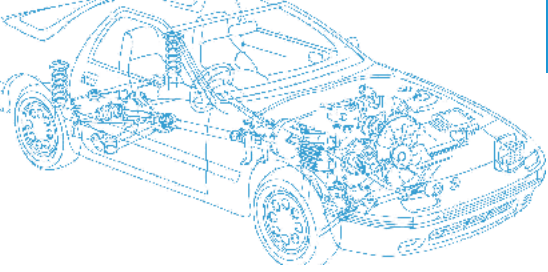
Automotive Cable



Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x4.00	196/0.16	3.3	4.71	0.8	4.5	4.9	53
1x4.5	84/0.16	1.80	12.7	0.6	2.7	3.0	23
1x6.00	294/0.16	4.2	3.14	0.8	5.3	6.0	76
1x10.00	455/0.16	5.2	1.85	1.0	6.7	7.3	124
1x16.00	490/0.21	6.7	1.16	1.0	8.2	8.8	198
1x25.00	798/0.21	8.0	0.74	1.2	9.9	10.5	298

Note: Other configurations, sizes, colors and length not specified herein are available upon request.





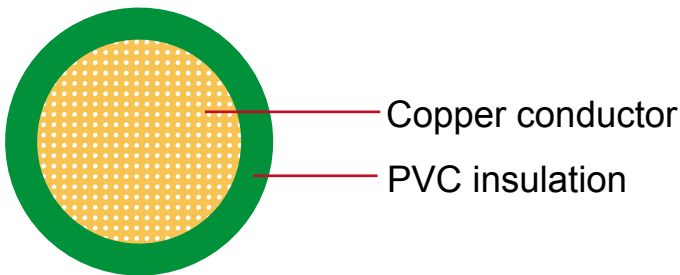
Automotive Cable

FLRYK

Application:

This PVC insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PVC insulation (cold resistant)

Standard: ISO 6722 Class B

Special properties:

Cold bending test according to ISO 6722 at -50°C .

Short-term and long-term ageing according to ISO 6722, Class B.

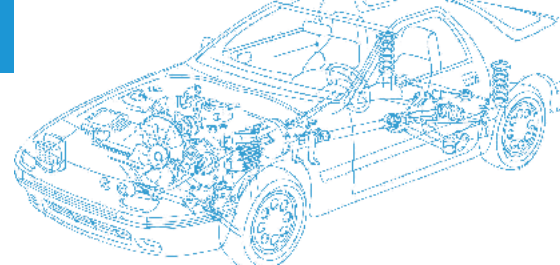
Technical Parameters:

Operating temperature: -50°C to $+105^{\circ}\text{C}$

Nominal Cross-section	Conductor Construction			Insulation Nominal thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical resistance at 20°C max.		Overall Diameter Min.	Overall Diameter Max.	Weight approx.
mm ²	No./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.50	16/0.21	1.0	37.7	0.22	1.4	1.6	7
1x1.00	32/0.21	1.4	18.5	0.30	2.3	2.1	12
1x1.50	30/0.26	1.7	12.7	0.24	2.2	2.4	17
1x2.50	50/0.26	2.1	7.6	0.70	3.5	3.7	33

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

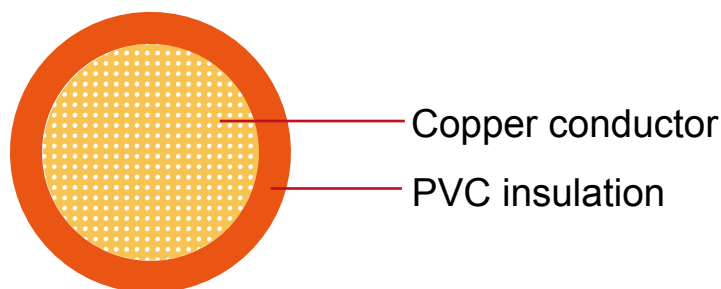


FLRY-A

Application:

This PVC insulated single-core cable with symmetrical conductor structure (type A) and thin wall is used for automobiles, Motorcycles electrical equipment in high temperature condition.

Construction:



Conductor: Cu-ETP1 bare or tinned copper according to DIN EN13602

Insulation: PVC

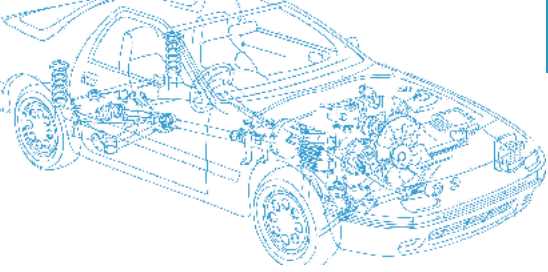
Standard Compliance: ISO 6722 Class B

Technical Parameters:

Operating temperature: - 40°C to 105°C

Nominal Cross-section	Conductor			Insulation	Cable	
	No. and Dia. of Wires	Diameter max.	Resistance at 20°C Bare/Tinned max.	Thickness Wall min.	Overall Diameter max.	Weight approx.
mm ²	No./mm	mm	mΩ/m	mm	mm	kg/km
1x0.22	7/0.21	0.70	84.80/86.50	0.20	1.20	3
1x0.35	7/0.26	0.80	52.00/54.50	0.20	1.30	5
1x0.50	19/0.19	1.00	37.10/38.20	0.22	1.60	7
1x0.75	19/0.23	1.20	24.70/25.40	0.24	1.90	9
1x1.00	19/0.26	1.35	18.50/19.10	0.24	2.10	11
1x1.50	19/0.32	1.70	12.70/13.00	0.24	2.40	16
1x2.00	19/0.37	2.00	9.42/9.69	0.24	2.60	23
1x2.50	19/0.41	2.20	7.60/7.80	0.28	3.00	26

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



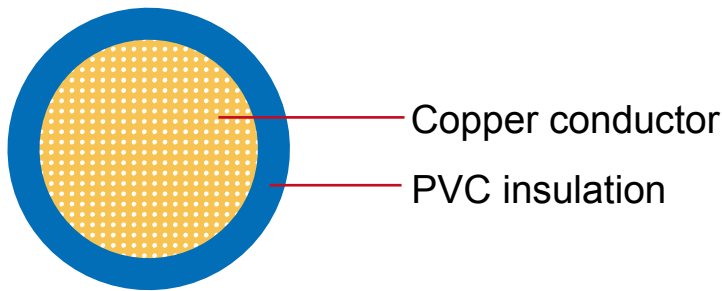
Automotive Cable

FLRY-B

Application:

This PVC insulated single-core cable with symmetrical conductor structure (type B) and thin wall is used for automobiles, Motorcycles electrical equipment in high temperature condition

Construction:



Conductor: Cu-ETP1 bare or tinned according to DIN EN13602

Insulation: PVC

Standard Compliance: ISO 6722 Class B

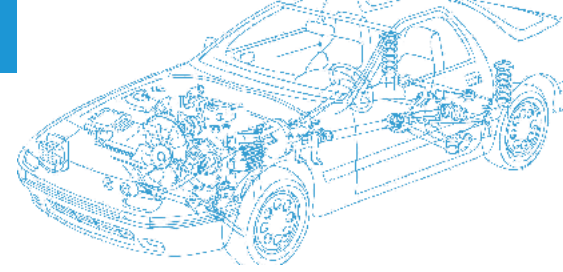
Technical Parameters:

Operating temperature: - 40°C to 105°C

Nominal Cross-section	Conductor			Insulation Thickness Wall min.	Cable	
	No. and Dia. of Wires	Diameter max.	Resistance at 20°C Bare/Tinned max.		Overall Diameter	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	kg/km
1x0.35	12/0.21	0.90	52.00/55.50	0.20	1.40	5
1x0.50	16/0.21	1.00	37.10/38.20	0.22	1.60	7
1x0.75	24/0.21	1.20	24.70/25.40	0.24	1.90	9
1x1.00	32/0.21	1.35	18.50/19.10	0.24	2.10	11
1x1.50	30/0.26	1.70	12.70/13.00	0.24	2.40	16
1x2.00	30/0.31	1.90	9.31/9.59	0.24	2.60	22
1x2.50	50/0.26	2.20	7.60/7.80	0.28	3.00	26
1x3.00	45/0.31	2.40	6.21/6.40	0.28	3.20	33
1x4.00	56/0.31	2.75	4.70/4.80	0.32	3.70	42
1x6.00	84/0.31	3.30	3.10/3.20	0.32	4.30	61
1x10.00	80/0.41	4.50	1.82/1.85	0.48	6.00	108
1x16.00	126/0.41	6.30	1.16/1.18	0.52	7.90	170
1x25.00	196/0.41	7.80	0.74/0.76	0.52	9.40	265

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

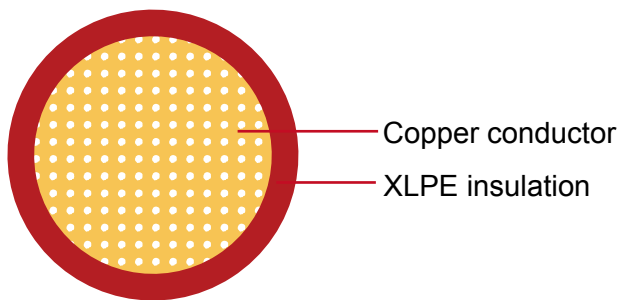


FLR2X-A

Application:

This XLPE insulated single-core cable is used in motor and battery ground low voltage circuit applications with high temperatures (Rated for continuous use from -40°C up to 125°C), tight spaces, and where aging and abrasion resistance are necessary.

Construction:



Conductor: Annealed stranded copper (Type A)

Insulation: XLPE

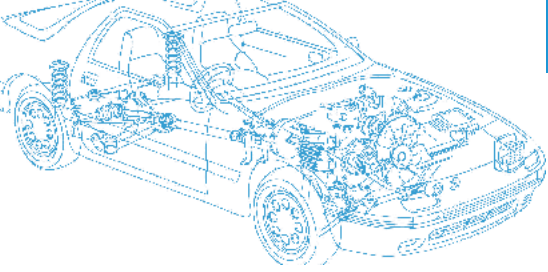
Standard: ISO 6722 Class C

Technical Parameters:

Operating temperature: -40°C to $+125^{\circ}\text{C}$

Nominal cross-section	Conductor Construction			Insulation Nominal thickness	Cable		Weight approx.
	No. and Dia. of Wires	Diameter of Conductor-max.	Electrical resistance at 20°C max.		Overall Diameter Min.	Overall Diameter Max	
mm^2	No./mm	mm	$\text{m}\Omega/\text{m}$	mm	mm	mm	kg/km
0.22	7/0.21	0.7	86.5	0.2	1.15	1.2	3.4
0.35	7/0.27	0.9	54.4	0.25	1.2	1.3	4.
0.5	19/0.19	1.1	37.1	0.28	1.4	1.6	7
0.75	19/0.24	1.3	24.7	0.3	1.7	1.9	9.5
1	19/0.27	1.5	18.5	0.3	1.9	2.1	12
1.5	19/0.33	1.8	12.7	0.3	2.2	2.4	17
2.0	19/0.38	2.0	9.42	0.28	2.8	2.85	26
2.5	37/0.28	2.2	7.6	0.35	2.7	3.0	27

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



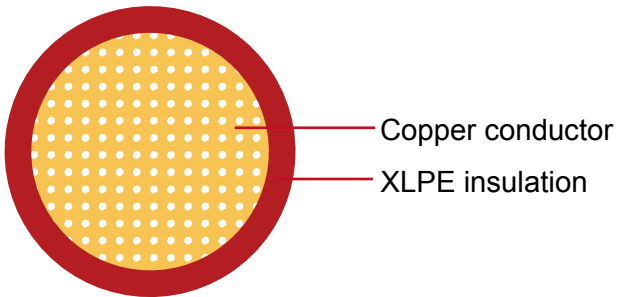
Automotive Cable

FLR2X-B

Application:

This XLPE insulated single-core cable is used in motor and battery ground low voltage circuit applications with high temperatures (Rated for continuous use from -40°C up to 125°C), tight spaces, and where aging and abrasion resistance are necessary.

Construction:



Conductor: Annealed stranded copper (Type B)

Insulation: XLPE

Compliance: ISO 6722 Class C

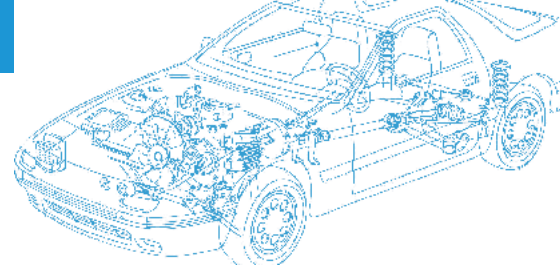
Technical Parameters:

Operating temperature: -40°C to +125°C

Nominal cross-section	Conductor Construction			Insulation Nominal thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor-max.	Electrical resistance at 20°C max.		Overall Diameter Min.	Overall Diameter Max	Weight approx.
mm ²	No./mm	mm	mΩ/m	mm	mm	mm	kg/km
0.35	12/0.21	0.9	52	0.2		1.4	4.5
0.5	16/0.21	1.1	37.1	0.28	1.4	1.6	6.5
0.75	24/0.21	1.3	24.7	0.3	1.7	1.9	9
1	32/0.21	1.5	18.5	0.3	1.9	2.1	12
1.5	30/0.26	1.8	12.7	0.3	2.2	2.4	16.5
2.0	28/0.31	2.0	9.69	0.28	2.65	2.8	22
2.5	50/0.26	2.2	7.6	0.35	2.7	3.0	27
3	44/0.31	2.4	6.36	0.32	3.25	3.4	35
4	56/0.31	2.8	4.71	0.4	3.4	3.7	43
6	84/0.31	3.4	3.14	0.4	4.0	4.3	61
10	80/0.41	4.5	1.82	0.6	5.3	6.0	108
16	126/0.41	5.8	1.16	0.65	6.4	7.2	161
20	152/0.41	6.3	0.955	0.65	7.0	7.8	200
25	196/0.41	7.2	0.743	0.65	7.9	8.7	257

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

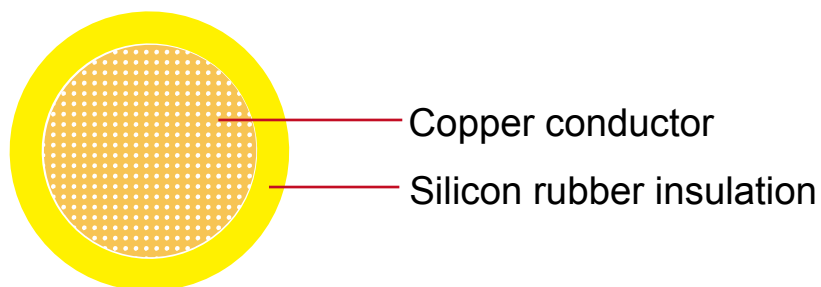


FL2G

Application:

This silicon rubber insulated single core cable is used in battery lead-wire for automobiles.

Construction:



Copper conductor

Silicon rubber insulation

Conductor: Cu-ETP1 bare or tinned according to DIN EN 13602

Insulation: Silicon rubber

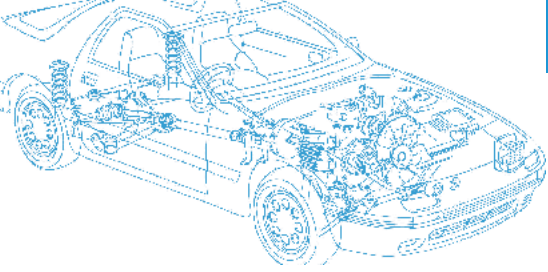
Standard: ISO 6722 Class F

Technical Parameters:

Operating temperature: -40°C to +200°C

Nominal cross-section	Conductor Construction			Insulation Nominal thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor-max.	Electrical resistance at 20°C max.		Overall Diameter Min.	Overall Diameter Max	Weight approx.
mm ²	No./mm	mm	mΩ/m	(mm)	(mm)	mm	kg/km
0.5	16/0.21	1.1	37.1	0.48	2	2.3	8
0.75	24/0.21	1.3	24.7	0.48	2.2	2.5	10.6
1	32/0.21	1.5	18.5	0.48	2.4	2.7	13.5
1.5	30/0.26	1.8	12.7	0.48	2.7	3	17.9
2.5	50/0.26	2.2	7.6	0.56	3.3	3.6	29.5
4	56/0.31	2.8	4.71	0.64	4	4.4	46.7
6	84/0.31	3.4	3.14	0.64	4.6	5	66
10	80/0.41	4.5	1.82	0.8	5.9	6.5	113
16	126/0.41	6.3	1.16	0.8	7.7	8.3	173
25	196/0.41	7.8	0.743	1.04	9	10	266
35	276/0.41	9	0.527	1.04	10.4	11	361
50	396/0.41	10.5	0.368	1.25	12.4	13.5	526
70	360/0.51	12.5	0.259	1.25	14.2	15.5	750

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



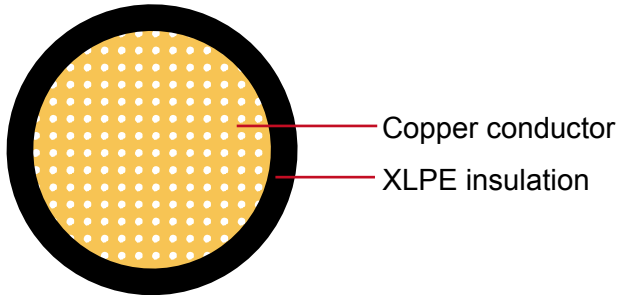
Automotive Cable

FL2X

Application:

This PVC insulated single-core cable is used for low voltage electric installations in vehicles.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: XLPE

Standard: ISO 6722 Class C

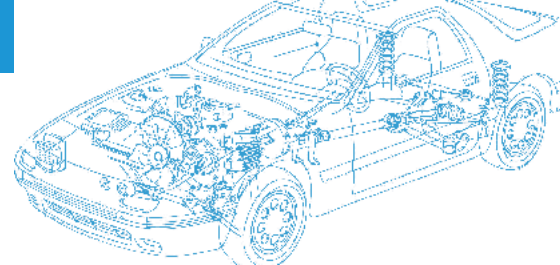
Technical Parameters:

Operating temperature: -40°C to +125°C

Nominal Cross-section	Conductor Construction			Insulation Nominal thickness	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.50	16/0.21	1.10	37.1	0.6	2.1	2.3	8
1x0.75	24/0.21	1.30	24.7	0.6	2.35	2.5	11
1x1.00	32/0.21	1.50	18.5	0.6	2.55	2.7	14
1x1.50	30/0.26	1.80	12.7	0.6	2.85	3.0	19
1x2.00	40/0.26	2.00	9.42	0.6	3.15	3.3	24
1x2.50	50/0.26	2.20	7.6	0.7	3.45	3.6	30
1x3.00	60/0.26	2.40	6.15	0.7	3.95	4.1	38
1x4.00	56/0.31	2.80	4.71	0.8	4.20	4.4	48
1x6.00	84/0.31	3.40	3.14	0.8	4.80	5.0	68

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

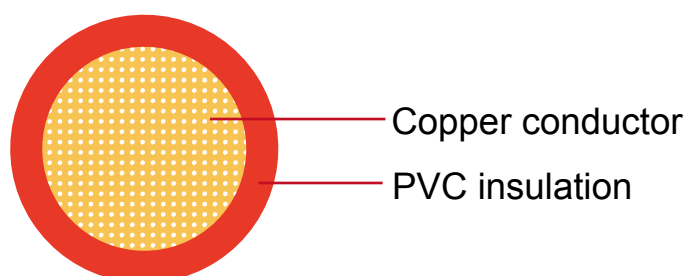


FLRYW-A

Application:

This PVC insulated single-core cable is used as low-tension electric wire for automobiles.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PVC

Standard: ISO 6722 Class C

Special properties:

Heat resistant cable

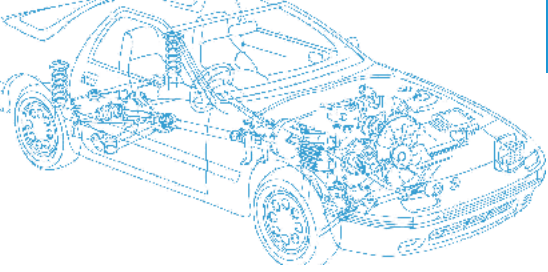
Suitable for application inside the engine compartment

Technical Parameters:

Operating temperature: -50°C to $+125^{\circ}\text{C}$

Nominal Cross-section	Conductor Construction			Insulation Nominal thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	7/0.26	0.8	54.4	0.20	1.2	1.3	5
1x0.50	19/0.19	1.0	37.1	0.22	1.4	1.6	7
1x0.75	19/0.23	1.2	24.7	0.24	1.7	1.9	9
1x1.00	19/0.26	1.35	18.5	0.24	1.9	2.1	11
1x1.25	19/0.30	1.7	14.9	0.24	2.1	2.3	12
1x1.50	19/0.32	1.7	12.7	0.24	2.2	2.4	16
1 x2.00	19/0.38	2.0	9.42	0.28	2.5	2.8	22

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



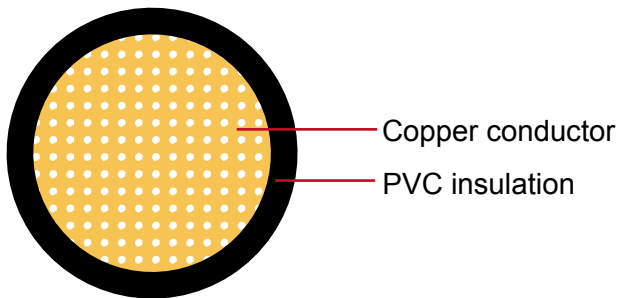
Automotive Cable

FLRYWd

Application:

This PVC insulated single-core cable is used for vehicle constructions.

Construction:



Conductor: Cu-ETP1 bare or tinned according to DIN EN 13602

Insulation: PVC

Standard: ISO 6722 Class B

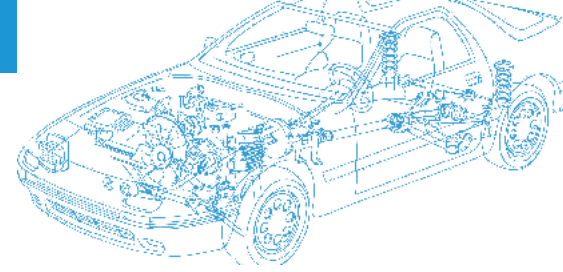
Technical Parameters:

Operating temperature: -40°C to $+105^{\circ}\text{C}$

Nominal Cross-section	Conductor Construction			Insulation Nominal thickness	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	7/0.26	0.80	52	0.20	1.3	1.4	4.48
1x0.50	16/0.21	1.00	37.1	0.22	1.4	1.7	6.6
1x0.75	24/0.21	1.20	24.7	0.24	1.7	1.9	9.0
1x1.00	32/0.21	1.35	18.5	0.24	1.9	2.1	11.0
1x1.50	30/0.26	1.70	12.7	0.24	2.2	2.4	16.0
1x2.00	30/0.31	1.90	9.42	0.28	2.4	2.8	22.0
1x2.50	50/0.26	2.20	7.6	0.28	2.7	3.0	6.0
1x3.00	45/0.31	2.40	6.15	0.32	2.9	3.4	32.5
1x4.00	56/0.31	2.75	4.71	0.32	3.4	3.8	42.0
1x6.00	84/0.31	3.30	3.14	0.32	4.0	4.3	61.0
1x10.00	80/0.41	4.50	1.82	0.48	5.4	6.0	108
1x16.00	126/0.41	6.30	1.16	0.52	7.3	7.9	170
1x25.00	196/0.41	7.80	0.74	0.52	8.6	9.4	265

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

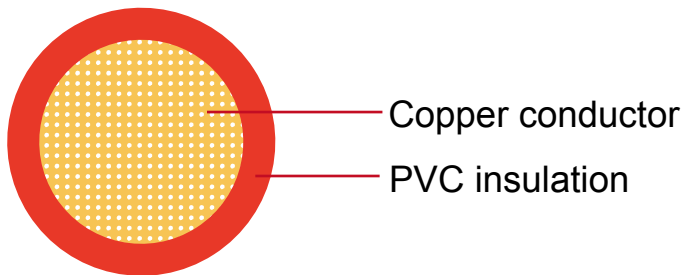


FLRYW-B

Application:

This PVC insulated single-core cable is used as low-tension electric wire for automobiles.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PVC

Standard: ISO 6722 Class C

Special properties:

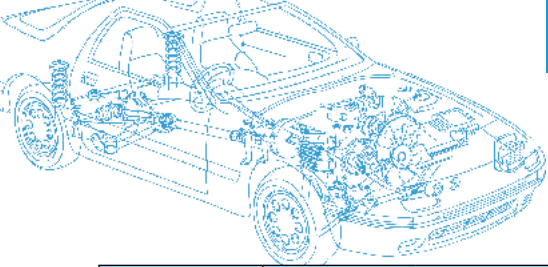
Heat resistant cable, flame retardant, extra flexibility

Flexible conductor with PVC Thin wall insulation with increase mechanical strength

Technical Parameters:

Operating temperature: -50°C to $+125^{\circ}\text{C}$

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	12/0.21	0.9	54.4	0.2	1.2	1.4	5
1x0.50	16/0.21	1.0	37.1	0.22	1.4	1.6	6
1x0.75	24/0.21	1.2	24.7	0.24	1.7	1.9	9
1x1.00	32/0.21	1.35	18.5	0.24	1.9	2.1	11
1x1.25	16/0.33	1.7	14.9	0.24	2.1	2.3	12
1x1.50	30/0.26	1.7	12.7	0.24	2.2	2.4	17



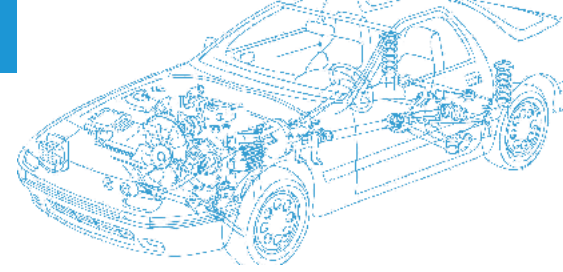
Automotive Cable

Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x2.00	28/0.31	2.0	9.42	0.28	2.5	2.8	24
1x2.50	50/0.26	2.2	7.6	0.28	2.7	3.0	28
1x3.00	45/0.31	2.4	6.15	0.32	3.1	3.4	34
1x4.00	56/0.31	2.75	4.71	0.32	3.4	3.7	44
1x5.00	65/0.33	3.1	3.94	0.32	3.9	4.2	50
1x6.00	84/0.31	3.3	3.14	0.32	4.0	4.3	64
1x8.00	50/0.46	4.3	2.38	0.32	4.6	5.0	82
1x10.00	38/0.41	4.5	1.82	0.48	5.4	5.8	113
1x12.00	96/0.41	5.4	1.52	0.48	5.8	6.5	120
1x16.00	126/0.41	5.5	1.16	0.52	6.5	7.0	171
1x20.00	152/0.41	6.9	0.955	0.52	7.0	7.8	192
1x25.00	196/0.41	7.0	0.743	0.52	7.9	8.7	255

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



Automotive Cable

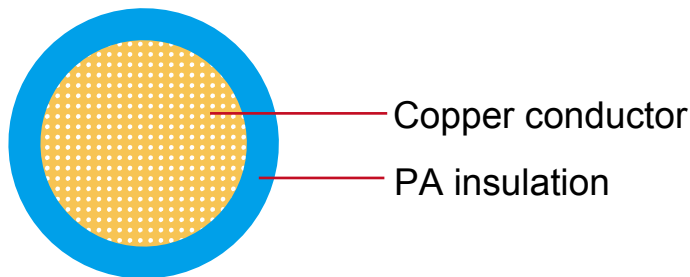


FLR4Y

Application:

This PA insulated single-core cable is used for automobiles, motorcycles and other motor vehicles. Especially suitable for use as fuel gauge wire, this cable is gasoline and diesel resistant.

Construction:



Conductor: Cu-ETP1 bare or tinned according to DIN EN13602

Insulation: Polyamide (PA)

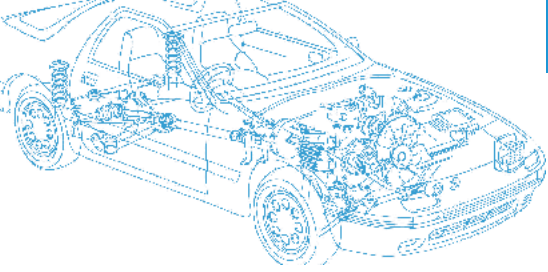
Standard Compliance: ISO 6722 Class B

Technical Parameters:

Operating temperature: - 40°C to 105°C

Nominal Cross-section	Conductor			Insulation Thickness Wall min.	Cable	
	No. and Dia. of Wires	Diameter max.	Resistance at 20°C Bare/Tinned max.		Overall Diameter	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	kg/km
FLR4Y-A						
1x0.35	7/0.26	0.80	52.00/54.50	0.20	1.30	4
1x0.50	19/0.19	1.00	37.10/38.20	0.22	1.60	6
1x0.75	19/0.23	1.20	24.70/25.40	0.24	1.90	8
1x1.00	19/0.26	1.35	18.50/19.10	0.24	2.10	11
1x1.50	19/0.32	1.70	12.70/13.00	0.24	2.40	15
1x2.50	19/0.41	2.20	7.60/7.80	0.28	3.00	24
FLR4Y-B						
1x0.35	12/0.21	0.90	52.00/54.50	0.20	1.40	4
1x0.50	16/0.21	1.00	37.10/38.20	0.22	1.60	6
1x0.75	24/0.21	1.20	24.70/25.40	0.24	1.90	8
1x1.00	32/0.21	1.35	18.50/19.10	0.24	2.10	11
1x1.50	30/0.26	1.70	12.70/13.00	0.24	2.40	15
1x2.50	50/0.26	2.20	7.60/7.80	0.28	3.00	24
1x4.00	56/0.31	2.75	4.70/4.80	0.32	3.70	40

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



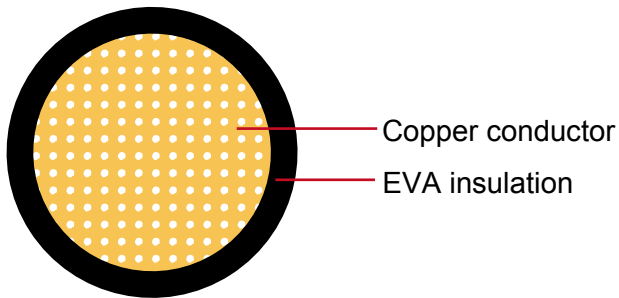
Automotive Cable

FL4G

Application:

This EVA insulated single-core cable is used for cable harnesses.

Construction:



Conductor: Cu-ETP1 bare or tinned according to DIN EN13602

Insulation: Cross-linked ethylene/vinylacetate insulation(EVA)

Standard Compliance: ISO 6722 Class D

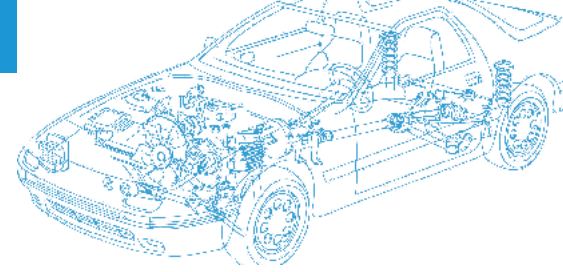
Technical Parameters:

Operating temperature: -40°C to 140°C

Nominal Cross-section	Conductor			Insulation	Cable	
	No. and Dia. of Wires	Diameter max.	Resistance at 20°C max.	Thickness Wall min.	Overall Diameter	Weight Approx.
	mm ²	no./mm	mΩ/m	mm	mm	kg/km
1x0.50	16/0.21	1.10	38.2	0.48	2.3	9
1x0.75	24/0.21	1.30	25.4	0.48	2.5	11
1x1.00	32/0.21	1.50	19.1	0.48	2.7	14
1x1.50	30/0.26	1.80	13.0	0.48	3.0	19
1x2.50	50/0.26	2.20	7.82	0.56	3.6	30
1x4.00	56/0.31	2.75	4.85	0.64	4.4	53
1x6.00	84/0.31	3.40	3.23	0.64	5.0	68

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

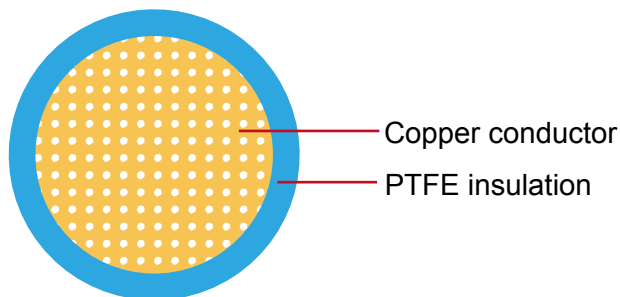


FLR5Y-A

Application:

This PTFE insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PTFE

Standard: ISO 6722 Class H

Special properties:

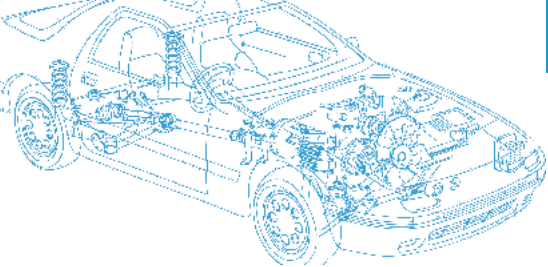
Excellent resistance to chemicals

Technical Parameters:

Operating temperature: -90°C to +260°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.22	7/0.21	0.7	87.9	0.20	1.1	1.2	3
1x0.35	7/0.27	0.8	56.8	0.20	1.25	1.35	5
1x0.5	19/0.19	1.0	38.6	0.22	1.4	1.6	6
1x0.75	19/0.24	1.2	25.7	0.24	1.7	1.9	10
1x1	19/0.27	1.35	19.3	0.24	1.75	1.95	11
1x1.5	19/0.33	1.7	13.2	0.24	2.1	2.3	17
1x2.5	19/0.41	2.2	7.92	0.28	2.5	2.8	25

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



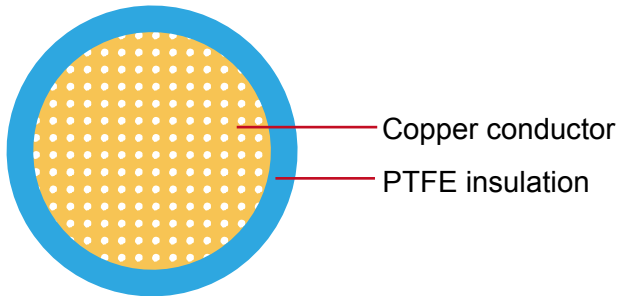
Automotive Cable

FLR5Y-B

Application:

This PTFE insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Construction:



Copper conductor

PTFE insulation

Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PTFE

Standard: ISO 6722 Class H

Special properties:

Excellent resistance to chemicals

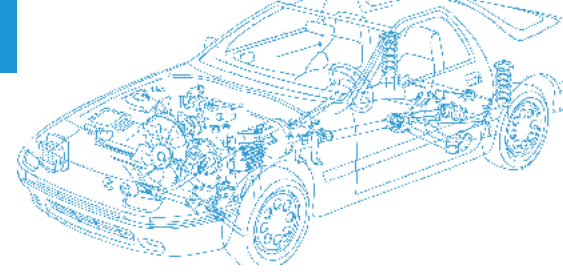
Technical Parameters:

Operating temperature: -90°C to +260°C

Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	12/0.21	0.9	87.9	0.20	1.25	1.35	5
1x0.5	16/0.21	1.0	56.8	0.22	1.4	1.6	6
1x0.75	24/0.21	1.2	38.6	0.24	1.7	1.9	9
1x1	32/0.21	1.4	25.7	0.24	1.75	1.95	11
1x1.5	30/0.26	1.7	19.3	0.24	2.1	2.3	16
1x2.5	50/0.26	2.2	13.2	0.28	2.5	2.8	26
1x4	56/0.31	2.75	4.91	0.32	3.05	3.35	40
1x6	84/0.31	3.4	3.27	0.32	3.85	4.15	61

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

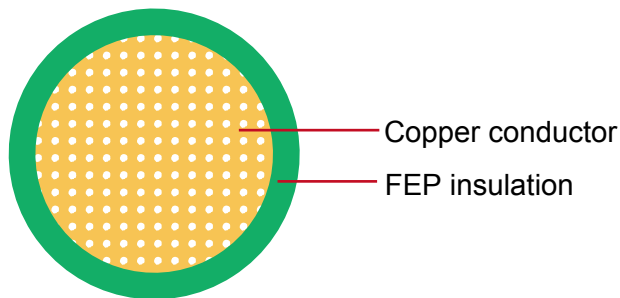


FLR6Y-A

Application:

This FEP insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Construction:



Conductor: Cu-ETP1 bare/tinned according to DIN EN 13602

Insulation: FEP

Standard: ISO 6722 Class F

Special properties:

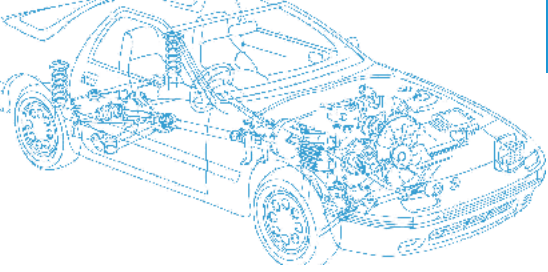
Good thermal properties

Technical Parameters:

Operating temperature: -65°C to +210°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C Bare/Tinned max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	No./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	7/0.26	0.8	54.4/55.5	0.2	1.2	1.3	4
1x0.5	19/0.19	1.0	37.1/38.2	0.22	1.4	1.6	7
1x0.75	19/0.23	1.2	24.7/25.4	0.24	1.7	1.9	9
1x1	19/0.26	1.35	18.5/19.1	0.24	1.9	2.1	12
1x1.5	19/0.32	1.7	12.7/13.0	0.24	2.2	2.4	17
1x2.5	19/0.41	2.2	7.6/7.82	0.28	2.7	3.0	27

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



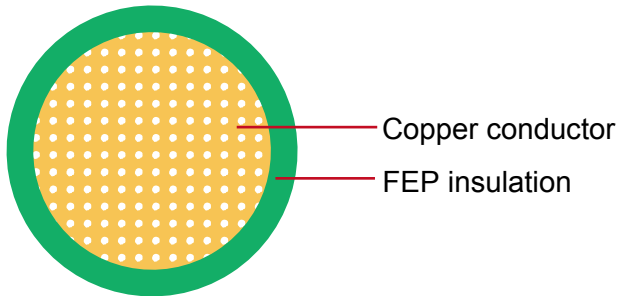
Automotive Cable

FLR6Y-B

Application:

This FEP insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Construction:



Conductor: Cu-ETP1 bare/tinned according to DIN EN 13602

Insulation: FEP

Standard: ISO 6722 Class F

Special properties:

Good thermal properties

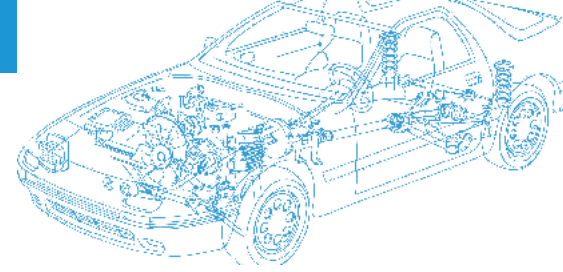
Technical Parameters:

Operating temperature: -65°C to +210°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C Bare/Tinned max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	12/0.21	0.9	54.4/55.5	0.2	1.2	1.4	5
1x0.5	16/0.21	1.0	37.1/38.2	0.22	1.4	1.6	6
1x0.75	24/0.21	1.2	24.7/24.4	0.24	1.7	1.9	9
1x1	32/0.21	1.35	18.5/19.1	0.24	1.9	2.1	12
1x1.5	30/0.26	1.7	12.7/13.0	0.24	2.2	2.4	17
1x2.5	50/0.26	2.2	7.6/7.82	0.28	2.7	3.0	28
1x4	56/0.31	2.75	4.71/4.85	0.32	3.4	3.7	41
1x6	81/0.31	3.3	3.14/3.14	0.32	4.0	4.3	62

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

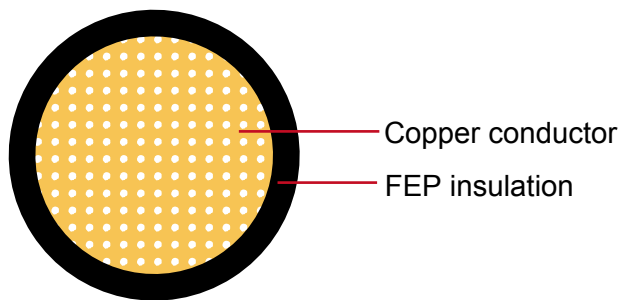


FLU6Y

Application:

This FEP insulated automotive cable is used for cable harnesses. Very good resistance to fuels and abrasion.

Construction:



Conductor: Plain, tinned Silver or Nickel plated copper

Insulation: FEP

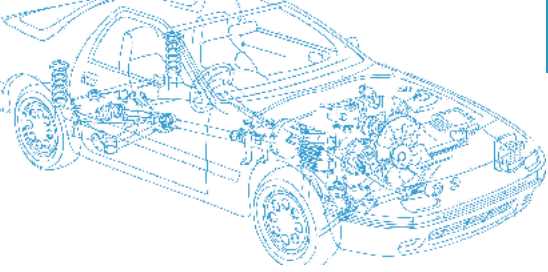
Standard: ISO 6722 Class F

Technical Parameters:

Operating temperature: -40°C to +200°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.13	7/0.16	0.5	140	0.16	0.85	0.95	2.3
1x0.14	7/0.16	0.5	140	0.16	0.85	0.95	2.3
1x0.22	7/0.21	0.7	86.5	0.16	0.95	1.05	2.9
1x0.35	7/0.26	0.7	55.5	0.16	1.10	1.20	4.3
1x0.50	19/0.19	1.0	38.2	0.16	1.30	1.40	6.4
1x0.75	19/0.23	1.2	25.4	0.16	1.50	1.60	8.8
1x1.00	19/0.26	1.4	19.1	0.16	1.65	1.75	10.8
1x1.50	19/0.32	1.7	13.0	0.16	1.90	2.10	15.8
1x2.50	19/0.41	2.2	7.82	0.20	2.45	2.75	25.8

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



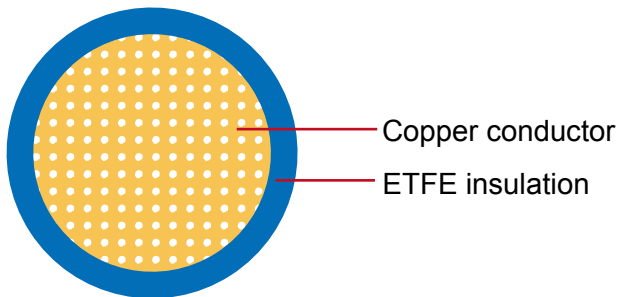
Automotive Cable

FLR7Y-A

Application:

This ETFE insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Construction:



Conductor: Cu-ETP1 bare/tinned according to DIN EN 13602

Insulation: ETFE

Standard: ISO 6722 Class E

Special properties:

Highly resistant against acids, lyes, petrol and diesel/excellent chemical resistance/good mechanical & thermal properties

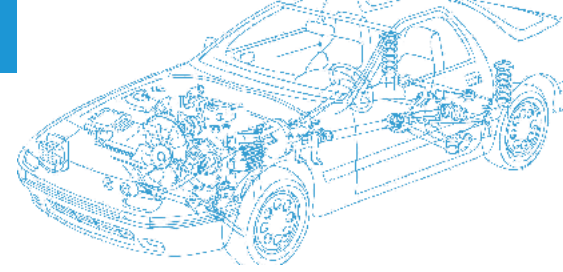
Technical Parameters:

Operating temperature: -45°C to +180°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C Bare/Tinned max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	7/0.23	0.8	52/53.5	0.20	1.2	1.3	5
1x0.5	19/0.19	1.0	37.1/38.2	0.22	1.4	1.6	6
1x0.75	19/0.23	1.2	24.7/25.4	0.24	1.7	1.9	9
1x1	19/0.26	1.35	18.5/19.1	0.24	1.9	2.1	11
1x1.5	19/0.32	1.7	12.7/13.0	0.24	2.2	2.4	17
1x2.5	19/0.41	2.2	7.6/7.82	0.28	2.7	3.0	25

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

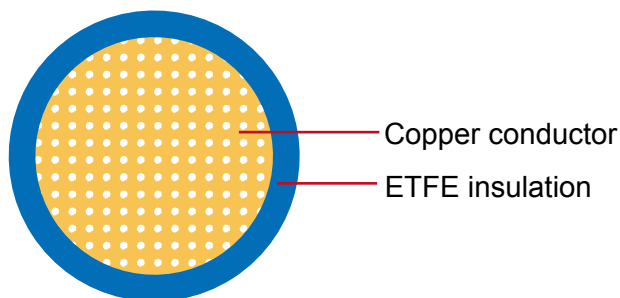


FLR7Y-B

Application:

This ETFE insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting ,charging,lighting,signal and instrument panel circuits.

Construction:



Conductor:Cu-ETP1 bare/tinned according to DIN EN 13602

Insulation:ETFE

Standard:ISO 6722 Class E

Special properties:

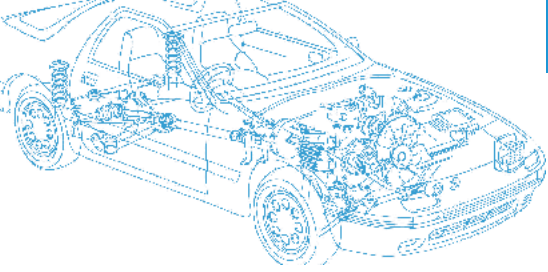
Highly resistant against acids,lyes,petrol and diesel/Excellent chmical resistance/Good mechanical & thermal properties

Technical Parameters:

Operating temperature: -45°C to +180°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C Bare/Tinned max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	12/0.21	0.9	54/55.5	0.2	1.2	1.4	5
1x0.5	16/0.21	1.0	37.1/38.2	0.22	1.4	1.6	7
1x0.75	24/0.21	1.2	24.7/25.4	0.24	1.7	1.9	10
1x1	32/0.21	1.35	18.5/19.1	0.24	1.9	2.1	12
1x1.5	30/0.26	1.7	12.7/13.0	0.24	2.2	2.4	18
1x2.5	50/0.26	2.2	7.6/7.82	0.28	2.7	3.0	30
4	56/0.31	2.75	4.71/4.85	0.32	3.4	3.7	42
6	84/0.31	3.3	3.14/-	0.32	4.0	4.3	62

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



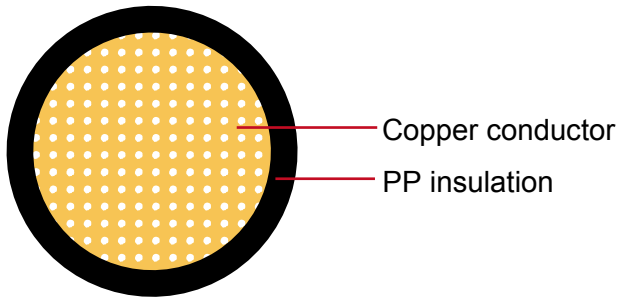
Automotive Cable

FLR9Y-A

Application:

This PP insulated single-core cable is used for cable harnesses, Halogen-free.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: Polypropylene insulation (PP)

Standard: ISO 6722 Class C

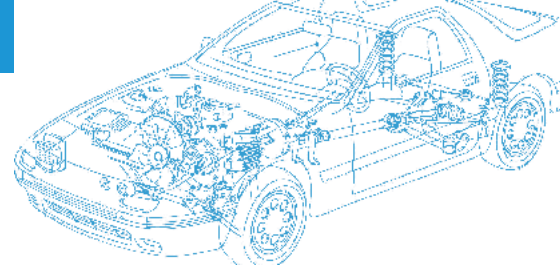
Technical Parameters:

Operating temperature: -40°C to +125°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.22	7/0.21	0.70	86.5	0.20	1.10	1.20	3.1
1x0.35	7/0.26	0.70	55.5	0.20	1.20	1.30	4.5
1x0.50	19/0.19	1.00	38.2	0.22	1.40	1.60	6.6
1x0.75	19/0.23	1.20	25.4	0.24	1.70	1.90	9.0
1x1.00	19/0.26	1.35	19.1	0.24	1.90	2.10	11
1x1.50	19/0.32	1.70	13.0	0.24	2.20	2.40	16
1x2.50	19/0.41	2.20	7.82	0.28	2.70	3.00	26
1x4.00	37/0.38	2.70	4.92	0.32	3.40	3.70	42
1x6.00	37/0.45	3.40	3.23	0.32	4.00	4.30	61

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

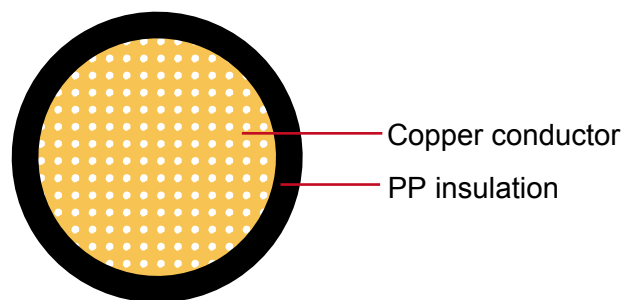


FLR9Y-B

Application:

This PP insulated single-core cable is used for cable harnesses, Halogen-free.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: Polypropylene insulation (PP)

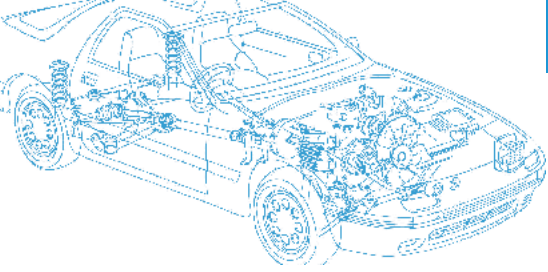
Standard: ISO 6722 Class C

Technical Parameters:

Operating temperature: -40°C to +125°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	12/0.21	0.90	55.5	0.20	1.2	1.4	4.5
1x0.50	16/0.21	1.00	38.2	0.22	1.4	1.6	6.6
1x0.75	24/0.21	1.20	25.4	0.24	1.7	1.9	9.0
1x1.00	32/0.21	1.35	19.1	0.24	1.9	2.1	11
1x1.50	30/0.26	1.70	13.0	0.24	2.2	2.4	16
1x2.50	50/0.26	2.20	7.82	0.28	2.7	3.0	26
1x4.00	56/0.31	2.75	4.85	0.32	3.4	3.7	42
1x6.00	84/0.31	3.30	3.23	0.32	4.0	4.3	61
1x10.00	80/0.41	4.50	1.85	0.48	5.6	6.0	118

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



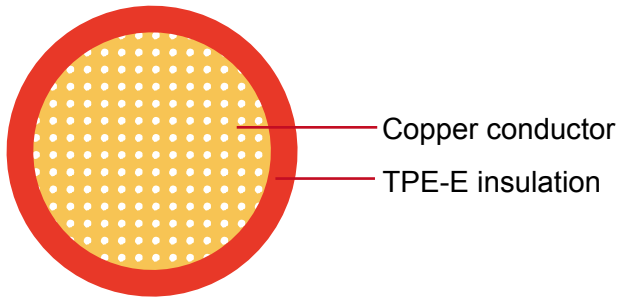
Automotive Cable

FLR12Y-A

Application:

This TPE-E insulated single-core cable is used for cable harnesses.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: TPE-E

Standard: ISO 6722 Class D

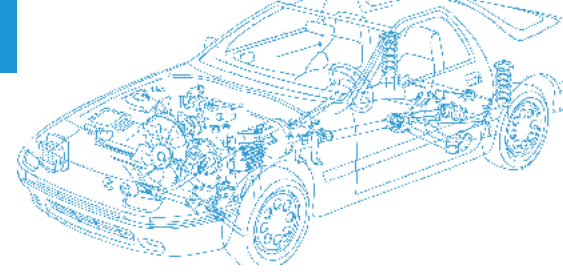
Technical Parameters:

Operating temperature: -40°C to +150°C

Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
	mm ²	no./mm	mm	mΩ/m	mm	mm	kg/km
1x0.22	7/0.21	0.70	86.5	0.20	1.1	1.20	3.1
1x0.35	7/0.26	0.70	55.5	0.20	1.2	1.30	4.5
1x0.50	19/0.19	1.00	38.2	0.22	1.4	1.60	6.6
1x0.75	19/0.23	1.20	25.4	0.24	1.7	1.90	9.0
1x1.00	19/0.26	1.35	19.1	0.24	1.9	2.10	11
1x1.50	19/0.32	1.70	13.0	0.24	2.2	2.40	16
1x2.50	19/0.41	2.20	7.82	0.28	2.7	3.00	26

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

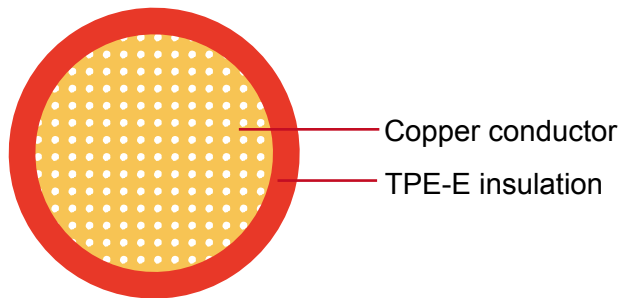


FLR12Y-B

Application:

This TPE-E insulated single-core cable is used for cable harnesses.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: TPE-E

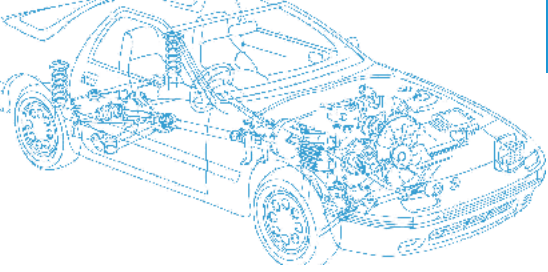
Standard: ISO 6722 Class D

Technical Parameters:

Operating temperature: -40°C to +150°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	12/0.21	0.90	55.5	0.20	1.3	1.4	4.5
1x0.50	16/0.21	1.00	38.2	0.22	1.5	1.6	6.6
1x0.75	24/0.21	1.20	25.4	0.24	1.8	1.9	9.0
1x1.00	32/0.21	1.35	19.1	0.24	2.0	2.1	11
1x1.50	30/0.26	1.70	13.0	0.24	2.3	2.4	16
1x2.50	50/0.26	2.20	7.82	0.28	2.9	3.0	26
1x4.00	56/0.31	2.75	4.85	0.32	3.6	3.7	42
1x6.00	84/0.31	3.30	3.23	0.32	4.2	4.3	61

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



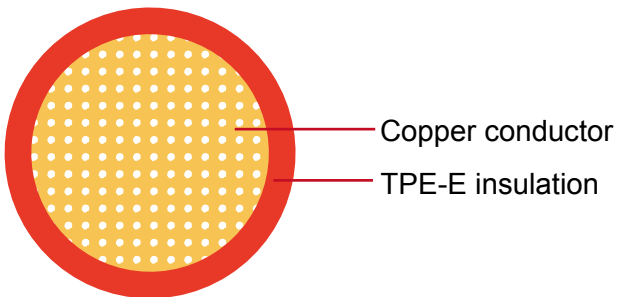
Automotive Cable

FLR13Y-A

Application:

This TPE insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Construction:



Copper conductor

TPE-E insulation

Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: TPE-E

Standard: ISO 6722 Class D

Special properties:

Limited resistance to hydrolysis

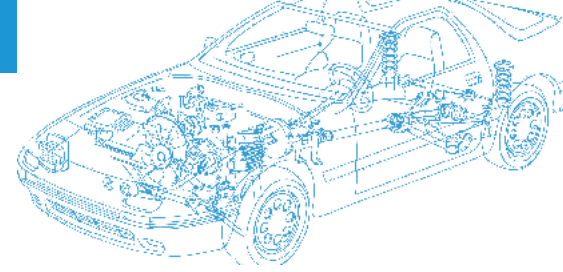
Technical Parameters:

Operating temperature: -40°C to +150°C

Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.22	7/0.21	0.7	84.8	0.2	1.1	1.2	3
1x0.35	7/0.26	0.8	52	0.2	1.2	1.6	5
1x0.5	19/0.19	1.0	37.1	0.22	1.4	1.6	6
1x0.75	19/0.23	1.2	24.7	0.24	1.7	1.9	9
1x1	19/0.26	1.35	18.5	0.24	1.9	2.1	11
1x1.5	19/0.32	1.7	12.7	0.24	2.2	2.4	17
1x2	19/0.37	2.0	9.42	0.28	2.5	2.8	21
1x2.5	19/0.41	2.2	7.6	0.28	2.7	3.0	26

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

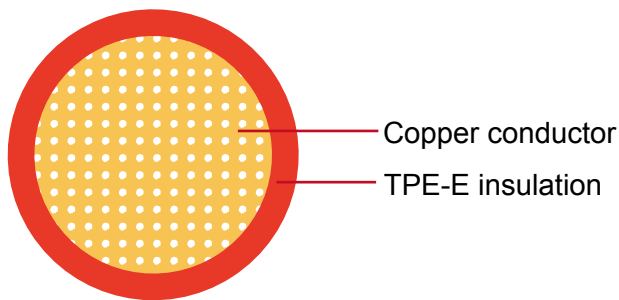


FLR13Y-B

Application:

This TPE insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting ,charging,lighting,signal and instrument panel circuits.

Construction:



Copper conductor

TPE-E insulation

Conductor:Cu-ETP1 bare according to DIN EN 13602

Insulation:TPE-E

Standard:ISO 6722 Class D

Special properties:

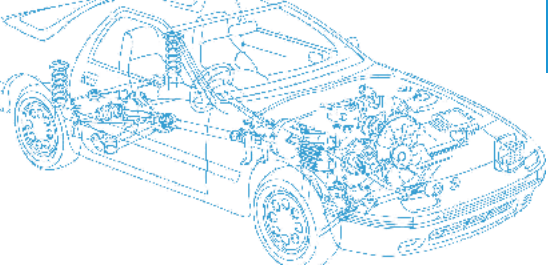
Limited resistance to hydrolysis

Technical Parameters:

Operating temperature: -40°C to +150°C

Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	12/0.21	0.9	52.0	0.20	1.2	1.4	5
1x0.5	16/0.21	1.0	37.1	0.22	1.4	1.6	6
1x0.75	24/0.21	1.2	24.7	0.24	1.7	1.9	9
1x1	32/0.21	1.35	18.5	0.24	1.9	2.1	12
1x1.5	30/0.26	1.7	12.7	0.24	2.2	2.4	16
1x2	30/0.31	2.0	9.42	0.28	2.5	2.8	23
1x2.5	50/0.26	2.2	7.6	0.28	3.7	3.0	26
1x4	56/0.31	2.75	4.71	0.32	3.4	3.7	41
1x6	84/0.31	3.3	3.14	0.32	4.0	4.3	60

Note: Other configurations, sizes, colors and length not specified herein are available upon request



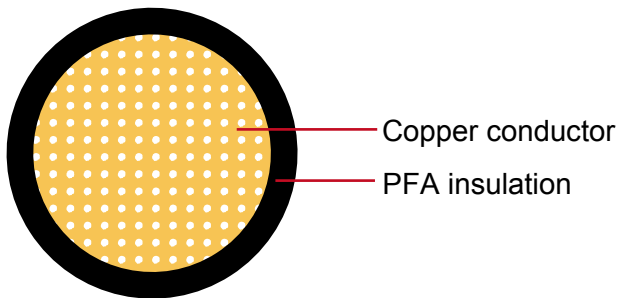
Automotive Cable

FLR14Y

Application:

This PFA insulated automotive cable is used for cable harnesses, cable with excellent resistance against chemicals, can be used as an alternative to PTFE.

Construction:



Conductor: Silver or Nickel plated copper

Insulation: PFA

Standard: ISO 6722 Class H

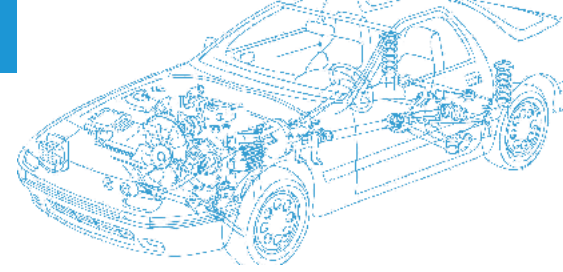
Technical Parameters:

Operating temperature: -80°C to +260°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.5	19/0.19	1.00	38.2	0.22	1.4	1.60	7
1x0.75	19/0.22	1.20	25.4	0.24	1.7	1.90	10
1x1	19/0.25	1.35	19.1	0.24	1.9	2.10	12
1x1.5	19/0.32	1.70	13	0.24	2.2	2.40	17
1x2.5	19/0.40	2.20	7.8	0.28	2.7	3.00	28
1x4	56/0.30	2.70	4.8	0.32	3.4	3.70	45

Note: Other configurations, sizes, colors and length not specified herein are available upon request

Automotive Cable

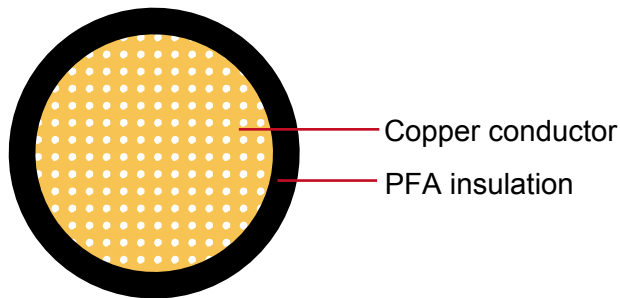


FLR51Y-A

Application:

This PFA insulated automotive cable is used for cable harnesses.

Construction:



Conductor: Plain, Tinned, Silver or Nickel plated copper

Insulation: PFA

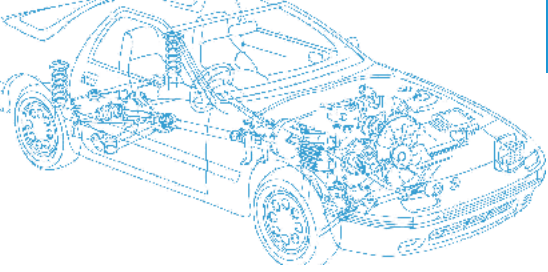
Standard: ISO 6722 Class H

Technical Parameters:

Operating temperature: -40°C to +250°C

Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.13	7/0.16	0.50	142	0.20	1.0	1.10	2.4
1x0.14	7/0.16	0.50	142	0.20	1.05	1.10	2.4
1x0.22	7/0.21	0.70	87.9	0.20	1.1	1.20	3.1
1x0.35	7/0.26	0.70	55.5	0.20	1.25	1.30	4.5
1x0.50	19/0.19	1.00	38.2	0.22	1.5	1.60	6.6
1x0.75	19/0.23	1.20	25.4	0.24	1.75	1.90	9.0
1x1.00	19/0.26	1.35	19.1	0.24	1.9	2.10	11
1x1.50	19/0.32	1.70	13.0	0.24	2.2	2.40	16
1x2.50	19/0.41	2.20	7.82	0.28	2.75	3.00	26

Note: Other configurations, sizes, colors and length not specified herein are available upon request



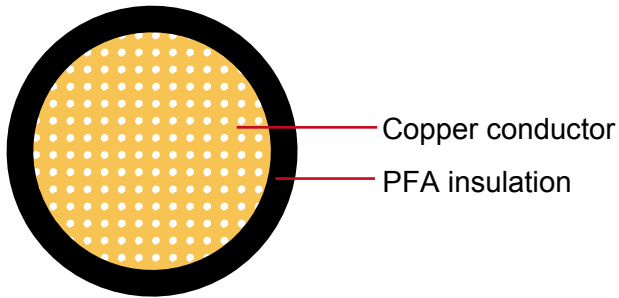
Automotive Cable

FLR51Y-B

Application:

This PFA insulated automotive cable is used for cable harnesses.

Construction:



Conductor: Plain, Tinned, Silver or Nickel plated copper

Insulation: PFA

Standard: ISO 6722 Class H

Technical Parameters:

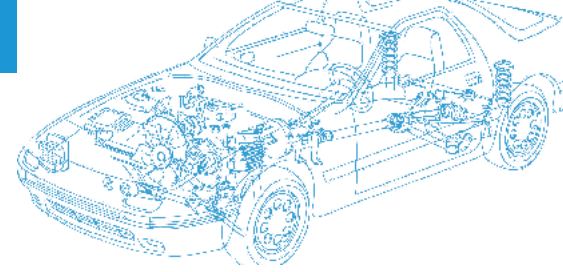
Operating temperature: -40°C to +250°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.35	12/0.21	0.90	55.5	0.20	1.25	1.4	4.5
1x0.50	16/0.21	1.00	38.2	0.22	1.50	1.6	6.6
1x0.75	24/0.21	1.20	25.4	0.24	1.75	1.9	9.0
1x1.00	32/0.21	1.35	19.1	0.24	1.9	2.1	11
1x1.50	30/0.26	1.70	13.0	0.24	2.2	2.4	16
1x2.50	50/0.26	2.20	7.82	0.28	2.75	3.0	26

Note: Other configurations, sizes, colors and length not specified herein are available upon request



Automotive Cable

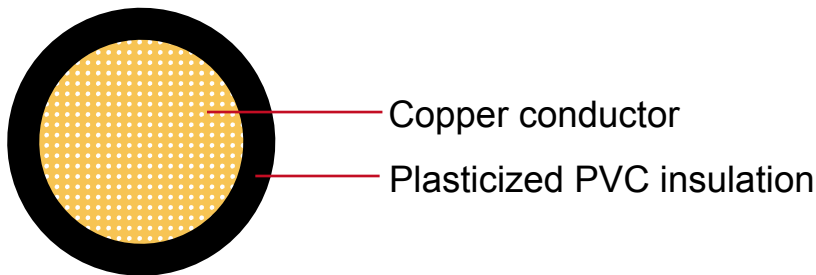


FLYWK&FLRYWK

Application:

This PVC insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting ,charging,lighting,signal and instrument panel circuits.

Construction:



Conductor:Cu-ETP1 bare according to DIN EN 13602

Insulation:Plasticized PVC (heat and cold resistant)

Standard:ISO 6722 Class B

Special properties:

Cold bending test according to ISO 6722 at -50°C .

Short-term and long-term ageing according to ISO 6722, Class B.

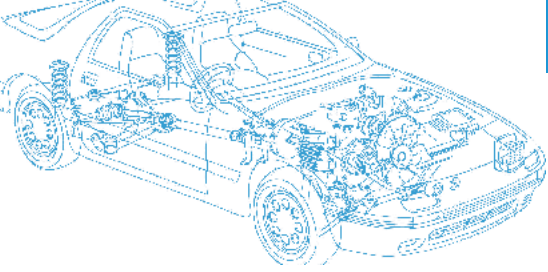
Flexible conductors with PVC Thin wall insulation with increased mechanical strength

Technical Parameters:

Operating temperature: -50°C to $+105^{\circ}\text{C}$

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm^2	no./mm	mm	$\text{m}\Omega/\text{m}$	mm	mm	mm	g/km
1x0.5	16/0.20	1.0	37.1	0.28	1.4	1.6	6
1x0.75	24/0.20	1.2	24.7	0.6	2.2	2.5	33
1x1.00	32/0.20	1.4	18.5	0.3	1.8	2.1	57
1x1.50	30/0.25	1.7	12.7	0.3	2.2	2.4	111
1x2.50	50/0.25	2.1	7.6	0.7	3.3	3.7	278

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



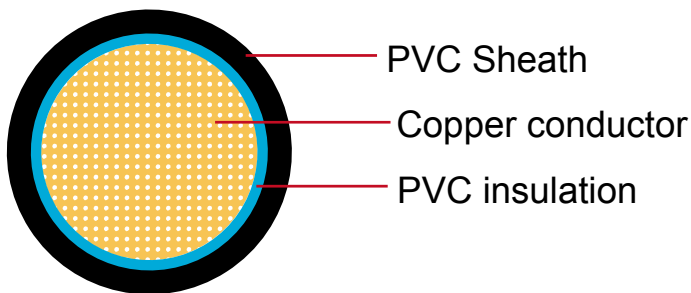
Automotive Cable

FLYOY/FLYKOY

Application:

This PVC insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting ,charging,lighting,signal and instrument panel circuits.

Construction:



Conductor:Cu-ETP1 bare according to DIN EN 13602

Insulation:PVC

Sheath:PVC, lead free

Standard:ISO 6722 Class B

Special properties:

Flame retardant, extra flexibility, cold resistance

Flexible conductors with PVC thick wall insulation with increased mechanical strength

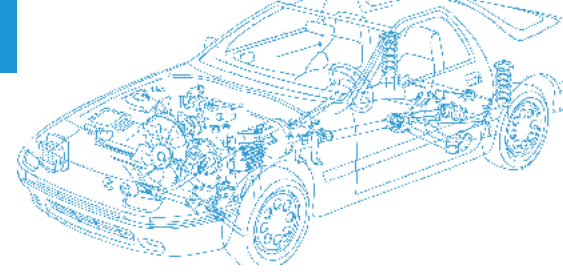
Technical Parameters:

Operating temperature: -40°C to +105°C

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable			Weight Approx.
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Sheath Wall Thickness	Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	kg/km
1x4	56/0.31	2.75	4.7	0.8	2.0	8.0	8.4	123
1x6	84/0.31	3.3	3.1	0.8	2.0	8.6	9.0	149
1x10	80/0.41	4.5	1.82	1.0	3.0	12.2	12.8	267
1x16	126/0.41	6.3	1.16	1.0	2.0	11.5	12.1	279
1x50	396/0.41	10.5	0.368	0.8	1.4	14.5	15.1	587
1x50	1600/0.21	10.9	0.386	0.8	1.4	14.5	15.1	592
1x70	2200/0.21	13.3	0.272	1.0	1.6	17.5	18.3	870

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

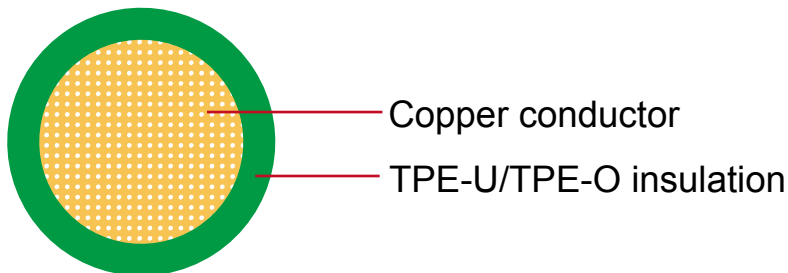


FL91Y/FL11Y

Application and Description:

This TPE insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Cable Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation:

TPE-U (FL11Y)
TPE-O (FL91Y)

Standard:

ISO 6722 Class B (FL11Y)
ISO 6722 Class C (FL91Y)

Special properties:

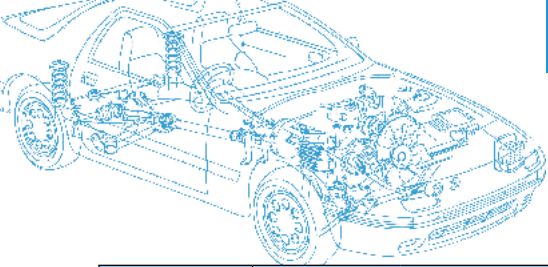
Flame retardant

Also available as aluminium battery cables.

Technical Parameters:

Operating temperature: -40°C to +110°C (FL11Y)
-40°C to +125°C (FL91Y)

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x6	84/0.31	3.3	3.1	0.8	4.6	5.0	73



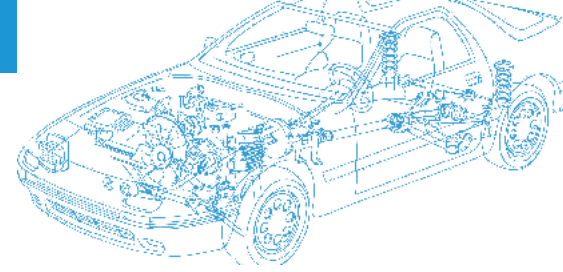
Automotive Cable

Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x10	80/0.41	4.5	1.82	1.0	6.0	6.5	120
1x16	126/0.41	6.3	1.16	1.0	7.0	8.1	177
1x25	196/0.41	7.8	0.74	1.3	8.7	10.2	275
1x35	276/0.41	9.0	0.53	1.3	10.0	10.7	373
1x50	400/0.41	10.5	0.37	1.5	11.9	13.0	541
1x70	560/0.41	12.5	0.30	1.5	14.0	15.0	734
1x95	740/0.41	14.8	0.20	1.6	15.4	16.2	956
1x120	960/0.41	16.5	0.15	1.6	18.7	19.7	1218

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



Automotive Cable

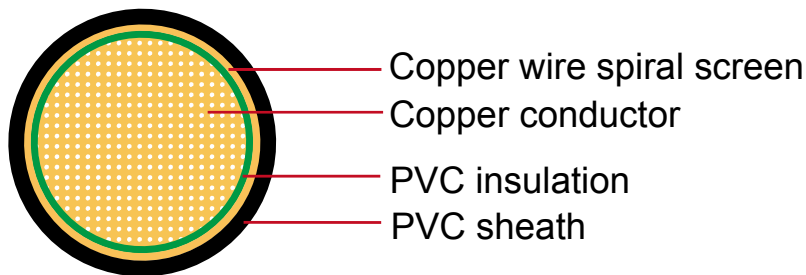


FLRYDY

Application:

This PVC insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting ,charging,lighting,signal and instrument panel circuits.

Construction:



Copper wire spiral screen

Copper conductor

PVC insulation

PVC sheath

Conductor:Cu-ETP1 bare according to DIN EN 13602

Insulation:PVC

Screen:Copper wire spiral shield

Sheath:PVC

Standard:ISO 6722 Class B

Special properties:

Flame retardant

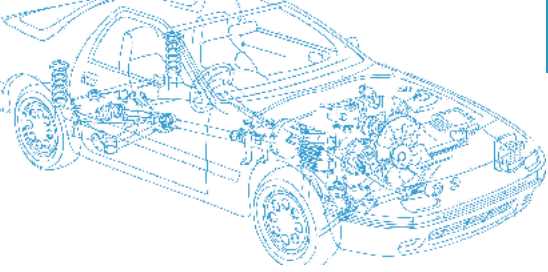
Flexible conductors with PVC thin wall insulation with increased mechanical strength

Technical Parameters:

Operating temperature: -40°C to +105°C

Nominal Cross-section	Conductor Construction			Insulation		Cable			
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Diameter Of Core	Sheath Wall Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
1x0.75	24/0.21	1.2	24.7	0.3	1.75	0.3	2.5	2.7	20
1x1.00	32/0.21	1.35	18.5	0.3	1.95	0.3	2.7	2.9	23
1x1.50	30/0.26	1.7	12.7	0.3	2.25	0.3	3.0	3.2	29

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



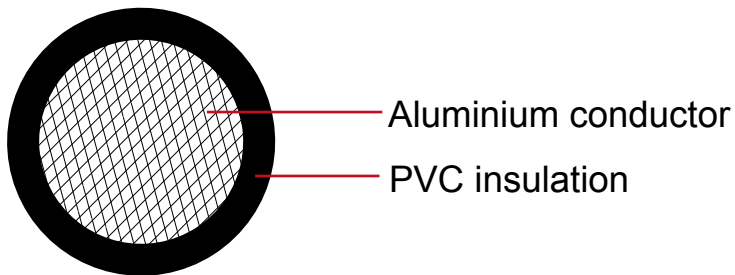
Automotive Cable

FLALRY

Application and Description:

This PVC insulated automotive cable is designed for telecommunication overhead contract line and electronics.

Cable Construction:



Conductor:

Aluminium 99.7% $\geq 1.25 \text{ mm}^2$
Aluminium alloy $< 1.25 \text{ mm}^2$

Insulation: PVC

Standard: ISO 6722 Class B

Special properties:

Cables with cross-sections $> 10 \text{ mm}^2$ can be used as battery cables

Considerable weight savings compared to copper

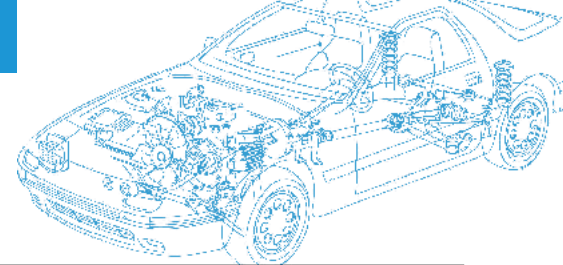
Technical Parameters:

Operating temperature: -40°C to $+105^\circ\text{C}$

Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.75	11/0.3	1.3	43.6	0.24	1.7	1.9	4
1x1.00	16/0.29	1.5	32.7	0.24	1.9	2.1	5
1x1.25	16/0.32	1.7	24.8	0.24	2.1	2.3	6
1x1.50	16/0.35	1.8	21.2	0.24	2.2	2.4	7



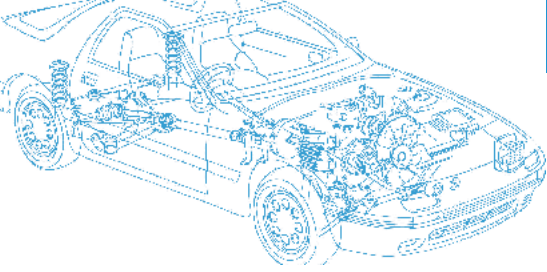
Automotive Cable



Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x2.0	15/0.42	2.0	15.7	0.28	2.5	2.8	9
1x2.5	19/0.43	2.2	12.7	0.28	2.7	3.0	12
1x3.0	23/0.42	2.4	10.2	0.32	3.1	3.4	14
1x4.0	30/0.42	2.8	7.85	0.32	3.4	3.7	17
1x5.0	36/0.42	3.1	6.57	0.32	3.9	4.2	19
1x6.0	45/0.42	3.4	5.23	0.32	4.0	4.3	23
1x8.0	59/0.42	4.3	3.97	0.32	4.6	5.0	29
1x10.0	50/0.52	4.5	3.03	0.48	5.3	6.0	43
1x12.0	60/0.52	5.4	2.53	0.48	5.8	6.5	50
1x16.0	78/0.52	5.8	1.93	0.52	6.4	7.2	63

Note: Other configurations, sizes, colors and length not specified herein are available upon request.





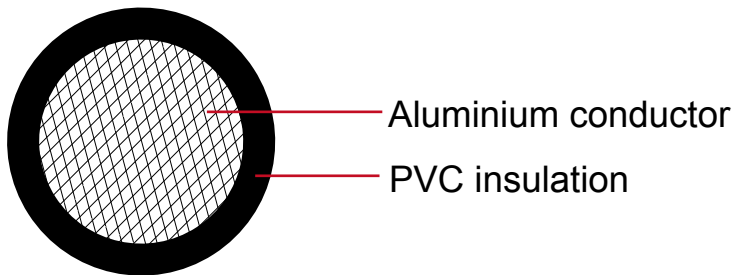
Automotive Cable

FLALRYW

Application and Description:

This PVC insulated automotive cable is suitable for application inside the engine compartment.

Cable Construction:



Conductor:

Aluminium 99.7% $\geq 1.25 \text{ mm}^2$
Aluminium alloy $< 1.25 \text{ mm}^2$

Insulation: PVC

Standard: ISO 6722 Class C

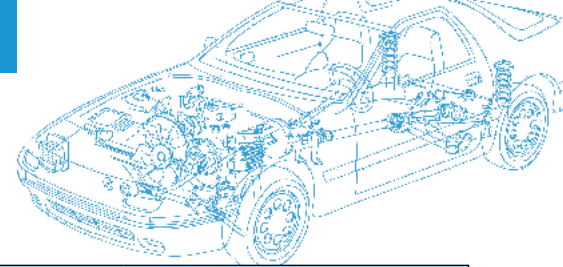
Special properties:

Hot pressure resistance
Considerable weight savings compared to copper

Technical Parameters:

Operating temperature: -40°C to $+125^\circ\text{C}$

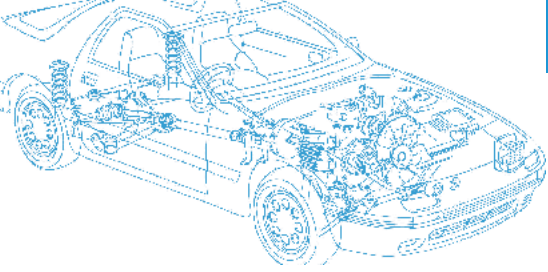
Nominal Cross-section	Conductor Construction			Insulation Nominal Thickness	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.75	11/0.3	1.3	43.6	0.24	1.7	1.9	4
1x1.00	16/0.29	1.5	32.7	0.24	1.9	2.1	5
1x1.25	16/0.32	1.7	24.8	0.24	2.1	2.3	6
1x1.50	16/0.35	1.8	21.2	0.24	2.2	2.4	7



Automotive Cable

Nominal Cross-section	Conductor Construction			Insulation	Cable		
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x2.0	15/0.42	2.0	15.7	0.28	2.5	2.8	9
1x2.5	19/0.43	2.2	12.7	0.28	2.7	3.0	12
1x3.0	23/0.42	2.4	10.2	0.32	3.1	3.4	14
1x4.0	30/0.42	2.8	7.85	0.32	3.4	3.7	17
1x5.0	36/0.42	3.1	6.57	0.32	3.9	4.2	19
1x6.0	45/0.42	3.4	5.23	0.32	4.0	4.3	23
1x8.0	59/0.42	4.3	3.97	0.32	4.6	5.0	29
1x10.0	50/0.52	4.5	3.03	0.48	5.3	6.0	43
1x12.0	60/0.52	5.4	2.53	0.48	5.8	6.5	50
1x16.0	78/0.52	5.8	1.93	0.52	6.4	7.2	63

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



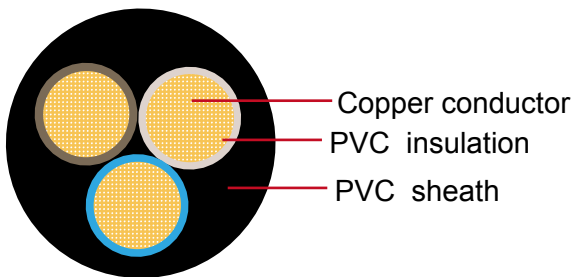
Automotive Cable

FLYY

Application:

This PVC insulated, PVC sheathed low tension multi-cores cable is used for automobiles, motorcycles and other motor vehicles.

Construction:



Conductor: Cu-ETP1 bare or tinned according to DIN EN13602

Insulation: PVC

Sheath: PVC

Standard Compliance: ISO 6722 Class B

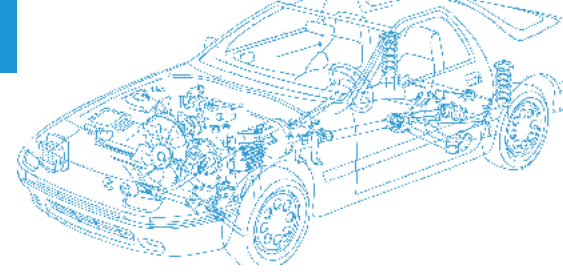
Technical Parameters:

Operating temperature: - 40 °C to +105 °C

Nominal Cross-section	Conductor			Insulation		Cable			
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C Bare/tinned Max.	Thickness Wall nom.	Diameter of Core	Sheath Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
2x0.50	16/0.21	1.00	37.10/38.20	0.50	1.75	0.50	4.30	4.70	31
2x0.75	24/0.21	1.20	24.70/25.40	0.60	2.30	0.50	5.40	5.80	48
2x1.00	32/0.21	1.35	18.50/19.10	0.60	2.50	0.80	6.40	6.80	65
2x1.50	30/0.26	1.70	12.70/13.00	0.60	2.75	0.90	7.00	7.50	83
3x0.50	16/0.21	1.00	37.10/38.20	0.50	2.10	0.60	5.80	6.20	53
3x0.75	24/0.21	1.20	24.70/25.40	0.60	2.30	0.60	5.70	6.30	60
3x1.00	32/0.21	1.35	18.50/19.10	0.60	2.50	0.90	6.90	7.50	81
3x1.50	30/0.26	1.70	12.70/13.00	0.60	2.65	0.70	6.90	7.50	98

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

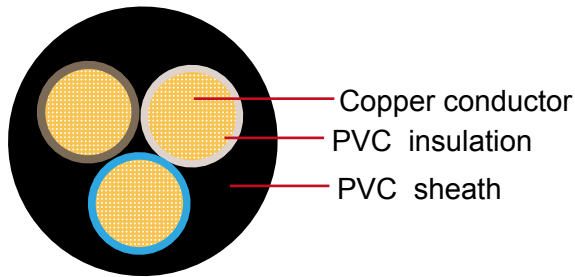


FLRYY

Application:

This PVC insulated, PVC sheathed cable is used for low voltage electrical installations in vehicles.

Construction:



Conductor: Cu-ETP1 bare or tinned according to DIN EN13602

Insulation: PVC

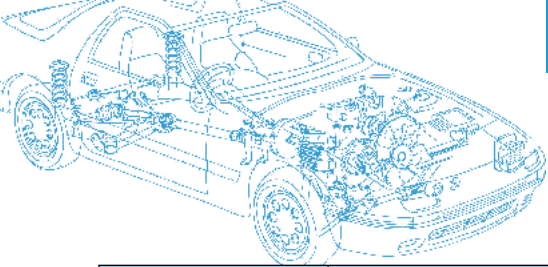
Sheath: PVC

Standard Compliance: ISO 6722 Class B

Technical Parameters:

Operating temperature: -40 °C to +105 °C

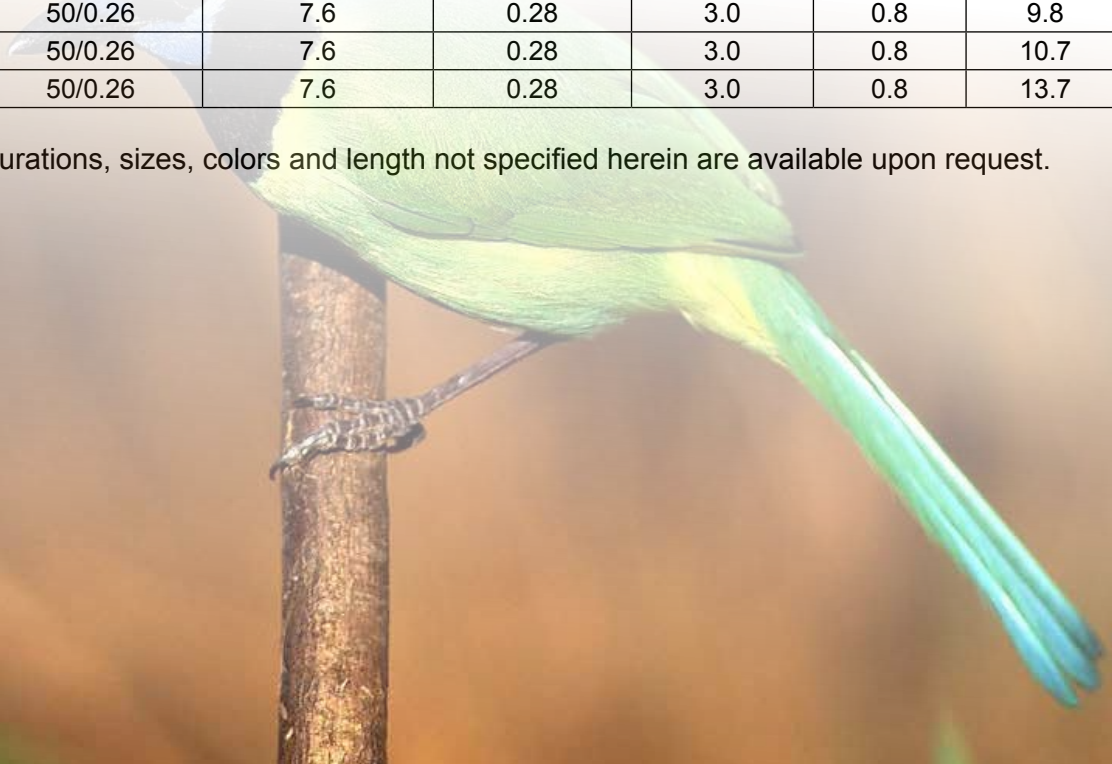
Nominal Cross-section	Conductor		Insulation		Cable	
	No. and Dia. of Wires	Electrical Resistance at 20°C Max.	Thickness Wall nom.	Diameter of Core	Sheath Thickness	Overall Diameter max.
mm ²	no./mm	mΩ/m	mm	mm	mm	mm
1x0.35	12/0.21	52.0	0.20	1.3	0.4	2.2
2x0.35	12/0.21	52.0	0.20	1.3	0.5	3.7
3x0.35	12/0.21	52.0	0.20	1.3	0.5	3.9
4x0.35	12/0.21	52.0	0.20	1.3	0.5	4.3
5x0.35	12/0.21	52.0	0.20	1.3	0.5	4.6
7x0.35	12/0.21	52.0	0.20	1.3	0.5	5.0
10x0.35	12/0.21	52.0	0.20	1.3	0.5	6.4
1x0.5	16/0.21	37.1	0.22	1.3	0.6	2.5
2x0.5	16/0.21	37.1	0.22	1.6	0.6	4.5
3x0.5	16/0.21	37.1	0.22	1.6	0.6	4.8
4x0.5	16/0.21	37.1	0.22	1.6	0.6	5.2
5x0.5	16/0.21	37.1	0.22	1.6	0.6	5.6
7x0.5	16/0.21	37.1	0.22	1.6	0.6	6.1
10x0.5	16/0.21	37.1	0.22	1.6	0.6	7.7
1x0.75	24/0.21	24.7	0.24	1.9	0.4	2.8
2x0.75	24/0.21	24.7	0.24	1.9	0.6	5.1



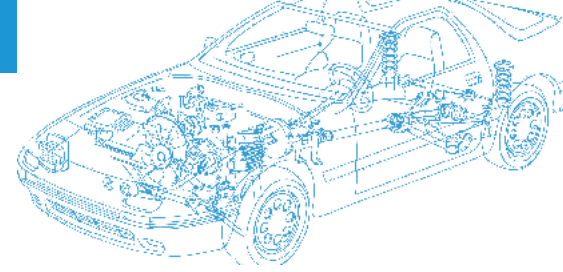
Automotive Cable

Nominal Cross-section	Conductor		Insulation		Cable	
	No. and Dia. of Wires	Electrical Resistance at 20°C Max.	Thickness Wall nom.	Diameter of Core	Sheath Thickness	Overall Diameter max.
mm ²	no./mm	mΩ/m	mm	mm	mm	mm
3x0.75	24/0.21	24.7	0.24	1.9	0.6	5.4
4x0.75	24/0.21	24.7	0.24	1.9	0.6	5.9
5x0.75	24/0.21	24.7	0.24	1.9	0.6	6.4
7x0.75	24/0.21	24.7	0.24	1.9	0.6	7.0
10x0.75	24/0.21	24.7	0.24	1.9	0.8	9.3
1x1.0	32/0.21	18.5	0.24	2.1	0.4	3.0
2x1.0	32/0.21	18.5	0.24	2.1	0.6	5.5
3x1.0	32/0.21	18.5	0.24	2.1	0.6	5.8
4x1.0	32/0.21	18.5	0.24	2.1	0.6	6.4
5x1.0	32/0.21	18.5	0.24	2.1	0.6	7.0
7x1.0	32/0.21	18.5	0.24	2.1	0.8	8.0
10x1.0	32/0.21	18.5	0.24	2.1	0.8	10.1
1x1.5	30/0.26	12.7	0.24	2.4	0.4	3.3
2x1.5	30/0.26	12.7	0.24	2.4	0.6	6.1
3x1.5	30/0.26	12.7	0.24	2.4	0.6	6.4
4x1.5	30/0.26	12.7	0.24	2.4	0.6	7.1
5x1.5	30/0.26	12.7	0.24	2.4	0.6	7.8
7x1.5	30/0.26	12.7	0.24	2.4	0.8	8.9
10x1.5	30/0.26	12.7	0.24	2.4	0.8	11.4
1x2.5	50/0.26	7.6	0.28	3.0	0.4	3.9
2x2.5	50/0.26	7.6	0.28	3.0	0.6	7.3
3x2.5	50/0.26	7.6	0.28	3.0	0.6	7.8
4x2.5	50/0.26	7.6	0.28	3.0	0.6	8.6
5x2.5	50/0.26	7.6	0.28	3.0	0.8	9.8
7x2.5	50/0.26	7.6	0.28	3.0	0.8	10.7
10x2.5	50/0.26	7.6	0.28	3.0	0.8	13.7

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



Automotive Cable

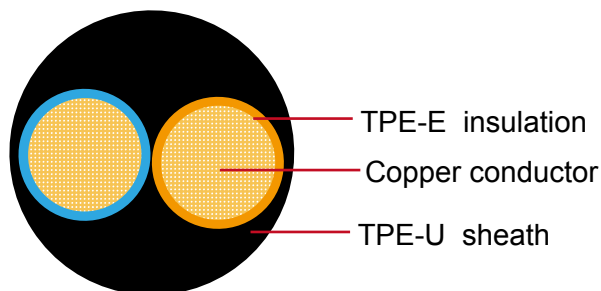


FLR13Y11Y

Application:

This TPE-E insulated , TPE-U sheathed low tension multi-cores cable is used for ABS systems, it has excellent abrasion resistance and better resistance to bending fatigue.

Construction:



Conductor: Cu-ETP1 according to DIN EN13602

Insulation: Thermoplasticity polyester (TPE-E)

Sheath: Thermoplasticity polyurethane (TPU)

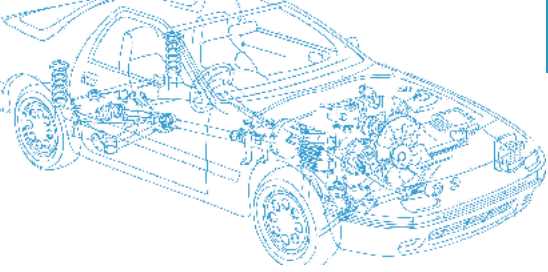
Standard Compliance: ISO 6722 Class C

Technical Parameters:

Operating temperature: - 40 °C to +125 °C

Nominal Cross-section	Conductor			Insulation		Cable			Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Diameter of Core	Sheath Thickness	Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
2x0.50	28/0.16	1.00	37.10	0.20	1.40	0.60	3.85	4.15	22
2x0.50	28/0.16	1.00	37.10	0.20	1.40	0.85	4.35	4.65	27
2x0.50	28/0.16	1.00	37.10	0.35	1.70	0.80	4.80	5.20	32
2x0.60	80/0.11	1.20	24.70	0.20	1.45	0.80	4.35	4.65	28
2x0.75	42/0.16	1.20	27.10	0.30	1.80	1.30	6.00	6.40	48
2x0.75	96/0.10	1.20	27.10	0.30	1.80	1.30	6.00	6.40	62

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



Automotive Cable

FLYZ

Application:

This PVC insulated multi-cores cable is used in internal wiring in automobile where high flexibility, thermo and mechanical strength are required.

Construction:



Conductor:

Cu-ETP1 bare according to DIN EN13602

Insulation: Plasticized (PVC)

Standard Compliance: ISO 6722 Class B

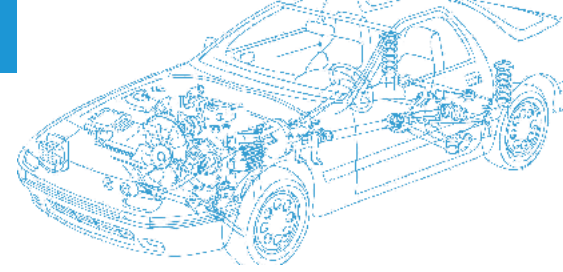
Technical Parameters:

Operating temperature: - 40 °C to +105 °C

Nominal Cross-section	Conductor			Insulation		Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Diameter of Core	Diameter Width	Diameter Height	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	kg/km
2x0.50	16/0.21	1.00	37.10	0.50	2.10	4.40±0.20	2.10±0.15	20
2x0.75	24/0.21	1.20	24.70	0.60	2.35	4.70±0.30	2.35±0.15	23
2x1.00	32/0.20	1.50	19.50	0.60	2.55	5.10±0.30	2.60±0.15	32
2x1.50	48/0.26	1.70	12.70	0.60	2.80	5.60±0.30	2.80±0.15	39

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

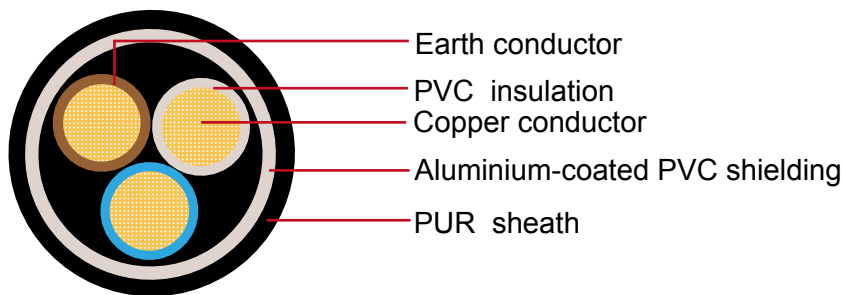


FLRYB11Y

Application:

This PVC insulated ,PUR sheathed low tension multi-cores cable is used for automobiles; it has excellent abrasion resistance and better resistance to bending fatigue.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PVC

Cover for the earth conductor: Conductive PVC

Shielding: Aluminium-coated PVC foil

Sheath: polyurethane (PUR)

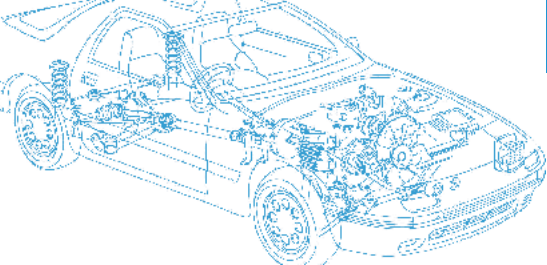
Standard Compliance: ISO 6722 Class B

Technical Parameters:

Operating temperature: - 40 °C to +105 °C

Nominal Cross-section	Conductor			Insulation		Cable			Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.	Thickness Wall nom.	Diameter of Core	Sheath Thickness	Overall Diameter min.	Overall Diameter max.	
mm ²	No./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
1 x 0.35+(0.35)	7/0.26	0.80	52.00	0.25	1.25	0.60	3.90	4.30	21
2 x0.35+(0.35)	7/0.26	0.80	52.00	0.25	1.25	0.60	4.10	4.50	24
3 x0.35+(0.35)	7/0.26	0.80	52.00	0.25	1.25	0.60	4.40	4.80	30
4 x0.35+(0.35)	7/0.26	0.80	52.00	0.25	1.25	0.60	4.80	5.20	39
5 x0.35+(0.35)	7/0.26	0.80	52.00	0.25	1.25	0.60	5.40	5.80	46

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



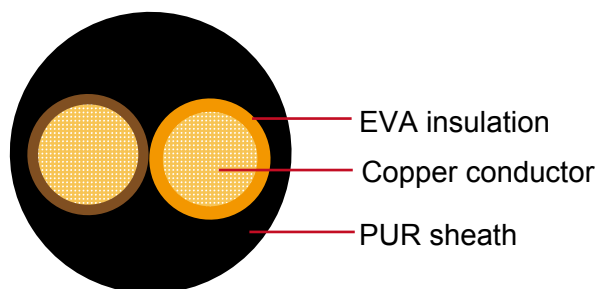
Automotive Cable

FL4G11Y

Application:

This EVA insulated , PUR sheathed multi-cores cable is used for ABS braking systems, wiring inside the engine compartment.

Construction:



Conductor: Cu-ETP1 tinned according to DIN EN 13602

Insulation: Ethylene vinyl acetate (EVA)

Sheath: Polyurethane (PUR)

Sheath colour: Black

Standard Compliance: ISO 6722 Calss C

Special Properties:

Good flexibility and Good reversed bending strength. Conductors with 3 and 4 cores for additional functions. Also suitable for wiring inside the engine compartment

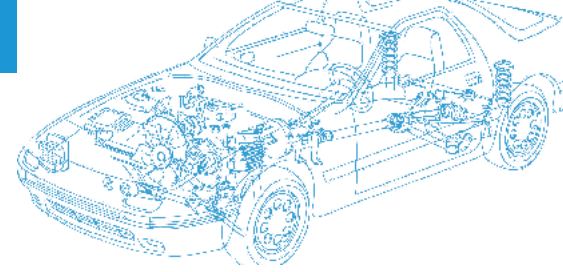
Technical Parameters:

Operating temperature: - 40 °C to +125 °C

Nominal Cross-section	Conductor			Insulation		Cable			
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Diameter of Core	Sheath Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
2x0.50	16/0.21	1.00	40.10	0.60	2.20	0.85	5.90	6.30	44
2x0.75	40/0.16	1.10	27.10	0.60	2.30	0.90	6.40	6.80	49
2x1.50	30/0.26	1.70	13.70	0.60	2.90	0.90	7.60	8.00	66
3x0.50	16/0.21	1.00	40.10	0.60	2.20	0.80	6.00	6.40	51
3x1.50	30/0.26	1.70	13.70	0.70	2.90	1.10	8.10	8.70	107

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

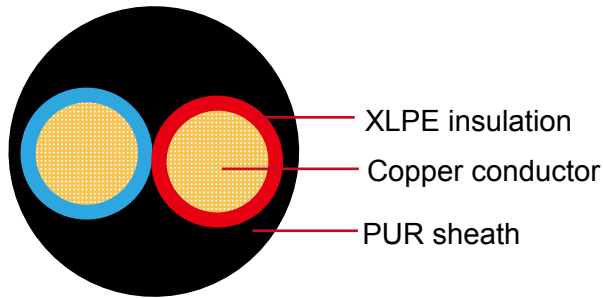


FLR2X11Y

Application:

This XLPE insulated, PUR sheathed multi-cores cable is used for ABS systems. It has good bending strength properties.

Construction:



Conductor: Cu-ETP1 bare or tinned according to DIN EN 13602

Insulation: Crosslinked polyethylene (XLPE)

Sheath: Polyether polyurethane (PUR)

Sheath colour: black

Standard Compliance: ISO 6722 Class C

Special Properties:

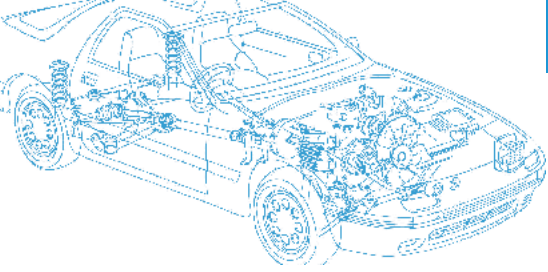
Special conductor highly tensile and bending resistant Cu-alloy, Cadmium-free.

Technical Parameters:

Operating temperature: - 40 °C to +125 °C

Nominal Cross-section	Conductor			Insulation		Cable			Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C Bare/tinned max.	Thickness Wall nom.	Diameter of Core	Sheath Thickness	Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
2x0.35	12/0.21	0.90	52.00/54.50	0.25	1.35	0.50	3.50	3.90	18
2x0.50	19/0.19	1.00	37.10/40.10	0.30	1.50	0.65	4.20	4.60	25
2x0.50	64/0.10	1.00	38.20/40.10	0.35	1.60	0.95	5.00	5.40	36
2x0.75	42/0.16	1.20	24.70/27.10	0.50	2.20	0.90	6.00	6.40	46

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



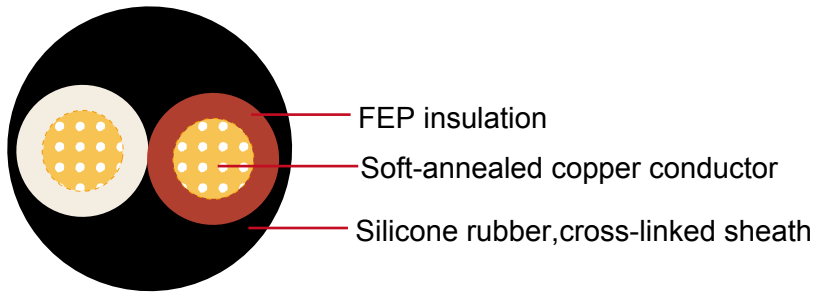
Automotive Cable

FL6Y2G

Application:

This FEP insulated multi-cores cable is used for automobiles.

Construction:



Conductor:

Cu-ETP1 or bare according to DIN EN 13602

Insulation:

Fluorinated ethylene propylene(FEP) insulation

Sheath:

Silicone rubber, cross-linked according to ISO 14572 class F

Standard:

ISO 6722 Class F

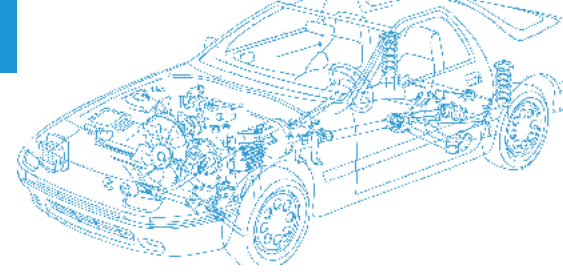
Technical Parameters:

Operating temperature: -40°C to $+210^{\circ}\text{C}$

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable			
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Sheath Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	kg/km
2x0.35	12/0.21	0.8	52	0.4	0.53	4.6	5	32
2x0.25	24/0.16	0.7	86.5	0.4	0.53	3.4	3.8	24

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

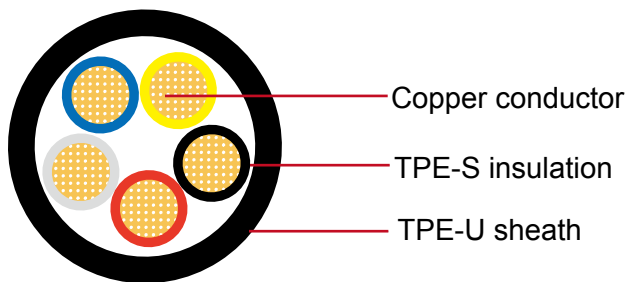


FLR31Y11Y

Application:

This TPE insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting ,charging,lighting,signal and instrument panel circuits.

Construction:



Conductor:Cu-ETP1 bare according to DIN EN 13602

Insulation:TPE-S

Outer Sheath:TPE-U

Standard:ISO 6722 Class C

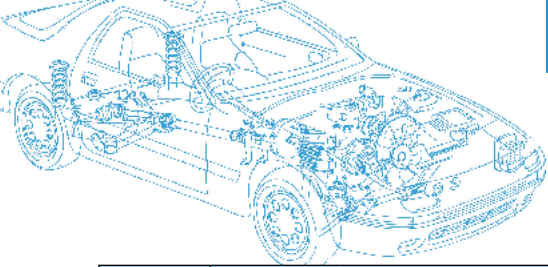
Special properties:

Flame retardant
Highly resistant against acids,lyes,petrol and diesel

Technical Parameters:

Operating temperature: -40°C to +125°C

Nominal Cross-section	Conductor Construction			Insulation		Cable			
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Diameter of Core	Sheath Wall Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
2x0.50	28/0.16	1.0	37.1	0.3	1.5	0.7	4.3	4.7	38
2x0.50	28/0.16	1.0	37.1	0.3	1.5	1.0	4.8	5.2	45
2x0.75	42/0.16	1.2	24.7	0.3	1.8	1.2	6.0	6.4	64
2x0.75	96/0.11	1.2	24.7	0.3	1.8	1.2	6.0	6.4	48



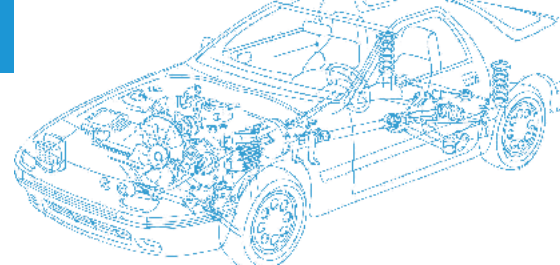
Automotive Cable



Nominal Cross-section	Conductor Construction			Insulation		Cable			
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Diameter of Core	Sheath Wall Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
3x0.5	19/0.19	1.0	37.1	0.3	1.6	0.8	5.0	5.2	47
3x0.75	19/0.23	1.2	24.7	0.3	1.8	1.0	5.7	6.1	64
3x1.0	19/0.26	1.2	18.5	0.35	2.0	0.8	5.7	6.1	71
4x0.5	28/0.16	1.0	37.1	0.3	1.5	1.2	6.0	6.4	76
4x0.5	64/0.1	1.0	37.1	0.3	1.6	1.2	6.0	6.4	51
5x0.5	64/0.1	1.0	37.1	0.3	1.6	1.0	6.0	6.4	54

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

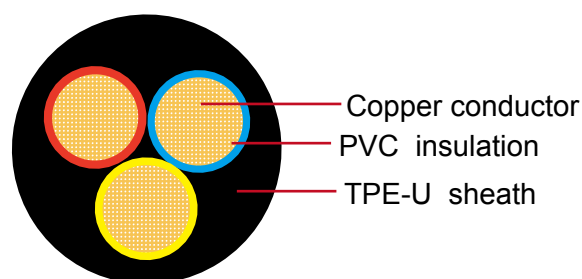


FLRY11Y

Application:

This PVC insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Construction:



Conductor: Cu-ETP1 bare according to DIN EN 13602

Insulation: PVC

Outer Sheath: TPE-U

Standard: ISO 6722 Class B

Special properties:

Flame retardant

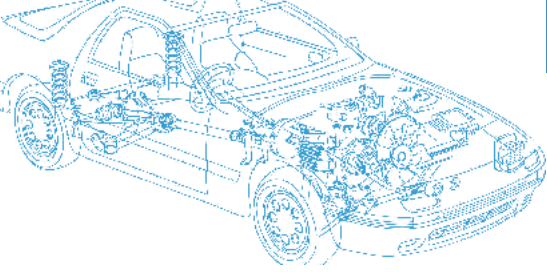
Highly resistant against acids, lyes, petrol and diesel

Technical Parameters:

Operating temperature: -40°C to +105°C

Nominal Cross-section	Conductor Construction			Insulation		Cable			Weight Approx.
	No. and Dia. of Wires	Diameter of Conductor max.	Electrical Resistance at 20°C max.	Nominal Thickness	Diameter of Core	Sheath Wall Thickness	Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
2x0.75	42/0.16	1.2	24.7	0.4	1.9	0.8	5.2	5.6	47
3x1	32/0.21	1.5	18.5	0.35	2.0	0.7	5.6	6.0	54
3x1.5	30/0.26	1.7	13.3	0.4	2.4	0.75	6.5	6.9	71

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



Automotive Cable

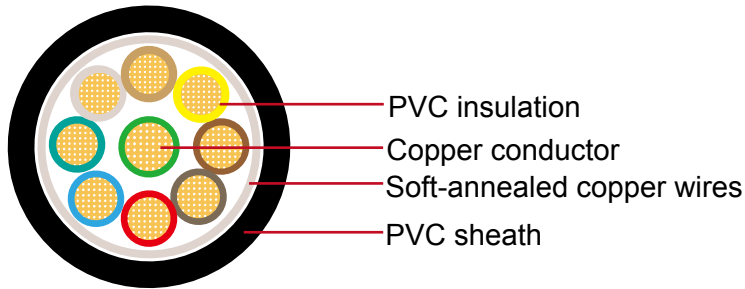


FLRYCY

Application:

This PVC insulated, PVC sheathed multi-cores cable is used for car communication cable.

Construction:



Conductor: Cu-ETP1 according to DIN EN 13602

Insulation: PVC

Shielding: Soft-annealed copper wires CU-ETP1 or tin coated soft-annealed copper wires according to DIN 40500 and DIN EN 13602

Optical coverage of approximately 85% is reflected in very efficient shield attenuation.

Sheath: PVC

Standard Compliance: ISO 6722 Class B

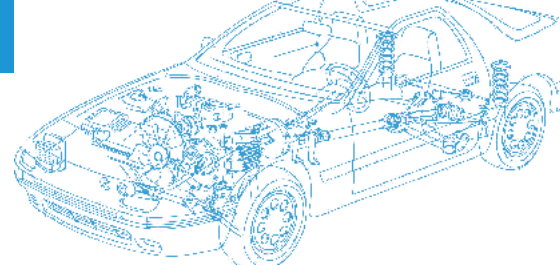
Technical Parameters:

Operating temperature: - 40 °C to +105 °C

Nominal Cross-section	Conductor			Insulation		Cable			
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C Bare/tinned max.	Thickness Wall nom.	Diameter of Core	Sheath Thickness	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm	kg/km
9x0.08	10/0.11	0.45	35.30/36.50	0.20	0.80	0.60	4.60	4.90	38
10x0.25	14/0.16	0.70	84.80/86.50	0.20	1.10	0.60	5.80	6.20	68
5x0.35	19/0.16	0.80	52.00/54.50	0.25	1.30	0.50	4.70	5.10	47
8x0.35	19/0.16	0.80	52.00/54.50	0.25	1.25	0.65	5.90	6.30	75
10x0.35	19/0.16	0.80	52.00/54.50	0.25	1.25	0.65	6.50	6.90	83

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

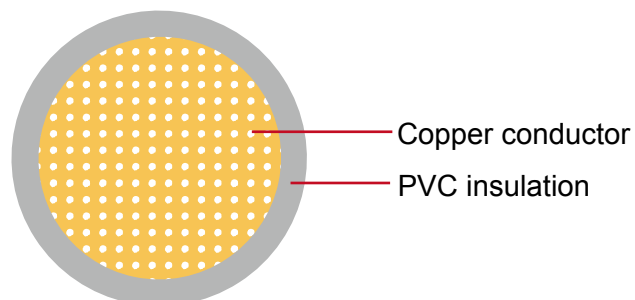


AV

Application:

This PVC insulated single-Core cable is used for low voltage circuits in automobiles, vehicles and motorcycles.

Construction:



Conductor: Cu-ETP1 bare according to D 609-90

Insulation: PVC

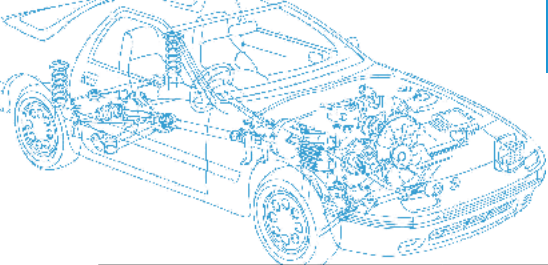
Standard Compliance: JIS C 3406

Technical Parameters:

Operating temperature: - 40 °C to +85 °C

Intermittent temperature: 120°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom. mm	Cable		Weight Approx. kg/km
	No. and Dia. of Wires	Diameter max. mm	Electrical Resistance at 20°C max. mΩ/m		Overall Diameter min. mm	Overall Diameter max. mm	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.50	7/0.32	1.00	32.70	0.60	2.20	2.40	10
1x0.85	11/0.32	1.20	20.80	0.60	2.40	2.60	13
1x1.25	16/0.32	1.50	14.30	0.60	2.70	2.90	17
1x2.00	26/0.32	1.90	8.81	0.60	3.10	3.40	26
1x3.00	41/0.32	2.40	5.59	0.70	3.80	4.10	40
1x5.00	65/0.32	3.00	3.52	0.80	4.60	4.90	62
1x8.00	50/0.45	3.70	2.32	0.90	5.50	5.80	92
1x10.00	63/0.45	4.50	1.84	1.00	6.50	6.90	120
1x15.00	84/0.45	4.80	1.38	1.10	7.00	7.40	160
1x20.00	41/0.80	6.10	0.89	1.10	8.20	8.80	226



Automotive Cable

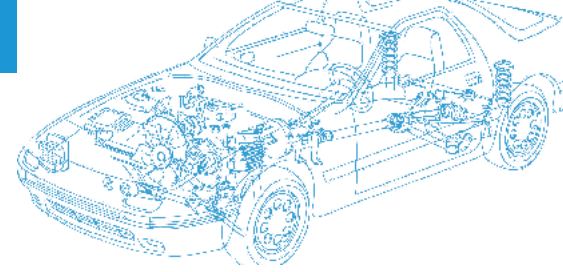
Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x30.00	70/0.80	8.00	0.52	1.40	10.80	11.50	384
1x40	85/0.80	8.60	0.43	1.40	11.40	12.10	462
1x50	108/0.80	9.80	0.34	1.60	13.00	13.80	583
1x60	127/0.80	10.40	0.29	1.60	13.60	14.40	678
1x85	169/0.80	12.00	0.22	2.00	16.00	17.00	924
1x100	217/0.80	13.60	0.17	2.00	17.60	18.60	1151
1x0.5f	20/0.18	1.00	36.70	0.60	2.20	2.40	9
1x0.75f	30/0.18	1.20	24.40	0.60	2.40	2.60	12
1x1.25f	50/0.18	1.50	14.70	0.60	2.70	2.90	18
1x2f	37/0.26	1.80	9.50	0.60	3.00	3.40	25
1x3f	61/0.26	2.40	5.76	0.70	3.80	4.10	40

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

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



Automotive Cable

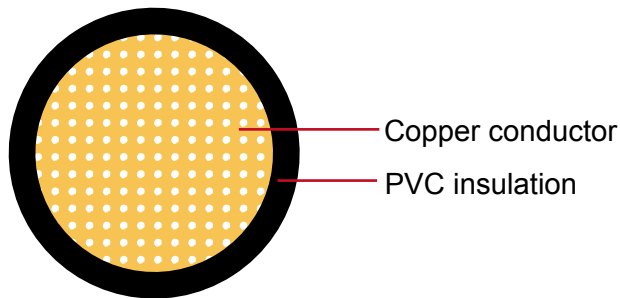


AV-V

Application:

This PVC insulated single-core cable is used in low voltage circuits in automobiles (Battery Cables).

Construction:



Conductor: Annealed stranded copper

Insulation: Lead free PVC

Standard Compliance: HMC ES 91110-05

Technical Parameters:

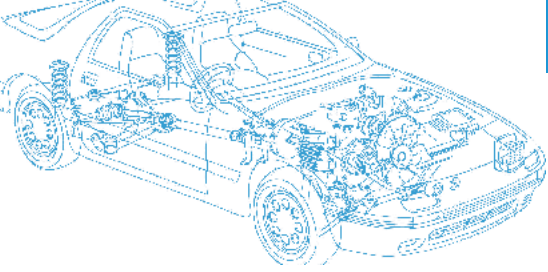
Operating temperature: $-40\text{ }^{\circ}\text{C}$ to $+80\text{ }^{\circ}\text{C}$

Rated temperature: $80\text{ }^{\circ}\text{C}$

Rated voltage up to 60V

Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm^2	no./mm	mm	$\text{m}\Omega/\text{m}$	mm	mm	mm	kg/km
1x5	63/0.32	3.1	3.58	0.8	4.7	5.0	6.5
1x8	105/0.32	4.1	2.14	1.0	6.1	6.4	6.0
1x10	114/0.32	4.2	1.96	1.0	6.2	6.5	8.5
1x15	171/0.32	5.3	1.32	1.0	7.3	7.8	8.0
1x20	247/0.32	6.3	0.92	1.0	8.3	8.8	11
1x30	361/0.32	7.8	0.63	1.0	9.8	10.3	12
1x50	608/0.32	10.1	0.37	1.0	12.1	12.8	16.5
1x60	741/0.32	11.1	0.31	1.4	13.9	14.6	16
1x85	1064/0.32	13.1	0.21	1.4	15.9	16.6	24.5
1x100	369/0.32	15.1	0.17	1.4	17.9	18.8	23.5

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



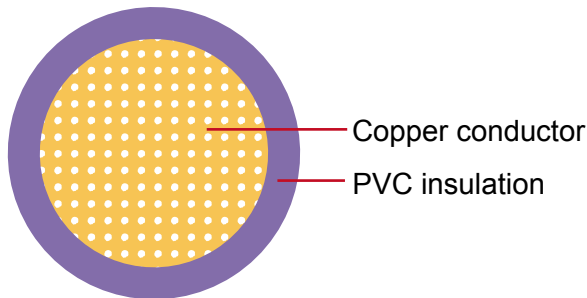
Automotive Cable

AVS

Application:

This PVC insulated single-core cable is used for low voltage circuits in automobiles, vehicles and motorcycles.

Construction:



Conductor: Cu-ETP1 bare according to D 609-90

Insulation: PVC

Standard Compliance: JASO D 611-94

Technical Parameters:

Operating temperature: - 40 °C to +85 °C

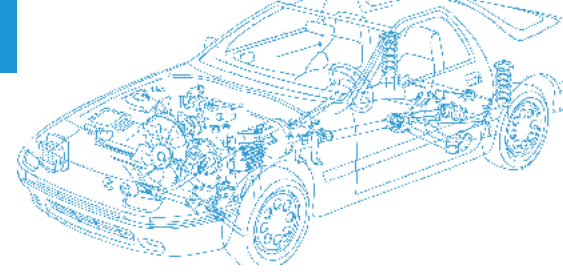
Intermittent temperature: 120°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom. mm	Cable		
	No. and Dia. of Wires	Diameter max. mm	Electrical Resistance at 20°C max. mΩ/m		Overall Diameter min. mm	Overall Diameter max. mm	Weight Approx. kg/km
	mm ²	no./mm	mm		mm	mm	kg/km
1x0.30	7/0.26	0.80	50.20	0.50	1.80	1.90	6
1x0.50	7/0.32	1.00	32.70	0.60	2.10	2.40	7
1x0.85	11/0.32	1.20	20.80	0.60	2.30	2.60	10
1x1.25	16/0.32	1.50	14.30	0.60	2.60	2.90	15
1x2.00	26/0.32	1.90	8.81	0.60	3.00	3.40	22
1x3.00	41/0.32	2.40	5.59	0.70	3.50	3.90	42
1x5.00	65/0.32	3.00	3.52	0.80	4.50	4.90	61
1x0.3f	15/0.18	0.80	48.90	0.50	1.80	1.90	6
1x0.5f	20/0.18	1.00	36.70	0.50	2.00	2.10	8
1x0.75f	30/0.18	1.20	24.40	0.50	2.20	2.30	11
1x1.25f	50/0.18	1.50	14.70	0.50	2.50	2.60	17
1x2f	37/0.26	1.80	9.50	0.50	2.90	3.10	24

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

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

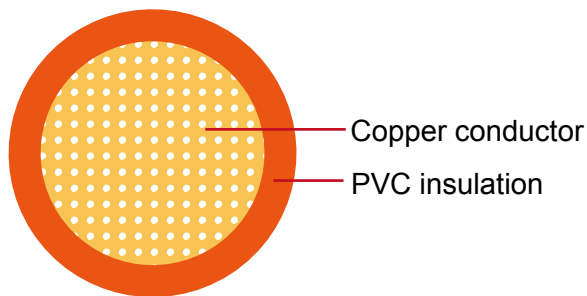


AVSS

Application:

This PVC insulated single-core cable is used for low voltage circuits in automobiles, vehicles and Motorcycles.

Construction:



Conductor: Cu-ETP1 bare according to JIS 3120

Insulation: PVC

Standard Compliance: JASO D 611-94

Technical Parameters:

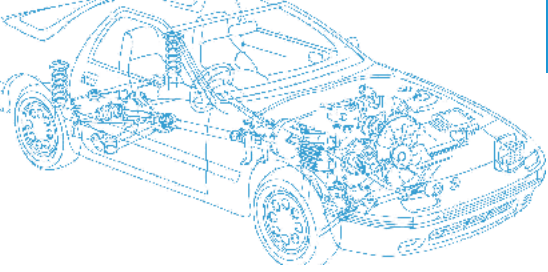
Operating temperature: - 40 °C to +85 °C

Intermittent temperature: 120°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		Weight Approx.
	NO. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.30	7/0.26	0.80	50.20	0.30	1.40	1.50	5
1x0.50	7/0.32	1.00	32.70	0.30	1.60	1.70	7
1x0.85	19/0.24	1.20	21.70	0.30	1.80	1.90	10
1x1.25	19/0.29	1.50	14.90	0.30	2.10	2.20	14
1x0.3f	19/0.16	0.80	48.80	0.30	1.40	1.50	5
1x0.5f	19/0.19	1.00	34.60	0.30	1.60	1.70	7
1x0.75f	19/0.23	1.20	23.60	0.30	1.80	1.90	10
1x1.25f	37/0.21	1.50	14.60	0.30	2.10	2.20	14
1x2f	37/0.26	1.80	9.50	0.40	2.60	2.70	22

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

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



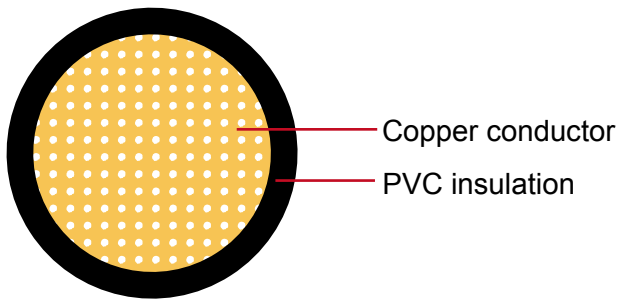
Automotive Cable

AVSSH

Application:

This PVC insulated single-core cable is used for automobiles, vehicles and Motorcycles.

Construction:



Conductor: Stranded ,bare copper

Insulation: PVC

Standard Compliance: JASO D 611-09 JASO D608

Technical Parameters:

Operating temperature: -40 °C to +100 °C

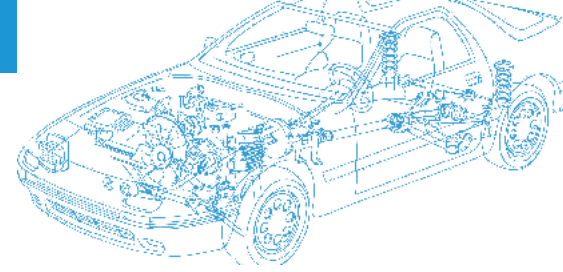
Rated voltage: 25VA and 60 VDC

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		
	NO. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.3f	19/0.16	0.8	48.6	0.3	1.4	1.5	5
1x0.5f	19/0.16	1.0	34.6	0.3	1.6	1.7	7
1x0.75f	19/0.23	1.2	23.6	0.3	1.8	1.9	10
1x1.25f	37/0.21	1.5	14.6	0.3	2.1	2.2	14

The "f" in the nominal size column indicates a flexile conductor with a fine wire diameter.

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

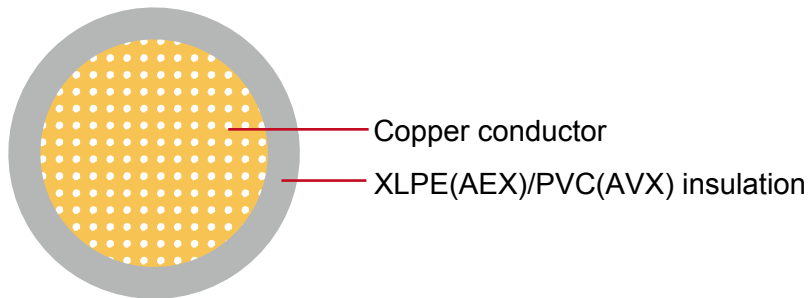


AEX/AVX

Application:

This XLPE insulated single-core cable is used for automobiles, motorcycles and other motor vehicles.

Construction:



Conductor: Cu-ETP1 according to JIS C3102

Insulation: XLPE (AEX)

Crosslinked PVC (AVX)

Standard Compliance: JASO D 608-92

Technical Parameters:

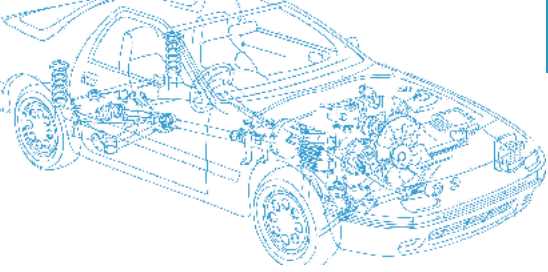
Operating temperature: - 40 °C to +120 °C (AEX)

Operating temperature: - 40 °C to +100 °C (AVX)

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.50	7/0.32	1.00	32.70	0.50	2.00	2.20	8
1x0.85	11/0.32	1.20	20.80	0.50	2.20	2.40	11
1x1.25	16/0.32	1.50	14.30	0.60	2.70	2.90	16
1x2.00	26/0.32	1.90	8.80	0.60	3.10	3.40	25
1x3.00	41/0.32	2.40	5.60	0.70	3.80	4.10	38
1x5.00	65/0.32	3.00	3.50	0.80	4.60	4.90	59
1x8.00	50/0.45	3.70	2.30	0.80	5.30	5.60	86
1x15.00	84/0.45	4.80	1.40	1.10	7.00	7.40	145
1x0.50f	20/0.18	1.00	36.70	0.50	2.00	2.20	8
1x0.75f	30/0.18	1.20	24.40	0.50	2.20	2.40	10
1x1.25f	50/0.18	1.50	14.70	0.60	2.70	2.90	16

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

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



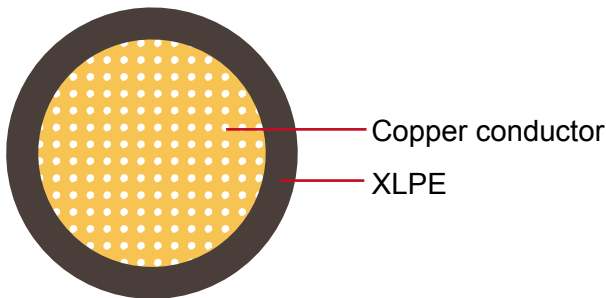
Automotive Cable

AEXF

Application:

This XLPE insulated single-core cable is used in low voltage circuits in automobiles(vehicles and motorcycles)

Construction:



Conductor: Annealed stranded copper

Insulation: Cross-linked Polyethylene (XLPE) or Polyvinyl Chloride

Standard Compliance: JASO D611

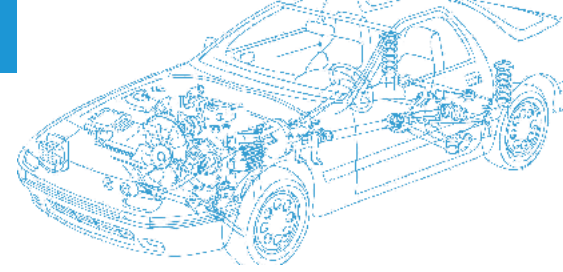
Technical Parameters:

Operating temperature: -40 °C to +120 °C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.30	12/0.18	0.7	61.1	0.5	1.7	1.8	5.7
1x0.50	20/0.18	1.0	36.7	0.5	1.9	2.0	8.0
1x0.85	34/0.18	1.2	21.6	0.5	2.2	2.3	12.0
1x1.25	50/0.18	1.5	14.6	0.6	2.7	2.8	17.5
1x2.00	79/0.18	1.9	8.68	0.6	3.1	3.2	24.9
1x3.00	119/0.18	2.3	6.15	0.7	3.7	3.8	37
1x5.00	207/0.18	3.0	3.94	0.8	4.6	4.8	61.5
1x8.00	315/0.18	3.7	2.32	0.8	5.3	5.5	88.5
1x10.0	399/0.18	4.1	1.76	0.9	5.9	6.1	113
1x15.0	588/0.18	5.0	1.20	1.1	7.2	7.5	166
1x20.0	247/0.32	6.3	0.92	1.1	8.5	8.8	216

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

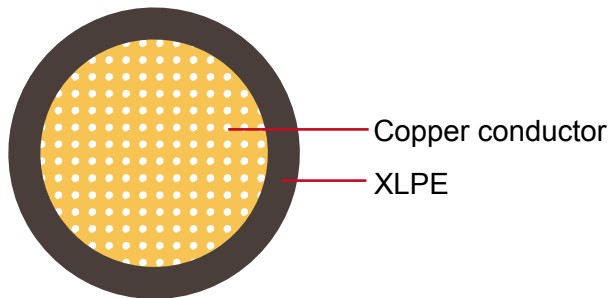


AEXSF

Application:

This XLPE insulated single-core cable is used in low voltage circuits in automobiles (vehicles and motorcycles), Superior heat resistance with irradiated PE, Suitable for the consideration of very flexibility and thermal resistance.

Construction:



Conductor: Annealed stranded copper

Insulation: Cross-linked Polyethylene (XLPE)

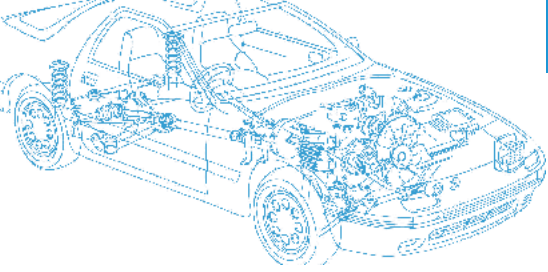
Standard Compliance: ES SPEC

Technical Parameters:

Operating temperature: -40 °C to +135 °C

Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x5	207/0.18	3.0	3.94	0.8	4.6	4.8	61
1x8	315/0.18	3.7	2.32	0.8	5.3	5.5	87
1x10	399/0.18	4.2	1.76	0.9	6.0	6.2	115
1x15	588/0.18	5.0	1.25	1.1	7.2	7.5	165
1x20	784/0.18	6.3	0.99	1.1	8.5	8.8	225
1x30	1159/0.18	8.0	0.61	1.3	10.6	10.9	325
1x40	1558/0.18	9.2	0.46	1.4	12.0	12.4	430
1x50	1919/0.18	10.0	0.39	1.5	13.0	13.4	530
1x60	1121/0.26	11.0	0.29	1.5	14.0	14.4	630
1x85	1596/0.26	13.0	0.21	1.6	16.2	16.6	885
1x100	1881/0.26	15.0	0.17	1.6	18.2	18.6	1040

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



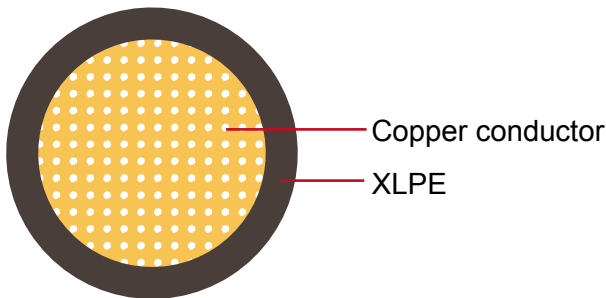
Automotive Cable

AEXHF

Application:

This XLPE insulated single-core cable is used in low voltage circuits in automobiles (vehicles and motorcycles), Superior heat resistance with irradiated PE superior more than thermal resistance AEX type.

Construction:



Conductor: Tin coated annealed stranded copper.

Insulation: Cross-linked Polyethylene (XLPE)

Standard Compliance: ES SPEC

Technical Parameters:

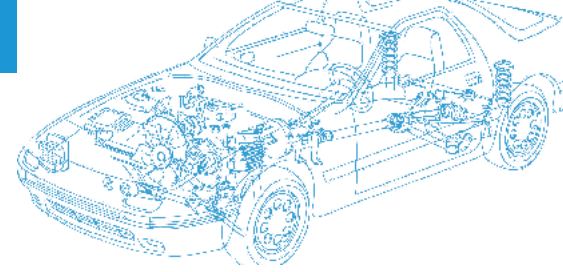
Operating temperature: -40 °C to +150°C

Rated voltage up to 60V

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.30	12/0.18	0.7	61.1	0.5	1.7	1.8	5.7
1x0.50	20/0.18	1.0	36.7	0.5	1.9	2.0	8.0
1x0.85	34/0.18	1.2	21.6	0.5	2.2	2.3	12.0
1x1.25	50/0.18	1.5	14.6	0.6	2.7	2.8	17.5
1x2.00	79/0.18	1.9	8.68	0.6	3.1	3.2	24.9
1x3.00	119/0.18	2.3	6.15	0.7	3.7	3.8	37
1x5.00	207/0.18	3.0	3.94	0.8	4.6	4.8	61.5
1x8.00	315/0.18	3.7	2.32	0.8	5.3	5.5	88.5
1x10.0	399/0.18	4.1	1.76	0.9	5.9	6.1	113
1x20.0	247/0.32	6.3	0.92	1.1	8.5	8.8	216

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

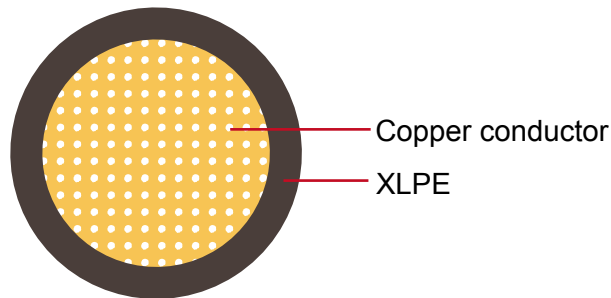


AESSXF

Application:

This XLPE insulated single-core cable is used in low voltage circuits in automobiles (vehicles and motorcycles).

Construction:



Conductor: Annealed stranded copper

Insulation: Cross-linked Polyethylene (XLPE)

Standard Compliance: JASO D611 ;ES SPEC

Technical Parameters:

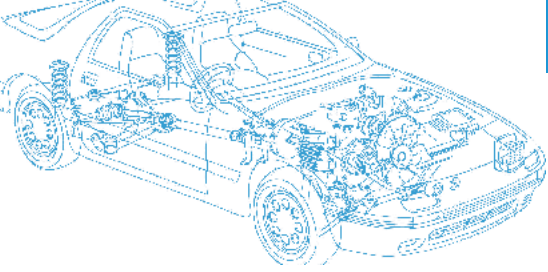
Operating temperature: -45 °C to +120 °C

Rated temperature: 120°C

Rated voltage up to 60V

Nominal Cross-section	Conductor			Insulation Thickness Wall nom. mm	Cable		Weight Approx. kg/km
	No. and Dia. of Wires	Diameter max. mm	Electrical Resistance at 20°C max. mΩ/m		Overall Diameter min. mm	Overall Diameter max. mm	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.22	7/0.2	0.6	84.4	0.3	1.2	1.3	3.3
1x0.30	19/0.16	0.8	48.8	0.3	1.4	1.5	5.0
1x0.50	19/0.19	1.0	34.6	0.3	1.6	1.7	6.9
1x0.75	19/0.23	1.2	23.6	0.3	1.8	1.9	10
1x1.25	37/0.21	1.5	14.6	0.3	2.1	2.2	14.3
1x2.00	27/0.26	1.8	9.5	0.4	2.6	2.7	22.2
1x2.50	50/0.26	2.1	7.6	0.4	2.9	3.0	28.5

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



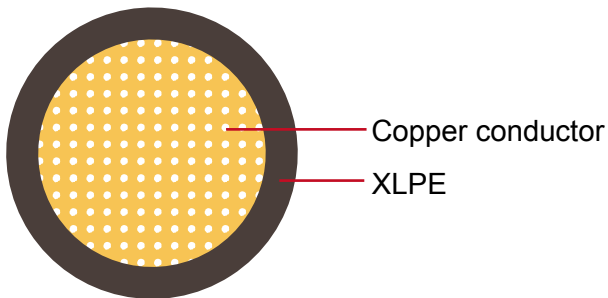
Automotive Cable

AEXHSF

Application:

This XLPE insulated single-core cable is used in EPS(Electric power steering), Starter motor for automobiles.

Construction:



Conductor: Tin coated annealed copper

Insulation: Cross-linked Polyethylene (XLPE)

Standard Compliance: HKMC ES 91110-05

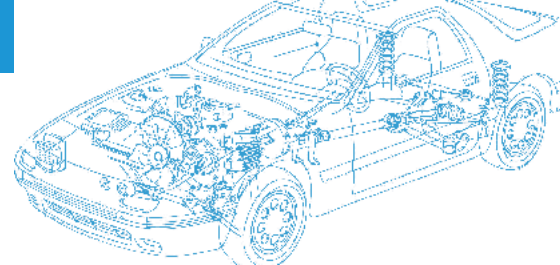
Technical Parameters:

Operating temperature: -45°C to +150 °C

Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x10.0	399/0.18	4.2	1.85	0.9	6.0	6.2	110
1x15.0	588/0.18	5.0	1.32	1.1	7.2	7.5	160
1x20.0	779/0.18	6.3	0.99	1.2	8.7	9.0	220
1x25.0	1007/0.18	7.1	0.76	1.3	9.7	10.0	280
1x30.0	1159/0.18	8.0	0.69	1.3	10.6	10.9	335
1x40.0	1554/0.18	9.2	0.50	1.4	12.0	12.4	445

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

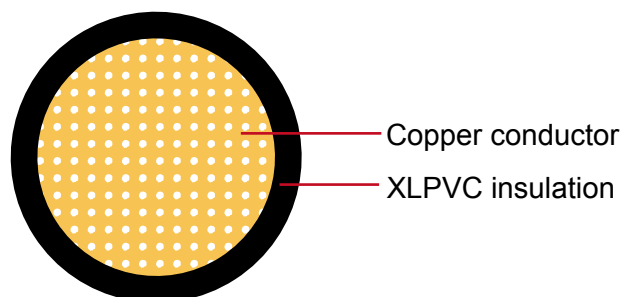


AVXSF

Application:

This XLPVC insulated single-core cable is used in low voltage circuits in automobiles(vehicles and motorcycles)

Construction:



Conductor: Annealed stranded copper

Insulation: Cross-linked Polyvinyl Chloride(XLPVC)

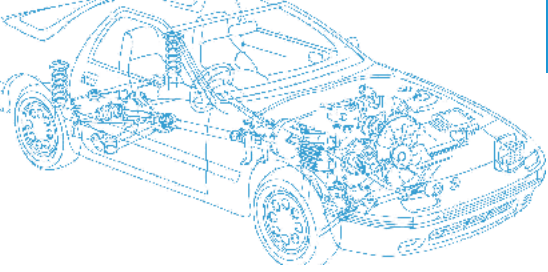
Standard Compliance: HKMC ES 91110-05

Technical Parameters:

Operating temperature: -45 °C to +200°C

Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x10.0	399/0.18	4.2	1.85	0.9	6.0	6.2	110
1x15.0	588/0.18	5.0	1.32	1.1	7.2	7.5	160
1x20.0	779/0.18	6.3	0.99	1.2	8.7	9.0	220
1x25.0	1007/0.18	7.1	0.76	1.3	9.7	10.0	280
1x30.0	1159/0.18	8.0	0.69	1.3	10.6	10.9	335
1x40.0	1554/0.18	9.2	0.50	1.4	12.0	12.4	445

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



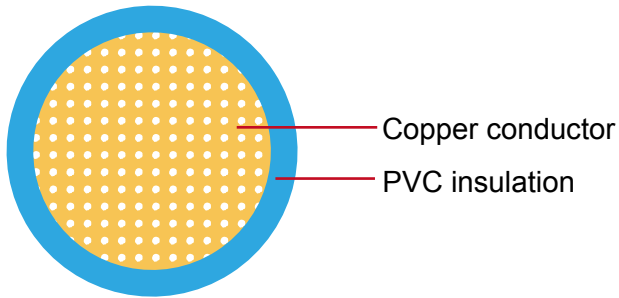
Automotive Cable

AVUHSF

Application:

This PVC insulated single-core cable is used in low voltage circuits in automobiles (Battery Cable)

Construction:



Conductor: Annealed stranded copper

Insulation: Polyvinyl Chloride (PVC)

Standard Compliance: ES SPEC

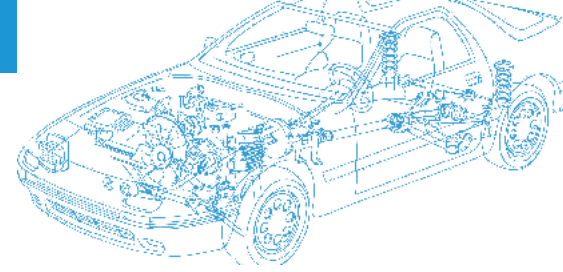
Technical Parameters:

Operating temperature: -40 °C to +135 °C

Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x5.0	207/0.18	3.0	3.94	0.8	4.6	4.8	62
1x8.0	315/0.18	3.7	2.32	0.8	5.3	5.5	88
1x10.0	399/0.18	4.15	1.76	0.9	6.0	6.2	120
1x15.0	588/0.18	5.0	1.25	1.1	7.2	7.5	170
1x20.0	779/0.18	6.3	0.99	1.2	8.7	9.0	230
1x30.0	1159/0.18	8.0	0.61	1.3	10.6	10.9	330
1x40.0	1558/0.18	9.2	0.46	1.4	12.0	12.4	430
1x50.0	1919/0.18	10.0	0.39	1.5	13.0	13.4	535
1x60.0	1121/0.26	11.0	0.29	1.5	14.0	14.4	640
1x85.0	1596/0.26	13.0	0.21	1.6	16.2	16.6	895
1x100.0	1881/0.26	15.0	0.17	1.6	18.2	18.6	1050

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

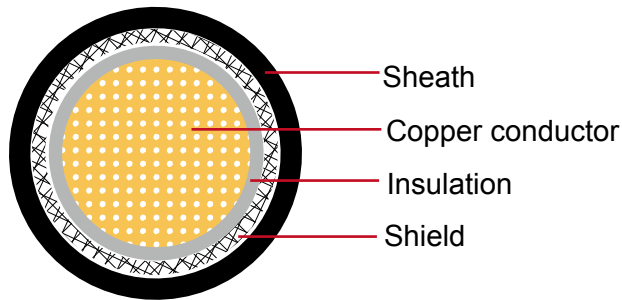


AVUHSF-BS

Application:

This Vinyl insulated single-core cable is used in EPS (Electric power steering) for automobiles.

Construction:



Conductor: Annealed stranded copper

Insulation: Vinyl

Shield: Tin coated annealed stranded copper

Sheath: Vinyl

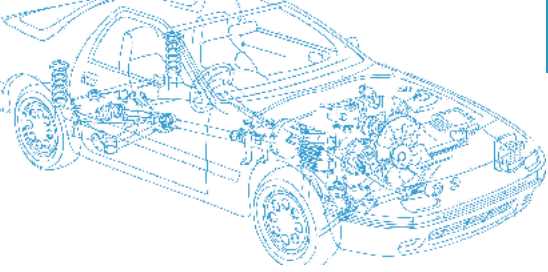
Standard Compliance: HKMC ES 91110-05

Technical Parameters:

Operating temperature: -40 °C to +135°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x5.0	207/0.18	3.0	3.94	0.8	6.7	7.1	72
1x8.0	315/0.18	3.7	2.32	0.8	7.5	7.9	128
1x10.0	399/0.18	4.2	1.76	0.9	8.2	8.6	153

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



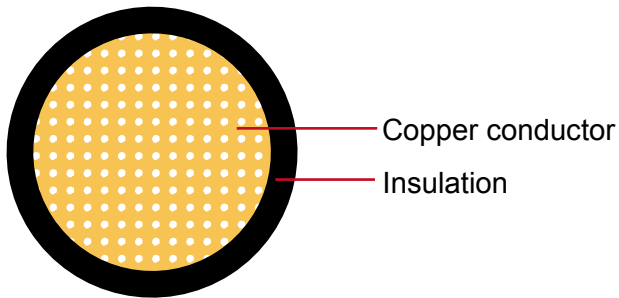
Automotive Cable

CIVUS

Application:

This PVC insulated single-core cable is used in low voltage circuits in automobiles.

Construction:



Conductor: Annealed stranded copper or copper alloy

Insulation: Polyvinyl Chloride(PVC)

Standard Compliance: JASO D611

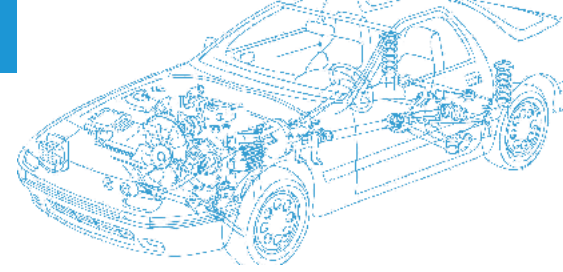
Technical Parameters:

Operating temperature: -40 °C to +85°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.13	7/SB	0.45	210	0.20	0.85	0.95	2.0
1x0.22	7/SB	0.55	84.4	0.20	0.95	1.05	3.0
1x0.35	7/SB	0.70	54.4	0.20	1.10	1.20	3.9
1x0.5	7/SB	0.85	37.1	0.20	1.25	1.40	5.7
1x0.75	11/SB	1.00	24.7	0.20	1.40	1.60	7.6
1x1.25	16/SB	1.40	14.9	0.20	1.80	2.00	12.4

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

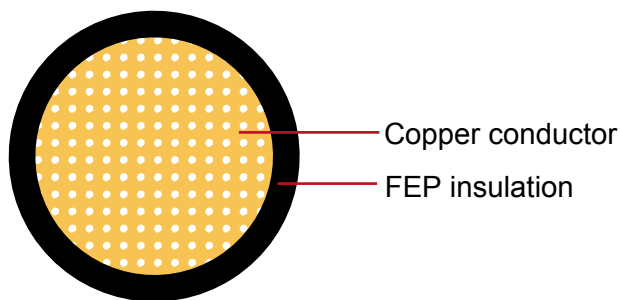


ATW-FEP

Application:

This FEP insulated single-core cable is used for wiring of car engine room, electrical and electronic components and other product up to 200°C temperature.

Construction:



Conductor: Tin coated annealed stranded copper

Insulation: Teflon(FEP)

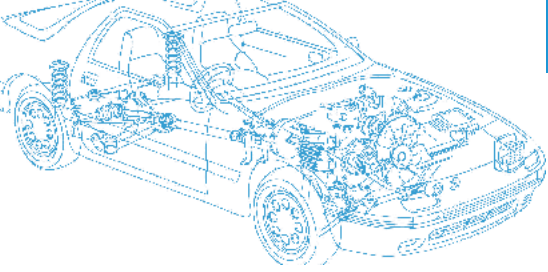
Standard Compliance: ES SPEC

Technical Parameters:

Operating temperature: -40 °C to +200°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.30	15/0.18	0.8	51.5	0.3	1.4	1.5	5.9
1x0.50	20/0.18	0.9	38.6	0.3	1.6	1.7	7.6
1x0.85	34/0.18	1.2	25.8	0.3	1.8	1.9	11
1x1.25	50/0.18	1.5	15.5	0.3	2.1	2.2	15.5
1x2.00	81/0.18	1.9	9.78	0.4	2.6	2.7	25
1x3.00	120/0.18	2.6	6.62	0.4	3.4	3.6	39
1x5.00	210/0.18	3.3	3.81	0.5	4.2	4.5	63

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



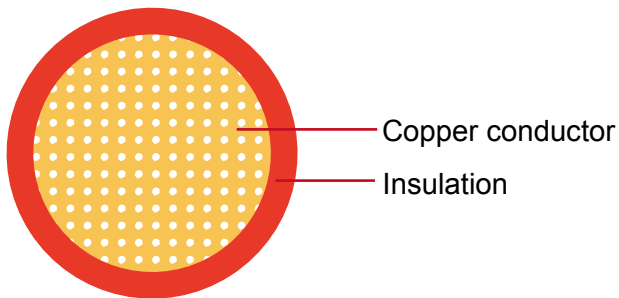
Automotive Cable

AHFX

Application:

This Fluoroelastomer insulated single-core cable is used in Fuel Pump and Transmission for automobiles, Superior oil resistance, Suitable for the consideration of the flexibility and thermal resistance.

Construction:



Conductor: Tin coated annealed stranded copper

Insulation: Fluoroelastomer

Standard Compliance: KIS-ES-8093

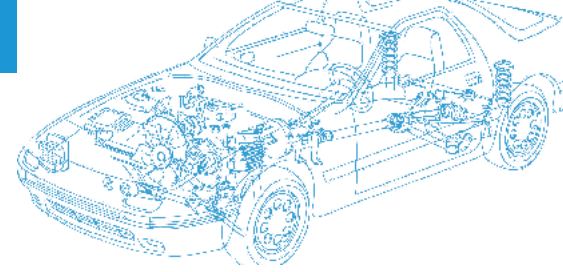
Technical Parameters:

Operating temperature: -40 °C to +200°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.50	20/0.18	0.9	38.2	0.4	1.55	1.85	7.8
1x0.75	19/0.23	1.2	24.7	0.4	1.75	2.05	10.8
1x1.25	50/0.18	1.4	15.9	0.4	2.15	2.45	16.7
1x2.00	37/0.26	1.8	10.5	0.4	2.45	2.75	23.5

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

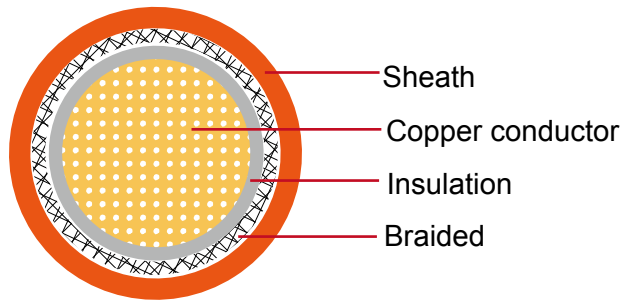


AHFX-BS

Application:

This Fluororubber insulated single-core cable is used for HEV automobiles.

Construction:



Conductor: Tin plated copper

Insulation: Fluororubber

Braided: Shield tin plated copper

Sheath: Halogen free Polyolefine

Standard Compliance: KIS-ES-1121

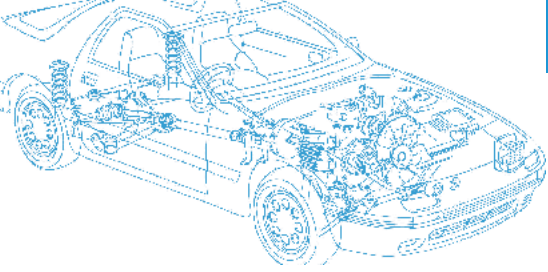
Technical Parameters:

Operating temperature: -40 °C to +200°C

Rated Voltage: 600V

Nominal Cross-section	Conductor			Insulation		Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall max.	Thickness Wall min.	Shield Rate	Overall Diameter max.	Overall Diameter min.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	mm	mm
1x3	65/0.26	2.4	5.65	4.05	3.55	90	5.6	5.3
1x5	65/0.32	3.0	3.72	4.9	4.3	90	7.3	6.5
1x8	154/0.26	4.0	2.43	5.9	5.3	90	8.3	7.5
1x15	171/0.32	5.3	1.44	7.8	7.2	90	10.75	9.85
1x20	247/0.32	6.5	1.00	9.0	8.4	90	11.95	11.05
1x25	323/0.32	7.4	0.76	10.6	9.8	90	13.5	12.5
1x30	361/0.32	7.8	0.68	11.0	10.2	90	13.9	12.9
1x40	494/0.32	9.1	0.52	12.3	11.5	90	16.25	15.15
1x50	608/0.32	10.1	0.42	13.75	12.85	90	17.7	16.5

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



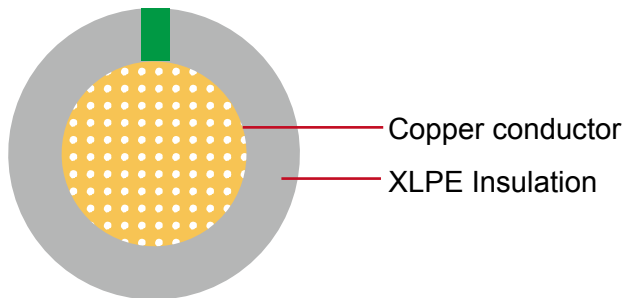
Automotive Cable

HAEXF

Application:

This XLPE insulated single-core cable is used in low-tension electric circuits for automobiles; especially used for circuits requiring heat resistance and cold resistance.

Construction:



Conductor: Tinned stranded copper

Insulation: XLPE

Standard Compliance: JASO D608

Technical Parameters:

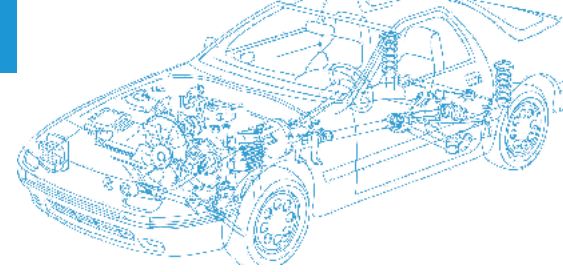
Operating temperature: $-40\text{ }^{\circ}\text{C}$ to $+150\text{ }^{\circ}\text{C}$

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.30	12/0.18	0.8	61.1	0.5	1.8	1.9	12
1x0.50	20/0.18	1.0	36.7	0.5	2.0	2.2	16
1x0.75	30/0.18	1.2	24.4	0.5	2.2	2.4	21
1x0.85	34/0.18	1.2	21.6	0.5	2.2	2.4	23
1x1.25	50/0.18	1.5	14.7	0.6	2.7	2.9	30
1x2.00	79/0.18	1.9	10.1	0.6	3.1	3.4	39
1x2.50	50/0.25	2.1	7.9	0.6	3.4	3.7	44

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



Automotive Cable

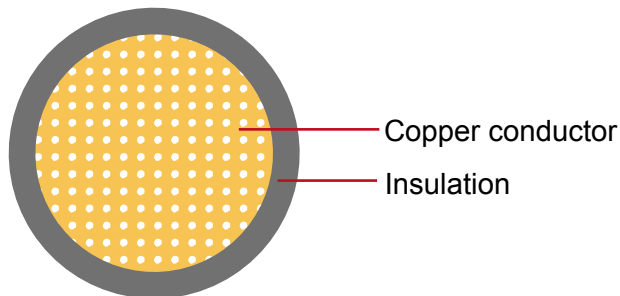


HFSSF-T3

Application:

This halogen free compound insulated single-core cable is used in low voltage circuits in automobiles (Vehicles).

Construction:



Conductor: Annealed stranded copper

Insulation: Halogen free compound

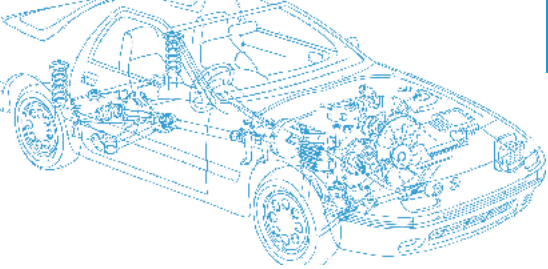
Standard Compliance: ES SPEC

Technical Parameters:

Operating temperature: -40 °C to +135°C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.30	19/0.16	0.8	48.8	0.3	1.4	1.5	5.0
1x0.50	19/0.19	1.0	34.6	0.3	1.6	1.7	6.9
1x0.75	19/0.23	1.2	23.6	0.3	1.8	1.9	10.0
1x1.25	37/0.21	1.5	14.6	0.3	2.1	2.2	14.3
1x2.00	37/0.26	1.8	9.5	0.4	2.6	2.7	22.2

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



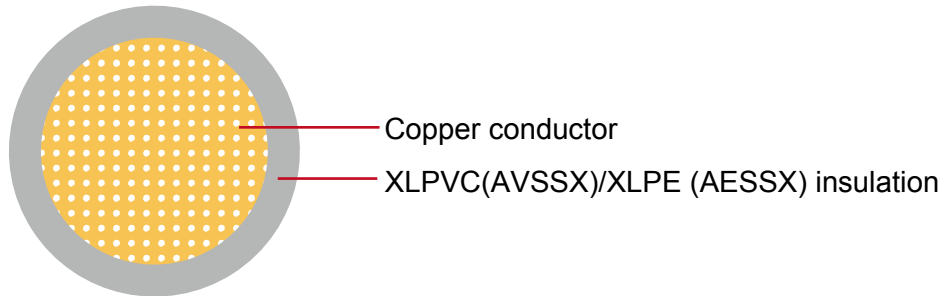
Automotive Cable

AVSSX/AESSX

Application:

This XLPVC (XLPE) insulated single-core cable is used in electric system for automobile.

Construction:



Conductor: Cu-ETP1 bare or tinned according to JIS C3102

Insulation: XLPVC (AVSSX)

XLPE (AESSX)

Standard Compliance: JASO D 608-92

Technical Parameters:

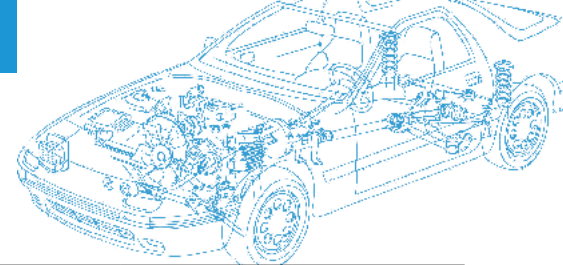
Operating temperature: - 40 °C to +105 °C (AVSSX)

Operating temperature: - 40 °C to +120 °C (AESSX)

AVSSX							
	Conductor			Insulation	Cable		
Nominal Cross-section	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.30	7/0.26	0.80	50.20	0.24	1.40	1.50	5
1x0.50	7/0.32	1.00	32.70	0.24	1.60	1.70	7
1x0.85	19/0.24	1.20	21.70	0.24	1.80	1.90	10
1x0.85	7/0.40	1.10	20.80	0.24	1.80	1.90	10
1x1.25	19/0.29	1.50	14.90	0.24	2.10	2.20	15
1x2.00	19/0.37	1.90	9.00	0.32	2.70	2.80	23
1x0.3f	19/0.16	0.80	48.80	0.24	1.40	1.50	2
1x0.5f	19/0.19	1.00	34.60	0.30	1.60	1.70	7
1x0.75f	19/0.23	1.20	23.60	0.30	1.80	1.90	10



Automotive Cable

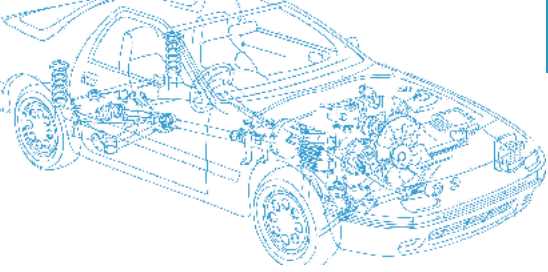


AVSSX							
Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x1.25f	37/0.21	1.50	14.60	0.30	2.10	2.20	14
1x2f	37/0.26	1.80	9.50	0.40	2.60	2.70	22
AESSX							
1x0.3f	19/0.16	0.80	48.80	0.30	1.40	1.50	5
1x0.5f	19/0.19	1.00	64.60	0.30	1.60	1.70	7
1x0.75f	19/0.23	1.20	23.60	0.30	1.80	1.90	10
1x1.25f	37/0.21	1.50	14.60	0.30	2.10	2.20	14
1x2f	37/0.26	1.80	9.50	0.40	2.60	2.70	22

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

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.





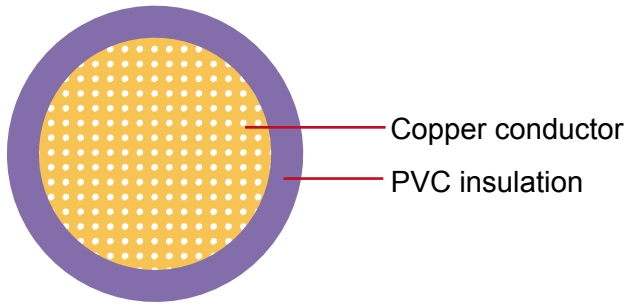
Automotive Cable

CAVS

Application:

This PVC insulated single-core low tension cable is used for automotive wiring.

Construction:



Conductor: Cu-ETP1 according to JIS C 3102

Insulation: PVC

Standard Compliance: JASO D 611-94

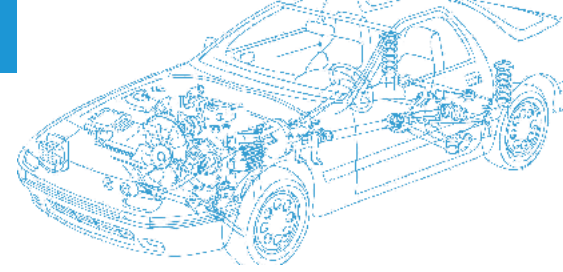
Technical Parameters:

Operating temperature: - 40 °C to +80 °C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.30	7/0.26	0.70	50.20	0.35	1.40	1.50	3
1x0.50	7/0.32	0.90	32.70	0.35	1.60	1.70	5
1x0.85	11/0.32	1.10	20.80	0.35	1.80	1.90	7
1x1.25	16/0.32	1.40	14.30	0.35	2.10	2.20	10

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

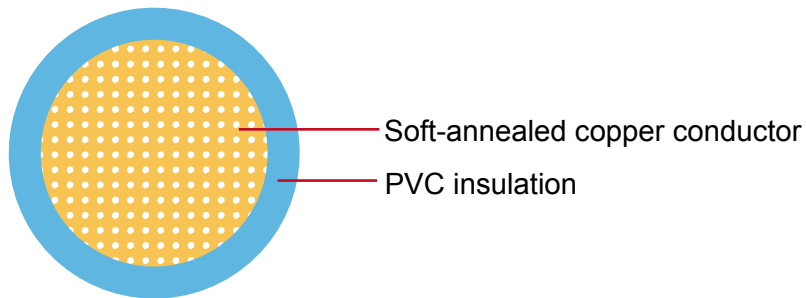


CAVUS

Application:

This PVC insulated single-core cable is used for automotive wiring.

Construction:



Conductor: Cu-ETP1 according to JIS C 3102

Insulation: PVC

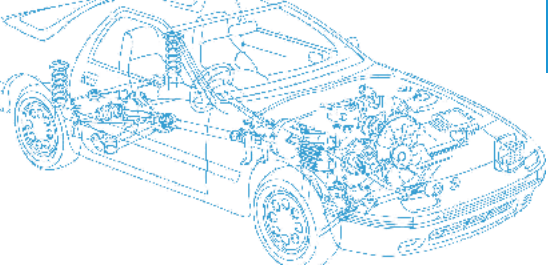
Standard Compliance: JASO D 611-94

Technical Parameters:

Operating temperature: - 40 °C to +80 °C

Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x0.30	7/0.26	0.70	50.20	0.20	1.10	1.20	4
1x0.50	7/0.32	0.90	32.70	0.20	1.30	1.40	6
1x0.85	11/0.32	1.10	20.80	0.20	1.50	1.60	9
1x1.25	16/0.32	1.40	14.30	0.20	1.80	1.90	13

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



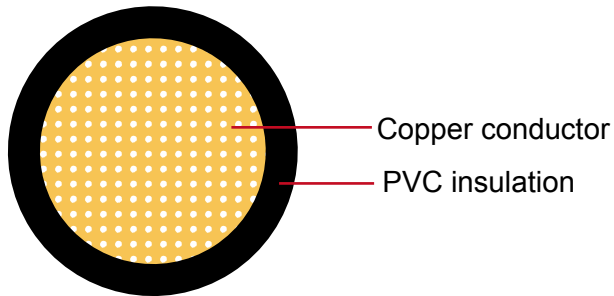
Automotive Cable

EB/HDEB

Application:

This PVC insulated single-core cable is used in low voltage circuits of battery for automobiles.

Construction:



Copper conductor

PVC insulation

Conductor: Cu-ETP1 according to JIS C 3102

Insulation: PVC

Standard Compliance: JIS C 3406

Features:

EB wires is for grounding (-side) and thin type; It consists of complex stranded conductors (flexible type).

HDEB wires are thicker type than EB wires to provide increased mechanical strength.

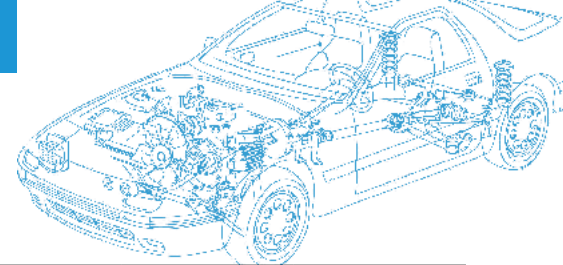
Technical Parameters:

Operating temperature: - 40 °C to +100 °C

EB							
Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x5	63/0.32	3.10	3.58	0.60	4.30	4.70	57
1x9	112/0.32	4.20	2.00	0.60	5.40	5.80	95
1x15	171/0.32	5.30	1.32	0.60	6.50	6.90	147
1 x20	247/0.32	6.50	0.92	0.60	7.70	8.00	207
1x30	361/0.32	7.80	0.63	0.60	9.00	9.40	303



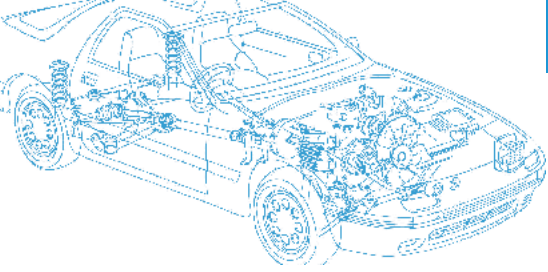
Automotive Cable



EB							
Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20°C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1x40	494/0.32	9.10	0.46	0.60	10.30	10.80	374
1x50	608/0.32	10.10	0.37	0.60	11.30	11.90	473
1x60	741/0.32	11.10	0.31	0.60	12.30	12.90	570
HDEB							
1x9	112/0.32	4.20	2.00	1.00	6.20	6.50	109
1x15	171/0.32	5.30	1.32	1.10	7.50	8.00	161
1x20	247/0.32	6.50	0.92	1.10	8.70	9.30	225
1x30	361/0.32	7.80	0.63	1.40	10.60	11.30	331
1x40	494/0.32	9.10	0.46	1.40	11.90	12.60	442
1x60	741/0.32	11.10	0.31	1.60	14.30	15.10	655

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.





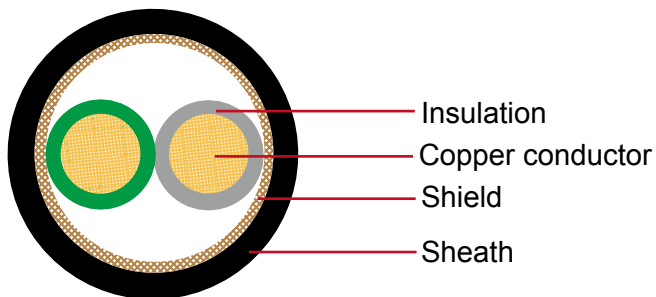
Automotive Cable

AEX-BS

Application:

This XLPE insulated cable is used in low voltage signal circuits in automobiles. superior heat resistance with irradiated PE. Suitable for the consideration or the shielding characteristic.

Construction:



Conductor: Annealed stranded copper

Insulation: Cross-Linked Polyethylene

Shield: Tin coated annealed copper

Sheath: Polyvinyl Chloride

Standard Compliance: JASO D608; HMC ES SPEC

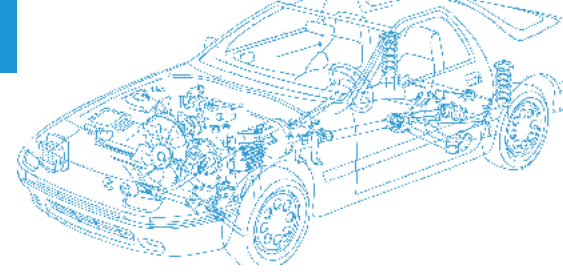
Technical Parameters:

Operating temperature: -40 °C to +120 °C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
0.5f	20/0.18	1.0	0.037	0.6	4.0	4.2	25
0.85f	34/0.18	1.2	0.021	0.6	7.0	7.2	62
1.25f	50/0.18	1.5	0.015	0.6	4.5	4.7	40

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

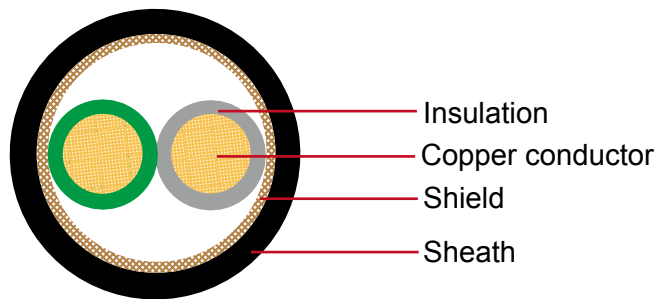


AEXHF-BS

Application:

This XLPE insulated cable is used in low voltage signal circuits in automobiles. Suitable for the consideration of the flexibility and thermal resistance. Suitable for the consideration of the shielding characteristic.

Construction:



Conductor: Annealed stranded copper

Insulation: Cross-Linked Polyethylene

Shield: Tin coated annealed copper

Sheath: Cross-linked Polyethylene

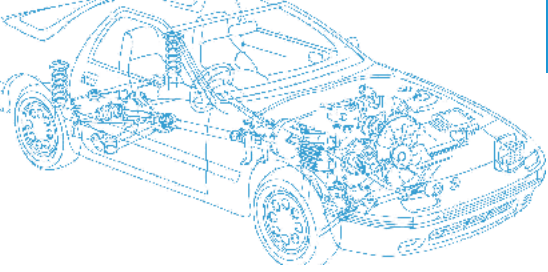
Standard Compliance: JASO D608; HMC ES SPEC

Technical Parameters:

Operating temperature: -40 °C to +150 °C

Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
0.5(2C)	20/0.18	0.93	39.1	0.5	5.9	6.1	42.5
0.85(2C)	34/0.18	1.21	23	0.5	6.6	6.8	55
1.25	50/0.18	1.5	15.7	0.6	7.6	7.8	71.5

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



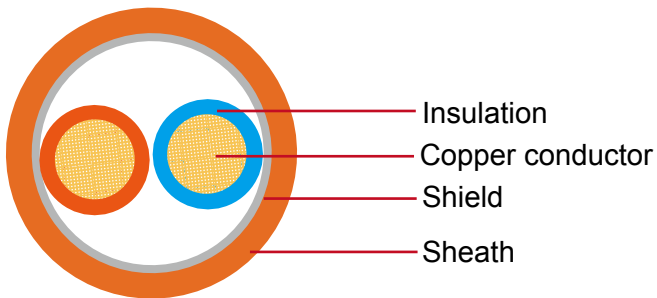
Automotive Cable

AESSXF/ALS

Application:

This XLPE insulated cable is used in low voltage signal circuits in automobiles. Superior heat resistant with irradiated PE. Suitable for the consideration of the flexibility and shielding characteristic. Shielding wire is consist of drain wire included Al-Mylar tape around core.

Construction:



Conductor: Annealed stranded copper

Insulation: XLPE

Shield: Al-Mylar Tape

Sheath: PVC

Standard Compliance: JASO D608; HMC ES SPEC

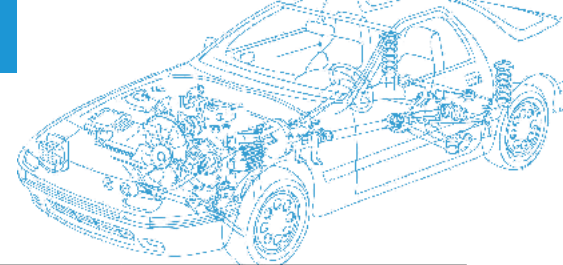
Technical Parameters:

Operating temperature: -40 °C to +120 °C

Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1/0.3	19/0.16	0.8	49.4	0.3	3.4	3.6	17
2/0.3	19/0.16	0.8	49.4	0.3	3.9	4.1	24
3/0.3	19/0.16	0.8	49.4	0.3	4.1	4.3	29
4/0.3	19/0.16	0.8	49.4	0.3	4.4	4.7	35



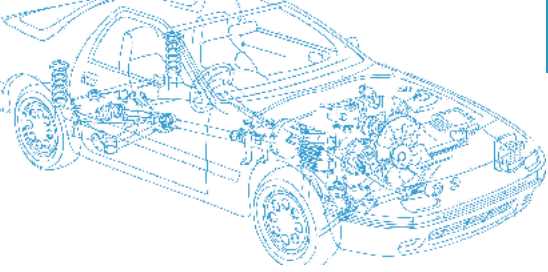
Automotive Cable



Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1/0.5	19/0.19	1.0	35.03	0.3	3.6	3.8	20
2/0.5	19/0.19	1.0	35.03	0.3	4.3	4.5	28
3/0.5	19/0.19	1.0	35.03	0.3	4.7	4.9	38
4/0.5	19/0.19	1.0	35.03	0.3	5.1	5.3	46
1/0.75	19/0.23	1.2	23.88	0.3	3.8	4.0	23
2/0.75	19/0.23	1.2	23.88	0.3	4.9	5.1	38
3/0.75	19/0.23	1.2	23.88	0.3	5.1	5.3	49
4/0.75	19/0.23	1.2	23.88	0.3	5.6	5.8	60
1/1.25	37/0.21	1.5	15.2	0.3	4.1	4.3	28
2/1.25	37/0.21	1.5	15.2	0.3	5.5	5.7	48
3/1.25	37/0.21	1.5	15.2	0.3	5.8	6.0	64
4/1.25	37/0.21	1.5	15.2	0.3	6.3	6.5	80

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.





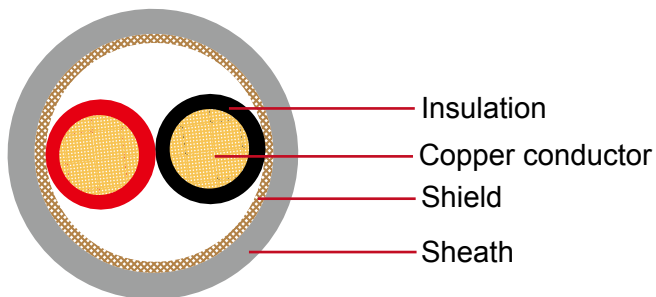
Automotive Cable

AVSS-BS

Application:

This PVC insulated cable is used in low electrostatic capacitance in automobiles(vehicles). Thinner insulation than AVS type. Suitable for the consideration of the shielding characteristic.

Construction:



Conductor: Annealed stranded copper

Insulation: PVC

Shield: Tin coated annealed copper

Sheath: PVC

Standard Compliance: JASO D611; ES SPEC

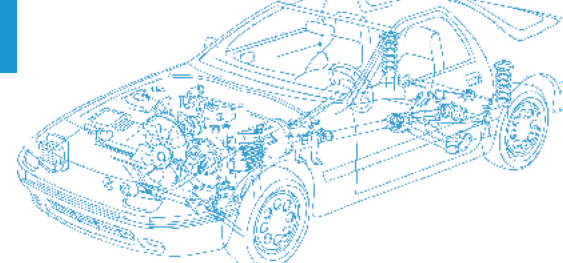
Technical Parameters:

Operating temperature: -40 °C to +120 °C

Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
1/0.3	70.26	0.8	50.2	0.3	3.2	3.4	17
2/0.3	7/0.26	0.8	50.2	0.3	4.6	4.8	28
3/0.3	7/0.26	0.8	50.2	0.3	4.8	5.0	35
4/0.3	7/0.26	0.8	50.2	0.3	5.2	5.4	43
1/0.5	7/0.32	1.0	32.7	0.3	3.4	3.6	22

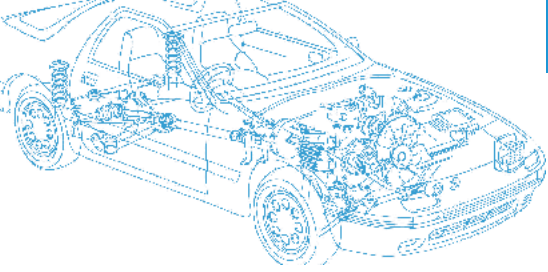


Automotive Cable



Nominal Cross-section	Conductor			Insulation	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.	Thickness Wall nom.	Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
2/0.5	7/0.32	1.0	32.7	0.3	5.0	5.2	36
3/0.5	7/0.32	1.0	32.7	0.3	5.3	5.5	45
4/0.5	7/0.32	1.0	32.7	0.3	5.7	5.9	55
1/0.85	19/0.24	1.2	21.7	0.3	3.5	3.7	25
2/0.85	19/0.24	1.2	21.7	0.3	5.4	5.6	42
3/0.85	19/0.24	1.2	21.7	0.3	5.6	5.9	58
4/0.85	19/0.24	1.2	21.7	0.3	6.1	6.3	64
1/1.25	19/0.29	1.5	14.9	0.3	3.9	4.1	33
2/1.25	19/0.29	1.5	14.9	0.3	6.0	5.2	56
3/1.25	19/0.29	1.5	14.9	0.3	6.4	6.6	72
4/1.25	19/0.29	1.5	14.9	0.3	6.9	7.1	90





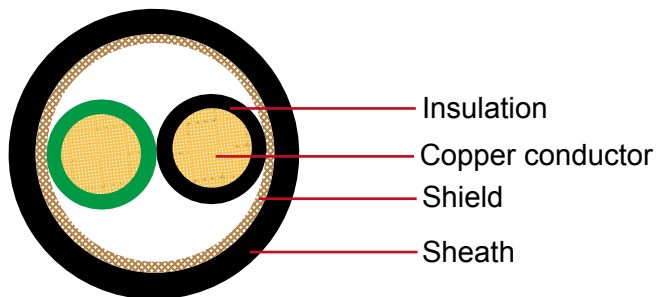
Automotive Cable

APEX-BS

Application:

This XLPE insulated cable is used in low voltage signal circuits in automobiles. Superior heat resistance with irradiated PE. Suitable for the consideration of the shielding characteristic.

Construction:



Conductor: Annealed stranded copper

Insulation: XLPE

Shield: Tin coated annealed copper

Sheath: PVC

Standard Compliance: JASO D611; ES SPEC

Technical Parameters:

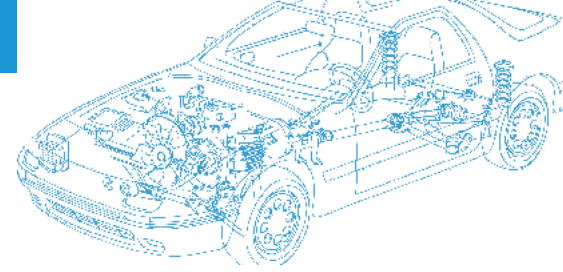
Operating temperature: -40 °C to +120 °C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		Weight Approx.
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.		Overall Diameter min.	Overall Diameter max.	
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
0.5	20/0.18	0.93	0.037	0.6	3.7	3.9	21
0.85	34/0.18	1.21	0.022	0.6	4.2	4.4	27
1.25	50/0.18	1.50	0.015	0.6	4.5	4.7	31

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



Automotive Cable

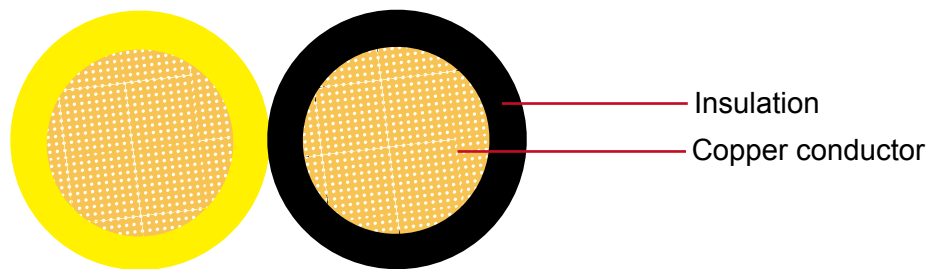


AVSSXFT

Application:

This Cross-linked Polyvinyl Chloride insulated cable is used in low voltage signal circuits in automobiles. Superior heat resistant with irradiated PVC.

Construction:



Conductor: Annealed stranded copper

Insulation: Cross-linked Polyvinyl Chloride

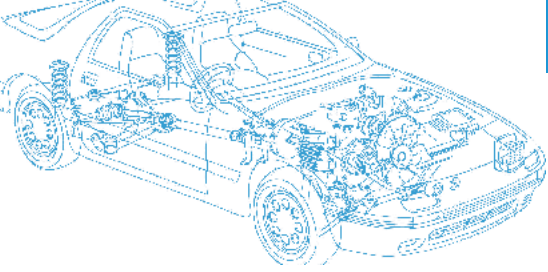
Standard Compliance: JASO D611; ES SPEC

Technical Parameters:

Operating temperature: -40 °C to +100 °C

Nominal Cross-section	Conductor			Insulation Thickness Wall nom.	Cable		
	No. and Dia. of Wires	Diameter max.	Electrical Resistance at 20 °C max.		Overall Diameter min.	Overall Diameter max.	Weight Approx.
mm ²	no./mm	mm	mΩ/m	mm	mm	mm	kg/km
0.3	19/0.16	0.8	49.4	0.3	2.8	3.0	10.3
0.5	19/0.19	1.0	35.0	0.3	3.2	3.4	14.0
0.85	37/0.17	1.2	22.0	0.3	3.6	3.8	20.4
1.25	37/0.21	1.5	14.6	0.3	4.2	4.4	29.5

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



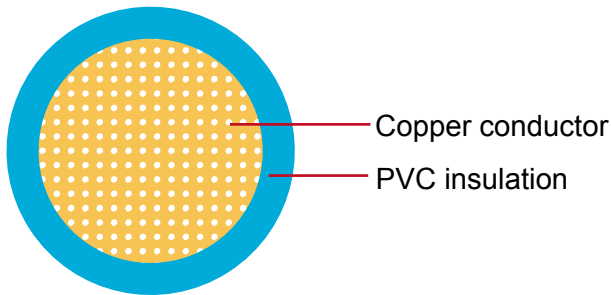
Automotive Cable

TWP

Application:

This PVC insulated single-core cable is used in automotive applications where small diameter and minimal weight is required.

Construction:



Copper conductor

PVC insulation

Conductor: Soft-annealed copper according to ASTM B3

Insulation: PVC

Standard Compliance: SAE J1128

Technical Parameters:

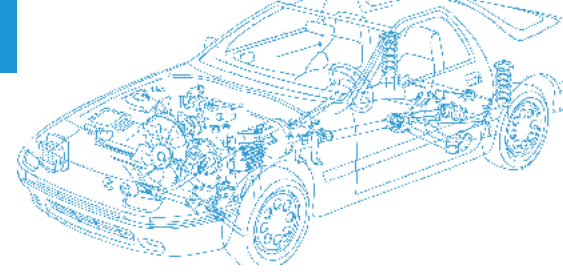
Operating temperature: - 40 °C to +80 °C

Size	Conductor			Insulation		Cable	
	Nominal Cross-section	No. and Dia. of Wires	Diameter max.	Thickness Wall min.	Thickness Wall nom.	Overall Diameter max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	mm	kg/km
22	1x0.35	7/0.25	0.76	0.28	0.40	1.70	6
20	1x0.50	7/0.32	0.97	0.28	0.40	1.90	8
18	1x0.80	16/0.25	1.17	0.28	0.40	2.20	11
18	1x0.80	19/0.23	1.17	0.28	0.40	2.20	11
16	1x1.00	19/0.28	1.45	0.28	0.40	2.40	15
14	1x2.00	19/0.36	1.80	0.28	0.40	2.70	22
12	1x3.00	19/0.45	2.29	0.32	0.46	3.30	34
10	1x5.00	19/0.57	2.87	0.35	0.50	4.00	53
8*	1x8.00	49/0.46	4.06	0.39	0.55	4.90	85

*for SAE J1128 Applications only

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

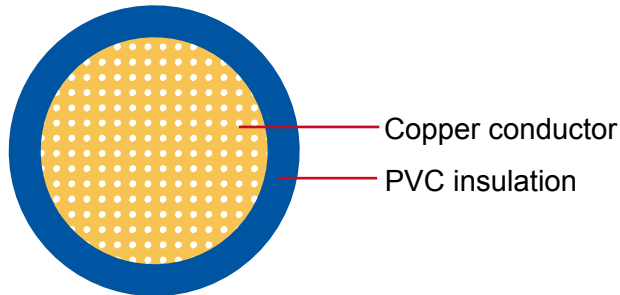


GPT

Application:

This PVC insulated single-core cable is used in automotive applications for general circuit wiring and automotive or marine applications where 105°C is required.

Construction:



Copper conductor

PVC insulation

Conductor: Soft-annealed copper according to ASTM B3

Insulation: PVC

Standard Compliance: SAE J1128

Technical Parameters:

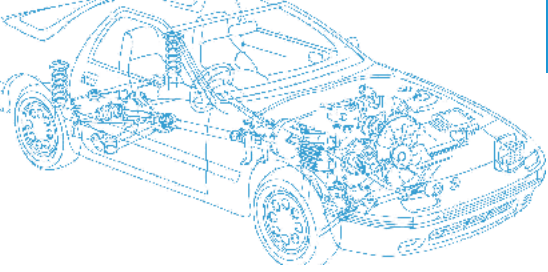
Operating temperature: - 40 °C to +80 °C

Size	Conductor			Insulation		Cable	
	Nominal Cross-section	No. and Dia. of Wires	Diameter max.	Thickness Wall min.	Thickness Wall nom.	Overall Diameter max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	mm	kg/km
22*	1x0.35	7/0.25	0.76	-	0.58	2.10	7
20	1x0.50	7/0.32	0.97	0.41	0.58	2.40	10
18	1x0.80	16/0.25	1.17	0.41	0.58	2.50	12
18	1x0.80	19/0.23	1.17	0.41	0.58	2.50	12
16	1x1.00	19/0.28	1.45	0.41	0.58	2.90	17
14	1x2.00	19/0.36	1.80	0.41	0.58	3.20	25
12	1x3.00	19/0.45	2.29	0.46	0.66	3.80	38
10	1x5.00	19/0.57	2.87	0.55	0.79	4.70	59
8**	1x8.00	19/0.73	3.26	0.66	0.94	6.00	96

*for Ford ESF M1L56-A Applications only

** For SAE J1128 and UTMS applications only

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



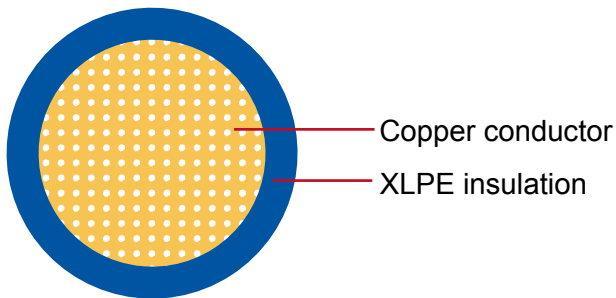
Automotive Cable

TXL

Application:

This XLPE insulated single-core cable is used in automotive applications where higher heat resistance, small diameter and minimal weight is required.

Construction:



Conductor: Soft-annealed copper according to ASTM B

Insulation: Polyethylene crosslinked (XLPE)

Standard Compliance: SAE J1128

Technical Parameters:

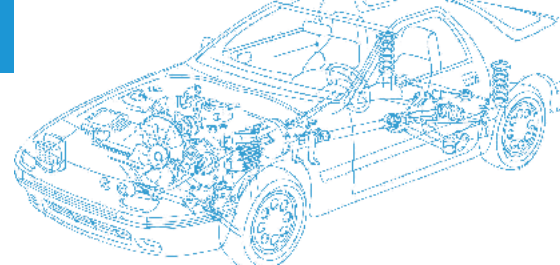
Operating temperature: - 40 °C to +105 °C

Size	Conductor			Insulation		Cable	
	Nominal Cross-section	No. and Dia. of Wires	Diameter max.	Thickness Wall min.	Thickness Wall nom.	Overall Diameter max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	mm	kg/km
22	1x0.35	7/0.25	0.76	0.28	0.40	1.70	6
20	1x0.50	7/0.32	0.97	0.28	0.40	1.90	8
20	1x0.50	19/0.19	0.95	0.28	0.40	1.90	8
18	1x0.80	16/0.25	1.17	0.28	0.40	2.20	11
18	1x0.80	19/0.23	1.17	0.28	0.40	2.20	11
16	1x1.00	19/0.28	1.45	0.28	0.40	2.40	15
14	1x2.00	19/0.36	1.80	0.28	0.40	2.70	22
12	1x3.00	19/0.45	2.29	0.32	0.46	3.30	34
10	1x5.00	19/0.57	2.87	0.35	0.50	4.00	53
10	1x5.00	100/0.26	3.00	0.35	0.45	3.90	53
8*	1x8.00	49/0.46	4.06	0.39	0.55	4.90	85

*For SAE J1128 applications only

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

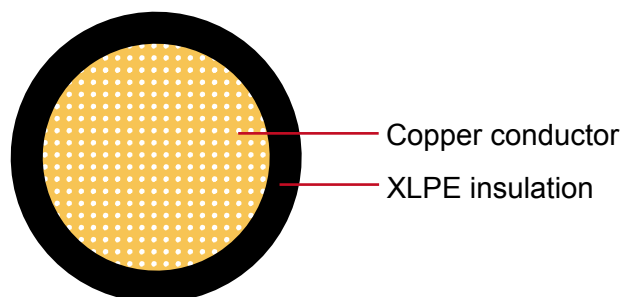


GXL

Application:

This XLPE insulated single-core cable is used in automotive applications where higher heat resistance and small diameter is required.

Construction:



Conductor: Soft-annealed copper according to ASTM B3

Insulation: Polyethylene crosslinked (XLPE)

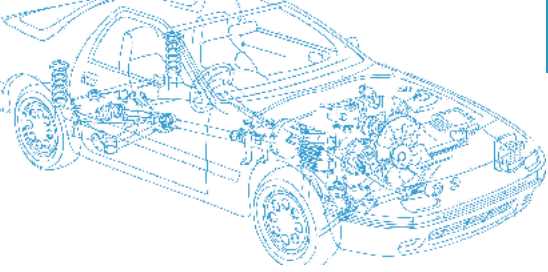
Standard Compliance: SAE J1128

Technical Parameters:

Operating temperature: - 40 °C to +125 °C

Size	Conductor			Insulation		Cable	
	Nominal Cross-section	No. and Dia. of Wires	Diameter max.	Thickness Wall min.	Thickness Wall nom.	Overall Diameter max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	mm	kg/km
20	1x0.50	19/0.20	0.97	0.41	0.58	2.40	9
18	1x0.80	19/0.23	1.17	0.41	0.58	2.50	12
18	1x0.80	16/0.25	1.17	0.41	0.58	2.50	12
16	1x1.00	19/0.24	1.45	0.41	0.58	2.90	17
14	1x2.00	19/0.36	1.80	0.41	0.58	3.20	25
12	1x3.00	19/0.45	2.29	0.46	0.66	3.80	38
10	1x5.00	19/0.57	2.87	0.56	0.79	4.70	58

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



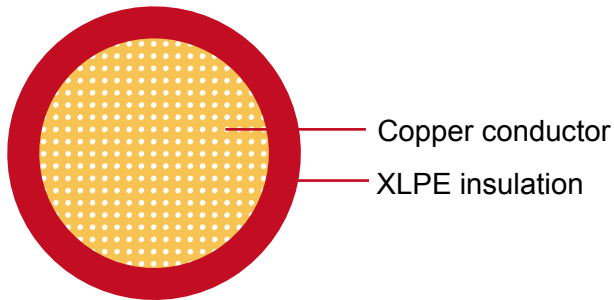
Automotive Cable

SXL

Application:

This XLPE insulated single-core cable is used in automotive applications where higher heat resistance is required.

Construction:



Copper conductor

XLPE insulation

Conductor: Soft-annealed copper according to ASTM B3

Insulation: Polyethylene crosslinked (XLPE)

Standard Compliance: SAE J1128

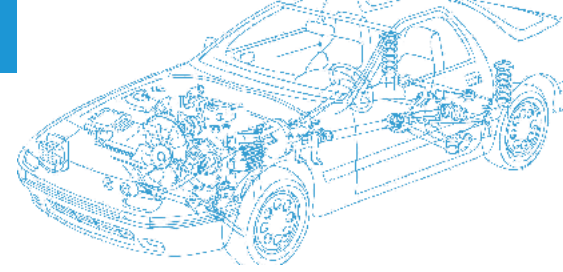
Technical Parameters:

Operating temperature: - 40 °C to +125 °C

Size	Conductor			Insulation		Cable	
	Nominal Cross-section	No. and Dia. of Wires	Diameter max.	Thickness Wall min.	Thickness Wall nom.	Overall Diameter max.	Weight Approx.
	mm ²	no./mm	mm	mm	mm	mm	kg/km
20	1x0.50	7/0.32	0.97	0.52	0.74	2.80	11
18	1x0.80	19/0.23	1.17	0.53	0.76	3.00	15
16	1x1.00	19/0.28	1.45	0.57	0.81	3.40	20
14	1x2.00	19/0.36	1.80	0.62	0.89	3.90	29
12	1x3.00	19/0.45	2.29	0.66	0.94	4.60	43
10	1x5.00	19/0.57	2.87	0.73	1.04	5.30	64

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

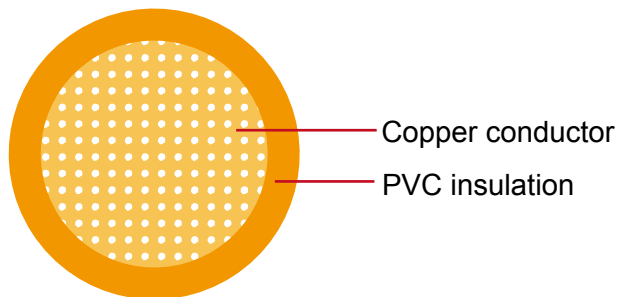


HDT

Application:

This PVC insulated single-core cable is used for automobiles, motorcycles and other motor vehicles.

Construction:



Conductor: Soft-annealed copper according to ASTM B3

Insulation: PVC

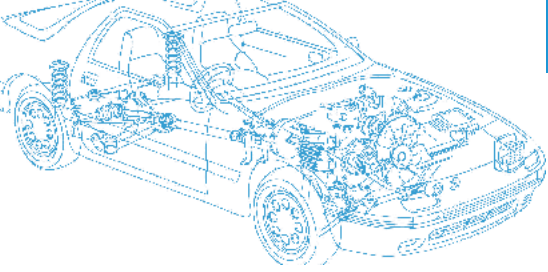
Standard Compliance: SAE J1128

Technical Parameters:

Operating temperature: - 40 °C to +85 °C

Size	Conductor			Insulation	Cable	
	Nominal Cross-section	No. and Dia. of Wires	Diameter max.	Thickness Wall nom.	Overall Diameter max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	kg/km
20	1x0.50	7/0.31	1.00	0.91	2.80	14
18	1x0.80	16/0.26	1.50	0.94	3.00	20
16	1x1.00	19/0.29	1.50	1.02	3.50	25
14	1x2.00	19/0.36	1.80	1.04	3.90	33
12	1x3.00	19/0.45	2.30	1.17	4.60	49
10	1x5.00	19/0.57	3.00	1.17	5.30	71
8	1x8.00	49/0.45	3.70	1.40	6.50	98

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.



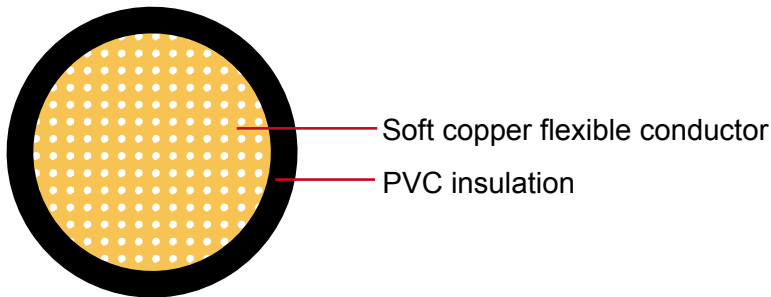
Automotive Cable

SGT

Application:

This PVC insulated single-core cable is used for automotive starters or battery grounds.

Construction:



Soft copper flexible conductor

PVC insulation

Conductor: Soft copper flexible conductor

Insulation: PVC

Standard Compliance: SAE J1127

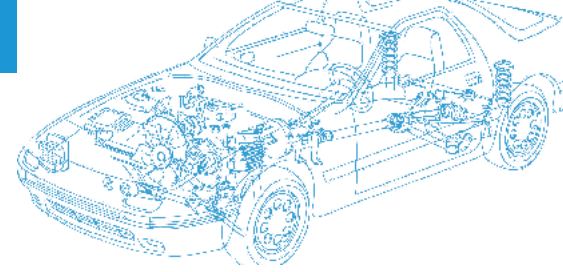
Technical Parameters:

Operating temperature: - 40 °C to +80 °C

Size	Conductor			Insulation	Cable	
	Nominal Cross-section	No. and Dia. of Wires	Diameter max.	Thickness Wall nom.	Overall Diameter max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	kg/km
6	1x13.48	266/0.26	4.12	1.52	6.58	152
4	1x21.28	420/0.26	6.72	1.65	9.40	243
2	1x33.70	665/0.26	8.58	1.65	11.26	368
1	1x42.36	836/0.26	9.77	1.65	12.45	454
1/0	1x53.91	1064/0.26	11.10	1.65	13.78	568
2/0	1x67.04	1323/0.26	12.47	1.65	15.15	697
3/0	1x84.42	1666/0.26	14.10	1.98	17.30	886
4/0	1x106.76	2107/0.26	15.97	1.98	19.17	1105

*Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

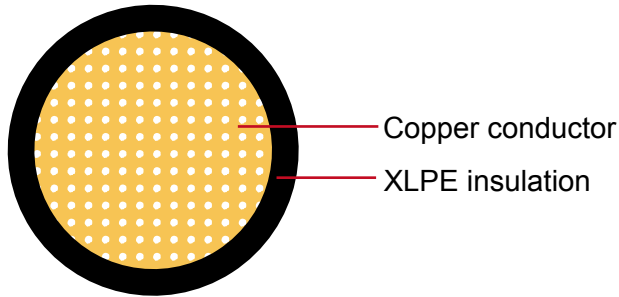


STX

Application:

This XLPE insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Cable Construction:



Conductor: Soft-annealed copper according to ASTM B

Insulation: XLPE (Polyethylene crosslinked)

Standard: SAE J 1127

Special properties:

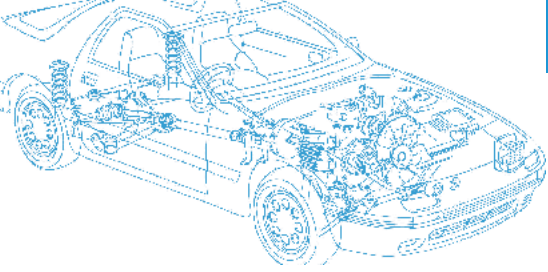
Flame retardant
Highly resistant against acids, lyes, petrol and diesel

Technical Parameters:

Operating temperature: -40°C to +125°C

Conductor Construction				Insulation		
Size	Nominal cross-section	No. and Dia. of Wires	Diameter of Conductor max.	Nominal thickness	Overall Diameter Max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	kg/km
6	1x13	133/0.36	4.83	1.09	7.80	147
4	1x19	133/0.46	6.09	1.12	9.50	230
2	1x32	133/0.57	7.67	1.12	11.00	341
1	1x40	259/0.46	8.49	1.12	12.00	421
1/0	1x50	1026/0.26	9.47	1.12	13.00	508
2/0	1x62	1254/0.26	10.47	1.12	14.50	613
3/0	1x81	1615/0.26	11.98	1.12	17.00	778
4/0	1x103	2052/0.26	13.40	1.12	18.50	978

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



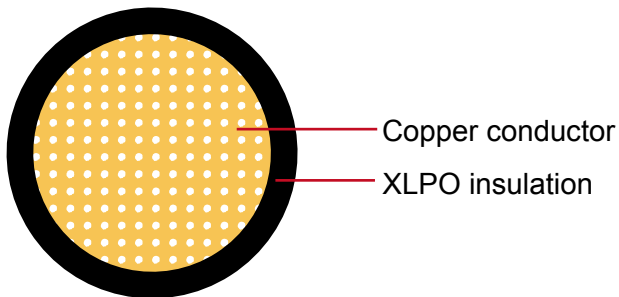
Automotive Cable

SGX

Application:

This XLPO insulated low-tension automotive cable is used in motorcycles and other motor vehicles for starting, charging, lighting, signal and instrument panel circuits.

Construction:



Copper conductor

XLPO insulation

Conductor: Soft-annealed copper according to ASTM B

Insulation: XLPO (Cross-Linked Polyolefin)

Standard: SAE J 1127

Special properties:

Flame retardant
Highly resistant against acids, lyes, petrol and diesel

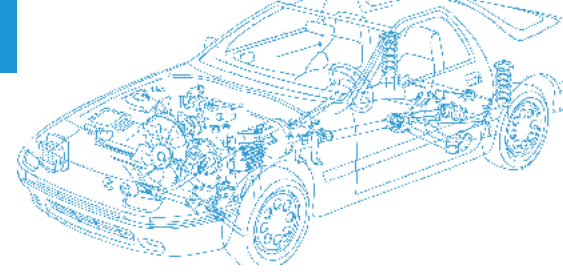
Technical Parameters:

Operating temperature: -40°C to +125°C

Conductor Construction				Insulation		
Size	Nominal Cross-section	No. and Dia. of Wires	Diameter of Conductor max.	Nominal Thickness	Overall Diameter Max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	kg/km
6	1x13	133/0.36	4.83	1.52	8.6	166
4	1x19	133/0.46	6.09	1.65	10.5	257
2	1x32	133/0.57	7.67	1.65	12.00	373
1	1x40	259/0.46	8.49	1.65	13.00	453
1/0	1x50	1026/0.26	9.47	1.65	14.50	545
2/0	1x62	1254/0.26	10.47	1.65	16.00	653
3/0	1x81	1615/0.26	11.98	1.98	18.50	847
4/0	1x103	2052/0.26	13.40	1.98	20.00	1052

Note: Other configurations, sizes, colors and length not specified herein are available upon request.

Automotive Cable

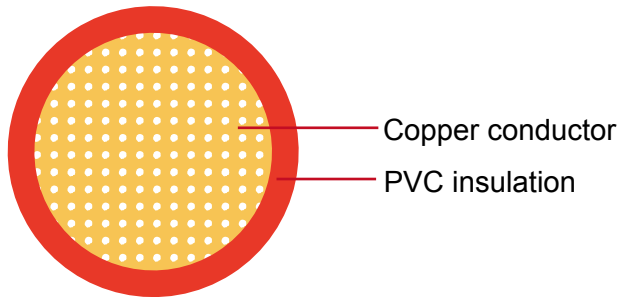


WTA

Application:

This PVC insulated low-voltage cable is designed for used at nominal voltage of 60v dc (60V AC rms) or surface vehicles electrical systems.

Construction:



Conductor: Soft-annealed copper according to ASTM B

Insulation: PVC Ultra-Thin wall according to SAE J 1678 ford WSBM1 L134-A/Chrysler MS 9532/Lear UTMS 12501/SAEJ 1678

Standard: SAE J1678

Special properties:

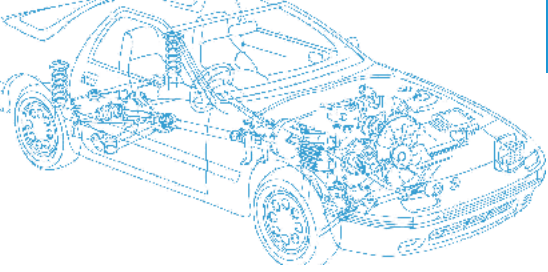
Flexible

Technical Parameters:

Operating temperature: -40°C to +85°C

Conductor Construction				Insulation		
Size	Nominal Cross-section	No. and Dia. of Wires	Diameter of Conductor max.	Nominal Thickness	Overall Diameter max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	kg/km
22	1x0.35	7/0.25	0.76	0.20	1.35	4
20	1x0.50	7/0.32	0.97	0.20	1.55	7
18	1x0.80	19/0.23	1.17	0.20	1.75	8
16	1x1.3	19/0.28	1.45	0.20	2.03	12
14	1x2	19/0.36	1.8	0.20	2.39	19
12	1x3	19/0.45	2.3	0.24	3.00	30

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



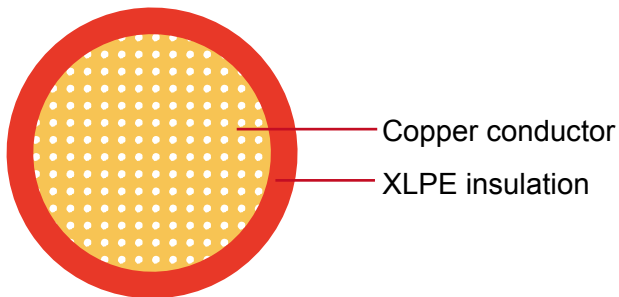
Automotive Cable

WXC

Application:

This XLPE insulated low-voltage cable is designed for used at nominal voltage of 60v dc (60V AC rms) or surface vehicles electrical systems.

Construction:



Copper conductor

XLPE insulation

Conductor: Soft-annealed copper according to ASTM B

Insulation: XLPE Ultra-Thin wall flame-retardant, halogen-free

Standard: SAE J1678

Special properties:

Flexible

Technical Parameters:

Operating temperature: -40°C to +125°C

Conductor Construction				Insulation		
Size	Nominal Cross-section	No. and Dia. of Wires	Diameter of Conductor max.	Nominal Thickness	Overall Diameter max.	Weight Approx.
AWG	mm ²	no./mm	mm	mm	mm	kg/km
22	1x0.35	7/0.25	0.76	0.20	1.35	4
20	1x0.50	7/0.32	0.97	0.20	1.55	7
18	1x0.80	19/0.23	1.17	0.20	1.75	8
16	1x1.3	19/0.28	1.45	0.20	2.03	12
14	1x2	19/0.36	1.8	0.20	2.39	19
12	1x3	19/0.45	2.3	0.24	3.00	30

Note: Other configurations, sizes, colors and length not specified herein are available upon request.



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