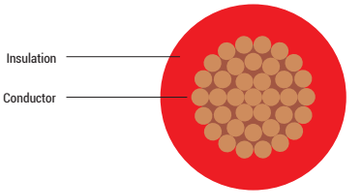
SECTION - IX

AUTO CABLES

PRODUCTS

SXL

REACH | RoHS | CE



SXL - Special Purpose Cross-Linked Polyolefin Insulated Cable

Application
These are extra thick walled insulated cables used in automotive electric circuits of motorcycles and off-road vehicles.

Standard
In accordance to SAE J1128

Temperature Range (3000 Hrs)
-40°C to +125°C

Cable Construction
Soft annealed electrolytic copper ASTM B3
Cross-linked polyethylene (PE) with heat resistant properties according to SAE J1128

Packing
Available in 100 mtrs. coil. Longer length available in spools or wooden drums.

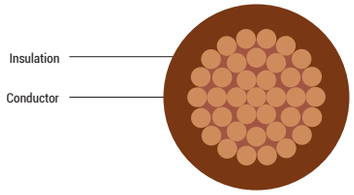
Special Properties
High temperature resistant and flame retardant
Provides higher reliability in heat resistance than conventional general wires due to emission bridging

Cable Design Parameters

SAE Conductor Size No.	No. of Strands	Max. Strand Diameter mm	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Approx. Overall Diameter mm
22*	7	0.26	0.78	0.74	2.3
20	7	0.32	0.96	0.74	2.5
20	19	0.19	0.95	0.74	2.5
18	16	0.26	1.22	0.76	2.7
18	19	0.23	1.12	0.76	2.7
16	19	0.29	1.45	0.81	3.1
14	19	0.36	1.80	0.89	3.6
12	19	0.45	2.25	0.94	4.2
10	19	0.58	2.98	1.04	5.0
10	104	0.25	2.90	1.04	5.0
8	19	0.72	3.60	1.09	5.9
8	50	0.45	3.67	1.09	5.9
6*	37	0.72	5.10	1.09	7.3
6*	133	0.36	4.80	1.09	7.0

*Not as per SAE J1128

GXL



GXL - General Purpose Cross-Linked Polyolefin Insulated Cable

Application
These are standard wall insulated cables for general purpose application in automotive electric circuits of motorcycles and off-road vehicles.

Standard
In accordance to SAE J1128

Temperature Range (3000 Hrs)
-40°C to +125°C

Cable Construction
Soft annealed electrolytic copper ASTM B3
Cross-linked polyethylene (PE) with heat resistant properties according to SAE J1128

Packing
Available in 100 mtrs. coil. Longer length available in spools or wooden drums.

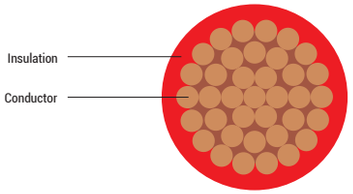
Special Properties
High temperature resistant and flame retardant
Provides higher reliability in heat resistance than conventional general wires due to emission bridging

Cable Design Parameters

SAE Conductor Size No.	No. of Strands	Max. Strand Diameter mm	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Approx. Overall Diameter mm
22*	7	0.26	0.78	0.58	2.0
20	7	0.32	0.96	0.58	2.2
20	19	0.19	0.95	0.58	2.2
18	16	0.26	1.22	0.58	2.4
18	19	0.23	1.12	0.58	2.4
16	19	0.29	1.45	0.58	2.7
14	19	0.36	1.80	0.58	3.0
12	19	0.45	2.25	0.66	3.6
10	19	0.58	2.98	0.79	4.5
10	104	0.25	2.90	0.79	4.5
8	19	0.72	3.60	0.94	5.6
8	50	0.45	3.67	0.94	5.6
6*	37	0.72	5.10	1.09	7.3
6*	133	0.36	4.80	1.09	7.0

*Not as per SAE J1128

TXL



TXL - Thin Wall Cross-Linked Polyolefin Insulated Cable

Application
These are extra thin walled insulated cables used for automotive lightings, signals and instrument panel circuits.

Standard
In accordance to SAE J1128

Temperature Range (3000 Hrs)
-40°C to +125°C

Cable Construction
Soft annealed electrolytic copper ASTM B3
Cross-linked polyethylene (PE) with heat resistant properties according to SAE J1128

Packing
Available in 100 mtrs. coil. Longer length available in spools or wooden drums.

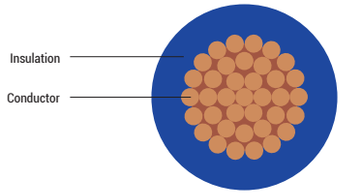
Special Properties
High temperature resistant and flame retardant
Provides higher reliability in heat resistance than conventional general wires due to emission bridging

Cable Design Parameters

SAE Conductor Size No.	No. of Strands	Max. Strand Diameter mm	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Approx. Overall Diameter mm
22	22	0.26	0.78	0.4	1.6
20	20	0.32	0.96	0.4	1.8
20	20	0.19	0.95	0.4	1.8
18	18	0.26	1.22	0.4	2.0
18	18	0.23	1.12	0.4	2.0
16	16	0.29	1.45	0.4	2.3
14	14	0.36	1.80	0.4	2.6
12	12	0.45	2.25	0.46	3.2
10	10	0.58	2.98	0.51	4.0
10	10	0.25	2.90	0.51	4.0
8	8	0.72	3.60	0.56	4.8
8	8	0.45	3.67	0.56	4.8
6*	6*	0.72	5.10	0.70	6.5
6*	6*	0.36	4.80	0.70	6.2

*Not as per SAE J1128

AV



AV - Standard wall PVC insulation

Application
These are standard wall auto cables for ideal use in automotives by harness manufacturers.

Standard
In accordance to JASO D 611, JASO D 618, JIS C 3406

Temperature Range (3000 Hrs)
-40°C to +80°C

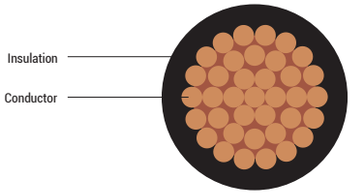
Cable Construction
Soft annealed electrolytic copper Cu-ETP1 according to D 609-90, bare conductor construction according to JASO D 611
PVC insulation, material accordingly to JASO D 611

Packing
Available in 100 mtrs. Longer length available in spools.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Min. Insulation Thickness (mm)	Overall Diameter (mm)		Approx. Weight (Kg/Km)
						Max.	Tolerance	
0.5	7	0.32	1.0	32.7	0.6	2.4	-0.2	10.0
0.85	11	0.32	1.2	20.8	0.6	2.6	-0.2	13.0
1.25	16	0.32	1.5	14.3	0.6	2.9	-0.2	17.0
2	26	0.32	1.9	8.81	0.6	3.4	-0.3	26.0
3	41	0.32	2.4	5.59	0.7	4.1	-0.3	40.0
5	65	0.32	3.0	3.52	0.8	4.9	-0.3	62.0
8	50	0.45	3.7	2.32	0.9	5.8	-0.3	92.0
10	63	0.45	4.5	1.84	1.0	6.9	-0.4	120.0
15	84	0.45	4.8	1.38	1.1	7.4	-0.4	160.0
0.5f*	20	0.18	1.0	36.7	0.6	2.4	-0.2	9.0
0.85f*	30	0.18	1.2	24.4	0.6	2.6	-0.2	12.0
1.25f*	50	0.18	1.5	14.7	0.6	2.9	-0.2	18.0
2f*	37	0.26	1.8	9.5	0.6	3.4	-0.4	25.0
3f*	61	0.26	2.4	5.76	0.7	4.1	-0.3	40.0

AVS



AVS - Thin Wall PVC Insulation

Application
These are thin wall auto cables ideal for use in automotives.

Standard
JASO D 611, JASO D 618

Temperature Range (3000 Hrs)
-40°C to +80°C

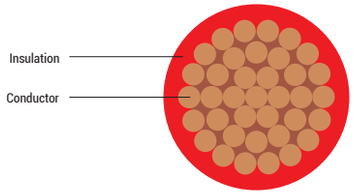
Cable Construction
Soft annealed electrolytic copper Cu-ETP1 according to D 609-90, bare conductor construction according to JASO D 611
PVC insulation, material accordingly to JASO D 611

Packing
Available in 100 mtrs. Longer length available in spools.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Standard Insulation Thickness (mm)	Overall Diameter (mm)		Approx. Weight (Kg/Km)
						Max.	Tolerance	
0.3	7	0.26	0.8	50.2	0.50	1.9	-0.1	6
0.5	7	0.32	1.0	32.7	0.50	2.1	-0.1	8
0.85	11	0.32	1.2	20.8	0.50	2.3	-0.1	12
1.25	16	0.32	1.5	14.3	0.50	2.6	-0.1	16
2	26	0.32	1.9	8.81	0.50	3.1	-0.2	25
3	41	0.32	2.4	5.59	0.60	3.8	-0.2	39
5	65	0.32	3.0	3.52	0.70	4.6	-0.2	60
0.3f*	15	0.18	0.8	48.9	0.50	1.9	-0.1	6
0.5f*	20	0.18	1.0	36.7	0.50	2.1	-0.1	8
0.75f*	30	0.18	1.2	24.4	0.50	2.3	-0.1	11
1.25f*	50	0.18	1.5	14.7	0.50	2.6	-0.1	17
2f*	37	0.26	1.8	9.5	0.50	3.1	-0.4	24

AVSS



AVSS - Ultra Thin Wall PVC Insulation

Application
These are ultra thin wall auto cables ideal for use in automotives.

Standard
JASO D 611, JASO D 618

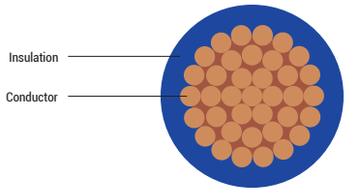
Temperature Range (3000 Hrs)
-40°C to +80°C

Cable Construction
Soft annealed electrolytic copper Cu-ETP1 according to JIS C 3102, bare conductor construction according to JASO D 611
PVC, insulation material accordingly to JASO D 611

Packing
Available in 100 mtrs. Longer length available in spools.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Min. Insulation Thickness (mm)	Overall Diameter (mm)		Approx. Weight (Kg/Km)
						Max.	Tolerance	
0.3	7	0.26	0.8	50.2	0.30	1.5	-0.1	5.0
0.5	7	0.32	1.0	32.7	0.30	1.7	-0.1	7.0
0.85	19	0.24	1.2	21.7	0.30	1.9	-0.1	10.0
1.25	19	0.29	1.5	14.9	0.30	2.2	-0.1	14.0
0.3f*	19	0.16	0.8	48.9	0.30	1.5	-0.1	5.0
0.5f*	19	0.19	1.0	34.6	0.30	1.7	-0.1	7.0
0.75f*	19	0.23	1.2	23.6	0.30	1.9	-0.1	10.0
1.25f*	37	0.21	1.5	14.6	0.30	2.2	-0.1	14.0
2f*	37	0.26	1.8	9.5	0.40	2.7	-0.1	22.0



Application

These are standard wall auto cables ideal for use in motor wirings of fans and sensor applications in automobiles.

Standard

Based on ISO 6722-1

Temperature Range (3000 Hrs)

-40°C to +105°C

Cable Construction

Soft annealed electrolytic copper Cu-ETP1 according to DIN EN 13602, bare conductor construction according to ISO 6722-1
Soft PVC insulation with properties according to ISO 6722-1, Class B

Special Properties

Conductor with cross-section > 6 mm² are also suitable as battery cable

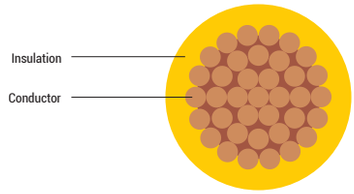
Packing

Available in 100 mtrs. Longer length available in spools or wooden drums.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Nominal Insulation Thickness (mm)	Overall Diameter (mm)	
						Min.	Max.
0.5	16	0.21	0.21	37.1	0.6	2.0	2.3
0.75	24	0.21	0.21	24.7	0.6	2.0	2.5
1	32	0.21	0.21	18.5	0.6	2.4	2.7
1.5	30	0.26	0.26	12.7	0.6	2.7	3.0
2	40	0.26	0.26	9.42	0.6	2.9	3.3
2.5	50	0.26	0.26	7.6	0.7	3.3	3.6
3	60	0.26	0.26	6.15	0.7	3.5	4.1
4	56	0.31	0.31	4.71	0.8	4.0	4.4
6	84	0.31	0.31	3.14	0.8	4.6	5.0
10	80	0.41	0.41	1.82	1.0	6.0	6.5
16	126	0.41	0.41	1.16	1.0	7.0	8.3
25	196	0.41	0.41	0.743	1.3	8.7	10.4
35	276	0.41	0.41	0.527	1.3	10.0	11.6
50	400	0.41	0.41	0.368	1.5	11.9	13.5
70	560	0.41	0.41	0.259	1.5	14.0	15.5
95	740	0.41	0.41	0.196	1.6	15.4	18.0
120	960	0.41	0.41	0.153	1.6	18.7	19.7

FLYW



Application
These are auto cables ideal for use in automotives with hot pressure resistance

Standard
In accordance to ISO 6722-1

Temperature Range (3000 Hrs)
-40°C to +125°C

Cable Construction
Soft annealed electrolytic copper Cu-ETP1 according to DIN EN 13602, bare conductor construction according to ISO 6722-1
Soft PVC insulation with properties according to ISO 6722-1, Class C

Packing
Available in 100 mtrs. Longer length available in spools or wooden drums.

Special Properties
Hot pressure resistance test at 120°C. Suitable for applications inside the engine compartment.

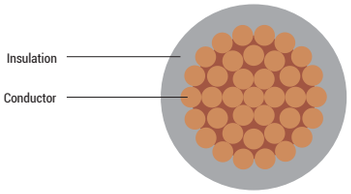
Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Nominal Insulation Thickness (mm)	Overall Diameter (mm)		Approx. Weight (Kg/Km)
						Max.	Tolerance	
0.5	16	0.21	1.0	37.1	0.6	2.3	-0.3	8.0
0.75	24	0.21	1.2	24.7	0.6	2.5	-0.3	11.0
1	32	0.21	1.35	18.5	0.6	2.7	-0.3	14.0
1.25*	16	0.33	1.7	14.9	0.6	2.95	-0.55	14.0
1.5	30	0.26	1.7	12.7	0.6	3.0	-0.3	19.0
2	28	0.31	2.0	9.42	0.6	3.3	-0.3	25.0
2.5	50	0.26	2.2	7.6	0.7	3.6	-0.3	31.0
3	60	0.26	2.4	6.0	0.7	4.1	-0.3	37.0
4	56	0.31	2.75	4.71	0.8	4.4	-0.4	47.0
5	65	0.33	3.1	3.94	0.8	4.9	-0.4	58.0
6	84	0.31	3.3	3.14	0.8	5.0	-0.4	68.0
8*	50	0.46	4.3	2.38	0.8	5.9	-0.9	88.0
10	80	0.41	4.5	1.82	1.0	6.5	-0.5	111.0
12**	96	0.41	5.4	1.52	1.0	7.4	-0.8	142.0
16	126	0.41	6.3	1.16	1.0	8.3	-0.6	179.0
20**	152	0.41	6.9	0.955	1.1	9.1	-1.0	218.0
25	196	0.41	7.8	0.743	1.3	10.4	-1.0	278.0

*Sizes from JIS C3406 **Not as per ISO 6722

FLYK

REACH I RoHS I CE



Application
These are standard wall auto cables with cold resistant properties and increased flexibility

Standard
In accordance to ISO 6722-1

Temperature Range (3000 Hrs)
-50°C to +105°C

Cable Construction
Soft annealed electrolytic copper Cu-ETP1 according to DIN EN 13602, bare conductor construction according to ISO 6722-1
Soft PVC insulation cold-resistant

Packing
Available in 100 mtrs. coils. Longer length available in spools.

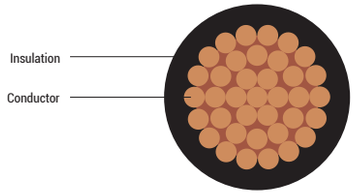
Special Properties
Cold bending test acc. to ISO 6722-1 at -50°C
Short-term and long term ageing according to ISO 6722-1, Class B.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Nominal Insulation Thickness (mm)	Overall Diameter (mm)		Approx. Weight (Kg/Km)
						Max.	Tolerance	
0.5	28	0.16	1.1	37.7	0.6	2.3	-0.3	9.0
0.75	42	0.16	1.3	25.1	0.6	2.5	-0.3	12.0
1.0	57	0.16	1.5	18.8	0.6	2.7	-0.3	15.0
1.5	84	0.16	1.8	12.7	0.6	3	-0.3	20.0
2.5	140	0.16	2.3	7.54	0.7	3.6	-0.4	32.0

FLRYK

REACH | RoHS | CE



Application
These are thin wall auto cables with cold resistant properties

Standard
In accordance to ISO 6722-1

Temperature Range (3000 Hrs)
-50°C to +105°C

Cable Construction
Soft annealed electrolytic copper Cu-ETP1 according to DIN EN 13602, bare conductor construction according to ISO 6722-1
Soft PVC insulation cold-resistant

Special Properties
Cold bending test acc. to ISO 6722-1 at -50°C.
Short-term and long term ageing according to ISO 6722-1, Class B

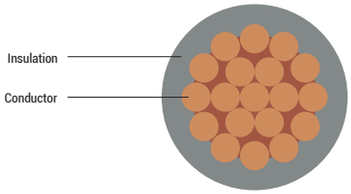
Packing
Available in 100 mtrs. Longer length available in spools.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Nominal Insulation Thickness (mm)	Overall Diameter (mm)		Approx. Weight (Kg/Km)
						Max.	Tolerance	
0.5	16	0.21	1.0	37.1	0.28	1.6	-0.2	6.0
1.0	32	0.21	1.4	18.5	0.30	2.1	-0.2	12.0
1.5	30	0.26	1.7	12.7	0.30	2.4	-0.3	16.0
2.5	50	0.26	2.1	7.6	0.35	3.0	-0.3	30.0

FLRY A

REACH | RoHS | CE



Application

These are thin walled cables ideal for use in automotives where its reduced insulation thickness and higher temperature withstanding properties serves its application in complex wiring harnesses.

Standard

In accordance with ISO 6722

Voltage Rating

60 V D.C.; 25 V A.C. (Suitable for 12 Volts and 24 Volts systems)

Temperature Range (3000 Hrs)

-40°C to +105°C

Cable Construction

Soft annealed electrolytic copper Cu-ETP according to DIN EN 13602.
Conductor construction according to ISO 6722 (Concentric conductor, Type A)
PVC insulation, class B to ISO 6722

Properties

The lead free, PVC polymer, offers excellent resistance to petrol, chemicals, and abrasion, and in addition is suitable for both low and high temperature applications. Flame retardant to EN 60332-1-2

Packing

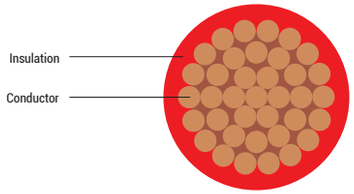
Available in 100 mtrs. Longer length available in spools.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Nom. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)		Min. Insulation Thickness (mm)	Max. Overall Diameter (mm)
				Plain Copper	Tinned Copper		
0.22	7	0.21	0.7	84.8	86.5	0.2	1.2
0.35	7	0.26	0.8	54.4	55.5	0.2	1.3
0.5	19	0.19	1.0	37.5	38.2	0.22	1.6
0.75	19	0.23	1.2	24.7	25.4	0.24	1.9
1	19	0.26	1.35	18.5	19.1	0.24	2.1
1.25	19	0.30	1.5	14.9	15.9	0.24	2.3
1.5	19	0.32	1.7	12.7	13	0.24	2.4
2	19	0.37	2.0	9.42	9.69	0.28	2.8
2.5	19	0.41	2.2	7.6	7.82	0.28	3.0

FLRY B

REACH | RoHS | CE



Application
These are thin walled cables ideal for use in automotives where its reduced insulation thickness and higher temperature withstanding properties serves its application in complex wiring harnesses.

Standard
In accordance with ISO 6722

Voltage Rating
60 V D.C.; 25 V A.C. (Suitable for 12 Volts and 24 Volts systems)

Temperature Range (3000 Hrs)
-40°C to +105°C

Cable Construction
Soft annealed electrolytic copper Cu-ETP according to DIN EN 13602.
Conductor construction according to ISO 6722 PVC insulation, class B to ISO 6722

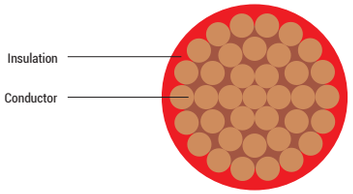
Properties
The lead free, PVC polymer, offers excellent resistance to petrol, chemicals, and abrasion, and in addition is suitable for both low and high temperature applications. Flame retardant to EN 60332-1-2

Packing
Available in 100 mtrs. Longer length available in spools or wooden drums.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)		Min. Insulation Thickness (mm)	Max. Overall Diameter (mm)
				Plain Copper	Tinned Copper		
0.35	12	0.21	0.9	54.4	55.5	0.2	1.4
0.5	16	0.21	1.0	37.5	38.2	0.22	1.6
0.75	24	0.21	1.2	24.7	25.4	0.24	1.9
1	32	0.21	1.35	18.5	19.1	0.24	2.1
1.25	16	0.33	1.5	14.9	15.9	0.24	2.3
1.5	30	0.26	1.7	12.7	13	0.24	2.4
2	30	0.31	2.0	9.42	9.69	0.28	2.8
2.5	50	0.26	2.2	7.6	7.82	0.28	3.0
3	45	0.31	2.4	6.15	6.36	0.28	3.4
4	56	0.31	2.75	4.71	4.85	0.32	3.7
5	65	0.33	3.1	3.94	4.02	0.32	4.2
6	84	0.31	3.3	3.14	3.23	0.32	4.3
8	50	0.46	3.8	2.38	2.52	0.32	5.0
10	80	0.41	4.5	1.82	1.85	0.48	6.0
12	96	0.41	5.2	1.52	1.6	0.48	6.5
16	18	0.41	5.5	1.16	1.18	0.52	7.2
20	152	0.41	5.8	0.955	0.999	0.52	7.8
25	196	0.41	7.8	0.743	0.757	0.52	8.7

FLUY



Application

These are ultra thin wall auto cables ideal for use in automotives.

Standard

In accordance to ISO 6722-1

Temperature Range (3000 Hrs)

-40°C to +105°C

Cable Construction

Soft annealed electrolytic copper Cu-ETP1 according to DIN EN 13602, bare or tinned.
Soft PVC insulation cold-resistant according to ISO 6722-1, Class B

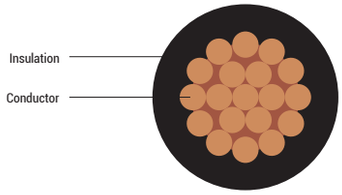
Packing

Packing available in 100 mtrs. Longer length available in spools.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Min. Insulation Thickness (mm)	Overall Diameter		Approx. Weight (Kg/Km)
						Max.	Tolerance	
0.35	7	0.27	0.8	52	0.16	1.2	-0.1	4.0
0.5	19	0.19	1	37.1	0.16	1.4	-0.1	6.0
0.75	19	0.24	1.2	24.7	0.16	1.6	-0.15	8.0
1.0	19	0.27	1.4	18.5	0.16	1.75	-0.15	10.0
1.25	19	0.30	1.5	14.9	0.16	2.0	-0.2	13.0
1.5	19	0.33	1.7	12.7	0.16	2.1	-0.2	15.0
2.0	19	0.37	1.9	9.42	0.20	2.4	-0.2	20.0
2.5	37	0.30	2.2	7.6	0.20	2.7	-0.2	25.0

FLRYW



FLRYW with thin wall PVC insulation (Type A / Type B, hot pressure resistant)

Application
These are thin wall auto cables with hot pressure resistant properties

Standard
In accordance to ISO 6722-1

Temperature Range (3000 Hrs)
-40°C to +125°C

Cable Construction
Soft annealed electrolytic copper Cu-ETP1 according to DIN EN 13602, bare or tinned construction acc. to ISO 6722-1
Special PVC insulation with properties according to ISO 6722-1, Class C

Special Properties
Heat resistant cable. Suitable for applications inside the engine compartment.

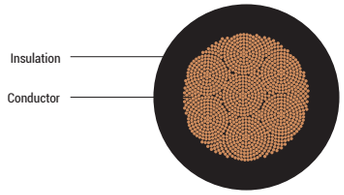
Packing
Available in 100 mtrs. Longer length available in spools or wooden drums.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20oC (Ω/km) (Bare/Tinned)		Min. Insulation Thickness (mm)	Overall Diameter (mm)		Approx. Weight (Kg/Km)
							Max.	Tolerance	
FLRYW - TYPE A									
0.35	7	0.26	0.8	54.4	55.5	0.20	1.3	-0.1	5.0
0.5	19	0.19	1.0	37.5	38.2	0.22	1.6	-0.2	7.0
0.75	19	0.23	1.2	24.7	25.4	0.24	1.9	-0.2	9.0
1.0	19	0.26	1.35	18.5	19.1	0.24	2.1	-0.2	11.0
1.25	19	0.30	1.5	14.9	15.9	0.24	2.3	-0.2	12.0
1.5	19	0.32	1.7	12.7	13.0	0.24	2.4	-0.2	16.0
2.0	19	0.37	2.0	9.42	9.69	0.28	2.8	-0.3	22.0
FLRYW - TYPE B									
0.35	12	0.21	0.9	54.4	55.5	0.20	1.4	-0.2	5.0
0.5	16	0.21	1.0	37.5	38.2	0.22	1.6	-0.2	7.0
0.75	24	0.21	1.2	24.7	25.4	0.24	1.9	-0.2	9.0
1.0	32	0.21	1.35	18.5	19.1	0.24	2.1	-0.2	11.0
1.25*	16	0.33	1.5	14.9	15.9	0.24	2.3	-0.2	12.0
1.5	30	0.26	1.7	12.7	13.0	0.24	2.4	-0.2	16.0

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20oC (Ω/km) (Bare/Tinned)		Min. Insulation Thickness (mm)	Overall Diameter (mm)		Approx. Weight (Kg/Km)
							Max.	Tolerance	
FLRYW - TYPE B									
2	30	0.31	2.0	9.42	9.69	0.28	2.8	-0.3	22.0
2.5	50	0.26	2.2	7.6	7.82	0.28	3.0	-0.3	26.0
3	45	0.31	2.4	6.15	6.36	0.28	3.4	-0.3	33.0
4	56	0.31	2.75	4.71	4.85	0.32	3.7	-0.3	42.0
5	65	0.33	3.1	3.94	4.02	0.32	4.2	-0.3	50.0
6	84	0.31	3.3	3.14	3.23	0.32	4.3	-0.3	61.0
8	50	0.46	3.8	2.38	2.52	0.32	5.0	-0.4	82.0
10	80	0.41	4.5	1.82	1.85	0.48	6.0	-0.4	108.0
12	96	0.41	5.2	1.52	1.6	0.48	6.5	-0.7	120.0
16	18	0.41	5.5	1.16	1.18	0.52	7.2	-0.5	170.0
20	152	0.41	5.8	0.955	0.999	0.52	7.8	-0.8	192.0
25	196	0.41	7.8	0.743	0.757	0.52	8.7	-0.8	265.0

FL11Y



FL11Y with TPE-U insulation

Application
These are automotive cables for starting and charging application in motorcycles and other motor vehicles. The cable design makes it suitable for harsh environment and robust applications.

Standard
In accordance to ISO 6722-1

Temperature Range (3000 Hrs)
-40°C to +110°C

Cable Construction
Soft annealed electrolytic copper Cu-ETP1 according to DIN EN 13602, bare construction acc. To ISO 6722-1
TPE-U (Thermoplastic polyurathane elastomer) according to ISO 6722-1, Class B

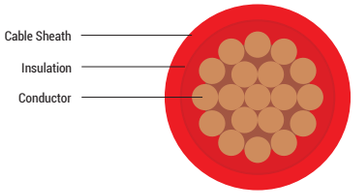
Packing
Available in 100 mtrs. Longer length available in spools or wooden drums.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Min. Insulation Thickness (mm)	Overall Diameter		Approx. Weight (Kg/Km)
						Max.	Tolerance	
6	84	0.31	3.3	3.14	0.80	5.0	-0.4	66.0
10	80	0.41	4.5	1.82	1.00	6.5	-0.5	109.0
16	126	0.41	6.3	1.16	1.00	8.3	-0.6	176.0
25	196	0.41	7.8	0.743	1.30	10.4	-0.7	273.0
35	276	0.41	9.0	0.527	1.30	11.6	-0.6	355.0
50	396	0.41	10.5	0.368	1.50	13.5	-2.0	511.0
70	360	0.51	12.5	0.259	1.50	15.5	-2.0	705.0
95	475	0.51	14.8	0.196	1.60	18.0	-2.0	905.0
120	608	0.51	16.5	0.153	1.60	19.7	-2.0	1170.0

FLYY

REACH | RoHS | CE



Application
These cables are ideal for use in automotive applications where higher current carrying capacity and mechnical strength are required.

Standard
Adapted to ISO 6722

Voltage Rating
60 V D.C., 25 V A.C. (Suitable for 12 Volts and 24 Volts systems)

Temperature Range (3000 Hrs)
-40°C to +105°C

Cable Construction
Soft annealed electrolytic copper Cu-ETP according to DIN EN 13602.
Conductor construction according to ISO 6722
PVC insulation, class B to ISO 6722
PVC sheath, class B to ISO 6722

Properties
The special cable construction, offers higher mechanical strength without compromising with the cable flexibility. The cable is suitable for rugged applications across the extreme temperature range.

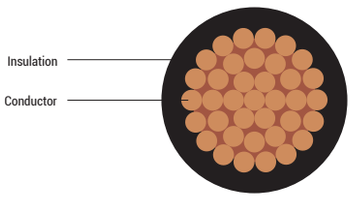
Packing
Available in 100 mtrs. Longer length available in spools.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Nominal Insulation Thickness (mm)	Nominal Core Diameter (mm)	Sheath Thickness (mm)	Overall Diameter	
								Max.	Max.
0.5	16	0.21	1.0	37.1	0.6	2.1	0.4	2.7	3.1
0.75	24	0.21	1.2	24.7	0.6	2.3	0.4	3.0	3.3
1.0	32	0.21	1.35	18.5	0.6	2.5	0.4	3.2	3.6
1.5	30	0.26	1.7	12.7	0.6	2.8	0.5	3.7	4.1
2.0	40	0.26	2.0	9.42	0.6	3.0	0.5	3.9	4.3
2.5	50	0.26	2.2	7.6	0.7	3.5	0.5	4.3	4.8

FLR13Y

REACH | RoHS | CE



Application

These are TPE-E insulated low tension automotive cables used in motor vehicles for lightings, signals and instrument panel circuits operating across wide range of extreme temperature.

Standard

In accordance to ISO 6722-1 class D

Temperature Range (3000 Hrs)

-40°C to +150°C

Cable Construction

Soft annealed electrolytic copper Cu-ETP1 according to DIN EN 13602 ,bare conductor construction acc. To ISO 6722-1
Tinned copper available on request. TPE-E (Thermoplastic Elastomer)

Special Properties

These are polyester based elastomeric cables which offer consistent performance across the entire operating temperature range.Tear and abrasion resistant. High peak temperature resistance.Good resistant to chemical and weather conditions. High impact strength.

Packing

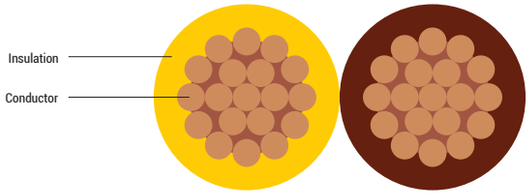
Packing available in 100 mtrs. Longer length available in spools.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Min. Insulation Thickness (mm)	Overall Diameter	
						Max.	Max.
FLR13Y - TYPE A							
0.22	7	0.21	0.7	84.8	0.20	1.1	1.2
0.35	7	0.26	0.8	54.4	0.20	1.2	1.3
0.5	19	0.19	1.0	37.5	0.22	1.4	1.6
0.75	19	0.23	1.2	24.7	0.24	1.7	1.9
1	19	0.26	1.35	18.5	0.24	1.9	2.1
1.5	19	0.32	1.7	12.7	0.24	2.2	2.4
2	19	0.37	2.0	9.42	0.28	2.5	2.8
2.5	19	0.41	2.2	7.6	0.28	2.7	3.0
FLR13Y - TYPE B							
0.35	12	0.21	0.9	54.4	0.20	1.2	1.4
0.5	16	0.21	1.0	37.5	0.22	1.4	1.6
0.75	24	0.21	1.2	24.7	0.24	1.7	1.9
1	32	0.21	1.35	18.5	0.24	1.9	2.1
1.5	30	0.26	1.7	12.7	0.24	2.2	2.4
2	30	0.31	2.0	9.42	0.28	2.5	2.8
2.5	50	0.26	2.2	7.60	0.28	3.7	3.0
4	56	0.31	2.75	4.71	0.32	3.4	3.7
6	84	0.31	3.3	3.14	0.32	4.0	4.3

FLRY n x (TWISTED CABLES)

REACH | RoHS | CE



Application

These are unsheathed twisted wires used in automobiles

Standard

In accordance to ISO 6722-1

Temperature Range (3000 Hrs)

-40°C to +105°C

Cable Construction

Soft annealed electrolytic copper Cu-ETP1 according to DIN EN 13602, bare or tinned copper construction acc. to ISO 6722-1
PVC with properties according to according to ISO 6722-1, Class B

Special Properties

Higher heat resistance. Tinned copper conductor. Other lay lengths available on request.

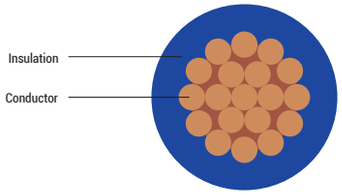
Packing

Available in 100 mtrs. Longer length available in spools or wooden drums.

Cable Design Parameters

No. of Cores x Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Min. Insulation Thickness (mm)	Core Diameter (Max.) (mm)	Lay Length (Nom.) (mm)	Outer Diameter (Max.)(mm)	Approx. Weight (Kg/Km)
2x0.35	7	0.26	0.8	52.0	0.20	1.3	16	2.6	9.0
2x0.35	7	0.26	0.8	52.0	0.20	1.3	20	2.6	9.0
2x0.35	7	0.26	0.8	52.0	0.20	1.3	30	2.6	9.0
2x0.5	19	0.19	1.0	37.1	0.22	1.6	15	3.2	13.0
2x0.5	19	0.19	1.0	37.1	0.22	1.6	30	3.2	13.0
2x0.5	16	0.21	1.0	37.1	0.22	1.6	20	3.2	13.0
2x0.5	16	0.21	1.0	37.1	0.22	1.6	30	3.2	13.0
3x0.5	19	0.19	1.0	37.1	0.22	1.6	30	3.5	20.0
3x0.5	16	0.21	1.0	37.1	0.22	1.6	40	3.5	20.0
2x0.75	24	0.23	1.2	24.7	0.24	1.9	30	3.8	18.0
2x0.75	19	0.21	1.2	24.7	0.24	1.9	30	3.8	18.0
3x0.75	19	0.23	1.2	24.7	0.24	1.9	30	4.1	27.0
2x1	19	0.26	1.35	18.5	0.24	2.1	30	4.2	22.0
2x1	32	0.21	1.35	18.5	0.24	2.1	30	4.2	22.0
3x1	32	0.21	1.35	18.5	0.24	2.1	25	4.5	33.0
4x1	19	0.26	1.35	18.5	0.24	2.1	30	5.1	44.0
2x1.5	19	0.32	1.7	12.7	0.24	2.4	30	4.8	32.0
2x2.5	50	0.26	2.2	7.8	0.28	3.0	30	6.0	52.0
5x2.5	50	0.26	2.2	7.8	0.28	3.0	50	8.1	130.0
6x2.5	50	0.26	2.2	7.8	0.28	3.0	55	9.0	156.0

ACW



Application

These are power train cables for automobiles. These are used in wire harness of low-tension engine compartment circuits for automobiles

Max. Operating Temperature

150°C

Cable Construction

Bare or annealed tinned copper
TPE-E (Thermoplastic Elastomer)

Packing

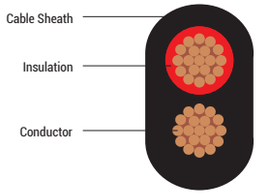
Available in 100 mtrs. Longer length available in spools.

Cable Design Parameters

Nom. Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter (mm)	Max. Conductor Diameter (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)	Nominal Insulation Thickness (mm)	Overall Diameter (mm)	
						Min.	Max.
0.35	7	0.26	0.9	52.0	0.25	1.2	1.4
0.50	19	0.20	1.0	37.1	0.30	1.4	1.6
0.75	19	0.24	1.20	24.7	0.35	1.7	1.9
1.0	19	0.26	1.35	18.5	0.38	1.9	2.1
1.5	30	0.26	1.7	12.7	0.35	2.2	2.4
2.5	50	0.26	2.2	7.6	0.40	2.7	3.0
4.0	56	0.31	2.75	4.7	0.45	3.4	3.7
6.0	84	0.31	3.3	3.1	0.50	4.0	4.3

*Note : Tinned copper conductor can be provided on request.

THIN WALL MULTICORE CABLES



Application

These are multicore cables used in automobile.

Standard

In accordance to ISO 6722-1

Cable Construction

Electrolytic plain annealed copper according to ISO 6722-1
PVC with properties according to according to ISO 6722-1, Class B (105°C). PVC Sheathed 105°C.

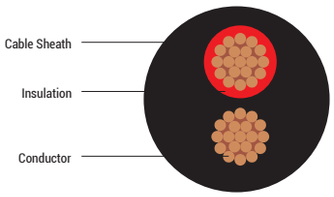
Packing

Available in 100 mtrs. Longer length available in spools or wooden drums.

Thin Wall 2 Core Auto Cables (Flat Twins)

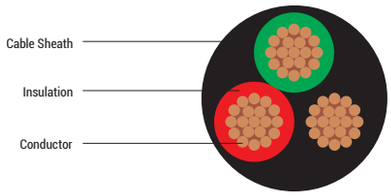
No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
2x0.5	16	0.20	2.7 x 4.6	Black	Black, Red
2x0.75	24	0.20	3.1 x 4.9		
2x1.0	32	0.20	3.0 x 5.0		
2x1.5	21	0.30	3.5 x 5.8		
2x2.0	28	0.30	3.9 x 6.5		
2x2.5	35	0.30	3.9 x 6.7		
2x3.0	44	0.30	4.3 x 7.5		
2x4.5	65	0.30	5.6 x 9.4		

Thin Wall 2 Core Auto Cables (Round Twins)



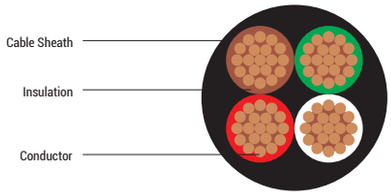
No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
2x0.5	16	0.20	5.2	Black	Black, Red
2x0.75	24	0.20	5.3		
2x1.0	32	0.20	5		
2x1.5	21	0.30	6.4		
2x2.0	28	0.30	6.8		
2x2.5	35	0.30	6.7		

Thin Wall 3 Core Auto Cables



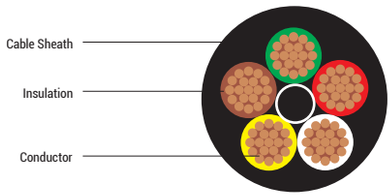
No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
3x0.75	24	0.20	5.7	Black	Black, Red, Green
3x1.0	32	0.20	5.5		
3x1.5	21	0.30	5.9		
3x2.0	28	0.30	7.3		

Thin Wall 3 Core Auto Cables



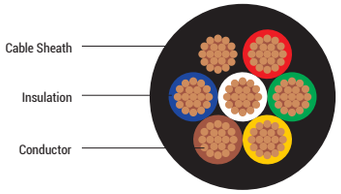
No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
4x0.75	24	0.20	5.9	Black	Brown, Green, Red, White
4x1.0	32	0.20	5.8		
4x1.5	21	0.30	7.6		

Thin Wall 5 Core Auto Cables



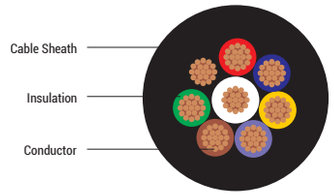
No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
5x0.75	24	0.20	5.9	Black	Brown, Green, Red, White, Yellow
5x1.0	32	0.20	5.8		
4x1.0 + 1x2.0	21	0.30	7.6		
	28	0.30			

Thin Wall 7 Core Auto Cables



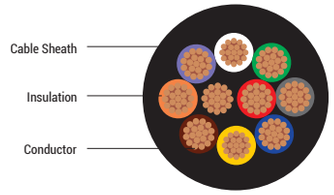
No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
7x0.5	16	0.20	6	Black	Black, Red, Green, Yellow, Brown, White, Blue
7x0.75	24	0.20	6.8		
7x1.0	32	0.20	7.4		
4x1.0 + 1x2.0	32	0.20	8.3		
	28	0.30			
4x1.0 + 1x2.0	21	0.30	10.1	Grey	
	35	0.30			

Thin Wall 8 Core Auto Cables



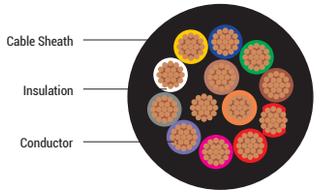
No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
7x1.0 + 1x2.0	32	0.20	8.8	Black	Black, Red, Blue, Yellow, Purple, Brown, White, Green
	28	0320			

Thin Wall 10 Core Auto Cables



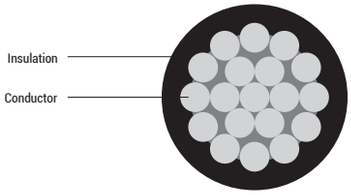
No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
9x1.0 + 1x2.0	32	0.20	10.90	Black	Black, Red, Green, Grey, Blue, Yellow, Brown, Orange, Purple, White
	28	0320			

Thin Wall 13 Core Auto Cables



No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
12x1.5 + 1x2.5	21	0.30	12.30	Black	Yellow, Blue, Green, Brown, Red/Black, Black, Red, Pink, Purple, Grey, White, Light Brown, Orange
	35	0.30			
8x1.5 + 5x2.5	30	0.25	13.30		Black, Red, Green, Grey, Blue, Yellow, Brown, Orange, Purple, White
	50	0.25			

TINNED COPPER CABLES



Application
Tin plated single and multi core cable for starting, charging and instrument panel circuits in automobiles.

Standards
In accordance to ISO 6722-1

Cable Construction
Electrolytic annealed tinned copper as per ISO 6722-1
PVC with properties according to according to ISO 6722-1, Class B (105°C)

Packing
Available in 100 mtrs. Longer length available in spools or wooden drums.

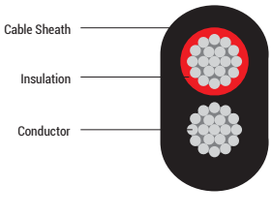
Single Core Cable

Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter mm	Outer Diameter (max.) (mm)	Max. DC Conductor Resistance at 20^0C (Ω/km)
1.0	32	0.20	2.1	19.1
1.5	21	0.30	2.4	13.0
2.5	35	0.30	3.0	7.82
4.0	56	0.30	3.7	4.85
6.0	84	0.30	4.3	3.23
10.0	80	0.40	6.0	1.85

Tinned Copper 2 Core Cables (Flat Twins)
Standards
In accordance to ISO 6722-1

Cable Construction
PVC with properties according to according to ISO 6722-1, Class B (105°C)
PVC Sheathed 105°C

Packing
Available in 100 mtrs. Longer length available in spools or wooden drums.



No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
2 x 1.5	21	0.30	3.5 x 5.8	White/ Black	Red, Black
2 x 2.5	35	0.30	3.9 x 6.7		

Tinned Copper 2 Core Cables (Round Twins)

Standards

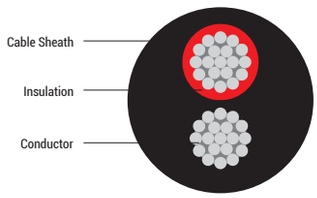
In accordance to ISO 6722-1

Cable Construction

PVC with properties according to according to ISO 6722-1, Class B (105°C)
PVC Sheathed 105°C

Packing

Available in 100 mtrs. Longer length available in spools or wooden drums



No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
2 x 1.5	21	0.30	6.4	Black	Black, Red
2 x 2.5	35	0.30	6.7		

Tinned Copper 3 Core Cables

Standards

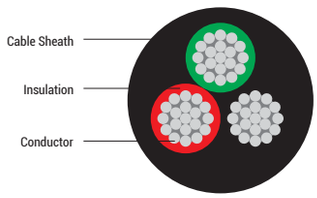
In accordance to ISO 6722-1

Cable Construction

PVC with properties according to according to ISO 6722-1, Class B (105°C)
PVC Sheathed 105°C

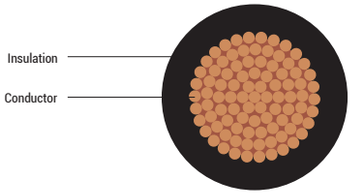
Packing

Available in 100 mtrs. Longer length available in spools or wooden drums



No. of Cores X Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Conductor (mm)	Max. Overall Diameter (mm)	Sheath Colour	Core Colour
2 x 1.5	21	0.30	5.9	White / Black	Black, Red, Green
2 x 2.5	35	0.30	7.4		

PVC BATTERY CABLE



Voltage Rating
Max. 200V

Test Voltage
1000 Volts

Temperature Range
-30°C to +70°C

Cable Construction
Annealed Bare copper strands
For PVC battery cable - Cl. 5 to EN 60228
For Flexible PVC battery cable - Cl. 6 to EN 60228
PVC insulation over bunched conductor

Packing
Available in wooden drums.

Cable Design Parameters

Standard Battery Cable

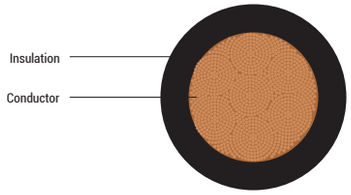
Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter mm	Outer Diameter (max.) (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)
25	196	0.40	9.7	0.780
35	276	0.40	12.2	0.554
50	396	0.40	13.3	0.386
70	360	0.50	14.6	0.272

Flexible Battery Cable

Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter mm	Outer Diameter (max.) (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)
16	512	0.20	8.3	1.21
25	800	0.20	10.1	0.780
35	1120	0.20	11.8	0.554
50	705	0.30	13.3	0.386
70	990	0.30	15.5	0.272
95	1340	0.30	17.9	0.206
120	1690	0.30	19.7	0.161

ELASTOMERIC BATTERY CABLE

REACH | RoHS | CE



Standard
Adapted to BS 6862

Voltage Rating
Max. 200V

Test Voltage
1000 Volts

Temperature Range (3000 Hrs)
-40°C to + 90°C

Cable Construction
Bare copper strands as per EN 60228, class 6

Packing
Available in wooden drums.

Conductor Bunch Variants
Normal flex and Super flex

Special Elastomeric Insulation
Thermoplastic Elastomer Vulcanizate

Special Properties
Acid Resistance Test: In sulphuric acid of specific gravity 1.28 at a temperature of 160°C to 210°C and check the cable after 60 hrs. No effect on insulation. Insulation free from deformation and shrinkage
Chemical Resistance: Resistant to ozone, acids, solvents, detergents, vaseline and oils.

Cable Design Parameters
Super Flex

Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter mm	Outer Diameter (max.) (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)
25	784	0.20	11.1	0.78
35	1176	0.20	12.8	0.554
50	1568	0.20	14.0	0.386
70	2205	0.20	16.0	0.272
95	2989	0.20	18.0	0.206
120	3850	0.20	20.3	0.161

Normal Flex

Nominal Cross-Section (mm^2)	No. of Strands	Max. Strand Diameter mm	Outer Diameter (max.) (mm)	Max. DC Conductor Resistance at 20°C (Ω/km)
25	816	0.20	11.1	0.78
35	1144	0.20	12.8	0.554
50	1662	0.20	14.0	0.386
70	2346	0.20	16.0	0.272
95	3050	0.20	18.0	0.206