



EMPOWERING **LEGACY, EXCELLENCE** AND SERVICE

Electric Cable | Electrical Wire Copper Conductor
System | Heat Adaptable Plastics

COMPANY PROFILE

At Goodwillcable, we take immense pride in being the largest cable and conductor manufacturer in Pakistan.

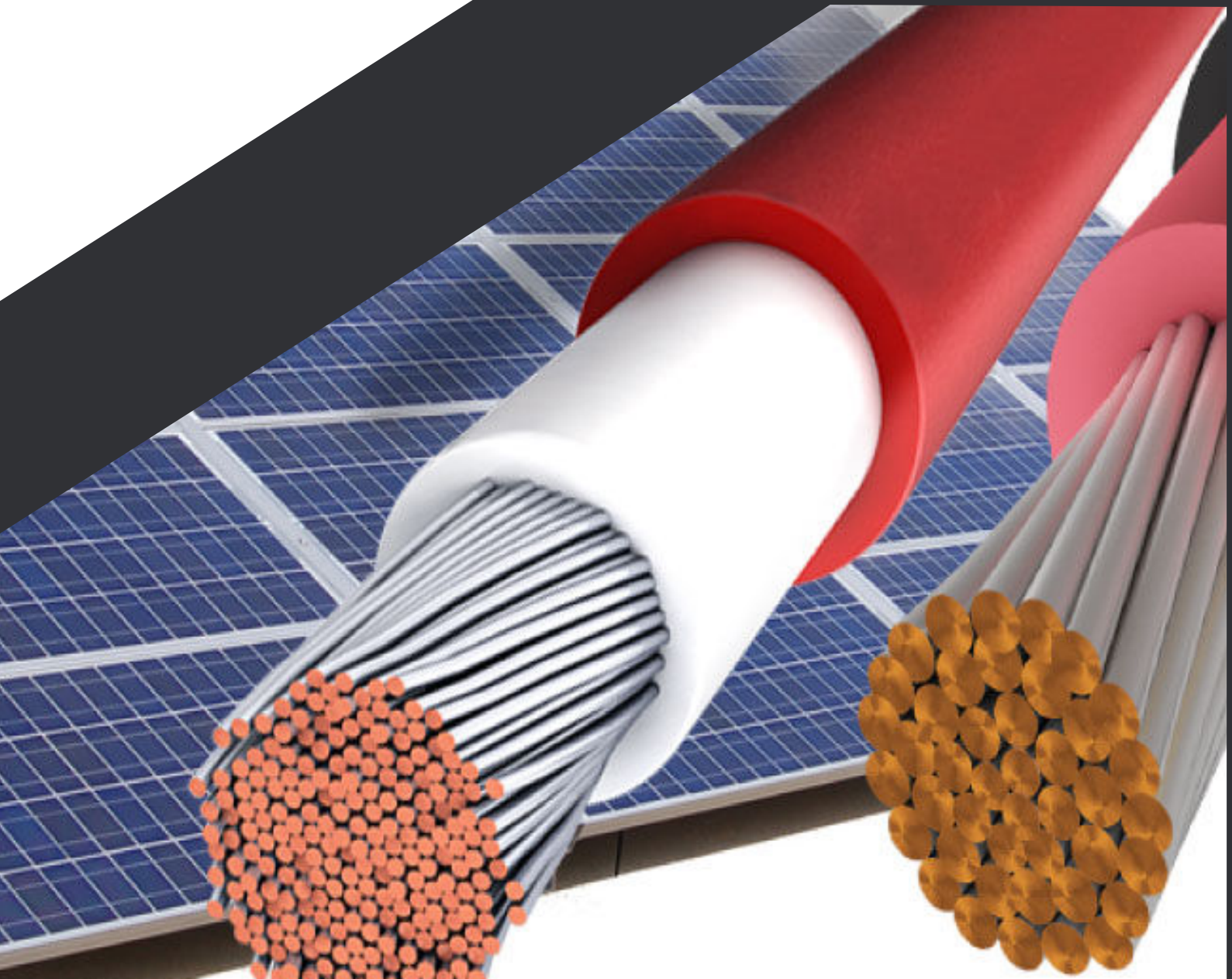


TABLE OF CONTENT

1. Electric Cable 01

1.1. Introduction 01

1.2. Extruded Wiring Unit 02

2. Copper Extraction Workshop 03

3. Heat Adaptable Plastics 04

3.1. Copper Quality 05

4. Cable Assembly 06

4.1. JASO Standard 07

4.2. ISO Standard 09

1. ELECTRIC CABLE

1.1. INTRODUCTION

Good Will Cable Industry specializes in manufacturing of flexible electric cables, wires, and solar Systems On Grid, Off Grid, Hybrid and all renewable energy solutions. Since its humble start in 2023, It has grown in tandem with the robust Pakistani Industry.

OUR CLIENTS

Today, Good Will Cable is an efficient and self-contained cable and wire industry situated on the perimeter of Lahore in a purpose built factory manned by an experienced and qualified workforce.

It has evolved flexible production systems to ensure smooth and seamless processing of the large variety of wires used in wiring harnesses while maintaining stringent quality standards of our esteemed clients. Our clients are first tier vendors of various Solartech Private Limited Group Projects, PEECA, PMU, PEDO, Government Departments, Residential and Commercial Solar Projects.

A well-developed vendor base, a complete in-house machineshop, state of the art wire manufacturing setup and a host of support departments through-out the wire harness.



1.2. EXTRUDED WIRING UNIT

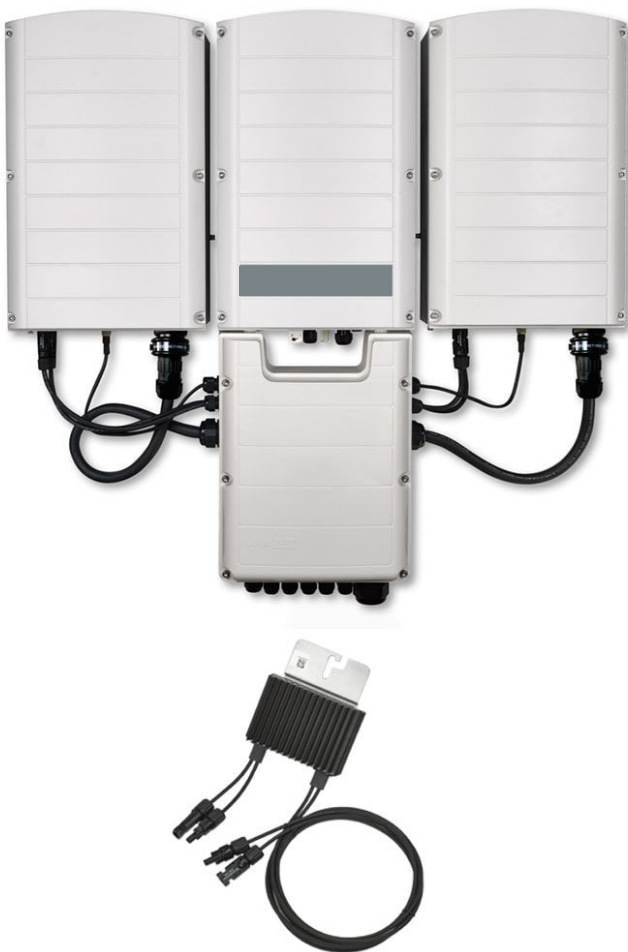
Extruded Wiring Unit

Good Will Cable has ten semi-automatic extrusion lines manned by a highly qualified workforce. All our extrusion lines are equipped with Self Centeing Dies, High Precision Electric Heaters, Spark Testers, in line Digital Diameter Controllers and In Line Digital Counter Meters. All machines are subject to a stringent Preventive Maintenance Program which ensures consistency in quality and efficiency of the production process.

CABLE SIZES

We are currently manufacturing up to Fifteen Thousand Kilometers per month (15,000 Km/month) of different varieties, colors and Thin (Compressed Conductor) 1 mm upto 200 mm.

Standards followed include JASO standard, ISO standard, and SAE standard.



2. COPPER EXTRACTION WORKSHOP

COPPER REFINING HUB

Good Will Cable has an in-house copper processing unit capable of processing 4mm rods into various smaller sizes and gauges. Once the rod has been processed into required diameter it is annealed and then bunched as per applicable standards. Use of

high speed Japanese and Western European Bunchers ensure quality copper “rope” which is the primary ingredient for a high quality automotive cable. Resistance and other variables of the copper rope are thoroughly tested to ensure compliance with

applicable standards. CPU has a capacity of processing up to 7 tons per day. The CPU also has a tinning unit for manufacturing tin coat cables used for applications such as phone lines and Solar Power Cables.



3. HEAT ADAPTABLE PLASTICS

TEMPERATURE-FLEXIBLE PLASTICS

At Good Will Cable we continuously evolve with the automotive and consumer electronics wiring harness industry. Good Will Cable has commissioned an in house **Thermoplastics Research, Development and Manufacturing Division** to cater to the complex Insulation requirements of leading OEM's. It has the honor of being the first company in Pakistan to work with Environment Friendly Non Halogen and ROHS compliant Lead Free Compounds. Other special insulation compounds include Cross Linked PE and

PVC used in higher temperature applications. Our expertise in thermoplastics allow us to manufacture compounds which can withstand heat, oil and other elements on a battery cable placed inside the engine compartment or a cable exposed to elements on a roof top powering a Solar Cell.



3.1. COPPER QUALITY

We strive our best to instill quality into all our activities. We maintain a highly efficient Quality Department which thoroughly checks incoming raw material, in process materials and finished product quality. It has the additional mandate of improving the production process to reduce the

QA department has access to a complete inhouse product and raw material Testing Lab where we conduct numerous tests including Heat Shock, Ageing, Scrape Abrasion, Elongation, Tensile Strength, Conductor Resistance and Insulation Resistance. Team Good Will Cable believes in continuous improvement by

improving both machinery and skill set of our workers. Regular quality meetings, training sessions and Quality Circle Meetings are organized to continuously monitor and improve our systems, machines and skill set. Our focus on quality and our efforts towards improvement of systems culminate in the fulfillment of our company objective i.e., **“On Time Delivery of High Quality Products”**



4. CABLE ASSEMBLY

Good Will Cable manufactures **cable assembly** and Power Cables for **Home Appliances** and **Consumer Electronics** as per customer designs using latest cutting, stripping, crimping, stamping and injection molding machines.



“ HIGHLY
TRAINED
AND DIVERSE
WORKFORCE

“ IN-HOUSE
INJECTION
MOULDING
WORKFORCE

“ FLEXIBLE
PRODUCTION
SYSTEM FOR
SMALLER MOQ'S

“ IN-HOUSE
WIRE &
THERMOPLASTICS
MANUFACTURING

WHAT MAKES US DIFFERENT?



05 Years Presence



Understanding
& Adherence



Workplace Safety &
OSHA Compliance



Wide Range Of Cables



International
Certifications

JASO Standard

3 AVSS

[illegible]

6 AVX JASO Heat Resistant Wires - Heat Resistant and Crosslinked PVC insulated.

6 AVX

JASO Heat Resistant Wires - Heat Resistant and Crosslinked PVC insulated.

Nominal Cross Section	Conductor				Insulation	Overall Diameter		Most electric capacity values
	No of Strands	Diameter of Strand	Outer Diameter	Electric Resistance at 20°C		Wall Thickness (nom.)	Nominal	
mm ²		mm	mm	mΩ/km	mm	mm	mm	A
0.5	7	0.32	1.0	32.7	0.50	2.0	2.2	12
0.85	16	0.26	1.2	20.8	0.50	2.2	2.4	15
1.25	16	0.32	1.5	14.3	0.60	2.7	2.9	20
2	26	0.32	1.9	8.81	0.60	3.1	3.4	27
3	41	0.32	2.4	5.59	0.70	3.8	4.1	37
5	65	0.32	3.0	3.52	0.80	4.6	4.9	49
8	50	0.45	3.7	2.32	0.80	5.3	5.6	64
0.5f	20	0.18	1.0	36.7	0.50	2.0	2.2	11
0.75f	30	0.18	1.2	24.4	0.50	2.2	2.4	14
1.25f	50	0.18	1.5	14.7	0.60	2.7	2.9	20
Allowable current value of the conductor insulation is based on calculation for the maximum temperature 80°C and the ambient temperature 40°C.								

allowable current value of the conductor insulation is based on calculation for the maximum temperature 80°C and the ambient temperature 40°C.

TECHNICAL DATA OF AUTO WIRE

7 CAVS JASO Thin Wall, with compressed conductor									
Nominal Cross Section	Conductor			Insulation			Overall Diameter		
	No. of Strands	Diameter of Strand	Outer Diameter	Electric Resistance at 20°C	Wall Thickness (nom.)	Wall Thickness (min.)	Nominal	Maximum	
mm²		mm	mm	mΩ/m	mm	mm	mm	mm	
0.3	7	0.26	0.7	50.2	0.35	0.28	1.40	1.50	
0.5	7	0.32	0.9	32.7	0.35	0.28	1.60	1.70	
0.85	19	0.24	1.1	21.7	0.35	0.30	1.80	1.90	
1.25	19	0.29	1.4	14.9	0.35	0.30	2.10	2.20	

8 HFSS Halogen Free Extremely Thin-Wall									
Nominal Cross Section	Conductor			Insulation			Overall Diameter		
	No. of Strands	Diameter of Strand	Outer Diameter	Electric Resistance at 20°C	Wall Thickness (nom.)	Wall Thickness (min.)	Nominal	Maximum	
mm²		mm	mm	mΩ/m	mm	mm	mm	mm	
0.35f	19	0.16	0.80	54.4	0.25	0.20	1.30	1.40	
0.5f	19	0.19	0.95	37.1	0.28	0.22	1.50	1.70	
0.75f	19	0.23	1.15	24.7	0.30	0.24	1.75	1.90	
1f	19	0.26	1.35	18.5	0.30	0.24	1.95	2.10	
1.25f	37	0.21	1.50	14.9	0.30	0.24	2.10	2.20	
1.5f	37	0.23	1.60	12.7	0.30	0.24	2.20	2.40	
2f	37	0.26	1.85	9.42	0.35	0.28	2.55	2.80	

9 CIVUS Ultra Thin-Wall, Compressed Conductor									
Nominal Cross Section	Conductor			Insulation			Overall Dia		
	No. of Strands	Diameter of Strand	Outer Diameter	Electric Resistance at 20°C (max.)	Wall Thickness (nom.)	Wall Thickness (min.)	Nominal	Maximum	
mm²		mm	mm	mΩ/m	mm	mm	mm	mm	
0.13	7	0.16	0.45	210	0.20	0.16	0.95		
0.22	7	0.20	0.55	84.4	0.20	0.16	1.05		
0.35	7	0.26	0.70	54.4	0.20	0.16	1.20		
0.5	7	0.32	0.85	37.1	0.20	0.16	1.40		
0.75	19	0.23	1.00	24.1	0.20	0.16	1.60		
1.0	19	0.26	1.20	18.5	0.20	0.16	1.75		
1.25	19	0.29	1.40	14.9	0.20	0.16	2.00		

SAE Standard

1 GPT SAE General Purpose, Thermoplastic Insulated									
Wire Size	Conductor			Insulation			Overall Diameter		
	No. of Strands	Diameter of Strand	Outer Diameter	Wall Thickness (nom.)	Wall Thickness (min.)	Wall Thickness (min.)	Nominal	Maximum	
AWG		mm	mm	mm	mm	mm	mm	mm	
20	7	0.32	1.0	0.58	0.41	0.41	2.2	2.4	
20	19	0.19	1.0	0.58	0.41	0.41	2.2	2.4	
18	19	0.23	1.2	0.58	0.41	0.41	2.4	2.5	
16	19	0.29	1.5	0.58	0.41	0.41	2.6	2.9	
14	19	0.36	1.8	0.58	0.41	0.41	3.0	3.2	
12	19	0.45	2.3	0.66	0.46	0.46	3.6	3.8	
10	19	0.58	3.0	0.79	0.55	0.55	4.5	4.7	
8	50	0.45	3.7	0.94	0.66	0.66	5.6	6.0	

2 TWP SAE Thin Wall, Thermoplastic Insulated									
Wire Size	Conductor			Insulation			Overall Diameter		
	No. of Strands	Diameter of Strand	Outer Diameter	Wall Thickness (nom.)	Wall Thickness (min.)	Wall Thickness (min.)	Nominal	Maximum	
AWG		mm	mm	mm	mm	mm	mm	mm	
24	7	0.20	0.6	0.40	0.28	0.28	1.4	1.5	
22	7	0.26	0.8	0.40	0.28	0.28	1.6	1.7	
20	7	0.32	1.0	0.40	0.28	0.28	1.8	1.9	
20	19	0.19	1.0	0.40	0.28	0.28	1.8	1.9	
18	19	0.23	1.2	0.40	0.28	0.28	2.0	2.2	
16	19	0.29	1.5	0.40	0.28	0.28	2.3	2.4	
14	19	0.36	1.8	0.40	0.28	0.28	2.6	2.7	
12	19	0.45	2.3	0.46	0.32	0.32	3.2	3.3	
10	19	0.58	3.0	0.50	0.35	0.35	3.9	4.0	
8	50	0.45	3.7	0.55	0.39	0.39	4.8	4.9	

3 HDT SAE Heavy Duty, Thermoplastic Insulated									
Wire Size	Conductor			Insulation			Overall Diameter		
	No. of Strands	Diameter of Strand	Outer Diameter	Wall Thickness (nom.)	Wall Thickness (min.)	Wall Thickness (min.)	Nominal	Maximum	
AWG		mm	mm	mm	mm	mm	mm	mm	
20	7	0.32	1.0	0.91	0.64	0.64	2.8	3.1	
20	19	0.19	1.0	0.91	0.64	0.64	2.8	3.1	
18	19	0.23	1.2	0.94	0.66	0.66	3.0	3.4	
16	19	0.29	1.5	1.02	0.71	0.71	3.5	3.7	
14	19	0.36	1.8	1.04	0.73	0.73	3.9	4.2	
12	19	0.45	2.3	1.17	0.82	0.82	4.6	5.1	
10	19	0.58	3.0	1.17	0.82	0.82	5.3	5.7	
8	50	0.45	3.7	1.40	0.98	0.98	6.5	7.0	

TECHNICAL DATA OF AUTO WIRE

1 **FLRY-A** Thin Wall, with Symmetric Conductor (Type A)

[illegible]

Thin Wall, With Asymmetric Conductor (Type B)

Nominal Cross Section	Conductor				Insulation		Overall Dia Maximum
	No. of Strands	Diameter of Strand	Outer Diameter of (max.)	Electric Resistance at 20°C (max)	Wall Thickness (nom.)	Wall Thickness (min.)	
mm²		mm	mm	mΩ/m	mm	mm	mm
0.35	12	0.20	0.80	34.1	0.25	0.20	1.40
0.50	16	0.20	1.00	37.1	0.28	0.22	1.60
0.75	24	0.20	1.20	24.7	0.30	0.24	1.90
1.00	32	0.20	1.30	18.5	0.30	0.24	2.10
1.50	30	0.25	1.60	12.7	0.30	0.24	2.40
2.00	30	0.30	1.90	9.42	0.35	0.28	2.80
2.50	50	0.25	2.10	7.60	0.35	0.28	3.00
3.00	45	0.31	2.40	6.15	0.40	0.32	3.40
4.00	56	0.30	2.60	4.71	0.40	0.32	3.70
6.00	84	0.30	3.20	3.14	0.40	0.32	4.30
16.00	126	0.40	5.20	1.16	0.65	0.52	7.20

3 FLUY-A Ultra Thin Wall, with Symmetric Conductor (Type A)

[illegible]

Thin Wall, with Twisted Multi-Wires without Sheath

No. of Cores x Nominal Cross Section	Conductor				Core			Overall Dia
	No. of Strands	Diameter of Strand	Outer Diameter (max.)	Electric Resistance at 20°C (max)	Wall Thickness (nom.)	Wall Thickness (min.)	Outer Diameter (max.)	
mm ²		mm	mm	mΩ/m	mm	mm	mm	
2 x 0.35	7	0.26	0.8	54.4	0.25	0.20	1.30	
2 x 0.50	7	0.19	1.0	37.1	0.28	0.22	1.60	
3 x 0.50	19	0.19	1.0	37.1	0.28	0.22	1.60	
2 x 0.75	19	0.23	1.2	24.7	0.30	0.24	1.90	
3 x 0.75	19	0.23	1.2	24.7	0.30	0.24	1.90	
2 x 1.00	19	0.26	1.3	18.5	0.30	0.24	2.10	
4 x 1.00	19	0.26	1.3	18.5	0.30	0.24	2.10	
2 x 1.50	19	0.32	1.7	12.7	0.30	0.24	2.40	

Thin Wall, with Multi-Cores and PVC sheath

No. of Cores x Nominal Cross Section	Conductor			Core			Sheath	Overall
	No. of Strands	Diameter of Strand	Outer Diameter (max)	Electric Resistance at 20°C (max)	Wall Thickness (nom.)	Wall Thickness (mm.)	Outer Diameter (max)	Thickness (nom.) Max.
mm ²	mm	mm	mΩ/m	mm	mm	mm	mm	mm
Type - A								
2 x 0.35	7	0.26	0.80	54.4	0.25	0.20	1.30	0.50 3.70
2 x 0.50	19	0.19	1.0	37.1	0.28	0.22	1.60	0.60 4.60
2 x 0.75	19	0.23	1.2	24.7	0.30	0.24	1.90	0.60 4.90
2 x 1.0	19	0.26	1.3	18.5	0.30	0.24	2.10	0.60 5.40
Type - B								
2 x 0.50	16	0.20	1.0	37.1	0.28	0.22	1.60	0.60 4.60
2 x 0.75	24	0.20	1.2	24.7	0.30	0.24	1.90	0.60 4.90

Thin Wall, Heat Resistant, with Symmetric Conductor
(Type A)[illegible]

8 FLY

Thick Wall, with Conductor

Nominal Cross Section	Conductor				Insulation		Overall Dia	
	No. of Strands	Diameter of Strand	Outer Diameter (max.)	Electric Resistance at 20 °C (max)	Wall Thickness (nom.)	Wall Thickness (min.)	Maximum	
					mm	mm		mm
mm²		mm	mm	mΩ/m	mm	mm	mm	
0.50	16	0.20	1.0	37.1	0.60	0.48	2.30	
0.75	24	0.20	1.2	24.7	0.60	0.48	2.50	
1.00	32	0.20	1.3	18.5	0.60	0.48	2.70	
1.50	30	0.25	1.6	12.7	0.60	0.48	3.00	
2.00	30	0.30	1.9	9.42	0.60	0.48	3.30	
2.50	50	0.25	2.1	7.60	0.70	0.56	3.60	
3.00	45	0.30	2.4	6.15	0.70	0.56	4.10	
4.00	56	0.30	2.6	4.71	0.80	0.64	4.40	
6.00	84	0.30	3.2	3.14	0.80	0.64	5.00	
10.00	80	0.40	4.1	1.82	1.00	0.80	6.50	
16.00	126	0.40	5.2	1.16	1.00	0.80	8.30	
25.00	196	0.40	6.5	0.70	1.30	1.04	10.40	
35.00	276	0.40	7.7	0.50	1.30	1.04	11.60	
50.00	396	0.40	9.2	0.30	1.50	1.20	13.50	
70.00	360	0.50	11.0	0.20	1.50	1.20	15.50	

9 FLYW Thick Wall, Heat Resistant, with Conductor

9 FLYW

Thick Wall, Heat Resistant, with Conductor

Nominal Cross Section	No. of Strands	Conductor		Insulation		Overall Dia	
		Diameter or Strand	Outer Diameter (max)	Electric Resistance at 20°C (max)	Wall Thickness (nom.)	Wall Thickness (min.)	Maximum
mm²		mm	mm	mΩ/m	mm	mm	mm
0.50	16	0.20	1.0	37.1	0.60	0.48	2.30
0.75	24	0.20	1.2	24.7	0.60	0.48	2.50
1.00	32	0.20	1.3	18.5	0.60	0.48	2.70
1.50	30	0.25	1.6	12.7	0.60	0.48	3.00
2.00	30	0.30	1.9	9.42	0.60	0.48	3.30
2.50	50	0.25	2.1	7.60	0.70	0.56	3.60
3.00	45	0.30	2.4	6.15	0.70	0.56	4.10
4.00	56	0.30	2.6	4.71	0.80	0.64	4.40
6.00	84	0.30	3.2	3.14	0.80	0.64	5.00
10.0	80	0.40	4.1	1.82	1.00	0.80	6.50
16.0	126	0.40	5.2	1.16	1.00	0.80	8.30
25.0	196	0.40	6.5	0.70	1.30	1.04	10.40
35.0	276	0.40	7.7	0.50	1.30	1.04	11.60
50.0	396	0.40	9.2	0.30	1.50	1.20	13.50
70.0	360	0.50	11.0	0.20	1.50	1.20	15.50

11 FLY Multi

[illegible]Thin Wall, Heat Resistant, with Symmetric Conductor
(Type A)[illegible]



GoodWill Cables

ELECTRICAL CABLES & SOLAR WIRES :)

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