## **CATALOGUE** 2022-2023





**POWERING KENYA SINCE 2010** 

## About Us

**FINLAY WIRES AND CABLES** is a leading manufacturer of a wide range of PVC electrical insulated wiring cables, Power cables, Welding cables, Submersible cables, Flexible cables, Battery cables & Automotive cables.

We have been in operation well over 11 years in servicing domestic, commercial and industrial users locally and regionally.

Our state of the art manufacturing plant is located at the heart of Nairobi's Industrial Area.

We incorporate the following features and characteristics;

- Tested under strict laboratory procedures to ensure quality.
- Manufactured using 99.9% pure copper from Zambia (ZAMEFA) and PVC materials sourced locally/internationally to ensure high conductivity and insulation.
- Compliance with relevant KEBS (KS) and BS standards.

The company has a team of dedicated and experienced people who are consistently working to upgrade the product technology. Our Research & Development capabilities, emphasize on upgrading the technology used in our production process to drive productivity and give best quality cables.

## Vision

To continuously evolve by challenging past achievements and setting new benchmarks as a producer of high quality electrical cables.

### **Mission**

To create value and delight our customers through continues development of innovative products.

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# **HOUSE WIRING CABLES**

FINLAY BRUSHWARE LTD 1.0MM SQ

 REF:
 6491X

 Standards:
 KS453, KS-187, KS EAS114

 Voltage rating:
 300/500V for 1.0mm<sup>2</sup>

 450/750V for > 1mm<sup>2</sup>

**Application:** These are cables intended to be drawn in trunking or conduits but may also be used in protected installations such as control panel boards or switch gears.

Maximum operating temperature: 70<sup>o</sup>C

**Colour:** Red, Black, Green-Yellow. Other colours available on order. The conductor is made of Solid (class1) or Stranded (class2) and PVC Insulated.



#### Below are conductor sizes and parameters.

REF:	Nominal cross- section area (mm²)	Insulation Thickness (mm)	Number/ diameter of strands No/mm	Conductor/ resistance at 20°c in Ω/km	Current carrying capacity of cables in AMP.	Overall diameter (OD) mm	APP WEIGHT Gm/mtr		
	300/500V cables								
	1.0mm	0.6	1/1.13	18.1	10	(2.4-2.5)	14		
	450/750V cables								
60/1V	1.5mm <sup>2</sup>	0.7	1/1.39	12.1	13	(2.8-2.9)	20		
07417	2.5mm <sup>2</sup>	0.8	7/0.674	7.41	19	(3.6-3.7)	33		
	4.0mm <sup>2</sup>	0.8	7/0.85	4.61	23	(4.0-4.1)	47		
	6.0mm <sup>2</sup>	0.8	7/1.04	3.08	30	(4.7-4.8)	69		
	10.0mm <sup>2</sup>	1.0	7/1.35	1.83	41	(6.1-6.2)	116		
	16.0mm <sup>2</sup>	1.0	7/1.70	1.15	54	(7.1-7.2)	176		

#### **PVC insulated and PVC sheathed flat cables**

 REF:
 6192Y (TWIN FLAT)

 6242Y (TWIN WITH EARTH)

 Standards:
 KS453, EAS114, KS187

 Voltage rating:
 300/500V



**Application:** Used for house wiring and light industrial wiring. The cable is usually clipped on walls or may be drawn in tray or ducts where mechanical protection is required.

**Construction:** Two core i.e. Red and Black laid Parallel To each other with Earth continuity conductor in between the cores.

Embossing is implied on the sheath indicating the size, manufacturer i.e FINLAY BRUSHWARE LTD and. Maximum operating temperature, 70°c

Core colours: RED and BLACK Sheath colour; GREY

NB: Please find Conductor sizes and Specifications on the Next Page

REF:	Nominal	Radial	Thickness of	No & diameter	Conductor	Overall	Current	Approximate
	conductor	thickness of insulation	sheath	of wire	resistance	diameter	carrying	weight in
	(mm²)	mm	mm	No/mm	$\Omega$ /km (max)	(mm)	capacity in	gm/m
							Amperes	
	1.0mm <sup>2</sup>	0.6	0.9	1/1.13	18.1	(4.2X6.8)	13	46.5
6192Y	1.5mm <sup>2</sup>	0.7	0.9	1/1.39	12.1	(4.7X7.8)	17	62.7
	2.5mm <sup>2</sup>	0.8	1.0	7/0.674	7.41	(5.7X9.5)	24	100.4
	4.0mm <sup>2</sup>	0.8	1.0	7/0.85	4.61	(6.2X10.5)	32	148.8

REF:	Nominal conductor (mm²)	Size of ECC mm <sup>2</sup>	Thickness of insulation mm	Thickness of sheath mm	No & diameter of wire	Conductor resistance Ω/km (max)	Overall diameter (mm)	Current carrying capacity in Amperes	Approximate weight in gm/m
	1.0mm <sup>2</sup>	1.0mm <sup>2</sup>	0.6	0.9	1/1.13	18.1	(4.4x8.0)	13	64.30
	1.5mm <sup>2</sup>	1.0mm <sup>2</sup>	0.7	0.9	1/1.39	12.1	(4.8x8.8)	17	80.08
	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	0.8	1.0	7/0.674	7.41	(5.7x11.6)	24	137.62
	4.0mm <sup>2</sup>	2.5mm <sup>2</sup>	0.8	1.0	7/0.85	4.61	(6.5x12.5)	32	170.20
624ZY	6.0mm <sup>2</sup>	2.5mm <sup>2</sup>	0.8	1.1	7/1.04	3.08	(6.9x13.8)	40	219.16
	10.0mm <sup>2</sup>	4.0mm <sup>2</sup>	1.0	1.2	7/1.35	1.83	(8.7x17.5)	57	298.40
	16.0mm <sup>2</sup>	6.0mm <sup>2</sup>	1.0	1.3	7/1.70	1.15	(10x21.0)	76	550

## **FLEXIBLE CABLES**

 REF:
 3180Y

 Standards:
 KS 187, KS 192

 Voltage rating:
 300/500V



**Application:** Generally used for indoor/outdoor and mostly areas flexing and torsion is likely. Also, are used as temporary power extension cords and portable and movable parts of machines for example, cranes and lifts.

**Construction:** Flexible cables are made of plain class 5 or 6 copper conductors annealed to the set standards. The sheath should not embed on the insulation so as to easier separation of the cores during installation.

Colour of sheath; white or black

#### **Core identification:**

2 core (3182Y); BROWN and BLUE 3 core (3183Y); BROWN, BLUE & YELLOW/GREEN 4 core (3184Y); BROWN, BLUE, YELLOW/GREEN & BLACK 5 core (3185Y); BROWN, BLUE, YELLOW/GREEN, BLACK & GREY

NB: Please find Specification of flexible cables on the next page

REF:	Nominal conductor (mm²)	Number and Size of wires (No./mm)	Insulation thickness (mm)	Thickness of sheath (mm)	Overall diameter (mm)	App. Weight (gm/m)	Conductor resistance at 20°c Ω/km (max)
3182Y	0.5mm <sup>2</sup>	16/0.20	0.6	0.8	6.0	54	39.0
3182Y	0.75mm <sup>2</sup>	24/0.20	0.6	0.8	6.6	56	26.0
3182Y	1.0mm <sup>2</sup>	32/0.20	0.6	0.8	7.0	67	19.5
3182Y	1.5mm <sup>2</sup>	30/0.25	0.7	0.8	7.6	98	13.3
3182Y	2.5mm <sup>2</sup>	50/0.25	0.8	1.0	9.4	160	7.98
3182Y	4.0mm <sup>2</sup>	56/0.30	0.8	1.0	10.6	200	4.95
3183Y	0.5mm <sup>2</sup>	16/0.20	0.6	0.8	6.5	58.0	39.0
3183Y	0.75mm <sup>2</sup>	24/0.20	0.6	0.8	6.9	75	26.0
3183Y	1.0mm <sup>2</sup>	32/0.20	0.6	0.8	7.4	86	19.5
3183Y	1.5mm <sup>2</sup>	30/0.25	0.7	0.9	8.6	120	13.3
3183Y	2.5mm <sup>2</sup>	50/0.25	0.8	1.1	9.8	160	7.98
3183Y	4.0mm <sup>2</sup>	56/0.30	0.8	1.1	11.8	250	4.95
3183Y	6.0mm <sup>2</sup>	84/0.30	0.8	1.2	13.0	349	3.30
3184Y	0.5mm <sup>2</sup>	16/0.20	0.6	0.8	7.4	58.0	39.0
3184Y	0.75mm <sup>2</sup>	24/0.20	0.6	0.8	8.0	80	26.0
3184Y	1.0mm <sup>2</sup>	32/0.20	0.6	0.8	8.4	112	19.5
3184Y	1.5mm <sup>2</sup>	30/0.25	0.7	0.9	9.0	150	13.3
3184Y	2.5mm <sup>2</sup>	50/0.25	0.8	1.1	10.8	205	7.98
3184Y	4.0mm <sup>2</sup>	56/0.30	0.8	1.1	12.8	305	4.95
3184Y	6.0mm <sup>2</sup>	84/0.30	0.8	1.2	13.8	410	3.30
3184Y	1.0mm <sup>2</sup>	32/0.20	0.6	0.8	7.8	105	26.0
3185Y	1.0mm <sup>2</sup>	32/0.20	0.6	0.8	8.8	125	26.0

Note: all sizes of flexible cables are available on order.

# WELDING CABLES

These are flexible cables designed to carry the welding current in arc welding circuits. They are made using fine stranded copper conductors class 5 bare copper rope stranded with nitrile insulation which is impervious to abrasion, oil and diluted acids.

Standards: KS 1637 : 2001 KS 04-187

Colour; Insulation : WHITE Outer Sheath : ORANGE





Cross - Sectional Area	No⁰α Diameter of Wires No⁰/mm	Radial thickness (RT) of Insulation (mm)	Radial thickness (RT) of Outer Sheath (mm)	Max Resistance@ 20°C Ω/km	Overall Diameter (mm)
16mm <sup>2</sup>	224/0.30	1.0	1.0	1.21	(9.8 - 10.4)
25mm <sup>2</sup>	350/0.3	1.0	1.0	0.78	(11.6 - 12.2)
35mm²	490/0.3	1.0	1.0	0.554	(13.0 - 14.0)
50mm <sup>2</sup>	378/0.41	1.2	1.0	0.386	(15.0 - 16.2)

## **POWER CABLES**

#### **PVC Insulated PVC sheathed ARMOURED**

Cables Reference: 6940X Voltage rating: 600/1000V

Standards: KS 04-194, KS 187

**Construction:** Stranded or solid Copper conductors PVC insulated, PVC bedded, Steel wire armoured and PVC sheathed.

Application: Used for industrial wiring. Delinquent to the Cables mechanical strength, it can be laid directly into the ground or can be embedded in trays. The **armour wire** gives the inner wires protection while the outer sheath makes the Cable water-tight in addition to jacketing the whole assembly.

#### **Core Identification**

6942X - 2 Core 6943X - 3 Core 6944X - 4 Core 6945X - 5 Core Red and Black Red, Yellow, Blue Red, Yellow, Blue, Black 1,2,3,4,5 and upwards (Multi-core cables)

Colour of sheath; BLACK

Maximum operating temperature 70°C



NB: Please find conductor sizes and specifications on the next page

REF:	Cross- Sectional Area of Conductor (mm²)	Thickness of Insulation (mm)	Thickness of Bedding (mm)	Diameter of Armour wire (mm)	Thickness of Outer Sheath (mm)	Overall Diameter OD (mm)	Approx Cable at weight in gm/m
6942X	1.5	0.7	0.8	0.9	1.4	12.5	280
6942X	2.5	0.8	0.8	0.9	1.4	13.5	350
6942X	4.0	0.8	0.8	0.9	1.4	15.4	470
6942X	6.0	0.8	0.8	0.9	1.5	16.5	550
6942X	10.0	1.0	0.8	1.25	1.6	20.2	820
6942X	16.0	1.0	0.8	1.25	1.6	21.8	1050
6943X	1.5	0.7	0.8	0.9	1.4	12.8	306
6943X	2.5	0.8	0.8	0.9	1.4	14.2	379
6943X	4.0	0.8	0.8	0.9	1.4	15.8	490
6943X	6.0	0.8	0.8	1.25	1.5	18.0	700
6943X	10.0	1.0	0.8	1.25	1.6	21.4	960
6944X	1.5	0.7	0.8	0.9	1.4	13.5	335
6944X	2.5	0.8	0.8	0.9	1.4	15.0	431
6944X	4.0	0.8	0.8	1.25	1.5	17.8	640
6944X	6.0	0.8	0.8	1.25	1.5	19.2	770

# **SUBMERSIBLE CABLES**

**Construction:** These are cables made with flexible class 5 Copper conductors They come in Flat and Round shaped. The cores are laid parallel to each other.

Core Identification: 3 Core; Red, Yellow & Blue 4 Core; Red, Yellow, Blue & Green Colour of sheath; BLACK OR BLUE

**Application;** These are cables are used for power connections to submersible pumps. They are PVC insulated and PVC sheathed. The PVC utilized is impervious to moisture, water, oil and diluted acids which make it ideal for use in all submerged condition.





Nominal Cross Sectional area (mm²)	No of Cores No	Insulation Thickness (mm)	Overall Dimension (mm)	Conductor resistance Ω/km
0.75	3	0.6	(4.1 X 10.0)	26.0
1.0	3	0.6	(4.4 X 10.8 )	19.5
1.5	3	0.7	(5.0 X 12.0)	13.3
2.5	3	0.8	(5.8 X 14.6)	7.98
4.0	3	0.8	(6.6 X 16.6)	4.95
6.0	3	0.8	(7.2 X 18.4)	3.30
0.75	4	0.6	(4.1 X 12.2)	26.0
1.0	4	0.6	(4.4 X 13.4)	19.50
1.5	4	0.7	(5.4 X 15.0)	13.30
2.5	4	0.8	(5.8 X 18.0)	7.980
4.0	4	0.8	(6.6 X 20.8)	4.95
6.0	4	0.8	(7.2 X 23.2)	3.30



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### MANUFACTURING RELATIONSHIPS, DISTRIBUTING QUALITY

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