SHREE BALAJI CABLES (SBJI) Cables – Product List and Technical Data

Shree Balaji Cables (SBJI) Cables is an Indian manufacturer of wires and cables.
The company produces a wide range of products including submersible pump cables, building wires, single-core and multicore flexible cables, welding cables, solar cables, automotive harness cables and instrumentation cables.
This report summarizes the key characteristics of each product family, drawing on the data sheets published on the Shree Balaji Cables (SBJI) Cables website.

Summary of product families

The table below provides a high-level comparison of the major product families offered by Shree Balaji Cables (SBJI) Cables.
Technical data fields use short phrases (e.g., temperature range, voltage grade and fire-safety metrics).
Silent features and applications are expressed as keywords rather than long sentences, in keeping with the client's formatting guidelines.

Product	Technical data (key parameters)	Cable standard	Silent features (keywords)	Typical applications
3-core PVC flat cable	Operates −10 °C to 70 °C; voltage grade ≤ 1.1 kV; oxygen index > 29.5 %; ignition temperature (21 % O_2) > 250 °C; smoke visibility < 30 %	IS 694:2010; BS 6500; conductor is 99.9 % electrolytic copper (IS 8130); PVC insulation (Type A – IS 5831); PVC sheath (ST-1 – IS 5831)	High flexibility; moisture/oil/abrasion resistance; excellent electrical and mechanical properties; standard packing 100–1000 m; core colors Red-Yellow-Blue; sheath colors Black/Blue/Grey	Irrigation pumps; submersible motor power supply; drinking-water supply pumps; fire-fighting pumps; sewage treatment plants; sea/river water handling equipment
4-core PVC flat cable	Same as 3-core flat cable: operating temperature	IS 694:2010; BS 6500; conductor 99.9 % copper; PVC insulation Type A;	High flexibility; moisture/oil/abrasion resistance; standard packing 100–	Irrigation pumps; power supply to submersible pumps;

Product	Technical data (key parameters)	Cable standard	Silent features (keywords)	Typical applications
	−10 °C to 70 °C; voltage grade ≤ 1.1 kV; oxygen index > 29.5 %; ignition temperature > 250 °C	PVC sheath Type ST-1	1000 m; core colors Red-Yellow-Blue-Green; sheath colors Black/Blue/Grey	drinking-water pumps; fire-fighting pumps; sewage treatment; sea/river water handling
3-core PVC round cable	Operating temperature −10 °C to 70 °C; voltage grade ≤ 1.1 kV; oxygen index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 30 %	IS 694:2010; BS 6500; conductor 99.9 % electrolytic copper (IS 8130); PVC insulation Type A (IS 5831); inner and outer PVC sheaths	High flexibility; abrasion/moisture/oil resistance; standard packing 100–1000 m; core colors Red-Yellow-Blue; sheath colors Black/Grey	Heavy-duty applications such as sewage, slurry and dewatering pumps where double-sheathed cables must withstand abrasion, prevent water ingress and resist acids and reactive chemicals
4-core PVC round cable	Same as 3-core round cable: operating temperature −10 °C to 70 °C; voltage grade ≤ 1.1 kV; oxygen index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 30 %	IS 694:2010; BS 6500; conductor 99.9 % copper; PVC insulation Type A; inner and outer PVC sheaths	High flexibility; abrasion/moisture/oil resistance; standard packing 100–1000 m; core colors Red-Yellow-Blue-Green; sheath colors Black/Grey	Same heavy-duty applications as 3-core round: sewage, slurry and dewatering pumps requiring abrasion-resistant, water-blocking sheaths

Product	Technical data (key parameters)	Cable standard	Silent features (keywords)	Typical applications
FR/FRLS/ ZHFR house wire	Operates −10 °C to 70 °C ; voltage grade ≤ 1.1 kV; oxygen index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 30 %. FR/FRLS/ZHFR compounds provide increasing flame retardancy, smoke reduction and halogen-free performance: FRLS has CO index > 30 % and ZHFR > 35 %; smoke density < 40 % (FRLS) and < 80 % (ZHFR); halogen release is < 20 % for FRLS and zero for ZHFR	IS 694:2010; BS 6500; conductor 99.9 % electrolytic copper (IS 8130); insulation FR-HR/FRLS/ZHFR PVC compounds (IS 5831)	Good flame-retardant properties; high flexibility & durability; moisture/abrasion/oil resistance; standard packing 90 m boxes, 180 m or 270 m coils; wide range of colors (red, yellow, blue, black, green, grey, white, brown)	Fixed installations in conduits and under plaster for power distribution and lighting in houses, commercial complexes, malls, buildings, industries, hospitals and apartments
Copper conductor solid/stranded	Operates −10 °C to 70 °C ; voltage grade ≤ 1.1 kV; oxygen	IS 694:2010; BS 6500; conductor 99.9 % pure electrolytic bare copper	High performance & durability; high current-carrying capacity; high thermal stability;	Fixed wiring in control panels, machines and electrical installations in

Product	Technical data (key parameters)	Cable standard	Silent features (keywords)	Typical applications
single-core cable	index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 30 %	(class 1 & 2 – IS 8130); insulation special HR-FR PVC compound (IS 5831)	resistance to moisture, abrasion, oil & grease; standard packing 90 m coils; colors Red/Yellow/Blue/Grey/Black	small, medium and large industries
Single-core flexible cable	Operates −10 °C to 70 °C ; voltage grade ≤ 1.1 kV; oxygen index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 30 %	IS 694:2010; BS 6500; conductor 99.9 % electrolytic flexible copper (IS 8130); insulation special HR-FR PVC compound (IS 5831)	High performance & durability; high current capacity; high thermal stability; moisture/abrasion/oil resistance; standard packing 90 m coils; colors Red/Yellow/Blue/Grey/Black	Fixed wiring in control panels, batteries, DC power transfer, machines and other electrical installations in industries
Multicore flexible cable	Operates −10 °C to 70 °C ; voltage grade ≤ 1.1 kV; oxygen index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 30 %	IS 694:2010; BS 6500; conductor 99.9 % flexible copper (IS 8130); insulation PVC Type D; outer sheath PVC Type ST-3 (IS 5831)	High flexibility & durability; moisture/abrasion/oil resistance; standard packing 90 m or 100 m; core colors: Red/Black (2 core), Red/Black/Green (3 core), Red/Yellow/Blue/Green (4 core); sheath colors Black/White/Grey/Orange	Interconnecting cable for measuring and control equipment, production lines, conveyors and computer units; suitable for fixed installations or flexible use in light mechanical stress; used outdoors when protected and indoors in dry or moist conditions, and in

Product	Technical data (key parameters)	Cable standard	Silent features (keywords)	Typical applications
				appliances and power tools
NBR welding cable	Operates −20 °C to 120 °C; voltage grade up to 600 V; test voltage 2.5 kV; insulation resistance 10 MΩ/km; oxygen index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 60 %	Meets IS 9857; conductor 99.9 % flexible copper (class 6) (IS 8130); separation polyester tape; insulation double insulated nitrile-rubber (NBR)	Ultra-high performance and durability; excellent resistance to moisture/abrasion/oil/grease; excellent electrical and mechanical properties; ozone and weather resistance; strong flame-retardant properties; standard packing 100–500 m; colors black and orange	Welding machines; automobile industries; shipbuilding; steel plants; refineries; automatic welding robots
Solar cables	Operates −15 °C to 90 °C; voltage grade up to 1100 V AC & 1800 V DC; oxygen index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 60 %	TÜV 2PfG-1169/08.2007 PV1-F (general compliance); conductor 99.9 % flexible or tinned copper; insulation UV-resistant XLPE; outer sheath UV-resistant XLPE or HFFR PVC	High flexibility & durability; resistance to moisture, abrasion, oil & grease; UV and ozone resistance; weather resistance; standard packing 100–1000 m; colors black and red	Interconnection of photovoltaic system elements; internal or external installations; within unprotected pipes or closed systems; used in solar panels, solar power plants and solar pump installations

Product	Technical data (key parameters)	Cable standard	Silent features (keywords)	Typical applications
Auto cable (FLRY-B)	Operates −40 °C to 105 °C (long-term) with temperature ratings of 105 °C for 3000 h, 125 °C for 240 h, 100 °C for 4 h and –40 °C for 48 h; voltage grade up to 60 V DC / 25 V AC (for 12/24 V systems); thermal overload capacity 120 °C for 48 h; electric strength 1 kV for 30 min in salt solution; oxygen index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 60 %	ISO 6722 (ASTM B3/DIN EN 13603); insulation PVC as per DIN 72551 & ISO 6722 Class B	Ultra-high performance; impervious to water, petrol, diesel, acids and oils; suitable for low- and high-temperature applications; excellent electrical & mechanical properties; compatible with high-speed harness equipment; excellent flame retardancy; standard packing 100–500 m; wide color range	Automobile wiring (starting, charging, lighting, signal and instrument panel circuits); auto harnesses
Battery cable (HR PVC)	Operates −40 °C to 105 °C with the same temperature ratings as auto cable; voltage grade up to 60 V DC	IS 2465; conductor 99.9 % flexible copper (class 5); insulation HR PVC; separation polyester tape over conductor	Ultra-high performance; impervious to water, petrol, diesel, acids and oils; suitable for low- and high-temperature applications; excellent electrical &	Battery connection and battery-chargi ng cables in the automotive industry; battery-to-inve

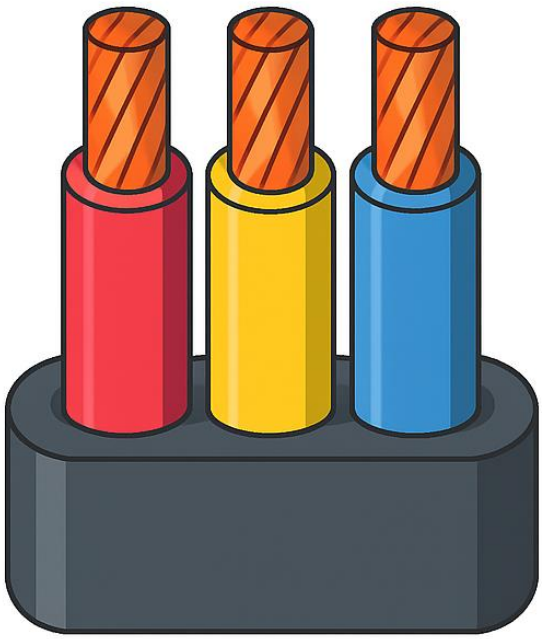
Product	Technical data (key parameters)	Cable standard	Silent features (keywords)	Typical applications
	/ 25 V AC (for 12/24 V systems); thermal overload capacity 120 °C for 48 h; electric strength 1 kV for 30 min in salt solution; oxygen index > 29.5 %; ignition temperature > 250 °C; smoke visibility < 60 %		mechanical properties; strong flame-retardant properties; standard packing 50–500 m; colors red and black	rter connections in larger installations
Instrumentation cable	Operates −5 °C to 70 °C; voltage grades 350 V/500 V/600 V; capacitance (1 kHz) up to 200 pF/m (core-to-core) and 400 pF/m (core-to-screen); inductance ≤ 1.25 MH/km	IS 694:2010; BS 5308 Part 2 Type 1; IEC 601156-1; IS 14493 Part 1; IS 5608 Part 1; conductor 99.9 % electrolytic copper (bare or tinned); insulation FR+HR PVC with high insulation resistance; outer sheath FR+HR PVC; separation aluminum mylar tape; optional copper braiding	Highly flexible data cable for low-frequency transmission; EMI protection via copper screen braiding (> 80 % coverage) and overall mylar tape; cores color-coded or numbered for easy identification; outer sheath of special PVC; standard packing 100–500 m	Control and signal cable for special-purpose machines, measurement equipment, electronics and computer systems, electronic scales, data transmission, drives and automation, electronic weighing systems and sensor/encoder/actuator signal transmission (<50 V)

Product details

Below are more detailed notes for each product family. Each section includes a representative illustration (generated for this report) and summarizes the key design features, data sheet information and typical applications.

Submersible pump cables

3-core PVC flat cable



Overview. “SHREE BALAJI CABLES (SBJI)” 3-core flat submersible cables consist of three pure-copper conductors insulated with PVC and enclosed in a PVC sheath. They conform to IS 694:2010 and BS 6500 standards. The flat profile allows easy installation in narrow bores.

Technical data.

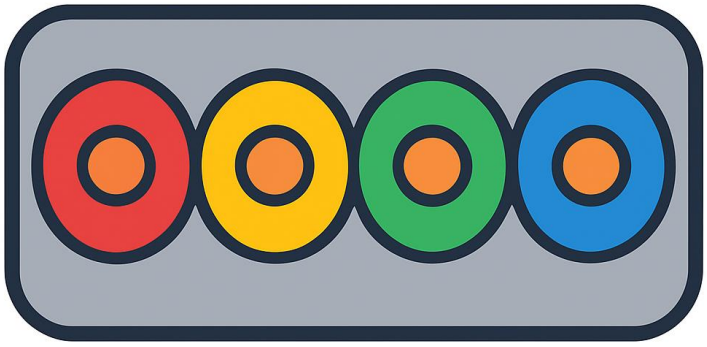
- **Operating temperature:** –10 °C to 70 °C.
- **Voltage grade:** up to 1.1 kV.
- **Fire performance:** oxygen index > 29.5 %; ignition temperature with 21 % O_2 > 250 °C; smoke visibility < 30 %.
- **Available sizes:** 1.5, 2.5, 4.0, 6.0, 10, 16, 25, 35 and 50 sq mm with current ratings from 14 A to 110 A.

Cable standard. Conductors are made from 99.9 % electrolytic copper (IS 8130). The insulation is PVC Type-A and the outer sheath is PVC Type ST-1 (IS 5831). The cables comply with IS 694:2010 and BS 6500.

Silent features. High flexibility and durability; excellent resistance to moisture, abrasion, oil and grease; excellent electrical and mechanical properties; standard packing 100–1000 m; core colors red/yellow/blue; sheath colors black/blue/grey.

Applications. Used for submersible motor power supply and pumps for irrigation, drinking water, fire-fighting, sewage treatment and sea/river water handling.

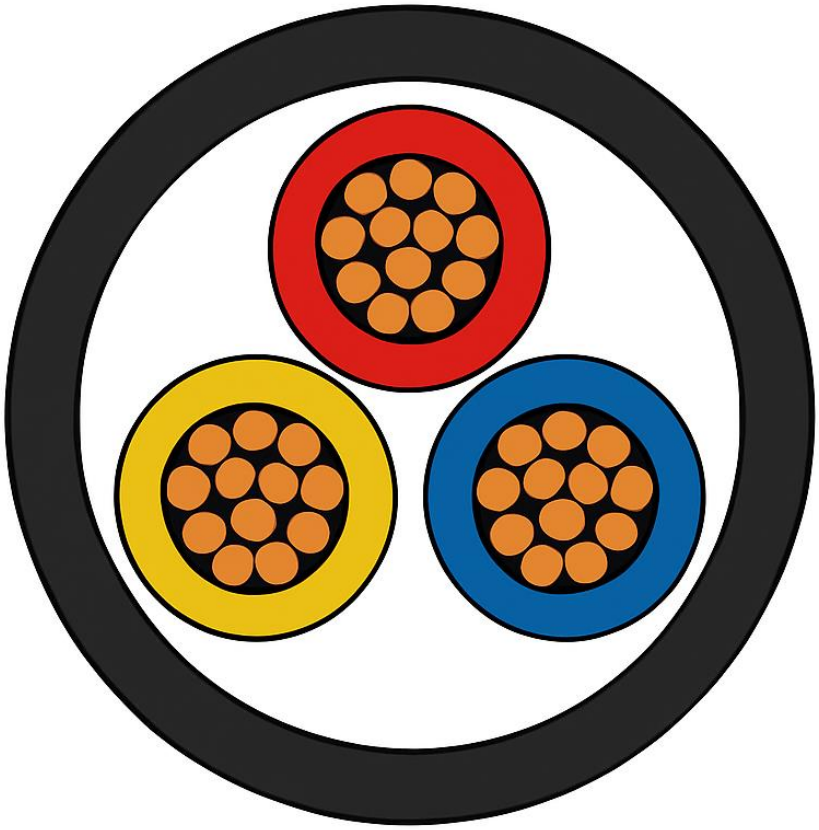
4-core PVC flat cable



This cable adds a fourth core for applications requiring an earth or neutral conductor. All technical parameters, standards and silent features mirror the 3-core version. Core colors follow the Red-Yellow-Blue-Green convention.

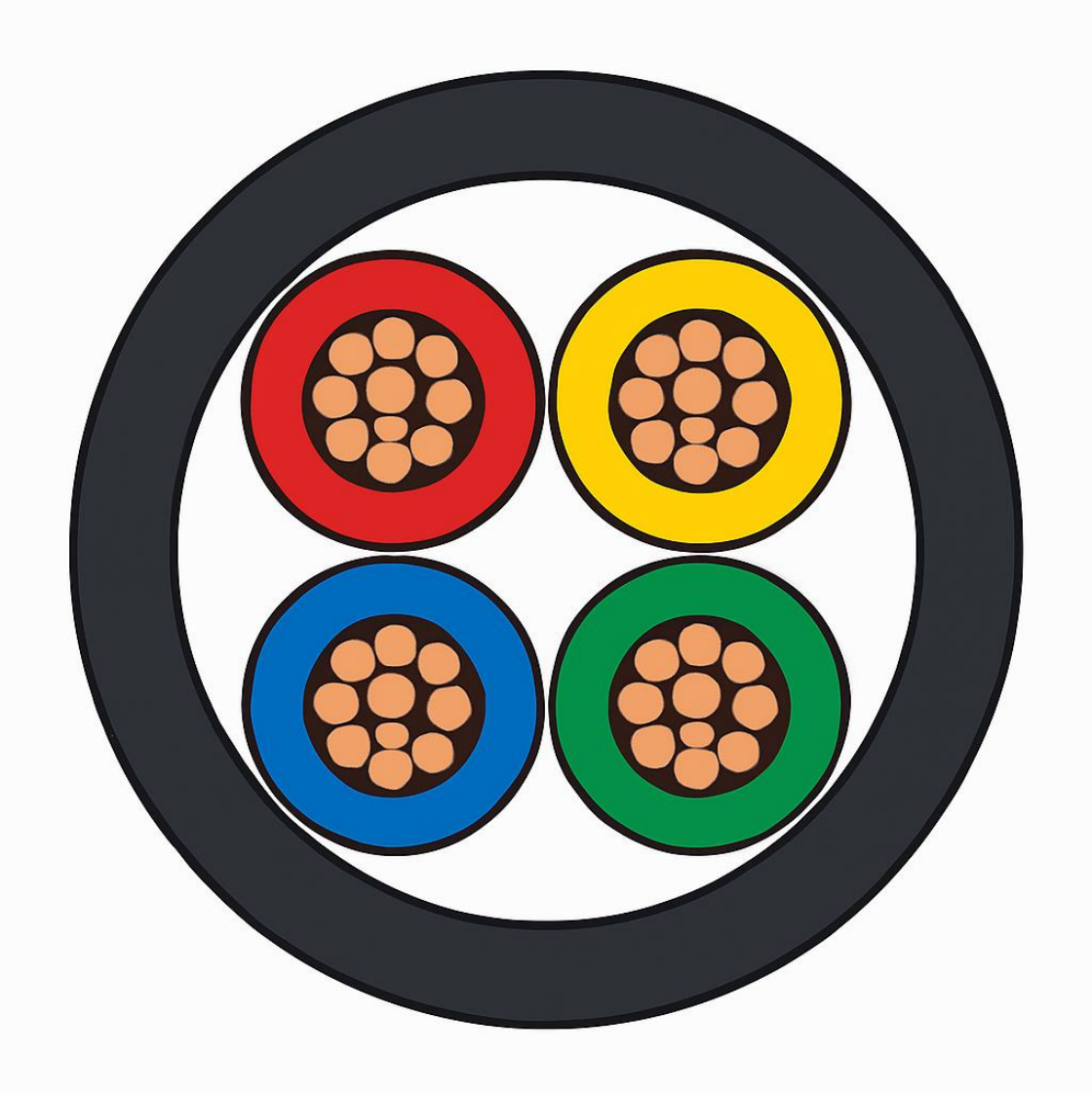
Submersible round cables

3-core PVC round cable



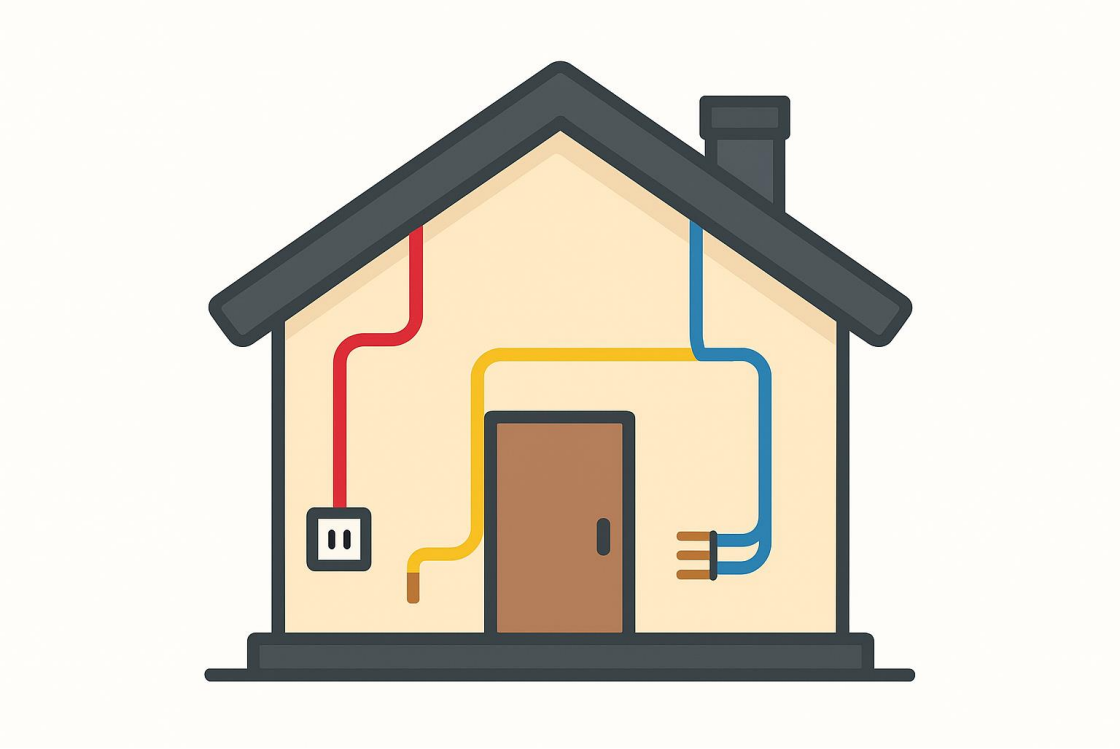
This double-sheathed round cable is designed for heavy-duty submersible applications. The circular sheath improves abrasion resistance and prevents water ingress. Technical data (operating temperature, voltage grade and fire parameters) match the flat cables. It uses 99.9 % copper conductors and PVC insulation/sheaths and conforms to IS 694:2010 and BS 6500. Applications include sewage, slurry and dewatering pumps where chemical resistance and mechanical strength are critical.

4-core PVC round cable



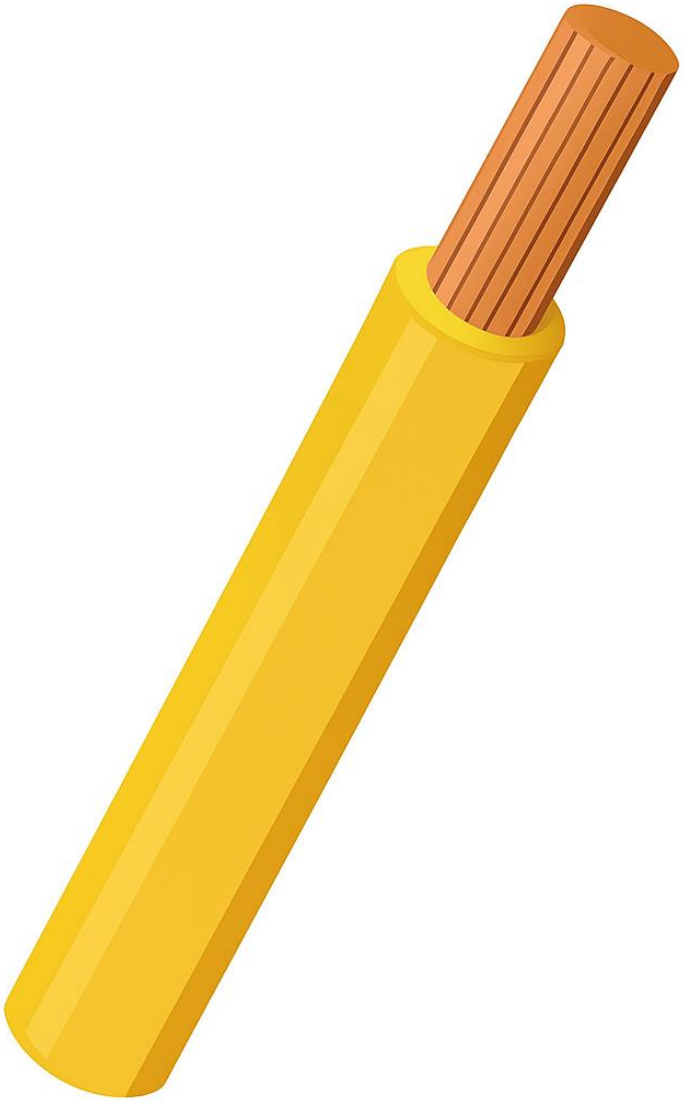
Identical to the 3-core round cable but with four conductors and corresponding color coding. The cable is used in heavy-duty pumping installations requiring an additional core. Standards, technical data and silent features remain the same.

Building wires (FR/FRLS/ZHFR)



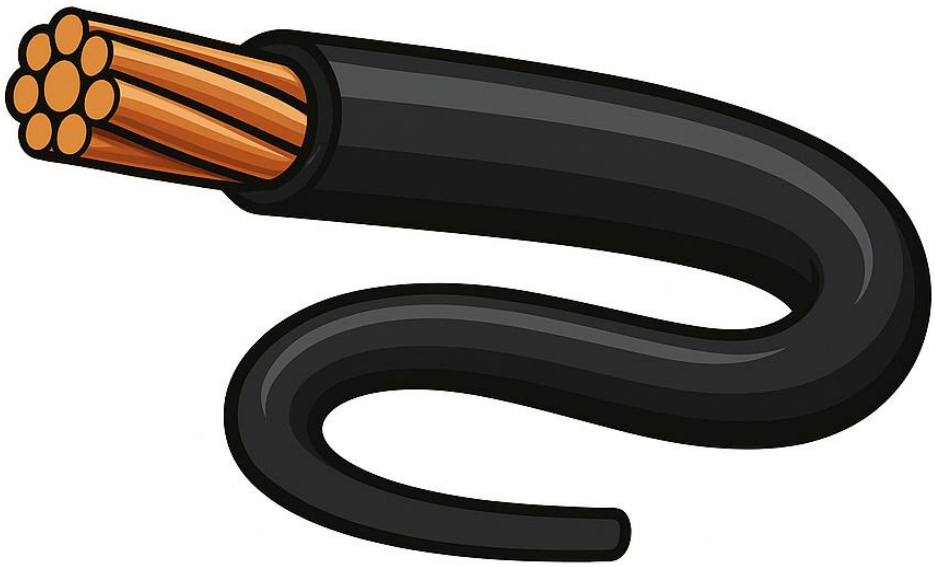
Shree Balaji Cables (SBJI) offers flame-retardant (FR), flame-retardant low-smoke (FRLS) and zero-halogen flame-retardant (ZHFR) building wires. All versions operate from −10 °C to 70 °C and are rated up to 1.1 kV. The compounds improve fire safety: FRLS wires reduce smoke and halogen gas release, while ZHFR wires are halogen-free with a higher oxygen index (> 35 %) and a temperature index > 300 °C. Cables use 99.9 % copper conductors and FR/FRLS/ZHFR PVC insulation and are certified to IS 694:2010 and BS 6500. They are available in many colors and supplied in 90, 180 or 270 m coils. Applications include power and lighting circuits in residential, commercial and industrial buildings.

Single-core cables - Solid/stranded single-core cable



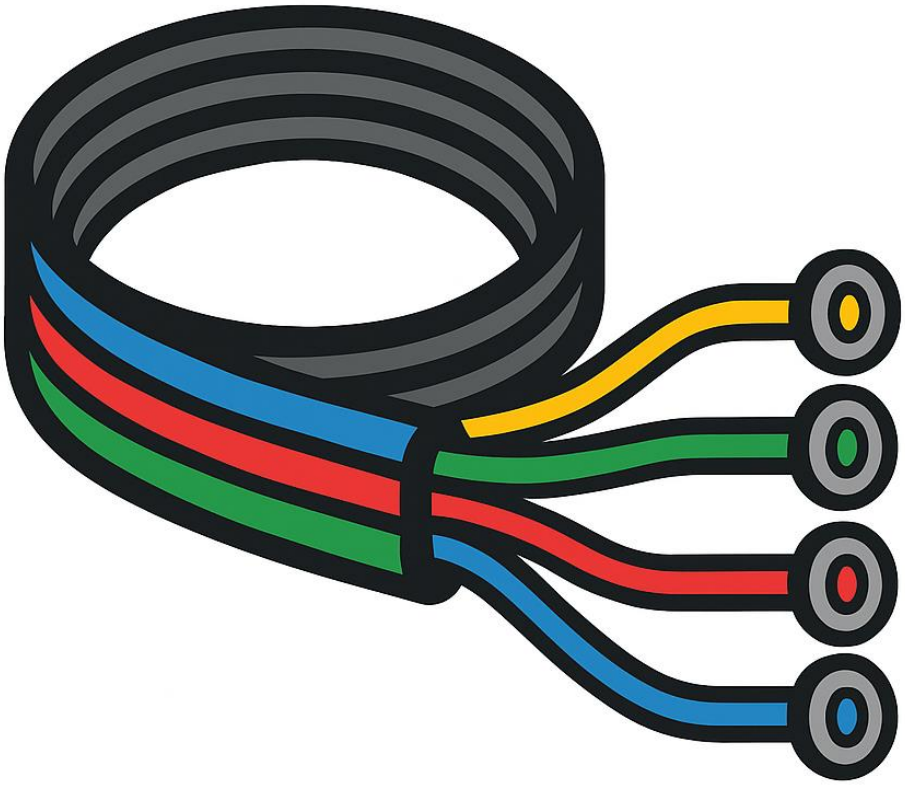
These HR-FR PVC insulated cables use class-1 (solid) or class-2 (stranded) copper conductors. They operate from −10 °C to 70 °C with a voltage grade up to 1.1 kV. The cables have high current-carrying capacity and thermal stability, resist moisture, abrasion and oils, and are offered in 90 m coils in several colors. They meet IS 694:2010 and BS 6500 standards. Typical uses include fixed wiring of control panels and machinery.

Single-core flexible cable



This cable substitutes a flexible (class-5) copper conductor, making it suitable for dynamic installations. Technical parameters and standards mirror the solid/stranded cable. The cable offers high current capacity and thermal stability and comes in 90 m coils in multiple colors. It is used in control panels, batteries, DC power transfer and machines.

Multicore flexible cables

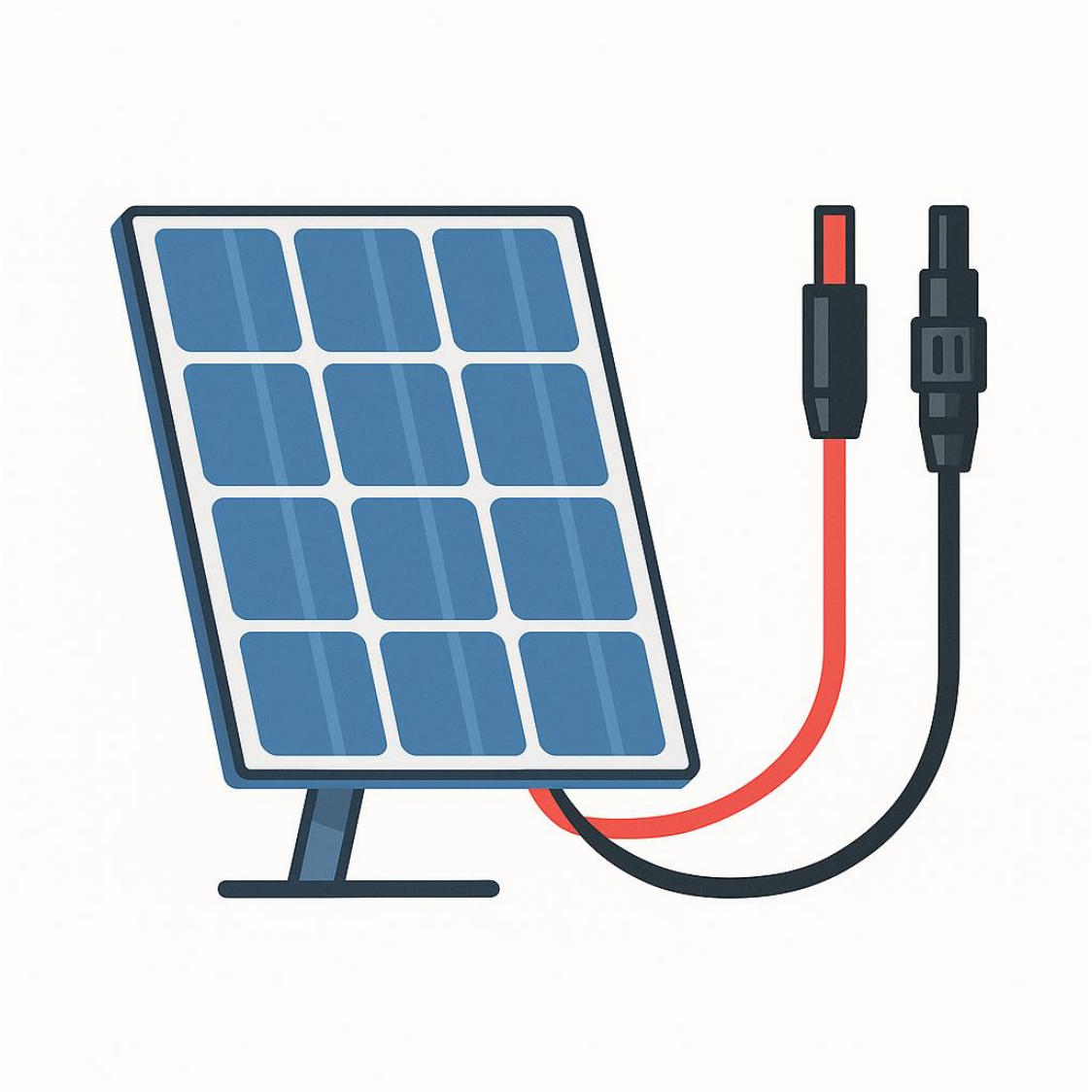


Shree Balaji Cables (SBJI) multicore flexible cables incorporate two to multiple copper conductors insulated with PVC (Type D) and sheathed with PVC Type ST-3. They operate between −10 °C and 70 °C and are rated up to 1.1 kV. The cables are highly flexible, resistant to moisture, abrasion, oil and grease, and supplied in 90 m or 100 m coils. Core colors follow IS 694 – red/black (2-core), red/black/green (3-core) and red/yellow/blue/green (4-core). Applications include control equipment, production lines, conveyors, computer units, home appliances and power tools.

NBR welding cable

Shree Balaji Cables (SBJI) NBR welding cables use class-6 flexible copper conductors separated by polyester tape and insulated with double nitrile-rubber (NBR) layers. They are designed for rugged welding environments: the operating range is –20 °C to 120 °C with a voltage rating of 600 V and a test voltage of 2.5 kV. These cables provide excellent moisture, oil, ozone and weather resistance and strong flame retardancy. Applications include welding machines, automotive manufacturing, shipyards, steel plants and refineries.

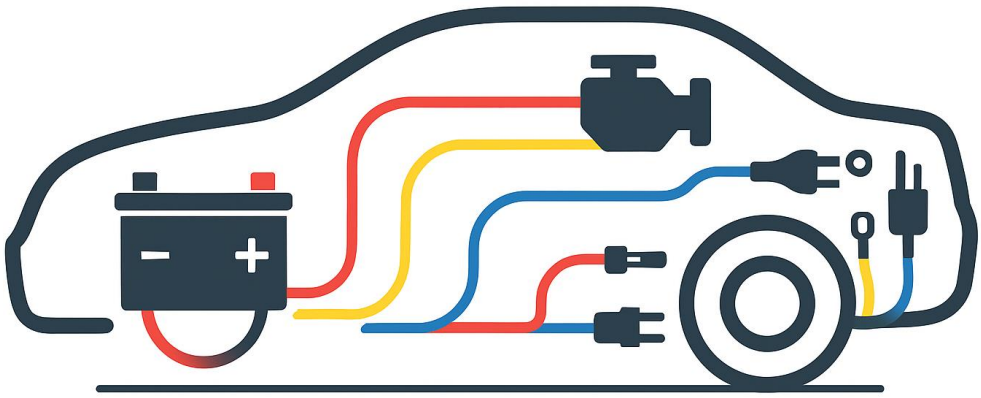
Solar PV cables



Solar PV cables connect photovoltaic panels to each other and to junction boxes. Shree Balaji Cables (SBJI) solar cables employ annealed copper or tinned copper conductors insulated with UV-resistant XLPE and sheathed with UV-resistant XLPE or halogen-free flame-retardant PVC. They operate from –15 °C to 90 °C and are rated 1.1 kV AC / 1.8 kV DC. The cables are flexible, weather-resistant and available in black or red with standard lengths of 100–1000 m. They conform to TÜV 2PfG-1169/08.2007 PV1-F. Applications include interconnection of solar panels in PV systems, solar power plants and solar pump installations.

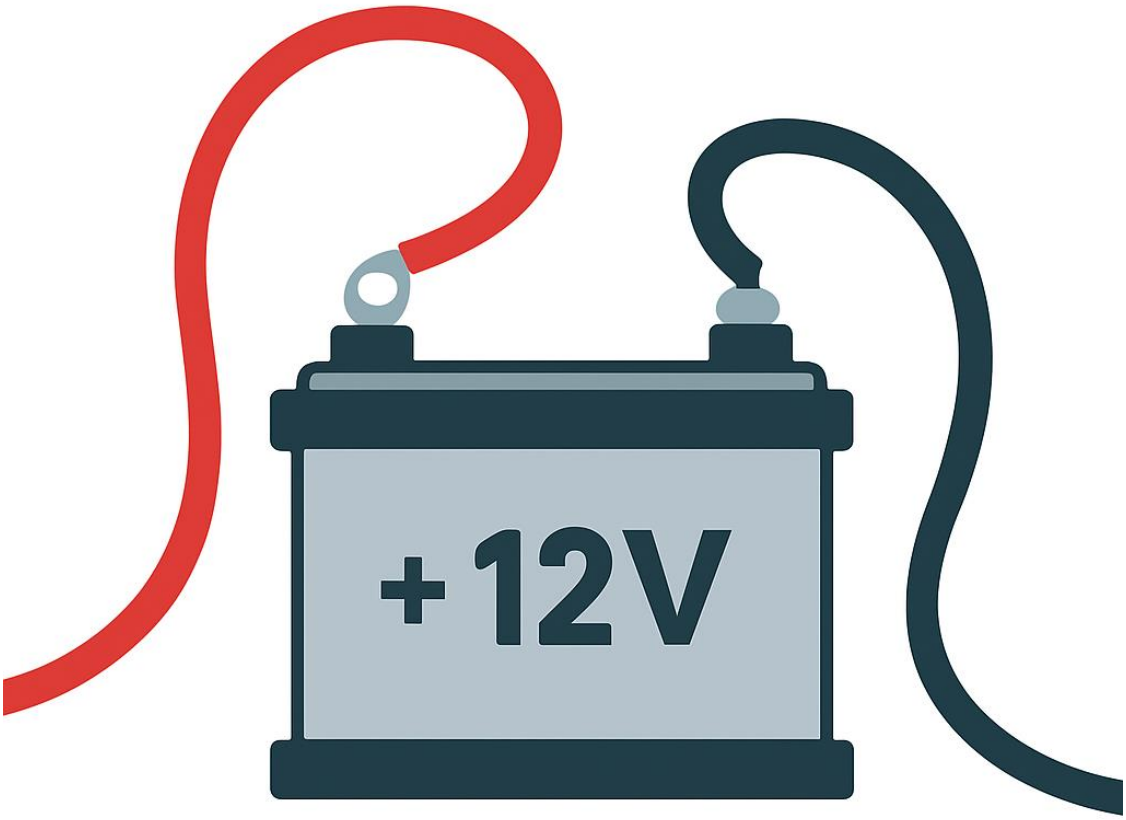
Automotive and battery cables

Auto cable (FLRY-B)



Auto cables are part of the vehicle wiring harness used for starting, charging, lighting and instrumentation circuits. Shree Balaji Cables (SBJI) FLRY-B cables use flexible copper conductors with PVC insulation conforming to ISO 6722 and DIN 72551. They tolerate temperatures from –40 °C to 105 °C with short-term overloads up to 125 °C and are rated for 60 V DC / 25 V AC. Cables are impervious to water, fuels and lubricants, compatible with automated harness production and available in many colors.

Battery cable (HR PVC)



Battery cables connect automotive batteries or inverters to loads. They use flexible class-5 copper conductors insulated with heat-resistant PVC and separated by polyester tape. Operating conditions and temperature ratings mirror the auto cable (–40 °C to 105 °C with overload up to 120 °C). The cables are robust, oil- and fuel-resistant and available in red or black with coil lengths from 50 m to 500 m. They conform to IS 2465 and are used for battery charging and battery-to-inverter connections.

Instrumentation cables

Instrumentation cables are multicore shielded cables used for low-level signal transmission in noisy industrial environments. The cables operate from –5 °C to 70 °C with voltage ratings of 350 V, 500 V or 600 V; capacitance is ≤ 200 pF/m (core-to-core) and

≤ 400 pF/m (core-to-screen) with inductance ≤ 1.25 MH/km. Conductors are bare or tinned copper with FR+HR PVC insulation; an aluminum mylar tape provides separation and optional tinned copper braiding offers >80 % EMI shield coverage. Cables are coded by colors or numbers, enclosed in a special PVC sheath and supplied in 100–500 m coils. They meet IS 694:2010, BS 5308 Part 2 Type 1 and other international standards. Typical uses include control and signal wiring in instrumentation and computer systems, electronic weighing machines, drives and automation equipment, sensors, encoders and actuators.

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