

BAHRA
CABLES



ELECTRIC CABLES FOR
PHOTOVOLTAIC SYSTEMS
SOLAR CABLES



Bahra Electric, the holding company of Bahra Cables Company was established in 2008 to serve Saudi, GCC & International Markets. It is based in Bahra industrial city located 35km from Jeddah and spanning over 500,000 sqm. of prime manufacturing space together with associated design offices, laboratories and storage area. It specializes in Manufacturing and Distributing Electrical Equipment.

Our products comply with universal standards; IEC, BS, UL, ASTM and certified by SASO, ESMA, ISO, BASEC, LPCB, UL, ASTA and many more.

Our products are also type tested by well-known independent laborites KEMA, IPH, BSI, UL, Labelec, Intertek, Bureau Veritas, Kinectrics, CSA etc.

We are also equipped with a 7,000m2 state-of-the-art integrated testing facility, which is now accredited by A2LA in accordance with ISO/IEC 17025:2005 to ensure that we maintain even higher quality control standards.

We are constantly identifying and establishing marketing and distribution channels locally and internationally and continuously improving our services and shall further invest in our manpower, equipment and processes.



ELECTRIC CABLES FOR PHOTOVOLTAIC SYSTEMS

SOLAR CABLES

In the recent years, a lot of research has been going on in solar power generation to make it easier, cheaper, smaller, sleeker and more customer friendly. Different new techniques are expected to help the future of this industry.

A solar cable is an interconnection cable, which is utilized in photovoltaic power generation industry for interconnecting solar panels and other electrical components. Easy installation, UV resistance, lifetime reliability, outdoor durability, flexibility, and stripability are some of the properties, which make solar cables ideal for industrial application. These cables are flame retardant and fully recyclable in accordance with environmental regulations.



Bahra Cables Company as a one of the leading companies operating in the Kingdom of Saudi Arabia has started production of Solar Cables to meet the huge growth in the solar power generation.

APPLICATION

BAHRA Solar Cables for PV-systems "H1Z2Z2-K" are intended for permanent use in particular for installation at the direct current (d.c.) side. These cables are suitable for outdoor and indoor, for free movable, free hanging and fixed installation.

Installation also in conduits and trunkings on, in or under plaster as well as in appliances.

Suitable for the application in/at equipment with protective insulation (protection class II).

They are inherently short-circuit and earth fault proof acc. to 60364-5-52.

BAHRA Solar Cables provide a maximum efficiency in the energy transmission throughout the service life of installation.

CABLE STANDARDS

BS EN 50618

IEC 62930



RATED VOLTAGE

DC: 1500 V & max. 1800 V

AC: 600/1000 V

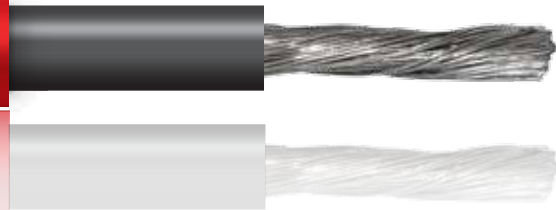
CONSTRUCTION

- CONDUCTOR:
Flexible Tinned copper Class 5 (K) as per EN 60228
- INSULATION:
Halogen-free cross-linked LSOH-XL compound
- JACKET:
Halogen-free cross-linked LSOH-XL compound

ELECTRIC CABLES FOR PHOTOVOLTAIC SYSTEMS

SOLAR CABLES

BAHRA CABLES CO.KSA 4 MM2 1500 V d.c 1000 V a.c H1Z2Z2-K



FEATURES

OUTDOOR USE / WEATHER RESISTANCE

TEMPERATURE RATING

Fixed: -40°C to +90°C

Maximum: +120°C (Up to 20000h)

MINIMUM BENDING RADIUS

Fixed: 4 x overall diameter

Free: 6 x overall diameter

- UV RESISTANCE
- OZONE RESISTANCE
- ACID AND ALKALINE

Sheath resistance against acid and alkaline solution

SERVICE LIFE

- AT LEAST 25 YEARS LIFETIME

MECHANICAL FEATURES

- IMPACT RESISTANCE

AG2

- ABRASION RESISTANCE
- TEAR RESISTANCE
- VIBRATION

Fixed installations up to AH3

FIRE PERFORMANCE & ECO-FRIENDLY

- FLAME PROPAGATION

Flame retardant as per EN 60332-1-2

SMOKE EMISSION

Minimum light transmittance as per EN 61034-1&2

ASSESSMENT OF HALOGENS

Halogen free as per IEC 60754-1

CORROSIVE GASES

Low corrosive gas emission IEC 60754-2

PHYSICAL AND ELECTRICAL CHARACTERISTICS

CATALOGUE CODE	CONDUCTOR SIZE	CONDUCTOR DC RESISTANCE AT 20 °C	MAX. SHORT-CIRCUIT CURRENT	APPROXIMATE OUTER DIAMETER	NET WEIGHT	TENSILE STRENGTH IN OPERATION	DELIVERY LENGTH/ STANDARD PACKING
	mm ²	Ohm/km	kA	mm	kg/km	n	(±5 %) Meters
11301101	1,5	13,7	0.21	4,6	30	22	1000/Drum
11301102	2,5	8,21	0.36	5,0	40	37	1000/Drum
11301103	4	5,09	0.57	5,5	54	60	1000/Drum
11301104	6	3,39	0.86	6,1	74	90	1000/Drum
11301105	10	1,95	1.43	7	115	150	1000/Drum
11301106	16	1,24	2.29	8,4	175	240	1000/Drum
11301107	25	0,795	3.58	10	265	375	1000/Drum
11301108	35	0,565	5.01	11,6	363	525	1000/Drum
11301109	50	0,393	7.15	13,6	522	750	1000/Drum
11301110	70	0,277	10.01	15,8	732	1000	1000/Drum
11301111	95	0,210	13.59	17,5	914	1000	1000/Drum
11301112	120	0,164	17.16	19,5	1162	1000	1000/Drum
11301113	150	0,132	21.45	21,7	1432	1000	1000/Drum
11301114	185	0,108	26.46	24,2	1781	1000	1000/Drum
11301115	240	0,0817	34.32	27,1	2307	1000	1000/Drum
11301116	300	0,0654	42.9	30,3	2900	1000	1000/Drum
11301117	400	0,0495	57.2	34,3	3860	1000	1000/Drum

300 & 400 mm² As per IEC 62930

Maximum short-circuit current is calculated based on 90°C maximum operating temperature and 250 °C maximum short-circuit temperature.

CURRENT CARRYING CAPACITY

CONDUCTOR SIZE mm ²	CURRENT CARRYING CAPACITY ACCORDING TO METHOD OF INSTALLATION		
	SINGLE CABLE FREE IN AIR	SINGLE CABLE ON A SURFACE	TWO LOADED CABLES TOUCHING ON A SURFACE
	A	A	A
1,5	31	30	24
2,5	42	40	33
4	57	54	45
6	72	69	58
10	98	96	80
16	132	130	107
25	183	174	138
35	227	215	171
50	287	273	209
70	361	344	269
95	433	411	328
120	508	483	382
150	590	560	441
185	671	638	506
240	808	767	599
300	913	866	693
400	1098	1041	825



*BASED ON IEC 62930, AMBIENT TEMPERATURE: 30 °C AND MAXIMUM CONDUCTOR TEMPERATURE: 90 °C

CURRENT RATING CONVERSION FACTORS FOR DIFFERENT AMBIENT TEMPERATURES

AMBIENT TEMPERATURE °C	0	10	20	30	40	50	60	70
CONVERSION FACTOR	1,22	1,15	1,08	1,00	0,91	0,82	0,71	0,58



Bahra Advanced Cable Manufacture Co. Ltd.

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