



Photovoltaic Cables Solutions



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PRYSUN™

Solar PV Cables

APPLICATION

PRYSUN solar PV cables are a Prysmian Group solution designed for the interconnection of various elements in photovoltaic systems, including panel interconnection, between panels and string boxes or from string boxes to the inverter. They are suitable for applications in/at equipment with protective insulation (Protecting Class II), and may be installed as fixed or freely suspended or free movable, indoor or outdoor. Installation is also possible in ducts and pipes.

DESIGN & CONSTRUCTION

1 CONDUCTOR

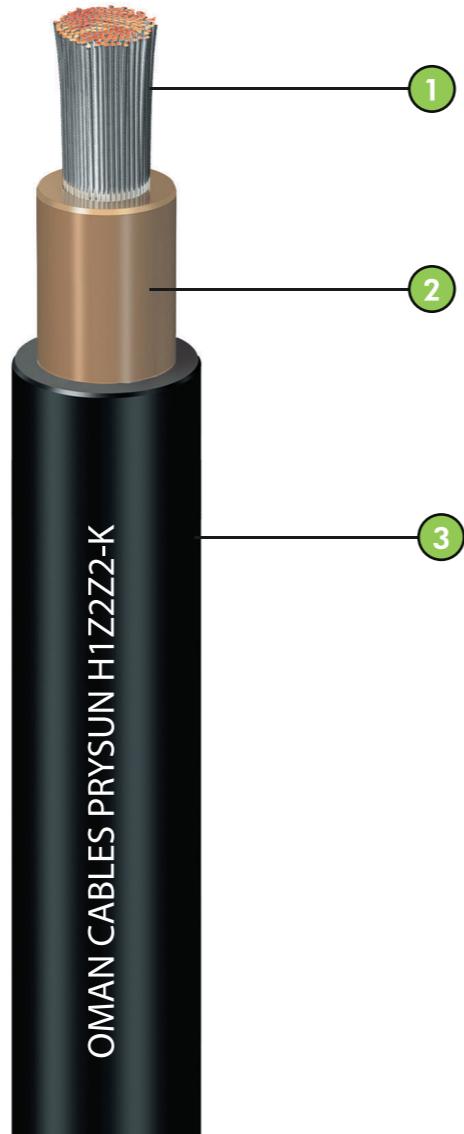
Flexible tinned copper conductor Class 5 according to IEC 60228

2 INSULATION

Halogen free cross-linked compound

3 OUTER SHEATH

Halogen free cross-linked compound. Color: Black (red and black colors available upon request)



UV resistant
UV resistant per
IEC 62930 Annex E and
EN 50618 Annex E



Temperature
-40°C to +90°C
(120°C 20,000 h)



Flexible
Flexible tinned copper
conductor Class 5 per
IEC 60228



Fire behavior
Flexible tinned copper
conductor Class 5 per
IEC 60332-1-2



LSZH
Flame retardant per
EN IEC 61034-2 Halogen
fee per IEC 62821-1
and EN 50525-1 Annex B



Water absorption
Water absorption resistant
IEC 62821-2
EN 50395-9
(240h/85°C WATER/1.8kV DC).

TECHNICAL DATA

Standards

EN 50618
IEC 62930

Rated voltage

1,5/1,5 kV DC
1,0/1,0 kV AC

Max. permissible operating voltage

1,8 kV DC
1,2 kV AC

Test voltage (5 min)

15 kV DC
6,5 kV AC

Max. conductor operating temperature

90°C (120°C for 20,000 hours)

Max. short circuit temperature of the conductor

250°C (5s)

Operation temperature

-40°C to +90°C

Fire behavior

Flame retardant per EN IEC 60332-1-2 Annex A
Low smoke emission per EN IEC 61034-2
Halogen free per EN 50525-1 and IEC 62821-1
Annex B

CHEMICAL, THERMAL & MECHANICAL CHARACTERISTICS

Fire Performance	Vertical flame propagation on complete cable per IEC 60332-1-2, EN 60332-1-2
	Halogen-free per IEC 62821-1 Annex B , EN 50525-1 Annex B
	Low Smoke Emission per IEC 61034-2, EN 61034-2 (Light Transmittance > 60%)
Weather Resistance	Ozone resistance per IEC 62930 Tab.3 per IEC 60811-403, EN 50618 Tab.2 per EN 50396 Test Type B
	Weathering/UV resistance on sheath per IEC 62930 Annex E and EN 50618 Annex E
Acid and Alkaline Solution Resistance	Acc. IEC 62930 Annex B, EN 50618 Annex B : 7 days, 23°C (N-Oxalic Acid, N-Sodium Hydroxide) per IEC 60811-404, EN 60811-404
Long Term Resistance of Insulation to DC	Acc. IEC 62821-2, EN 50395-9 (240h/85°C water/ 1.8kV DC)
Maximum Operating Temperature of the Conductor	Acc. IEC 62930 and EN 50618: the cables are designed to operate at a normal continuous maximum conductor temperature of 90°C. 20,000 h in operation at maximum conductor temperature of 120°C are permitted.
Damp-Heat Test	Meets IEC 62930 Tab.2 and EN 50618 Tab.2 1.000 h at 90°C and 85% humidity per IEC 60068-2-78, EN 60068-2-78
Shrinkage Test on Sheath	Acc. IEC 62930 Tab. 2 per IEC 60811-503 and EN 50618 Tab. 2 per EN 60811-503 (Max Shrinkage 2%)
Dynamic Penetration Test	Acc. IEC 62930 Annex D and EN 50618 Annex D
Durability of Print	Acc. IEC 62930 and EN 50396.

TECHNICAL DATASHEET

S.NO.	DESCRIPTION	UNIT	1C x 4 mm ²	1C x 6 mm ²	1C x 10 mm ²
1.00	GENERAL				
1.01	Cable Size		1C x 4mm ²	1C x 6mm ²	1C x 10mm ²
1.02	Voltage Grade	kV	1.5 kV (DC) 1.0/1.0 kV (AC)	1.5 kV (DC) 1.0/1.0 kV (AC)	1.5 kV (DC) 1.0/1.0 kV (AC)
1.03	Applicable Standard		IEC 62930	IEC 62930	IEC 62930
1.04	Number of Cores	Nos.	1	1	1
1.05	Normal continuous operating temp.	°C	90	90	90
2.00	CONDUCTOR				
2.01	Material		Tinned Copper	Tinned Copper	Tinned Copper
2.02	Nominal area	mm ²	4	6	10
2.03	Max. strand wire diameter	mm	0.31	0.31	0.41
2.04	Flexibility Class		Class 5	Class 5	Class 5
2.05	Shape		Circular	Circular	Circular
3.00	INSULATION				
3.01	Material		LSZH	LSZH	LSZH
3.02	Average Thickness	mm	0.7	0.7	0.7
3.03	Minimum Thickness	mm	0.53	0.53	0.53
4.00	SHEATH				
4.01	Material		LSZH	LSZH	LSZH
4.02	Average Thickness	mm	0.8	0.8	0.8
4.03	Minimum Thickness	mm	0.58	0.58	0.58
4.04	Core Colour		Red or Black	Red or Black	Red or Black
4.05	Overall Diameter - Approx.	mm	6.6	7.4	8.8
5.00	WEIGHT				
5.01	Approx. Net Weight	kg/km	55.0	75.0	115.0
6.00	ELECTRICAL PARAMETERS				
6.01	Max. Conductor DC Resistance at 20°C	Ω/km	5.09	3.39	1.95
6.02	Single Cable in surface Air * (Ambient T 30°C)	Amps	57	72	98
6.03	Single Cable on a surface Air * (Ambient T 30°C)	Amps	54	69	96