PRYSUN H1Z2Z2-K 1/1KV

Rubber cables for photovoltaic plants

Designed and tested refer to EN50618 and IEC 62930, PRYSMIAN Solar cables PRYSUN H1Z2Z2-K are intended for use in Photovoltaic Power Supply Systems: Indoor and/or outdoor, in industrial and agriculture fields. 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. Installation in cable trays, conduits, on and in walls is permissible.

DESIGN

Standard

Refer to EN50618:2014 and IEC 62930:2017

Conductor

Class 5 Tinned copper conductor

Insulation

Halogen free cross-linked elastomer

White

Outer sheath

Halogen free cross-linked elastomer

Black or Red or Black/Red

STANDARDS

DIN EN 50618	General
IEC 62930	General
IEC 60228	Conductor
DIN EN 60332-1-2	Fire performance
EN 50525-1 Annex B	Fire performance
DIN EN 61034-2	Fire performance
DIN EN 50396	Chemical behaviour

CABLE DESIGN

Material inner sheath	Other
Material outer sheath	Polyolefin

ELECTRICAL & THERMAL PARAMETERS

Rated voltage U0/U (Um)	0.6/1 (1.2) kV
Nominal voltage DC U [V]	1,500
Max. voltage DC Um [V]	1,800
Test voltage [kV]	6.5
Max. operation temperature at conductor [°C]	90
Max. conductor temperature [°C]	90
Max. conductor temperature at short circuit [°C]	250
Min. Installation temperature [°C]	-25
Min. Operation temperature [°C]	-40
Max. Operation temperature [°C]	90

CHEMICAL PROPERTIES

Halogen free	Yes
Low smoke	Yes
Resistant to chemicals	Yes
Ozone resistance	Yes

Basic construction	Diameter conductor [mm]	Nominal thickness insulation [mm]	Nominal thickness of outer sheath [mm]	Cable diameter (min) [mm]	Cable diameter (max) [mm]	Cable weight [kg/km]	Insulation resistance [MΩ·km]	Max. armour DC resistance at 20°C [Ohm/km]
1x4	2.49	0.7	0.8	5.4	6.2	61	580	5.09
1x6	2.95	0.7	0.8	5.9	6.4	81	500	3.39

CHARACTERISTICS

Rated Voltage AC	1.0/1.0kV
Nominal DC voltage	1.5kV
Max. permissible operating voltage AC	1.2/1.2kV
Max. permissible operating voltage DC	1.8kV
Test Voltage	AC: 6,5kV/5 min | DC: 15kV/5 min
Max. tensile load of cable	15N/mm2
Min. bending radius	6D
Resistance to fire	EN 60332-1-2/ IEC 60332-1-2
Low Smoke emission	EN 61034-2/ IEC 61034-2
Halogen-free per	EN 50525-1/ IEC 62821-1, Annex B
Sheath resistance against acid and alkaline solution	On sheath: 7x24h, 23°C | EN 60811-404/ IEC 60811-404
Weather/UV resistance	EN 50618/ IEC 62930, Annex E
Enviromentally Friendly	RoHS 2011/65/EU
Ozone resistance	EN 50396/ IEC 60811-403
Max. operating temperature of the conductor	90°C
Max. short circuit temperature of the conductor	250°C
Ambient temperature (for fixed and flexible installation)	Installation: -25°C up to 60°C | In operation: -40°C up to +90°C

MARKING

PRYSMIAN CN PRYSUN H1Z2Z2-K DC1.5kV 1X6 YEAR **** M

CURRENT CARRYING CAPACITY FOR PV CABLES

Nominal cross sectional area mm²	Single cable in free air A	Single cable on a surface A	Two loaded cables touching, on a surface A
1.5	30	29	24
2.5	41	39	33
4	55	52	44
6	70	67	57
10	98	93	79
16	132	125	107
25	176	167	142
35	218	207	176
50	276	262	221
70	347	330	278
95	416	395	333
120	488	464	390
150	566	538	453
185	644	612	515
240	775	736	620

NOTE: The expected period of use at a max. conductor temperature of 120°C and at a max. ambient temperature of 90°C is limited to 20 000 h.

TABLE A.4 - CURRENT RATING CONVERSION FACTORS FOR DIFFERENT AMBIENT TEMPERATURES

Ambient Temperature °C	Conversion factor
Up to 60	1,00
70	0,92
80	0,84
90	0,75