

TECSUN(UL) PV-Wire

PHOTOVOLTAIC CABLE

for interconnection wiring of grounded and ungrounded photovoltaic power systems

Features and Benefits

Type Designation

- > TECSUN(UL): Photovoltaic Wire
- > UL Category: ZKLA

Conductor

- > Electrolytic tinned copper, Class 5 in accordance with IEC 60228

Insulation

- > HEPR complying with UL 1581 Table 50.245
- > Natural color - white

Jacket

- > Crosslinked EVA rubber complying with UL 1581 Table 50.245
- > Black color

Jacket Printing

- > Typical: PRYSMIAN TECSUN(UL) PV-WIRE E312049 10 AWG / 6mm² 600V 90°C Wet 105°C Dry Sun Res -40°C VW-1

Nominal Cross Section

- > #16 AWG to 3/0 AWG (1.5mm² to 95mm²)

Performance

- > Meets or exceeds the requirements of UL 4703 and is tested in accordance with relevant UL standards 44, 1581, and 2556; IEC standards 60228, 60754-1, and 60754-2; as well as DIN EN 50305
- > Environmentally Friendly: TECSUN(UL) PV-Wire complies with RoHS directives 2002/95/EG, 2005/69/EG, and 2006/122/EG of the EU
- > 90°C Wet or Dry Operation
- > 105°C Dry Operation

Registered Supplier

- > ISO 9001 and ISO 14001
- > UL File E312049

Specifications and Ratings

- > UL 4703 Type PV Wire

Bend Radius

Static (min) 4 x Cable OD

Dielectric Withstand (AC)

	600V	1000V or 2000V
14 - 10 AWG	3.0kV	6.0kV
8 - 2 AWG	3.5kV	7.5kV
1 - 3/0 AWG	4.0kV	9.0kV

Temperature Rating

	°C	°F
Ambient	-40 to +90	-40 to +194
Operation (max)	105	221
Short Circuit	250	482

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Performance Specifications

TECHNICAL DATA

Electrical Parameters

- > Rated Voltage (U) 600V AC
- > Test Voltage 6kV (AC) / 10kV (DC) for 5 min
- > Relative Permittivity ≤ 6 per UL 2556 Section 6.5.5
- > Long Term Insulation Resistance $> 3G\Omega$ after 12 weeks in water at 90°C, 600V per UL 2556 Section 6.4.4.2.1

Chemical Parameters

- > Weather Resistance (Sunlight) Meets UL 2556 Section 4.2.8.5; 300 hours
720 hours per UL 44 Section 5.15.2
UV-resistance per ISO 4892-2 Method A / UL 1581 Section 1200 (XenoTest)
- > Conductor Corrosion 7 Days at 121°C per UL 2556 Section 8.1
- > Fire Behavior Meets UL 2556 Section 9.1 horizontal flame test
Vertical flame test per UL 2556 Section 9.5
VW-1 per UL 1581 Section 1080
In accordance with IEC 60754-1 for Halogen-Free
Meets IEC 60754-2 for no corrosivity
Low Smoke emission per IEC 61034
In accordance with DIN EN 50305 for no toxicity

Thermal/Mechanical Parameters

- > Cold Resistance Meets UL 1581 Section 583 at -40°C
- > Insulation Tensile Strength $> 1500 \text{ lbf/in}^2$ per UL 1581 Table 50.245

ORDERING INFORMATION

Nominal Cross-Section	Part No.	Conductor Diameter (inch)	Overall Cable Diameter (inch)	Net Weight (lbs/kft)	Minimum Bend Radius (inch)	Maximum Tensile Load (lbf)	Current Carrying Capacity at 60°C ambient temperature in free air (A)	Short Circuit Current [1s] (A)
16 AWG / 1.5mm ²	20025133	0.063	0.22	29	1	5	29	190
14 AWG / 2.5mm ²	20025135	0.075	0.23	36	1	8	41	320
12 AWG / 4.0mm ²	20025134	0.094	0.25	48	1	13	55	500
10 AWG / 6.0mm ²	20025136	0.114	0.27	61	2	20	70	760
8 AWG / 10.0mm ²	20025137	0.157	0.34	101	2	33	98	1260
6 AWG / 16.0mm ²	20025458	0.217	0.41	150	2	53	132	2010
4 AWG / 25.0mm ²	20025459	0.252	0.46	212	2	84	176	3150
2 AWG / 35.0mm ²	20025460	0.295	0.50	278	2	118	218	4410
1 AWG / 50.0mm ²	20025461	0.354	0.60	398	3	168	276	6300
2/0 AWG / 70.0mm ²	20025462	0.425	0.67	534	3	236	347	8820
3/0 AWG / 95.0mm ²	20025463	0.496	0.74	665	3	320	416	12000

Cable diameters and weights are nominal values subject to normal manufacturing variations.

To place an order, contact us in one of the following ways:

700 Industrial Drive, Lexington SC 29072 - (800) 845-8507 (Inside Sales) - Fax (803) 951-1126 - energy.cables.na@prysmian.com