

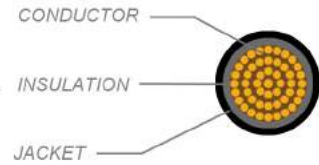
## UL 4703 (FR-12AWG-B)

**Rating:**

Voltage:	600/1000V
Temperature:	-40°C--90°C

**Description:**

Conductor:	Tinned annealed copper
Insulation:	120°CXLPE
Jacket:	120°CXLPE,Black
Marking:	E332231 (UL) Type PV Wire 12AWG 90°C Dry and Wet 600V Sun Res -40°C VW-1 FRCABLE



**Application:**

Specifically designed for connecting photovoltaic system components inside and outside of building and equipment with high mechanical requirements and extreme weather conditions. For permanent installations.

**General characteristics:**



**Construction**

Conductor	
AWG	12
Construction(N/mm)	65/0.254±0.006
Conductor(Dia.)	2.36
Insulation	
Standard thickness	1.22
Standard diameter	4.80±0.1
Jacket	
Standard thickness(mm)	0.80
Outer diameter	6.40±0.2
Conductor resistance(20°C)	5.64
Weight rated(kg/km)	69.83

**Electrical properties**

Insulation resistance(90°C)(Ω/cm)	≥ 10 <sup>11</sup>
Withstand voltage(V/5min)	AC6500
Spaek Voltage(V/5min)	AC6500
Min bending radius(mm)	5*D

**Packaging**

BOX(art.code FR-100-12AWG / FR-500-12AWG)	
Size:	310x310x100mm
Weight:	±7.0Kg
Cable length box:	100m
PALLET (art.code FR-100-12AWG-100pcs-10000m)	
Size:	1100x1100mm
Amount of boxes on one pallet:	100pcs
Weight of total pallet:	±700Kg
Cable length pallet:	10000m



## UL 4703 (FR-12AWG-B)

Main performance parameter of finished cable

Voltage test of finished cable

Min.time of dipping in water	≥1(h)
Testing voltage (AC)	6500(V)
Min.voltage applying time at one time	5(min)
Test result	no breakdown

Sheated surface resistance

Length of specimen:	250mm
Test result	≥10 <sup>9</sup> Ω

Penetrate the insulation resistance

Temperature	20℃
Test result	≥10 <sup>14</sup> Ω

High temperature stress

Temperature	140℃
Test result	
A: with 1.2 Voltage test	A: No breakdown
B: deep pressure	B: Wall thickness 50%

Damp-heat test

Temperature	90℃
Humidity	85%
Test result	
Aging before and after the tensile strength of Change	≤30%
Aging before and after the elongation at break of Change	≤-30%

Acid-alkali Resistance

Min.time of dipping in	168h
Test result	
Aging before and after the tensile strength of Change	≤-30%
Elongation	≥100

Low-temperature bending

Temperature	-40℃
Time	16h
Test result	No crack

Ozone resistance

Ozone concentration	200x106%
Time	72h
Test result	No crack

Heat shrinkable jacket test

Test result	≤2%
Flame retardant	
Vertical burn	
Test result	
Fixture on the lower edge from the starting point and carbonization	≥50mm
Burning fuel downward from the lower edge of bottom fixture	≤540mm

## UL 4703 (FR-12AWG-B)

Halogen content of non-metallic materials

Test result

Chlorine and bromine content

HCL≤0.5HBr≤0.5%

Fluoride content

F≤0.1%

The inner layer of insulation and sheath of the mechanical properties

Test result

Aging before tensile strength

8.0N/mm<sup>2</sup>

Aging before elongation

125%

Aging before and after the tensile strength of change

-30%

Aging before and after the elongation at break of change

-30%

Hot extension

Temperature

200℃

Test result

The inner layer of insulation and sheath

Elongation under load

≤100%

Elongation after unloading

≤25%

Life expectancy hot

Test result

≥25 years