



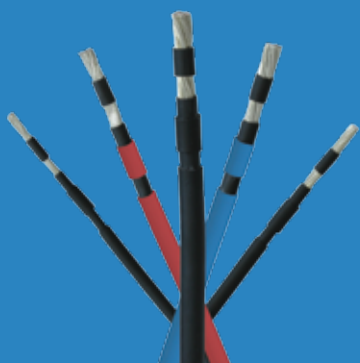
Kabelwerke Villingen GmbH



**DOUBLE INSULATED  
SINGLE WIRE FOR  
THE INTERCONNECTION  
OF PV SYSTEMS:**

**SolarVill®  
PV1-F**

VDE REG: 8099  
VDE E PV 01:2008-02  
TÜV R 60031930  
TÜV 2 PFG 1169/08.2007



- BAUART  
GEPRÜFT
- TYPE  
APPROVED

## Application:

*SolarVill® is a PV cable for the interconnection of solar moduls, panel strings and inverters. PV1-F marking shows and guarantees you the up to date safety standards for PV plants according to the DKE requirements.*

- Fixed installation or steady movement in free motion without tensile load
- Specially made for the outdoor installation with direct solar radiation or the installation in dry or wet locations
- Not to be used as buried cable

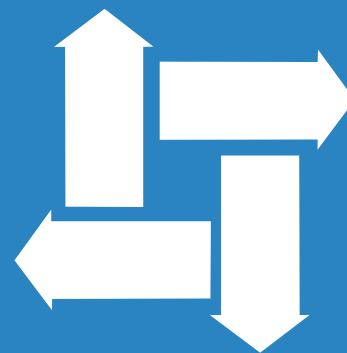
## Assembly:

| Cross section<br>(in mm <sup>2</sup> ) | Conductor<br>resistance<br>< Ω/km | Outer diameter<br>(in mm +/- 0.20mm) | Copper weight<br>(kg/km) | Cable weight<br>(app. kg/km) |
|----------------------------------------|-----------------------------------|--------------------------------------|--------------------------|------------------------------|
| 1.5                                    | 13.70                             | 4.3                                  | 14.0                     | 32                           |
| 2.5                                    | 8.21                              | 4.5                                  | 24.0                     | 40                           |
| 4.0                                    | 5.09                              | 5.2                                  | 38.4                     | 59                           |
| 6.0                                    | 3.39                              | 5.9                                  | 57.6                     | 81                           |
| 10.0                                   | 1.95                              | 6.9                                  | 96.0                     | 127                          |
| 16.0                                   | 1.24                              | 8.3                                  | 151.1                    | 193                          |
| 25.0                                   | 0.795                             | 10.1                                 | 234.0                    | 301                          |
| 35.0                                   | 0.565                             | 11.3                                 | 315.7                    | 398                          |

available colours: black, red, blue

## Features:

- Flame retardent and halogen-free
- No corrosive gases and low smoke density
- The material properties of insulation and jacket dispose of excellent resistance to weather and abrasion and are highly UV-proof
- The temperature range and weatherproof features allow the usage even in rough climate
- Very flexible construction for high mechanical load
- Easy stripping of insulation and jacket
- All materials are RoHS and REACH compliant
- Expected period of use is 25 years



**KVV**

**Kabelwerke Villingen GmbH**

## Technical properties:

*According to PV1-F VDE and TÜV requirement:*

- Conductor according to DIN EN 60 228 class 5 tinned
- Short-circuit proof up to 200°C/ 5s
- Hot set test at 200°C
- Deformation test up to 140°C
- Nominal Voltage [U<sub>0</sub>/U] AC 0.6/1.0 kV, DC 0.9/1.5 kV
- Test Voltage [online test] 10 kV
- Test Voltage AC 6,5 kV
- Voltages up to 1.8 kV are possible (conductor/conductor, not grounded system, unloaded circuit)
- Long term aging behaviour 20,000 h at 120°C
- Resistance to acid and lye
- Ozone resistant and UV resistant
- Halogenfree
- Temperature range                      fixed:        -40°C up to +90°C
- Maximum Temperature at the conductor +120°C

*Additional product characteristics:*

- Hot set test at 250°C
- AC Voltage resistance [increase 2 kV / 5 min] > 30 kV
- Insulation resistance at 20°C > 800 MOhmkm
- Insulation resistance at 90°C > 50 MOhmkm
- Sea water resistant
- Temperature range                      fixed:        -50°C up to +150°C  
                                                         moved:       -25°C up to +125°C
- Minimum bending radius               fixed:        5 x diameter  
                                                         moved:       10 x diameter



As at 09/2010

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