

## Sykonec-ArCon ES - 2



The ArCon PV-Array-interconnection-systems comply completely with the requirements of TÜV 2PFG1913/04.2011. They are intended for interconnection of PV modules and other distributed generation sources in free movable, free hanging or fixed installations. They can be used indoor and outdoor as well as in industry. They are suitable for applications in/at equipment with protective insulation (protection class II). In other respects IEC 61215, IEC 61646, IEC 64/1123D, DIN VDE 0100 Teil 520 and IEC 60364-7-712 applies.

All ArCon products are subject to extensive routine and periodic tests and are suitable for durable outdoor use in an ambient temperature area from -40°C to +90°C.

After installation of the ArCon PV-Array-interconnection-system no connectors must be left unsealed. Enclosure caps for sealing the connectors are available from the connector manufacturers. Open cable ends (cable end to combiner box or PV inverter) have to be installed properly before start of operation.

Technical data	
Rated voltage	up to 1.500 V DC
Insulation material	EVA-Compound 120 °C, i.A. an DIN VDE 0282-2, HD22.1
Ambient temperature	- 40 °C to + 90 °C
Max. operating temperature	- 40 °C to + 120 °C
Resistance against	Ozone acc. to 2PFG 1913/04.11
	UV acc. to 2PFG 1913/04.11
	Moisture heat (steam heat test): 1,000 h at 90 °C and 85% humidity, according to DIN EN 60068-2-78
	Long-term-resistance of insulation to DC acc. to 2PFG 1913/04.11: 240h, 1,5kV DC in Wasser bei 85°C
	Ammonia, 30 days in saturated NH <sub>3</sub> -atmosphere (internal test)
Flammability (internal tests)	Single cable acc. to DIN EN 60332-1-2
	Multiple cable acc. to DIN EN 50305-9
	Lower smoke emission acc. to DIN EN 50268-2
	Absence of Halogens acc. to EN 50525-1, appendix B
	Lower toxicity acc. to DIN EN 50305
Degree of protection	IP 68 (1h, 1 m)
Spark test	16 kV AC
Dielectric strength acc. to 2 PFG 1913/04.11	Voltage test 1 h in water, 6,5 kV AC (5 minutes)
Contact resistance (measured acc. to TÜV 2 PFG 1913/04.11: directly at the output of the cables of the moulding of connection splice)	≤ 0,5 mΩ
Tensile test	acc. to TÜV 2 PFG 1913/04.11

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Max. rated current for ArCon PV-array-interconnection-systems without using PV-connectors:

Nominal cross sectional area	Current rating at kind of laying		
	single cable free in air	single cable on a surface	two loaded cables touching on a surface
mm <sup>2</sup>	A	A	A
6	70	67	57

Conversion factors for different ambient temperature	
Ambient temperature °C	Conversion factor
up to 60	1,00
70	0,92
80	0,84
90	0,75

Degree of protection and max. current rating for ArCon PV-array-interconnection-systems when using the following PV-connectors:

Manufacturer	Type	Rated voltage	Rated current 6mm <sup>2</sup> at 85°C acc. to IEC 62852	IP protection class	Upper limit temperature
Stäubli	PV-KST4-EVO 2/xy-UR; PV-KBT4-EVO 2/xy-UR	1500 V DC nach IEC 62852	53 A	IP65, IP68 (1h,1m)	115°C
Phoenix Contact	PV-CM-C-xxxx-SET; PV-CF-C-xxxx-SET	1500 V DC nach IEC 62852	35 A	IP65, IP68 (1h,1m)	105°C

## Dimensions of Sykonec ArCon ES - 2

Type	Cable cross-section		ArCon		
	Main cable	Branch cable	Length	Width	Height
1	6,0 mm <sup>2</sup>	6,5 mm <sup>2</sup>	49 mm	24 mm	15 mm

The distances between individual ArCons as well as the lengths of main and branch cables can vary according to the used PV modules. The ArCon PV-array-interconnection-systems will be supplied with or without connectors on customer's request.

Smallest package unit: 1 ArCon ES-2

All data may be subject to alterations and errors. 2019\_1118\_EN

