




Summary of	EN12976-2	test results	Certification No.	011-7S993 A									
Annex to Solar KEYMARK Certificate			Issued	2017-01-19									
Company	SUNSHORE SOLAR Deutschland GmbH		Country	Germany									
Brand (optional)	SUNSHORE		Website	www.sunshoresolar.de									
Street	Auf dem Stein 20		E-mail	info@sunshoresolar.de									
Postal Code	51702	Bergneustadt	Tel. / Fax	+49 (0)2261 701373									
System family overview													
For each storage and collector size, give number of collectors													
Collector name	Q-B-J-2-175/2.33/0.6												
Q-B-J-2-175/2.33/0.6	1												
Name of system configuration	Q-B-J-2-175/2.33/0.6												
Collector name	Q-B-J-2-175/2.33/0.6	No. Collectors	1	Storage name	Q-B-J-2-175/2.33/0.6								
Calculated annual results for "solar-only / preheat system"													
Location	Qd,sh	Daily drawoff 110 l				Daily drawoff 140 l				Daily drawoff 170 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
		MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE		6150	3072	0	50	7821	3469	0	45	9492	3816	0	40
WürzburgDE		5897	3311	0	56	7506	3735	0	50	9114	4226	0	47
Davos CH		6654	4920	0	74	8483	5393	0	64	10281	5960	0	58
Athens GR		4573	3974	0	87	5834	4667	0	80	7064	5330	0	76
Perf. indicators for the table above													
Qd,sh	MJ/y	Not relevant for solar domestic hot water system											
Qd	MJ/y	Annual heat demand for domestic hot water											
QL	MJ/y	Annual heat energy delivered by the solar system											
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)											
f _{sol} =Q _L /Q _d	-	Solar fraction											
Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR								
	G	1 157	1 230	1 684	1 736								
	T _{a,ave}	7.5	9.0	3.2	18.5								
	T _{c,ave}	8.5	10.0	5.4	17.8								
	± ΔT _c	6.4	3.0	0.8	7.4								
G	kWh/m ²	Annual irradiation South, 45°											
T _{a,ave}	°C	Annual average outdoor air temperature											
T _{c,ave}	°C	Annual average mains cold water temp.											
ΔT _c	K	Seasonal variation of T_c											
Th	45 °C	Desired hot water temperature (mixing valve temperature).											
Max. operating press. - collector side		0	kPa	Max. operating press. - tank side		600	kPa						
Testing Laboratory		TÜV Rheinland Energy GmbH											
Website		www.tuv.com/solarpower											
Test report id. number		21212908											
Date of test report		2011-09-05											
Test method		ISO 9459-5 (DST)											
Comments of test lab													
No comments													
 TÜVRheinland® Genau. Richtig. TÜV Rheinland Energy GmbH Am Grauen Stein 51105 Köln													

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

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