

Page 1/2

	Licence	e Numb	er	SKM 10110.2										
Annex to Solar Keymark Certificate							sued		2020-12-20					
									DQS Hellas					
Licence holder SIRAKIAN ANDRONIKOS MON. I.K.E.						Issued	3.50		DQ3 Helias					
(APPLICATION OF THE PROPERTY O	A COUNTY OF THE PARTY	and the second second second second	KUNIKU	S WON.	y Greece									
Brand (optional) Street, Number	Contract Courts of the	LUS 2.75 ial Area S	raurere i			Web E-mail	2000 V 000 V 1							
Postcode, City						Water and the control								
Postcode, City	tcode, City 57022 Thessaloniki							Tel +30 2310795677 / 2310795690						
Collector Type						Flat plat	e collecto	r, I						
	77	1					B							
						Power output per collector Gb = 850 W/m2, Gd = 150 W/m2 & u = 1.3 m/s $\vartheta_m - \vartheta_a$								
Collector name		Gross area (A _G)	Gross length	Gross width	Gross height									
Collector flame		Gross area (/				0.1/	101/		_	70.1/	03.16			
		m ²	Annual Contract of the	V	- Actors to the first	0 K	10 K W	30 K	50 K	70 K W	92 K			
		5,65017-475301	mm	mm	mm	1000	- 77	W	A Company of the Comp	The second	W			
AL-SF PLUS 2.75		2.77	2,249	1,232	85	2,174	2,059	1,825	1,584	1,336	1,052			
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Power output per m ² gross area	į.	l.				785	743	659	572	482	380			
		[a	W 113 - 3071	153 9 77		7.03	743	033	312	402	300			
Performance parameters test met			tate - out											
Performance parameters (related	to A _G J	η0, b	a1	a2	a3	a4	a5	a6	a7	a8	Kd			
Units				W/(m²K²)		-	J/(m²K)	s/m		W/(m ² K ⁴)				
Test results		0.793	4.11	0.003	0.000	0.00	0	0.000	0.00	0.0E+00	0.93			
Incidence angle modifier test meth	od		Steady s	tate - out	door									
Incidence angle modifier		Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°			
Transversal		$K_{\theta T.coll}$	1.00	1.00	1.00	0.99	0.97	0.92	0.80	0.55	0.00			
Longitudinal		K _{OL,coll}	1.00	1.00	1.00	0.99	0.97	0.92	0.80	0.55	0.00			
Heat transfer medium for testing		CEJEOTI			0.00		Water							
Flow rate for testing (per gross area, A _G)							dm/dt	-	0.021	kg/(sm²	1			
Maximum temperature difference during thermal performance test								ANVESS	62.3 K					
Standard stagnation temperature (G = 1000 W/m ² ; ϑ_a = 30 °C)							(ປ _m -ປ _a) _{max}			°C				
Maximum operating temperature							ઈ _{stg}			173 °C				
y (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)							ϑ _{max_op}							
Maximum operating pressure							p _{max,op}		kPa					
Testing laboratory	NCSR Demokritos						www.solar.demokritos.gr							
Test report(s)		297 DQ1						Dated 2/12/2020						
	4304 DI	E1							2/12/20	20				
	<u> </u>													
Comments of testing laboratory							Da	atasheet v	ersion: 6.1	l, 2 019-09	26			
							SOLAR Tel: +210 6	ENERGY 5503815 - Fa	KRITO LABORATO IX: +210 6544 Paraskevi, Go	592 9/1	No 70			

Page 2/2

	Annex to Solar Keymark Certificate									SKM 10110.2			
Supplementary Information		Issue	t		2020-12-20								
Annual collector output in kWh/co	llector	at mea	an fluic	l temp	erature	e ϑ _m							
Standard Locations		Athens			Davos		S	tockhol	m	V	Vürzbur	g	
Collector name ϑ_{m}	25°C 50°C 75°C			25°C	50°C	75°C	25°C	50°C	50°C 75°C		25°C 50°C		
AL-SF PLUS 2.75	3,524	2,509	1,707	2,662	1,875	1,262	1,958	1,293	829	2,133	1,399	882	
A manual anthony to	4.0=0	000	645	001	c=-	45.5	70-	4.5-	200		F0-	2.1	
Annual output per m² gross area	1,272	906	616	961	677	456	707	467	299	770	505	319	
Annual efficiency, η _a	72%	51%	35%	59%	42%	28%	61%	40%	26%	62%	41%	269	
Fixed or tracking collector	47/	CE LAA/I-					5°; rounded to near						
Annual irradiation on collector plane	1/6	55 kWh,	/m-	16:	30 kWh	/m-	110		m-	124		m-	
Mean annual ambient air temperature		18.5°C	-0		3.2°C	00	_	7.5°C	- 0	9.0°C			
Collector orientation or tracking mode		outh, 2!			outh, 3			outh, 45			outh, 35		
The collector is operated at constant ter													
collector performance is performed with			•	•					5.1 (Sep	tember	2019). <i>A</i>	١.	
detailed description of the calculations	is availa	ble at h	ttp://w	ww.esti	i.org/sc	larkeyn	narknew	'/					
		Add	ditiona	al Info	matic	n							
Collector heat transfer medium										Water-	Glycole		
The collector is deemed to be suitable fo	or roof i	ntegrat	ion							N	lo		
The collector was tested successfully un	der the	followi	ng cond	itions:									
Climate class (A+, A, B or C)										A	-	-	
$G(W/m^2) > 1000$ $\vartheta_a(^{\circ}C) >$					20			H _X (MJ	/m²) >		60	00	
Maximum tested positive load									30	000	P	a	
Maximum tested negative load										000	Р	a	
Hail resistance using steel ball (maximur									1	8	n	า	
_				<u>lector</u>									
		al opera	tion		Active o	r nassiw	e measu	re(s) fo	r calf_ni				
Using external power source(s) fo		•				_		- (-) -	i seli-pi	rotectio	n		
Using external power source(s) fo Co-generating thermal and electric	ical pow	•			açade (collector		-(-,	г зеп-рі	rotectio	n		
	•	er .			_	collector	(s)			nical E			
Co-generating thermal and electric	matio	er .	A _{sol} (m ²)	F	Add	collector	(s) I Infor	mative	e Tech	nical [(m²)	
Co-generating thermal and electric Energy Labelling Infor	matio	ver n	A _{sol} (m ²)	Hy	Adc draulic	ditiona	(s) I Infor ation Co	mative de	e Tech	nical C	Data	(m²)	
Co-generating thermal and electric Energy Labelling Infor	matio	n ce Area,	A _{sol} (m ²)	Hy	Adc draulic	collector litiona Designa	(s) I Infor ation Co	mative de	e Tech	nical C	Data Area, A _a	(m²)	
Co-generating thermal and electric Energy Labelling Infor	matio	n ce Area,	A _{sol} (m ²)	Hy	Adc draulic	collector litiona Designa	(s) I Infor ation Co	mative de	e Tech	nical C	Data Area, A _a	(m²)	
Co-generating thermal and electric Energy Labelling Infor	matio	n ce Area,	A _{sol} (m ²)	Hy	Adc draulic	collector litiona Designa	(s) I Infor ation Co	mative de	e Tech	nical C	Data Area, A _a	(m²)	
Co-generating thermal and electric Energy Labelling Infor	matio	n ce Area,	A _{sol} (m ²)	Hy	Adc draulic	collector litiona Designa	(s) I Infor ation Co	mative de	e Tech	nical C	Data Area, A _a	(m²)	
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Co-generating thermal and electric Energy Labelling Infor	matio	n ce Area,	A _{sol} (m ²)	Hy	Adc draulic	collector litiona Designa	(s) I Infor ation Co	mative de	e Tech	nical C	Data Area, A _a	(m²)	
Co-generating thermal and electric	matio	n ce Area,	A _{sol} (m ²)	Hy	Adc draulic	collector litiona Designa	(s) I Infor ation Co	mative de	e Tech	nical C	Data Area, A _a	(m²)	
Co-generating thermal and electric Energy Labelling Infor	matio	n ce Area,	A _{sol} (m ²)	Hy	Adc draulic	collector litiona Designa	(s) I Infor ation Co	mative de	e Tech	nical C	Data Area, A _a	(m²)	
Co-generating thermal and electric Energy Labelling Information AL-SF PLUS 2.75	Referen	n ncce Area, 2.77		Hy 14-VH	Add draulic -13S-A:	Collector litiona Designa 7.2,1880	r(s) I Infor ation Co O-C:20.6	mative de ,1300-	Ape	erature A	Data Area, A _a 62		
Co-generating thermal and electric Energy Labelling Informal AL-SF PLUS 2.75 Data required for CDR (EU) No 811/201	Referen	n ncce Area, 2.77		Hy 14-VH	Adc draulic -13S-A:	ditiona Designa 7.2,1880	r(s) I Infor ation Co O-C:20.6	mative de ,1300-	Ape	erature A	Data Area, A _a		
Co-generating thermal and electric Energy Labelling Informal AL-SF PLUS 2.75 Data required for CDR (EU) No 811/201 Collector efficiency (η _{col})	Referen	n ncce Area, 2.77		Hy 14-VH	Adc draulic -13S-A:	for CDF	R (EU) N	mative de ,1300-	P Tech Ape Ape 013 - R	erature A 2. ceference 78	Data Area, A _a 62	↓ _{sol}	
Co-generating thermal and electric Energy Labelling Informal AL-SF PLUS 2.75 Data required for CDR (EU) No 811/201 Collector efficiency (η _{col}) Remark: Collector efficiency (ηcol) is defined	Referen 3 - Refe	n ncce Area, 2.77 2.77		Hy 14-VH	Add draulic -13S-A: equired ss effici	for CDF	R (EU) N	mative de ,1300-	PO13 - R	erature A 2. Seference 78 11	Data Area, A _a 62 See Area A W/(r	A _{sol}	
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