


Annex to Solar Keymark Certificate					Licence Number		011-7S3274 F							
					Date issued		2025-01-09							
					Issued by		DIN CERTCO							
Licence holder			INTERDOMO GmbH		Country		Germany							
Brand (optional)					Web		http://www.interdomo.de							
Street, Number			Rheiner Straße 151		E-mail		kontakt@interdomo.de							
Postcode, City			D- 48282 Emsdetten		Tel		+49 2572 23-0							
Collector Type					Flat plate collector									
Collector name					Gross area (A _G) m ²	Gross length mm	Gross width mm	Gross height mm	Power output per collector G _b = 850 W/m ² , G _d = 150 W/m ² & u = 1.3 m/s $\vartheta_m - \vartheta_a$					
									0 K	10 K	30 K	50 K	70 K	85 K
DomoSun SMI					2.32	2 037	1 137	80	1 770	1 687	1 501	1 290	1 052	857
Power output per m ² gross area					764	728	648	557	454	370				
Performance parameters test method			Steady state - indoor											
Performance parameters (related to A _G)			$\eta_{0, b}$	a1	a2	a3	a4	a5	a6	a7	a8	Kd		
Units			-	W/(m ² K)	W/(m ² K ²)	J/(m ³ K)	-	J/(m ² K)	s/m	W/(m ² K ⁴)	W/(m ² K ⁴)	-		
Test results			0.776	3.45	0.014			5 556				0.90		
Incidence angle modifier test method			Quasi dynamic - outdoor											
Incidence angle modifier			Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°		
Transversal			K _{θT, coll}	1.00	0.99	0.98	0.97	0.94	0.89	0.78	0.46	0.00		
Longitudinal			K _{θL, coll}	1.00	0.99	0.98	0.97	0.94	0.89	0.78	0.46	0.00		
Heat transfer medium for testing					Water									
Flow rate for testing (per gross area, A _G)					dm/dt		0.036	kg/(sm ²)						
Maximum temperature difference during thermal performance test					$(\vartheta_m - \vartheta_a)_{max}$		55	K						
Standard stagnation temperature (G = 1000 W/m ² ; $\vartheta_a = 30^\circ\text{C}$)					ϑ_{stg}		210	°C						
Maximum operating temperature					$\vartheta_{max, op}$		110	°C						
Maximum operating pressure					p _{max, op}		1000	kPa						
Testing laboratory			ISFH CalTeC		https://isfh.de/									
Test report(s)			172-24/B		Dated		02.12.2024							
Comments of testing laboratory					Ver. 6.2 (13.01.2022)									
					<p>Institut für Solarenergieforschung GmbH Am Ohrberg 1 D-41880 Emmershal Tel.: 05151/999 100 Fax: 05151/999-500</p> 									
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Supplementary Information		Issued		2025-01-09									
Gross Thermal Yield in kWh/collector at mean fluid temperature ϑ_m													
	Standard Locations	Athens			Davos			Stockholm			Würzburg		
Collector name	ϑ_m	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C	25°C	50°C	75°C
DomoSun SMI		2 818	2 027	1 330	2 153	1 496	941	1 583	1 043	632	1 721	1 127	672
Gross Thermal Yield per m ² gross area		1 217	875	574	929	646	406	684	450	273	743	487	290
Annual efficiency, η_a		69%	50%	33%	57%	40%	25%	59%	39%	23%	60%	39%	23%
Fixed or tracking collector		Fixed (slope = latitude - 15°; rounded to nearest 5°)											
Annual irradiation on collector plane		1765 kWh/m ²			1630 kWh/m ²			1166 kWh/m ²			1244 kWh/m ²		
Mean annual ambient air temperature		18.5°C			3.2°C			7.5°C			9.0°C		
Collector orientation or tracking mode		South, 25°			South, 30°			South, 45°			South, 35°		
The collector is operated at constant temperature ϑ_m (mean of in- and outlet temperatures). The calculation of the annual collector performance is performed with the official Solar Keymark spreadsheet tool Scenocalc Ver. 6.2 (13.01.2022). A detailed description of the calculations is available at http://www.estif.org/solarkeymarknew/													
Additional Information													
Collector heat transfer medium	Water-Glycole												
The collector is deemed to be suitable for roof integration	No												
The collector was tested successfully under the following conditions:													
Climate class (A+, A, B or C)	B												
G (W/m ²) >	900	ϑ_a (°C) >			15	H_x (MJ/m ²) >			540				
Maximum tested positive load	3000 Pa												
Maximum tested negative load	2000 Pa												
Hail resistance using steel ball (maximum drop height)	2 m												
Additional collector attribute(s)													
Using external power source(s) for normal operation	No	Active or passive measure(s) for self-protection											
Co-generating thermal and electrical power	No	Façade collector(s)											
Energy Labelling Information													
	Reference Area, A_{sol} (m ²)	Additional Informative Technical Data											
DomoSun SMI	2.32	Hydraulic Designation Code						Aperture Area, A_a (m ²)					
		2-VH-12S-A:11.3,8500-C:16,100						2.13					
Data required for CDR (EU) No 811/2013 - Reference Area							Data required for CDR (EU) No 812/2013 - Reference Area A_{sol}						
Collector efficiency (η_{col})	60%						Zero-loss efficiency (η_0)	0.76					
Remark: Collector efficiency (η_{col}) is defined in CDR (EU) No 811/2013 as collector efficiency of the solar collector at a temperature difference between the solar collector and the surrounding air of 40 K and a global solar irradiance of 1000 W/m ² , expressed in % and rounded to the nearest integer. Deviating from the regulation η_{col} is based on reference area (A_{sol}) which is aperture area for values according to EN 12975-2 or gross area for ISO 9806:2017.							First-order coefficient (a_1)	3.45					
							Second-order coefficient (a_2)	0.014					
							Incidence angle modifier IAM (50°)	0.93					
							Remark: The data given in this section are related to collector reference area (A_{sol}) which is aperture area for values according to EN 12975-2 or gross area for ISO 9806. Consistent data sets for either aperture or gross area can be used in calculations like in the regulation 811 and 812 and simulation programs.						
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