



Innovative in-roof solutions such as the Megaslat-eRoof by Solarday shown in the picture allow the customers to achieve highly aesthetic integration into their roofs.

Photos (2): Solarday



No wish unfulfilled

Young and dynamic – what is often heard from applicants in job interviews is also true of the Italian module industry. The sector might still be young. But the broad range of solar products offered on the market shows that the Italian PV industry has come a long way. There is certainly no reason for the manufacturers to be shy on the global stage.

When looked at from a global perspective, the module industry in Italy is still emerging. Many companies started their activities only a few years ago. Others were established with a different focus and have now become active players in the module production segment. This makes the diversity of the product range made in Italy the more remarkable. Presently, the Italian market is home to about 40 active module makers that offer their customers more than 600 different solar products. These products cover all technology forms, efficiency levels and module sizes for in-roof, rooftop and ground-mounted PV systems. On the following pages, Sun&Wind Energy has taken a look at 38 Italian manufacturers giving examples of their products in each case. The focus was put on modules either with the highest demand or the maximum efficiency.

Diversity in all segments

Generally, the capacity of the modules ranges from 100 to 300 W, depending on the technology form. The best-selling modules have a capacity of between 220 and 260 W. The module efficiencies range from 10 % to 16 %. The need for different sizes and technology forms explains why a company such as Brandoni So-

lare S.p.A. has already 62 different modules in its portfolio. But also other manufacturers such as Helios Technology S.p.A. or FVG Energy S.p.A. sell monocrystalline as well as polycrystalline solar cells simply to offer their customers a broader product range. The high diversity of the products is a result of the broad application range for solar modules in Italy, say industry representatives. Some of the key factors are the performance, weight, thickness and the module size, of course. The availability of different products allows the Italian customer to always find the ideal solution for each rooftop and its specific load capacity.

Complete offers are another important aspect. In order to keep customers coming back, the manufacturers must be able to provide a broad range of different solutions. At the same time, the Italian manufacturers offer about the same warranties for their products as producers in other countries. This means that the warranties comply largely with international standards. The same is true of the module certification, as international standards are often required for the project to qualify for the incentive.

Besides a great diversity of different products, the Italian module manufacturers also shine with custom-tailored solutions such as for private homes that meet highest aesthetic requirements. Italy's

manufacturers have therefore included frameless or transparent glass-glass modules in their portfolios. One highlight is the triangular module offered by Coenergia Srl. Compared to conventional products, Coenergia's modules have a 50 % reduced output of only 90 to 95 W. Nevertheless, the Italian customers are attracted to this specific module for aesthetical reasons. Coenergia's triangular PV module is particularly well-suited for covering the outer roof edges and allows for making efficient use of the roof surface.

Fifteen of the module manufacturers presented here are members of the Italian PV association Comitato IFI (Comitato Industrie Fotovoltaiche Italiane), which provides its members with a specific emblem "Made in Italy" warranting the required domestic content of the modules.

Further information:

- www.comitatoifi.it
- www.anafsolar.eu
- www.avproject.it
- www.azimut-pv.com
- www.brandonisolare.com
- www.cappelloalluminio.it
- www.cleanenergydp.it
- www.coenergiaitalia.com
- www.depasol.it
- www.dgenergy.it
- www.eclipseitalia.com
- www.ecopoweritalia.it
- www.electrosolar.it
- www.enecomitalia.com
- www.energicasrl.it
- www.enipower.eni.it
- www.eosolare.eu
- www.eu-energy.it
- www.ferraniasolis.com
- www.fotovolt.it
- www.fvgenergy.com
- www.heliostechnology.com
- www.investsrl.it
- www.istarsolar.com
- www.micronsun.it
- www.mxgroup.it
- www.renergiesitalia.it
- www.saiphil.com
- www.scenerg.com
- www.sdlenergy.it
- www.silfab.eu
- www.solar-power.it
- www.solarday.it
- www.solon.com
- www.solsonica.com
- www.spsistem.com
- www.suntechnology.eu
- www.torrisolare.it
- www.vipiemesolar.it
- www.xgroupspa.it



Some Italian manufacturers are already promoting their quality "Made in Italy" during trade fairs. The picture shows an exhibition stand by the manufacturer Brandoni Solare.

Photo (2): Europressedienst

company	location	module type	certificates	product warranty/ module power warranty (years)	module efficiency (%)	module dimensions (mm x mm x mm)	module weight (kg)	max surface load (kg/m ²)	cell type	cell manufacturer	country	connection system components	additional product info and remarks
Anaf Solar	Torre D'Isola	H-NRG 230	UNI EN 12975, IEC 61215, IEC 61730	10 on product, 12 on 90%, 25 on 80%	13.90	1,625 x 1,000 x 45	3	240	poly	Risun	China	IP65	H-NRG is a combination of PV cells and an avery efficient Al-thermal collector, a single device which converts solar radiation into electricity and thermal enrgy at the same time. This combination works with most kinds of heating systems in three unique ways:- to provide domestic hot water; connected to a heat pump to provide hot water for heating and domestic hot water;- cooling for the panel cells thus optimizing panel performance with increased annual electrical yield.
		AN 60 P 230	IEC 60904-3, TÜV IEC 61215	10 on product, 12 on 90%, 25 on 80%	13.90	1,625 x 1,000 x 45	22	240	poly	n.a.	China	IP65	
AV Project Srl	Manocalzati	AVP 48 M 200	TÜV IEC 61215	10 on power, 12 on 90%, 25 on 80%	15.90	1,336 x 992 x 42	16	n.a.	mono	n.a.	n.a.	n.a.	
		AVP 60M 250	TÜV IEC 61215	10 on power, 12 on 90%, 25 on 80%	15.34	1,644 x 992 x 42	21	n.a.	mono	n.a.	n.a.	n.a.	
		AVP 72M 300	TÜV IEC 61215	10 on power, 12 on 90%, 25 on 80%	15.31	1,955 x 997 x 42	26	n.a.	mono	n.a.	n.a.	n.a.	
		AVP 48P 200	TÜV IEC 61215	10 on power, 12 on 90%, 25 on 80%	15.09	1,336 x 992 x 42	16	n.a.	poly	n.a.	n.a.	n.a.	
		AVP 60P 250	TÜV IEC 61215	10 on power, 12 on 90%, 25 on 80%	15.34	1,644 x 992 x 42	21	n.a.	poly	n.a.	n.a.	n.a.	
		AVP 72P 300	TÜV IEC 61215	10 on power, 12 on 90%, 25 on 80%	15.31	1,966 x 997 x 42	26	n.a.	poly	n.a.	n.a.	n.a.	
Azimut Srl	Gambugliano	AZM606/240P	IEC 61215, IEC 61730 factory inspection	10 on product, 12 on 90%, 25 on 80%	14.54	1,661 x 996 x 35	21.5	540	poly	Motech/Solartech	Taiwan	J-Box Compel	also available with black or transparent backsheet and frameless version
		AZM606/235P	IEC 61215, IEC 61730 factory inspection	10 on product, 12 on 90%, 25 on 80%	14.85	1,661 x 996 x 35	21.5	540	poly	Motech/Solartech	Taiwan	J-Box Compel	also available with black or transparent backsheet and frameless version
		AZM606/245M	IEC 61215, IEC 61730 factory inspection	10 on product, 12 on 90%, 25 on 80%	14.85	1,661 x 996 x 35	21.5	540	mono	Motech/Solartech	Taiwan	J-Box Compel	also available with black or transparent backsheet and frameless version
		AZM606/250M	IEC 61215, IEC 61730 factory inspection	10 on product, 12 on 90%, 25 on 80%	15.15	1,661 x 996 x 35	21.5	540	mono	Motech/Solartech	Taiwan	J-Box Compel	also available with black or transparent backsheet and frameless version
		AZM806/330M	IEC 61215, IEC 61730 factory inspection	10 on product, 12 on 90%, 25 on 80%	15.14	1,661 x 996 x 35	28	540	mono	Motech/Solartech	Taiwan	J-Box Spelsberg	also available with black or transparent backsheet and frameless version
Brandoni Solare SpA	Castelfidardo	BRP633604G4G4-XXX-1708	IEC 61215, safety class 2, IEC 61730, IEC 61701, ammonia, CE, verified for GSE applicative rules made EU, UNI EN ISO:12543, UNI EN:12600	5 on 95%, 10 on 90 %, 25 on 80 %	10.20	1,755 x 809 x 10	29	540	poly	various	Europe and Asia	J-Box Tyco	glass glass modules
		BRP6360064-XXX	IEC 61215, safety class 2l, IEC 61730, IEC 61701, ammonia, CE, verified for GSE applicative rules made EU	5 on 95%, 10 on 90 %, 25 on 80 %	14.60	1,661 x 997 x 42	22	540	poly	various	Europe and Asia	J-Box Tyco	positive sorting; this module is available also in the following version: frameless; transparent backsheet; frameless with transparent backsheet
		BRM6360064-XXX	IEC 61215, safety class 2l, IEC 61730, IEC 61701, ammonia, CE, verified for GSE applicative rules made EU	10 on 90 %, 25 on 80 %	14.90	1,661 x 997 x 42	22	540	mono	various	Europe and Asia	J-Box Tyco	positive sorting; this module is available also in the following version: frameless; transparent backsheet; frameless with transparent backsheet
Cappello Energy Srl*	Ragusa	MICRON GOLD 72M CA295M72	IEC 16215, IEC 61730-2	10 on product, 10 on 90%, 25 on 80%	15.13	"1,979 x 998 x 45"	module with frame: smooth glass 26 kg, Albarino G/P glass 24 kg; frameless module: smoothglass 23 kg, Albarino G/P 21 kg	550	mono	Q-Cells	n.a.	J-Box Tyco Electronics, IP 65, 3 bypass diode Schottky	Albarino G solar glass type from SAINT GOBAIN
		MICRON GOLD 72P CA285	IEC 16215, IEC 61730-2	10 on product, 10 on 90%, 25 on 80%	14.43	"1,979 x 998 x 45"	module with frame: smooth glass 26 kg, Albarino G/P glass 24 kg; frameless module: smoothglass 23 kg, Albarino G/P 21 kg	550	poly	Q-Cells	n.a.	J-Box Tyco Electronics, IP 65, 3 bypass diode Schottky	Albarino G solar glass type from SAINT GOBAIN
		MICRON GOLD 60M CA245M60	IEC 16215, IEC 61730-2	10 on product, 10 on 90%, 25 on 80%	14.76	1,663 x 998 x 45	module with frame: smooth glass 26 kg, Albarino G/P glass 24 kg; frameless module: smoothglass 23 kg, Albarino G/P 21 kg	550	mono	Q-Cells	n.a.	J-Box Tyco Electronics, IP 65, 3 bypass diode Schottky	Albarino P solar glass type from SAINT GOBAIN
		MICRON GOLD 60P CA235	IEC 16215, IEC 61730-2	10 on product, 10 on 90%, 25 on 80%	14.16	1,663 x 998 x 45	module with frame: smooth glass 26 kg, Albarino G/P glass 24 kg; frameless module: smoothglass 23 kg, Albarino G/P 21 kg	550	poly	Q-Cells	n.a.	J-Box Tyco Electronics, IP 65, 3 bypass diode Schottky	Albarino P solar glass type from SAINT GOBAIN
		MICRON SILVER 60P CA230	IEC 16215, IEC 61730-2	10 on product, 10 on 90%, 25 on 80%	13.86	1,663 x 998 x 45	module with frame: smooth glass 26 kg, Albarino G/P glass 24 kg; frameless module: smoothglass 23 kg, Albarino G/P 21 kg	550	poly	other	Taiwan	J-Box Tyco Electronics, IP 65, 3 bypass diode Schottky	smooth solar glass type
Clean Energy DP Srl	Catania	CAR240l/M	n.a.	10 on 90 %, 25 on 80 %	n.a.	1,642 x 990 x 42	22	n.a.	poly	n.a.	n.a.	n.a.	
Coenergia Srl	Bondeno di Gonzaga	TRIENERGIA COE-xxM	IEC 61215, IEC 61730	5 on product, 10 on 90%, 25 on 80%	13.50	1,070 x 1,070 x 40	10	540	mono	Coenergia S.r.l.	Italy	n.a.	
		TRIENERGIA COE-xxxM	IEC 61215, IEC 61730	5 on product, 10 on 90%, 25 on 80%	15.13	1,200 x 1,070 x 40	17	540	mono	Coenergia S.r.l.	Italy	n.a.	

company	location	module type	certificates	product warranty/ module power war- ranty (years)	module efficiency (%)	module dimensions (mm x mm x mm)	module weight (kg)	max sur- face load (kg/m²)	cell type	cell manufac- turer	country	connection system components	additional product info and remarks
Depasol eco-energy systems	Trini- tapoli	DEP 50 M	n.a.	25 on product	n.a.	1,000 x 445 x 35	75	n.a.	mono	n.a.	n.a.	dual low loss bypass	
		DEP 80 M	n.a.	25 on product	n.a.	1,200 x 550 x 35	8,3	n.a.	mono	n.a.	n.a.	dual low loss bypass	
		DEP 120 M	n.a.	25 on product	n.a.	1,577 x 790 x 35	15	n.a.	mono	n.a.	n.a.	dual low loss bypass	
		DEP 150 M	n.a.	25 on product	n.a.	1,577 x 790 x 35	15	n.a.	mono	n.a.	n.a.	dual low loss bypass	
DG Energy Srl	Luzzi	DG6M54-200	IEC 61215-2, IEC 61730	10 on product, 12 on 90%, 25 on 80%	13.62	1,495 x 982 x 45	20	n.a.	poly	Gyntech	Taiwan	J-Box Tyco, IP 65, 3 bypass-diode	
		DG6M54-210	IEC 61215-2, IEC 61730	10 on product, 12 on 90%, 25 on 80%	14.30	1,495 x 982 x 45	20	n.a.	poly	Gyntech	Taiwan	J-Box Tyco, IP 65, 3 bypass-diode	
		DG6M60-230	IEC 61215-2, IEC 61730	10 on product, 12 on 90%, 25 on 80%	14.18	1,651 x 982 x 45	27	n.a.	poly	Gyntech	Taiwan	J-Box Tyco, IP 65, 3 bypass-diode	
		DG6M60-235	IEC 61215-2, IEC 61730	10 on product, 12 on 90%, 25 on 80%	14.49	1,651 x 982 x 45	27	n.a.	poly	Gyntech	Taiwan	J-Box Tyco, IP 65, 3 bypass-diode	
		DG6M60-240	IEC 61215-2, IEC 61730	10 on product, 12 on 90%, 25 on 80%	14.80	1,651 x 982 x 45	27	n.a.	poly	Gyntech	Taiwan	J-Box Tyco, IP 65, 3 bypass-diode	
Eclipse Italia Srl	Nozza di Vestone	SOL 195 H	IEC 61215-2, IEC 61730-1, IEC 61730-2	10 on 90%, 25 on 80%	15.29	1,598 x 798 x 40	17	550	mono	n.a.	n.a.	Tyco	
		SOL 250 M	IEC 61215-2, IEC 61730-1, IEC 61730-2	10 on 90%, 25 on 80%	15.06	1,663 x 998 x 45	20,7	550	mono	n.a.	n.a.	Tyco	
		SOL 65 H	IEC 61215-2, IEC 61730-1, IEC 61730-2	10 on 90%, 25 on 80%	n.a.	1,598 x 298 x 40	6,5	550	mono	n.a.	n.a.	Tyco	
		SOL 245 P	IEC 61215-2, IEC 61730, GSE 07/2011 Made in EU	10 on 90%, 25 on 80%	14.76	1,598 x 798 x 40	17	550	poly	n.a.	n.a.	Tyco	
Ecopower Srl	San Giovanni Teatino	SOL 135 P	IEC 61215-2, IEC 61730-1, IEC 61730-2	10 on 90%, 25 on 80%	n.a.	1,506 x 687 x 35	11	550	poly	n.a.	n.a.	Caja Tyco	
		"Ecopower EP 235 P60"	IEC 61215 2006, IEC 61730-1, IEC 61730-2 2007, TÜV Cert. N.09 - PPV - 00059/01 - TIC	5 on 95%, 12 on 90 %, 25 on 80 %	14.00	1,668 x 1,005 x 45	19.8	550	poly	n.a.	n.a.	Tyco Solarlock, IP65 with 3 bypass diode	
		"Ecopower EP 240 P60"	IEC 61215 2006, IEC 61730-1, IEC 61730-2 2007, TÜV Cert. N.09 - PPV - 00059/01 - TIC	5 on 95%, 12 on 90 %, 25 on 80 %	14.30	1,668 x 1,005 x 45	19.8	550	poly	n.a.	n.a.	Tyco Solarlock, IP65 with 3 bypass diode	
		Ecopower EP 210 P60	IEC 61215 2006, IEC 61730-1, IEC 61730-2 2007, TÜV Cert. N.09 - PPV - 00059/01 - TIC	5 on 95%, 12 on 90 %, 25 on 80 %	12.60	1,668 x 1,005 x 45	19.8	550	poly	n.a.	n.a.	Tyco Solarlock, IP65 with 3 bypass diode	
		Ecopower EP 220 P60	IEC 61215 2006, IEC 61730-1, IEC 61730-2 2007, TÜV Cert. N.09 - PPV - 00059/01 - TIC	5 on 95%, 12 on 90 %, 25 on 80 %	13.20	1,668 x 1,005 x 45	19.8	550	poly	n.a.	n.a.	Tyco Solarlock, IP65 with 3 bypass diode	
Electro Solar Srl	Carmig- nano di Brenta	"Ecopower EP 230 P60"	IEC 61215 2006, IEC 61730-1, IEC 61730-2 2007, TÜV Cert. N.09 - PPV - 00059/01 - TIC	5 on 95%, 12 on 90 %, 25 on 80 %	13.80	1,668 x 1,005 x 45	19.8	550	poly	n.a.	n.a.	Tyco Solarlock, IP65 with 3 bypass diode	
		ES75 12V	TÜV IEC 61215-2	5 on product, 10 on 90 %, 25 on 80 %	n.a.	1,208 x 553 x 35	8.6	n.a.	mono	n.a.	n.a.	J box IP 65	
		ES90 12V	TÜV IEC 61215-2	10 on 90 %, 25 on 80 %	n.a.	1,208 x 553 x 35	8.6	n.a.	mono	n.a.	n.a.	J box IP 65	
		ES150/36 12 V	TÜV IEC 61215-2, IEC 61701	10 on 90 %, 25 on 80 %	n.a.	1,483 x 663 x 35	16	n.a.	poly	n.a.	n.a.	J box IP 65	
		ES 235 Plus	TÜV IEC 61215-2	10 on product, 10 on 90%, 25 on 80%	n.a.	1,650 x 990 x 46	30	n.a.	poly	n.a.	n.a.	IP 65, MC PV-KBT4 / MC PV-KST4	
Enecom	Torino	ES 245	TÜV IEC 61215-2, IEC 61701	10 on 90 %, 25 on 80 %	n.a.	1,650 x 990 x 46	24	n.a.	poly	n.a.	n.a.	IP 65, MC PV-KBT4 / MC PV-KST4	
		HF 130	n.a.	n.a.	18.00	1,355 x 660 x 1.5	2.2	n.a.	mono	n.a.	n.a.	cable with universal MC4 plugs	flexible panels for stand-alone solutions like on caravans and boats
		HF 110	n.a.	n.a.	15.50	1,355 x 660 x 1.5	2.2	n.a.	poly	n.a.	n.a.	cable with universal MC4 plugs	
		HF 90	n.a.	n.a.	17.25	1,230 x 526 x 1.5	1.5	n.a.	mono	n.a.	n.a.	cable with universal MC4 plugs	
		HF 80	n.a.	n.a.	16.00	1,230 x 526 x 1.5	1.5	n.a.	mono	n.a.	n.a.	cable with universal MC4 plugs	
EniPower SpA	Roma	Hfp 40	n.a.	n.a.	16.00	625 x 280 x 1.5	1	n.a.	n.a.	n.a.	n.a.	cable with universal MC4 plugs	
		EN 12 /130	IEC 61215, IEC 61730, CE	12 on 90%, 25 on 80%	n.a.	1,492 x 674 x 35	12	n.a.	poly	n.a.	n.a.	Spelsberg	for stand-alone solutions
		EN20/ 240	IEC 61215-2, IEC 61730 2007, CE	12 on 90%, 25 on 80%	n.a.	1,650 x 992 x 35	19	n.a.	poly	n.a.	n.a.	Spelsberg IP65 2 bypass diode	for grid coennected solutions
		EN 25 /235	IEC 61215, IEC 61730, CE	12 on 90%, 25 on 80%	n.a.	1,650 x 990 x 38	18.7	n.a.	poly	n.a.	n.a.	Spelsberg	
		MT 16/180	IEC 61215-2, IEC 61730 2007, CE	12 on 90%, 25 on 80%	n.a.	1,585 x 813 x 35	15.2	n.a.	mono	n.a.	n.a.	Spelsberg IP65 2 bypass diode / MC	
Energica Srl	Cavour	PN 16 /170	IEC 61215-2, CE	12 on 90%, 25 on 80%	n.a.	1,600 x 800 x 37	14.7	n.a.	poly	n.a.	n.a.	Spelsberg IP65 2 bypass diode / MC	
		Superlux 60-240	IEC 61730-1-2 2007, IEC 61215 2006	10 on product, 12 on 90%, 25 on 80%	14.40	1,665 x 1,000 x 42	20	n.a.	poly	n.a.	n.a.	3 bypass diode	4 mm antireflex and hydrophilic tempered solar glass
		Super power 60-255	IEC 61730-1-2 2007, IEC 61215 2006	10 on product, 12 on 90%, 25 on 80%	15.30	1,665 x 1,000 x 42	22	n.a.	mono	n.a.	n.a.	3 bypass diode	4 mm antireflex and hydrophilic tempered solar glass
		Nero 60-245	IEC 61730-1-2 2007, IEC 61215 2006	10 on product, 12 on 90%, 25 on 80%	14.70	1,665 x 1,000 x 42	22	n.a.	mono	n.a.	n.a.	3 bypass diode	4 mm antireflex and hydrophilic tempered solar glass
		Nero 60-250	IEC 61730-1-2 2007, IEC 61215 2006	10 on product, 12 on 90%, 25 on 80%	15.00	1,665 x 1,000 x 42	22	n.a.	mono	n.a.	n.a.	3 bypass diode	4 mm antireflex and hydrophilic tempered solar glass
Eosolare Srl	Garaguso Scalo	Nero 60-255	IEC 61730-1-2 2007, IEC 61215 2006	10 on product, 12 on 90%, 25 on 80%	15.30	1,665 x 1,000 x 42	22	n.a.	mono	n.a.	n.a.	3 bypass diode	4 mm antireflex and hydrophilic tempered solar glass
		EOS 156P60	TÜV, Factory Inspection	10 on product, 12 on 90%, 25 on 80%	14.40	1,640 x 995 x 35	22	551	poly	n.a.	n.a.	IP65 with 3 bypass diode	
		EOS 156P72	TÜV, Factory Inspection	10 on product, 12 on 90%, 25 on 80%	14.65	1,955 x 995 x 35	26	551	poly	n.a.	n.a.	IP65 with 3 bypass diode	
		EOS 156M72-305	TÜV, Factory Inspection	10 on product, 12 on 90%, 25 on 80%	15.68	1,955 x 995 x 35	26	551	mono	n.a.	n.a.	IP65 with 3 bypass diode	

company	location	module type	certificates	product warranty/ module power warranty (years)	module efficiency (%)	module dimensions (mm x mm x mm)	module weight (kg)	max surface load (kg/m ²)	cell type	cell manufacturer	country	connection system components	additional product info and remarks
EU Energy Srl	Conco-rezzo	EOS156M72VW	TÜV, Factory Inspection	12 on 90%, 25 on 80%	15.33	1,970 x 1,010	50	551	mono	n.a.	n.a.		hybrid
		EOS156M72VCT	TÜV, Factory Inspection	12 on 90%, 25 on 80%	15.33	1,970 x 1,010	97	551	mono	n.a.	n.a.		hybrid
		EU-M36007/90	IEC 61215-2	2 on product, 25 on 90%	14.05	1,220 x 560 x 35	9	n.a.	mono	n.a.	n.a.	IP 65	
		EU-M54007/140	IEC 61215-2	2 on product, 25 on 90%	14.80	1,220 x 805 x 35	12	n.a.	mono	n.a.	n.a.	IP 65	
		EU-M72007/195	IEC 61215-2	2 on product, 25 on 90%	15.00	1,610 x 805 x 35	15	n.a.	mono	n.a.	n.a.	IP 65	
Ferrania Solis Srl	Cairo Montente	EU-P60010/240	IEC 61215-2	2 on product, 25 on 90%	14.50	1,665 x 987 x 35	22	n.a.	poly	n.a.	n.a.	IP 65	
		EU-P54010/205	IEC 61215-2	2 on product, 25 on 90%	14.30	1,507 x 987 x 35	19	n.a.	poly	n.a.	n.a.	IP 65	
		AP 72 – 290	"UNI EN ISO 9001:2008, UNI EN ISO 14001:2004, IEC 61215:2005, IEC 61730-1-2, TÜV Cert. no. 11-PPV-0009409-01-W01-TIC, IEC 61701:2000, ammonia resistance test "	10 on product, 12 on 90%, 25 on 80%	16.60	1,979 x 998 x 45	26	n.a.	poly	n.a.	n.a.	IP 65 (IEC 60529) - safety class 2 (DIN VDE0106) - 3 bypass diode	
		AP 60 – 240	"UNI EN ISO 9001:2008, UNI EN ISO 14001:2004, IEC 61215:2005, IEC 61730-1-2, TÜV Cert. no. 11-PPV-0009409-01-W01-TIC, IEC 61701:2000, ammonia resistance test "	10 on product, 12 on 90%, 25 on 80%	14.48	1,979 x 998 x 45	22	n.a.	poly	n.a.	n.a.	IP 65 (IEC 60529) - safety class 2 (DIN VDE0106) - 3 bypass diode	
		AP60 – 235	"UNI EN ISO 9001:2008, UNI EN ISO 14001:2004, IEC 61215 2005, IEC 61730-1-2, TÜV Cert. no. 11-PPV-0009409-01-W01-TIC, IEC 61701:2000, ammonia resistance test "	10 on product, 12 on 90%, 25 on 80%	14.24	1,979 x 998 x 45	22	n.a.	poly	n.a.	n.a.	IP 65 (IEC 60529) - safety class 2 (DIN VDE0106) - 3 bypass diode	
Fotovolta Srl	Crotone	AP 60 NERO – 240	"UNI EN ISO 9001:2008, UNI EN ISO 14001:2004, IEC 61215:2005, IEC 61730-1-2, TÜV Cert. no. 11-PPV-0009409-01-W01-TIC, IEC 61701:2000, ammonia resistance test "	10 on product, 12 on 90%, 25 on 80%	14.55	1,663 x 998 x 45	22	n.a.	poly	n.a.	n.a.	IP 65 (IEC 60529) - safety class 2 (DIN VDE0106) - 3 bypass diode	
		AP 36 ST series – 145	TÜV IEC, manufacturing inspection, ammonia resistance test, safety class 2	5 on product, 12 on 90%, 25 on 80%	14.40	1,504 x 678 x 45	14	n.a.	poly	n.a.	n.a.	IP 65 (IEC 60529) - safety class 2 (DIN VDE 0106)	
		FTV 220/240	IEC 61215, safety class 2	20 on >80%	n.a.	1,660 x 995 x 35	22	n.a.	poly	n.a.	n.a.	n.a.	
		FTV 220/235	IEC 61215, safety class 2	20 on >80%	n.a.	1,660 x 995 x 35	22	n.a.	poly	n.a.	n.a.	n.a.	
		FTV 220/230	IEC 61215, safety class 2	20 on >80%	n.a.	1,660 x 995 x 35	22	n.a.	poly	n.a.	n.a.	n.a.	
FVG Energy SpA	Carlino	FTV 220/225	IEC 61215, safety class 2	20 on >80%	n.a.	1,660 x 995 x 35	22	n.a.	poly	n.a.	n.a.	n.a.	
		FTV 220/220	IEC 61215, safety class 2	20 on >80%	n.a.	1,660 x 995 x 35	22	n.a.	poly	n.a.	n.a.	n.a.	
		FVG 230P-E	IEC 61215, IEC 61730-2	5 on product, 10 on 90%, 15 on 80%	13.90	1,668 x 993 x 46	20	540	poly	n.a.	n.a.	3 bypass diode	
		FVG 72-156	IEC 61215, IEC 61730-2	5 on product, 10 on 90%, 15 on 80%	15.46	1,960 x 990 x 45	27	540	mono	n.a.	n.a.		
		FVG 60-156	IEC 61215, IEC 61730-2	5 on product, 10 on 90%, 15 on 80%	15.30	1,960 x 990 x 35	21.5	540	mono	n.a.	n.a.		
Helios Technology SpA	Carmignano di Brenta	FVG 72-156	IEC 61215, IEC 61730-2	5 on product, 10 on 90%, 15 on 80%	14.68	1,960 x 990 x 45	27	540	poly	n.a.	n.a.		
		FVG 60-156	IEC 61215, IEC 61730-2	5 on product, 10 on 90%, 15 on 80%	14.70	1,650 x 990 x 35	21.5	540	poly	n.a.	n.a.		
		HTCB22M	EN 50380	5 on product, 10 on 90%, 25 on 80 %	n.a.	650 x 292 x 35	3	n.a.	mono	n.a.	n.a.	J-Box IP65, safety class 2, Multicontact MC4	
		H3A260M	IEC 61215 2006 for heavy snow loads - high wind, IEC 61730-1-2 2007, safety class 2, 1000 VDC	10 on 90 %, 25 on 80 %	15.90	1,650 x 990 x 38	18.7	550	mono	n.a.	n.a.	Compel®, IP65 with 3 bypass diode	
		H3G280P	IEC 61215 2006 for heavy snow loads - high wind, IEC 61730-1-2 2007, safety class 2, 1000 VDC	10 on 90 %, 25 on 80 %	14.90	1,970 x 990 x 38	22.3	550	poly	n.a.	n.a.	Tyco or Compel, IP65, with 3 bypass diode	
Invent Srl	Noventa di Piave	I3A235P	UNI EN 12975/6, IEC 61215 2006 for heavy wind - snow loads, IEC 61730-1-2 2007, safety class 2, 1000 VDC	10 on 90 %, 25 on 80 %	14.40	1,650 x 990 x 38	n.a.	n.a.	poly	n.a.	n.a.	Tyco or Compel, IP65, with 3 bypass diode	
		HMA230P	IEC 61215-2, IEC 61730-1-2, safety class 2, 1000 VDC	10 on 90 %, 25 on 80 %	14.10	1,650 x 990 x 38	18.7	550	poly	n.a.	n.a.	Tyco, IP65, with 3 bypass diode	
		Q 230	IEC 61215-2 2005, IEC 61730-2 2007	2 on product, 10 on 90%, 25 on 80%	13.87	1,663 x 997 x 35	19	n.a.	poly	Q-Cells	n.a.	IP 65	
		Q-HP 240	IEC 61215-2 2005, IEC 61730-2 2007	2 on product, 10 on 90%, 25 on 80%	14.47	1,663 x 997 x 35	21	n.a.	poly	Q-Cells	n.a.	IP 65	
		X 240	IEC 61215-2 2006, IEC 61730-2 2007	2 on product, 10 on 90%, 25 on 80%	14.53	1,652 x 1,000 x 45	22	n.a.	poly	n.a.	n.a.	Tyco	
Istar Solar Srl	Tito	X-HP 240	IEC 61215-2 2006, IEC 61730-2 2007	5 on product, 10 on 90%, 25 on 80%	14.53	1,652 x 1,000 x 45	22	n.a.	poly	n.a.	n.a.	Tyco or Multicontact	
		Quantum X 240	IEC 61215-2 2006, IEC 61730-2 2007	5 on product, 10 on 90%, 25 on 80%	14.53	1,652 x 1,000 x 45	22	n.a.	poly	n.a.	n.a.	Tyco or Multicontact	
		Quantum X-HP 240	IEC 61215-2 2006, IEC 61730-2 2007	5 on product, 10 on 90%, 25 on 80%	14.53	1,652 x 1,000 x 45	22	n.a.	poly	n.a.	n.a.	Tyco or Multicontact	
Istar Solar Srl	Tito	IS4000P-300	IEC 61215-61730-1-2, TÜV Intercert-Eurotest	10 on product, 12 on 90%, 25 on 80%	15.60	1,960 x 985 x 42	27	550	poly	Photovoltech	Belgium	Tyco	also black series, solrif series, frameless series, BIPV series.
		IS4000P-308	IEC 61215-61730-1-2, TÜV Intercert-Eurotest	10 on product, 12 on 90%, 25 on 80%	15.95	1,960 x 985 x 42	27	550	mono	Motech	Taiwan	Tyco	also black series, solrif series, frameless series, BIPV series.
		IS4000P-250	IEC 61215-61730-1-2, TÜV Intercert-Eurotest	10 on product, 12 on 90%, 25 on 80%	15.60	1,645 x 985 x 42	22	550	poly	Photovoltech	Belgium	Tyco	also black series, solrif series, frameless series, BIPV series.

company	location	module type	certificates	product warranty/ module power war- ranty (years)	module efficiency (%)	module dimensions (mm x mm x mm)	module weight (kg)	max sur- face load (kg/m ²)	cell type	cell manufac- turer	country	connection system components	additional product info and remarks	
MX Group SpA	Villas- anta	IS4000P-260	IEC 61215-61730-1-2, TÜV Intercert-Eurotest	10 on product, 12 on 90%, 25 on 80%	16.05	1,645 x 985 x 43	22	550	mono	Motech	Taiwan	Tyco	also black series, solrif series, frameless series, BIPV series.	
		IS4000P-230	IEC 61215-61730-1-2, TÜV Intercert-Eurotest	10 on product, 12 on 90%, 25 on 80%	15.70	1,960 x 985 x 45	27	550	mono	Motech	Taiwan	Tyco	also black series, solrif series, frameless series, BIPV series.	
		Suncase MX 60	100% Made in EU, IEC EN 61215 - 61730 /1- 61730/2, UL 17032 - TÜV Intercert, Kiwa, MCS	10 on product, 10 on 90%, 25 on 80%	14.30	1,665 x 1,005 x 43	22	540	poly	n.a.	n.a.	n.a.	IP 65	framed module
		Suncase MX 54	100% Made in EU, IEC EN 61215 - 61730 /1- 61730/2, UL 17032 - TÜV Intercert, Kiwa, MCS	10 on product, 10 on 90%, 25 on 80%	12.60	1,657x 997x 5	19.5	240	poly	n.a.	n.a.	n.a.	IP 65	frameless modules, available with transparent backsheets (20% transparent surface)
Renegies Italia SpA	Corrido- nia	Suncase MX 48	100% Made in EU, IEC EN 61215 - 61730 /1- 61730/2, UL 17032 - TÜV Intercert, Kiwa, MCS	10 on product, 10 on 90%, 25 on 80%	11.20	1,657x 997x 5	19.5	240	poly	n.a.	n.a.	IP 65	frameless modules, available with transparent backsheets (30% transparent surface)	
		REN 220M/240	IEC 61215-2, IEC 61730-2	14 on product, 10 on 90%, 20 on 83%, 25 on 80%	13.59	1,640 x 987 x 40	17	540	mono	n.a.	n.a.	J-Box, Multicontact MC4		
		REN 170M/190	IEC 61215-2, IEC 61730-2	14 on product, 10 on 90%, 20 on 83%, 25 on 80%	14.13	1,585 x 805 x 40	14	240	mono	n.a.	n.a.	J-Box, Multicontact MC4		
		REN 220P-SC/250	IEC 61215-2, IEC 61730-2	14 on product, 10 on 90%, 20 on 83%, 25 on 80%	13.59	1,634 x 984 x 6	17	540	poly	n.a.	n.a.	J-Box, Multicontact MC4		
S.D.L. Energy	Ragusa	REN 220P-TR/250	IEC 61215-2, IEC 61730-2	14 on product, 10 on 90%, 20 on 83%, 25 on 80%	13.59	1,640 x 987 x 40	21	540	poly	n.a.	n.a.	J-Box, Multicontact MC4	semit-transparent	
		REN 300P/300	in phase of certification	14 on product, 10 on 90%, 20 on 83%, 25 on 80%	14.07	1,300 x1,640 x 40	25	in phase of certification	poly	n.a.	n.a.	J-Box, Multicontact MC4		
		SDL230P	IEC 61215, IEC 61730-2 and CE	10 on product, 10 on 90%, 25 on 80%	14.00	1,645 x 991 x 45	21	n.a.	poly	n.a.	n.a.	n.a.		
		Comitini 160	TÜV, IEC 61215-2, IEC 61730	n.a.	n.a.	1,595 x 810 x 34	15	n.a.	mono	n.a.	n.a.	n.a.		
Saiphil Sunny Srl	Agrigento	Comitini 165	TÜV, IEC 61215-2, IEC 61730	n.a.	n.a.	1,595 x 810 x 34	15	n.a.	mono	n.a.	n.a.	n.a.		
		Comitini 170	TÜV, IEC 61215-2, IEC 61730	n.a.	n.a.	1,595 x 810 x 34	15	n.a.	mono	n.a.	n.a.	n.a.		
		SCN-240P	IEC 61215:2005	10 on 90 %, 25 on 80 %	14.72	1,645 x 990 x 42	22	540	poly	n.a.	n.a.	IP65 3 bypass diode		
Scenery Industry SpA	Verona	SCN-250M	IEC 61215:2005	10 on 90 %, 25 on 80 %	15.35	1,645 x 990 x 42	22	540	mono	n.a.	n.a.	IP65 3 bypass diode		
		SCN-250M TS	IEC 61215:2005	10 on 90 %, 25 on 80 %	13.18	1,645 x 990 x 42	22	540	mono	n.a.	n.a.	IP65 3 bypass diode		
		SCQ250 NL	IEC 61215:2005	10 on 90 %, 25 on 80 %	n.a.	1,650 x 990 x 40	20	540	mono	n.a.	n.a.	IP65 3 bypass diode		
		SCQ-280 P/F	IEC 61215:2005	10 on 90 %, 25 on 80 %	14.45	1,957 x 990 x 50	24	540	poly	n.a.	n.a.	IP65 3 bypass diode		
Silfab SpA	Padova	ELA 255P	TÜV	12 on 90%, 25 on 80%	15.60	1,650 x 990 x 38	19	550	poly	Sunrise	Taiwan	Tyco		
		ELA 240P	TÜV	12 on 90%, 25 on 80%	14.70	1,650 x 990 x 38	19	550	poly	Sunrise	Taiwan	Tyco		
		ELA 245M	TÜV	12 on 90%, 25 on 80%	15.00	1,650 x 990 x 38	19	550	mono	Sunrise	Taiwan	Tyco		
Solar Power Srl	Olivetro Citra	HELIUM 240 POLY	TÜV NORD IEC 61215	12 on product, 12 on 90%, 25 on 80%	14.70	1,650 x 990 x 42	22	540	poly	n.a.	n.a.	n.a.		
		LIGHT 230 POLY	TÜV NORD IEC 61215	12 on product, 12 on 90%, 25 on 80%	14.10	1,650 x 990 x 42	22	540	poly	n.a.	n.a.	n.a.		
		PROTON 185 MONO	TÜV NORD IEC 61215	12 on product, 12 on 90%, 25 on 80%	13.50	1,605 x 805 x 42	16.8	540	mono	n.a.	n.a.	n.a.		
		NEUTRON SMALL 95	TÜV NORD IEC 61215	12 on product, 12 on 90%, 25 on 80%	14.30	1,210 x 550 x 42	8.5	540	mono	n.a.	n.a.	n.a.		
Solarday SpA	Mezzago	NEUTRON LARGE 140	TÜV NORD IEC 61215	12 on product, 12 on 90%, 25 on 80%	14.40	1,465 x 665 x 42	12.7	540	poly	n.a.	n.a.	n.a.		
		PX 60HT SIL 2040X1200	IEC 61215-2, IEC 61730-1-2, EN 12600	10 on 90%, 15 on 80%	9.39	2,040 x 1,200 x 15	85	depends on mounting system	poly	n.a.	60	rear J-Box or edge connector	front glass 6+8, safety glass EN 12602, thickness of the glass depend on application, transparency: 40%	
		PX 60HT SIL 1665X1001 insulating glass ug 1.1	IEC 61215-2, IEC 61730-1-2, EN 12600	10 on 90%, 15 on 80%	14.46	1,665 x 1,001 x 35	66	depends on mounting system	poly	n.a.	60	edge connector	front glass: 6+8 IG: 16 Argon rear glass: 4+4, thickness of the glass depends on application, transparency: 12%	
		MEGASLATE® PX 40M BLACK	IEC 61215-2, IEC 61730-1-2	10 on 90%, 15 on 80%	14.07	1,300 x 865 x 6,5	17	240	mono	n.a.	40	rear J-Box	patent: EP 1 362 967 B1, backsheet color black	
Solon SpA	Carmig- nano di Brenta	ELETTROTEGOLA® ET75	IEC 61215-2, IEC 61730-1-2	10 on 90%, 15 on 80%	14.57	1,470 x 500 x 5,5	8.5	240	poly	n.a.	18	rear J-Box	Elettrotegola® roof integrated system, backsheet color white	
		PX26 SUNSCREEN	IEC 61215-2, IEC 61730-1-2	10 on 90%, 15 on 80%	12.67	2,153 x 350 x 5,5	10	240	poly	n.a.	26	rear J-Box	for Metra Sunscreen system, backsheet color white	
		SOLOON Blue 220/16	IEC 61215-2, IEC 61730 (incl. safety class 2), IEC 62716 (Ammonia resistance), made in EU	5 on 95%,10 on 90 %, 15 on 87%, 20 on 83%, 25 on 80%	14.02	1,640 x 1,000 x 34	22	540	poly	Photovoltech	Belgium	various		
		SOLOON Blue 220/16	IEC 61215-2, IEC 61730 (incl. safety class 2), IEC 62716 (Ammonia resistance), made in EU	5 on 95%,10 on 90 %, 15 on 87%, 20 on 83%, 25 on 80%	14.33	1,640 x 1,000 x 34	22	540	poly	Photovoltech	Belgium	various		
Solon SpA	Carmig- nano di Brenta	SOLOON Blue 220/16	IEC 61215-2, IEC 61730 (incl. safety class 2), IEC 62716 (Ammonia resistance), made in EU	5 on 95%,10 on 90 %, 15 on 87%, 20 on 83%, 25 on 80%	14.94	1,640 x 1,000 x 34	22	540	poly	Photovoltech	Belgium	various		

company	location	module type	certificates	product warranty/ module power warranty (years)	module efficiency (%)	module dimensions (mm x mm x mm)	module weight (kg)	max surface load (kg/m ²)	cell type	cell manufacturer	country	connection system components	additional product info and remarks
		SOLON Black 280/17	IEC 61215-2, IEC 61730 (incl. safety class 2), IEC 62716 (Ammonia resistance), made in EU	5 on 95%, 10 on 90%, 15 on 87%, 20 on 83%, 25 on 80%	14.39	1,973 x 993 x 5,3	23.8	540	mono	Bosch	Germany	various	
		SOLON Black 280/17	IEC 61215-2, IEC 61730 (incl. safety class 2), IEC 62716 (Ammonia resistance), made in EU	5 on 95%, 10 on 90%, 15 on 87%, 20 on 83%, 25 on 80%	14.65	1,973 x 993 x 5,3	23.8	540	mono	Bosch	Germany	various	
Solsonica SpA	Cittaduale	Maximo S610 M	Made in Europe, TÜV, CE, ISO, PV Cycle, Salt Mist corrosion resistance	10 on product/power	15.67	1,663 x 998 x 35	18	n.a.	mono	n.a.	n.a.	Compel SLIMBox-4r, 3 bypass diode	"25 year linear power output warranty 3.5% energy production derating in the first year and 0.7% p.a. in the following 24 years"
		Silver Plus Mono	Made in Europe, TÜV, CE, ISO, PV Cycle, Salt Mist corrosion resistance	10 on product/power	15.36	1,663 x 998 x 35	18	n.a.	mono	n.a.	n.a.	Compel SLIMBox-4r, 3 bypass diode	"25 year linear power output warranty 3.5% energy production derating in the first year and 0.7% p.a. in the following 24 years"
		Sealed Frame	Made in Europe, CE, ISO, PV Cycle, Salt Mist corrosion resistance, Ammonia corrosion resistance	10 on product/power	14.71	1,665 x 1,000 x 6.5	20	n.a.	poly	Solsonica	Italy	Compel SLIMBox-4r, 3 bypass diode	"30 year linear power output warranty 2.5% reduction in the first year, 0.7% per year in the following 29 years"
		Silver Plus	Made in Europe, TÜV, CE, ISO, PV Cycle, Salt Mist corrosion resistance	10 on product/power	15.06	1,663 x 998 x 35	18	n.a.	poly	Solsonica	Italy	Compel SLIMBox-4r, 3 bypass diode	"25 year linear power output warranty 2.5% reduction in the first year, 0.7% per year in the following 24 years"
		Building Integrated	Made in Europe, CE, TÜV, ISO, PV Cycle	10 on product/power	14.04	1,707 x 1,022 x 16	21	n.a.	poly	Solsonica	Italy	Compel SLIMBox-4r, 3 bypass diode	"25 year linear power output warranty 2.5% reduction in the first year, 0.7% per year in the following 24 years"
SPSISTEM Srl	Verona	SPS-240P plus	IEC 61215, IEC 61730, EN ISO 9001	10 on product, 12 on 90%, 25 on 80%	15.20	1,644 x 992 x 35	23.5	540	poly	n.a.	n.a.	Tyco	
		SPS-140P	IEC 61215, IEC 61730, EN ISO 9001	10 on product, 12 on 90%, 25 on 80%	14.00	1,484 x 674 x 36	14.5	n.a.	poly	n.a.	n.a.	n.a.	Stand-alone modules
		SPS-130PC32 BlackGhost	IEC 61215, IEC 61730, EN ISO 9001	10 on product, 12 on 90%, 25 on 80%	11.46	1,324 x 845 x 26	15	540	poly	n.a.	n.a.	n.a.	
		SPS-TERMSER15-240	IEC 61215, IEC 61730, EN ISO 9001	10 on product, 12 on 90%, 25 on 80%	14.11	1,690 x 996 x 26	21.2	540	poly	n.a.	n.a.	n.a.	
		SPS-115P2C30	IEC 61215, IEC 61730, EN ISO 9001	10 on product, 12 on 90%, 25 on 80%	13.71	1,638 x 562 x 26	11.5	540	poly	n.a.	n.a.	n.a.	
SunTechnology Italy	Vernio Prato	ST - 210P/54	IEC, TÜV, CE	5 on product, 10 on 90%, 25 on 80%	n.a.	1,495 x 990 x 50	20.9	n.a.	poly	n.a.	n.a.	3 bypass diode	
		ST - 240P/60	IEC, TÜV, CE	5 on product, 10 on 90%, 25 on 80%	14.94	1,650 x 990 x 50	22.9	n.a.	poly	n.a.	n.a.	3 bypass diode	
		ST - 290P/72	IEC, TÜV, CE	5 on product, 10 on 90%, 25 on 80%	15.09	1,970 x 990 x 50	26.9	240	poly	n.a.	n.a.	3 bypass diode	
		ST - 155M/36 V	IEC, TÜV, CE	5 on product, 10 on 90%, 25 on 80%	n.a.	1,580 x 808 x 11,5	30	n.a.	mono	n.a.	n.a.	3 bypass diode	
		ST - 200 M/72	IEC, TÜV, CE	5 on product, 10 on 90%, 25 on 80%	n.a.	1,580 x 808 x 35	15	n.a.	mono	n.a.	n.a.	3 bypass diode	
Torri Solare Srl	Brescia	TRS 280M	IEC 61215, IEC 61730, ISO 9001:2008	5 on product, 10 on 90%, 25 on 80%	14.50	1,979 x 998 x 35	25	540	mono	n.a.	n.a.	Tyco	
		TRS 130 BLUE	IEC 61215, IEC 61730	5 on product, 10 on 90%, 25 on 80%	13.14	1,490 x 680 x 35	14	540	poly	n.a.	n.a.	Tyco	
		TRS 280P	IEC 61215, IEC 61730, ISO 9001:2008	5 on product, 10 on 90%, 25 on 80%	14.50	1,979 x 998 x 35	25	540	poly	n.a.	n.a.	Tyco	
		TRS 90 BLACK	IEC 61215, IEC 61730	5 on product, 10 on 90%, 25 on 80%	13.67	1,210 x 560 x 35	10	540	mono	n.a.	n.a.	Tyco	
		TRS 240/220M	IEC 61215, IEC 61730	5 on product, 10 on 90%, 25 on 80%	14.24	1,663 x 998 x 35	22	540	mono	n.a.	n.a.	Tyco	
Vipiemme Solar Srl	Isso	VPS01B-250	IEC61215, IEC 61730-2, class 2	10 on product, 10 on 90%, 25 on 80%	15.13	1,645 x 995 x 40	21	n.a.	poly	n.a.	n.a.	IP 65 3 bypass diode	
		VPS01B-255	IEC61215, IEC 61730-2, class 2	10 on product, 10 on 90%, 25 on 80%	15.13	1,645 x 995 x 40	21	n.a.	poly	n.a.	n.a.	IP 65 3 bypass diode	
		VPS02B-250	IEC61215, IEC 61730-2, class 2	10 on product, 10 on 90%, 25 on 80%	15.13	1,640 x 990 x 4	19	n.a.	poly	n.a.	n.a.	IP 65 3 bypass diode	
		VPS02B-255	IEC61215, IEC 61730-2, class 2	10 on product, 10 on 90%, 25 on 80%	15.30	1,640 x 990 x 4	19	n.a.	poly	n.a.	n.a.	IP 65 3 bypass diode	
		VPS03B-115	IEC61215, IEC 61730-2, class 2	10 on product, 10 on 90%, 25 on 80%	14.25	1,640 x 512 x 5	11	n.a.	poly	n.a.	n.a.	IP 65 3 bypass diode	
XGROUP SpA	Cisterna di Latina	X-14	TÜV IEC 61215 (2005-04) safety class 2, 1000 VDC, EN 61730-2	5 on 95%, 12 on 92%, 28 on 80%	13.24	1,650 x 980 x 35	22	n.a.	poly	XGROUP	Italy	n.a.	
		X-22	TÜV IEC 61215 (2005-04) safety class 2, 1000 VDC, EN 61730-2	5 on 95%, 12 on 92%, 28 on 80%	13.73	1,650 x 980 x 35	22	n.a.	poly	XGROUP	Italy	n.a.	
		XG60P	TÜV IEC 61215 (2005-04) safety class 2, 1000 VDC, EN 61730-2	12 on 90%, 25 on 80%	14.50	1,650 x 980 x 35	22	n.a.	poly	XGROUP	Italy	n.a.	
		XG72P	TÜV IEC 61215 (2005-04)	12 on 90%, 25 on 80%	14.30	1,965 x 980 x 40	27	n.a.	poly	XGROUP	Italy	n.a.	
		XG48P	TÜV IEC 61215 (2005-04)	12 on 90%, 25 on 80%	13.80	1,335 x 980 x 35	16	n.a.	poly	XGROUP	Italy	n.a.	