Selecting an optimizer for the module

- Find an optimizer designed to work with a single module

	P300	P370	P401	P404	S440	P485	P500	S500	P505	P601
Power (@STC) [W].	300	370	400	405	440	485	500	500	505	600
Maximum voltage Uoc [V]. (U_{oc} at minimum temperatures)	48	60	60	80	60	125	80	60	83	65
MPPT voltage range [V].	**8-48**	**8-60**	**8-60**	**12.5-80**	**8-60**	**12.5-105**	**8-80**	**8-60**	**12.5-87**	**12.5-65**
Maximum current (I_{SC}) [A].	11	11	11.75	11	14.5	11A	10.1	14.5	14	14
Maximum output voltage [V].	60	60	60	80	60	80	60	60	80	80
Maximum output current [A]	15	15	15	15	15	15	15	15	15	15

- Calculate the maximum voltage at the minimum operating temperature using the data sheet of the photovoltaic module.
- **The compatibility of the module and the optimizer can also be checked using SolarEdge Designer**

Selecting an optimizer for the module

- Find an optimizer designed to work with two modules

	P600	P650	P730	P850	P950	P1100
Power (@STC)	600	650	730	850	950	1100
Maximum voltage Voc (V_{oc} at minimum temperature)	96	96	125	125	125	125
MPPT voltage range [V].	**12.5-80**	**12.5-80**	**12.5-105**	**12.5-105**	**12.5-105**	**12.5-105**
Maximum current (I_{SC})	10.25	11	11	14.1*	14.1*	14.1
Maximum output voltage [V].	80	80	80	80	80	80
Maximum output current [A]	15	15	15	18	18	18

For P850/P950 models manufactured on or before business week 06/2020, the maximum Isc per input is 12.5A. The production code is indicated in the serial number Serial number of the power optimizer Example: S/N SJ0620A-xxxxxxxxxx (working week 06 in 2020).

- Calculate the maximum voltage at the minimum operating temperature using the data sheet of the photovoltaic module.
- **The compatibility of the module and the optimizer can also be checked using SolarEdge Designer**

SolarEdge design principles

Each chain must meet the requirements:

- Only optimizers of the same order can be combined in one chain. Compatibility table on page 4
- The difference between chains plugged in parallel is a maximum of 2kW. The minimum DC connection power for inverters from SE15K upwards is 11kW

The completed set must be confirmed on the **Designer SolarEdge** website

	Model	Min. number of optimizers per chain	Max. number of optimizers per chain	Maximum power chain
1 - phase	P300,P370, P401, P500	8	25	5.7 kW
	S440, S500	8	25	5.7 kW
	P404, P405, P485, P505, P601	6	25	5.7 kW
3 -phase	P300,P370, P401, P500	16	50	11.25 kW
	S440, S500	16	50	11.25 kW
	P404, P405, P485, P505, P601	14	50	11.25 kW
	P650 (≥SE15K) P730, P801 (≥ SE16K)	14 (27 min. modules)	30	12.75 kW*
	P850, P950, P1100 (≥ SE16K)	14 (27 min. modules)	30	12.75 kW*

*Maximum power value is inverter dependent. To verify, check inverter data sheets or use Designer SolarEdge

Values for RWB inverters

	Model	Min. number of optimizers per chain	Max. number of optimizers per chain	Maximum power chain
3 -phase	P300,P370, P401, P500	9	25	Power dependent RWB units
	S440, S500	9	25	
	P404, P405, P485, P505, P601	8	25	

Compatibility of modules in one chain

- Compatible optimizers can be combined in a single PV chain

	P300	P370	P401	P404	S440	P485	S500	P500	P505	P600	P601	P650	P730	P800	P801	P850	P950	P1100
P300	√	√	√		√*		√*	√										
P370	√	√	√		√*		√*	√										
P401	√	√	√		√*		√*	√										
P404				√		√			√		√							
S440	√*	√*	√*		√		√	√*										
P485				√		√			√		√							
S500	√*	√*	√*		√		√	√*										
P500	√	√	√		√*		√*	√										
P505				√		√			√		√							
P600										√		√	√		√			
P601				√		√			√		√							
P650										√		√	√		√			
P730										√		√	√		√			
P800														√		√	√	√
P801										√		√	√		√			
P850														√		√	√	√
P950														√		√	√	√
P1100														√		√	√	√

* - In case of expansion or replacement. Do not combine S and P series in new installations.