

# Trumpa instrukcija kaip nustatyti Huawei keitiklį pagal ESO reikalavimus

## A1 elektrinė 30-100 kW

Galioja nuo 2023-05-19

Susirandame mus dominančią elektrinę, keitiklį:

The screenshot shows the 'Device Information' page for a device named 'INV-E'. The 'Configuration' tab is highlighted with a red box and labeled '3'. A red box labeled '1' highlights the search bar and dropdown menu. A red box labeled '2' highlights the 'Dongle' entry in the device tree under 'Photomate s.r.o'.

Pasirenkame tinklo nustatymų rinkinį EN50549-PL (Artimiausias pagal galimybes ESO reikalavimams)

The screenshot shows the 'Grid Parameter' configuration page. A red box labeled '1' highlights the 'Configuration' tab. A red box labeled '2' highlights the 'Grid code' dropdown, which is set to 'EN50549-PL'. A red arrow points from the 'Grid code' field to the 'Set' button at the bottom right of the page, which is also highlighted with a red box and labeled '3'.

Toliau mus domina tik raudonai apibraukti nustatymai. Reikia palikti sekančiai:

## Grid parameters:

Details | Alarms | Historical Information | Configuration

412-L-U      String inverter

### Grid Parameter

Grid code: EN50549-PL	Voltage level (V): 230 [0~1000]	Device model (Hz): 50 [50~60]
Output mode: Three-phase four-wire system	Isolation configuration: Input not grounded, without a tran...	Automatic startup upon grid recovery: Enable
On-grid recovery time (s): 60 [0~7200]	Quick startup for short-time grid disconnection: Enable	Duration for determining short-time grid disconnection (ms): 3000 [500~20000]
Soft start time after grid failure (s): 600 [1~1800]	Grid reconnection voltage upper limit (V): 253.0 [230.0~312.8]	Grid reconnection voltage lower limit (V): 207.0 [103.5~230.0]
Grid reconnection frequency upper limit (Hz): 50.10 [50.00~60.00]	Grid reconnection frequency lower limit (Hz): 49.00 [40.00~50.00]	Voltage upper limit of on-grid startup (V): 253.0 [230.0~312.8]
Voltage lower limit of on-grid startup (V): 207.0 [103.5~230.0]	Frequency upper limit of on-grid startup (Hz): 50.10 [50.00~60.00]	Frequency lower limit of on-grid startup (Hz): 49.00 [40.00~50.00]

### Protection Parameters

Insulation resistance protection threshold (MΩ): 0.037 [0.020~1.500]	Active island protection: Enable	Unbalance voltage protection threshold (%): 50.0 [0.0~50.0]
Phase angle offset protection: Disable	10 minute OV protection threshold (V): 275.0 [230.0~345.0]	10 minute OV protection time (ms): 600000 [50~7200000]

**Set**    **Refresh**

## Protection parameters:

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### Protection Parameters

Insulation resistance protection threshold (MΩ): 0.037 [0.020~1.500]	Active island protection: Enable	Unbalance voltage protection threshold (%): 50.0 [0.0~50.0]
Phase angle offset protection: Disable	10 minute OV protection threshold (V): 275.0 [230.0~345.0]	10 minute OV protection time (ms): 600000 [50~7200000]
Level-1 OV protection threshold (V): 255.3 [230.0~345.0]	Level-1 OV protection time (ms): 600000 [50~7200000]	Level-2 OV protection threshold (V): 264.5 [230.0~345.0]
Level-2 OV protection time (ms): 200 [50~7200000]	Level-1 UV protection threshold (V): 193.2 [11.5~230.0]	Level-1 UV protection time (ms): 3000 [50~7200000]
Level-2 UV protection threshold (V): 184.0 [11.5~230.0]	Level-2 UV protection time (ms): 2900 [50~7200000]	Frequency change rate protection: Enable
Frequency change rate protection threshold (Hz/s): 2.5 [0.1~5.0]	Frequency change rate protection time (s): 0.2 [0.2~20.0]	Level-1 OF protection threshold (Hz): 51.49 [50.00~60.00]
Level-1 OF protection time (ms): 1800000 [50~7200000]	Level-2 OF protection threshold (Hz): 51.50 [50.00~60.00]	Level-2 OF protection time (ms): 200 [50~7200000]
Level-1 UF protection threshold (Hz): 49.00 [40.00~50.00]	Level-1 UF protection time (ms): 1800000 [50~7200000]	Level-2 UF protection threshold (Hz): 47.49 [40.00~50.00]
Level-2 UF protection time (ms): 200	Level-3 UF protection threshold (Hz): 40.00	Level-3 UF protection time (ms): 100

**Set**    **Refresh**

## Feature parameters:

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### Feature Parameter

Communication interruption duration (min): <input type="text" value="30"/> [1~120]	Automatic shutdown upon communication interruption: <input type="button" value="Disable"/>	Communication disconnection fail-safe: <input type="button" value="Disable"/>																																	
Soft start time (s): <input type="text" value="600"/> [1~1800]	Shutdown gradient (%/s): <input type="text" value="50.00"/> [0.100~2500.000]	Shutdown at 0% power limit: <input type="button" value="Disable"/>																																	
Delayed upgrade: <input type="button" value="Disable"/>	MPPT multi-peak scanning: <input type="button" value="Disable"/>	RCD enhancement: <input type="button" value="Disable"/>																																	
AFCI: <input type="button" value="Enable"/>	Abnormal grounding shutdown: <input type="button" value="Enable"/>	PID operation mode: <input type="button" value="Prohibited"/> ?																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>HVRT: <input type="button" value="Disable"/></td> <td>LVRT: <input type="button" value="Enable"/></td> <td>LVRT trigger threshold (V): <input type="text" value="184.0"/> [115.0~230.0]</td> </tr> <tr> <td>LVRT K factor: <input type="text" value="2.0"/> [0.0~10.0]</td> <td>LVRT compensation power factor of reactive power in negative sequence: <input type="text" value="2.0"/> [0.0~10.0]</td> <td>LVRT reactive current limiting (%): <input type="text" value="100"/> [0~120]</td> </tr> <tr> <td>LVRT mode: <input type="button" value="Reactive power priority mode"/></td> <td>Total points of LVRT curve: <input type="text" value="4"/></td> <td>Point 1 time of LVRT curve (ms): <input type="text" value="250"/> [0~60000]</td> </tr> <tr> <td>Point 1 voltage percentage of LVRT curve (%): <input type="text" value="5"/> [0~100]</td> <td>Point 2 time of LVRT curve (ms): <input type="text" value="250"/> [0~60000]</td> <td>Point 2 voltage percentage of LVRT curve (%): <input type="text" value="15"/> [0~100]</td> </tr> <tr> <td>Point 3 time of LVRT curve (ms): <input type="text" value="250"/> [0~60000]</td> <td>Point 3 voltage percentage of LVRT curve (%): <input type="text" value="15"/> [0~100]</td> <td>Point 4 time of LVRT curve (ms): <input type="text" value="3000"/> [0~60000]</td> </tr> <tr> <td>Point 4 voltage percentage of LVRT curve (%): <input type="text" value="85"/> [0~100]</td> <td>Grid voltage protection shield during VRT: <input type="button" value="Enable"/></td> <td>VRT exit hysteresis threshold (%): <input type="text"/> [4.6~23.0]</td> </tr> <tr> <td>Zero current due to power grid fault: <input type="button" value="Disable"/></td> <td>Voltage rise suppression: <input type="button" value="Disable"/></td> <td>Frequency regulation: <input type="button" value="Disable"/></td> </tr> <tr> <td>Overfrequency derating: <input type="button" value="Enable"/></td> <td>Cutoff frequency of overfrequency derating (Hz): <input type="text" value="51.50"/> ? 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## Power Adjustment:

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### Power Adjustment

Remote power schedule:	Enable	Schedule instruction valid duration (s):	0 [0~86400]	Active power change gradient (%/s):	125.000 [0.100~5000.000]
Fixed active power derating (W):	11000 [0~11000]	Active power percentage derating (%):	100.0 [-100.0~100.0]	Reactive power change gradient (%/s):	125.000 [0.100~5000.000]
Reactive power compensation (PF):	1.000 (-1.000~-0.800) U [0.800~1.000]	Reactive power compensation (Q/S):	0.000 [-1.000~1.000]	Reactive power curve adjustment: Q-U characteristic curve <span style="float: right;">?</span>	
Number of Q-U characteristic curve points:	4	U/U <sub>n</sub> value of 1st Q-U curve point (%):	91.0 [80.0~136.0]	Q/S value of 1st Q-U curve point:	0.436 [-0.600~0.600]
U/U <sub>n</sub> value of 2nd Q-U curve point (%):	95.0 [80.0~136.0]	Q/S value of 2nd Q-U curve point:	0.000 [-0.600~0.600]	U/U <sub>n</sub> value of 3rd Q-U curve point (%):	105.0 [80.0~136.0]
Q/S value of 3rd Q-U curve point:	0.000 [-0.600~0.600]	U/U <sub>n</sub> value of 4th Q-U curve point (%):	109.0 [80.0~136.0]	Q/S value of 4th Q-U curve point:	-0.436 [-0.600~0.600]
Q-U characteristic curve mode:	Non-hysteresis ring	Power percentage for triggering Q-U scheduling (%):	0 [-100~100]	Power percentage for exiting Q-U scheduling (%):	0 [-100~100]
Minimum PF of Q-U characteristic curve:	0.000 [0.000~1.000]	Max. active power (kW):	11.000 [0.100~11.000]	<span style="border: 1px solid blue; padding: 2px;">Set</span> <span style="border: 1px solid blue; padding: 2px;">Refresh</span>	
<b>Device maintenance</b>					

Nustatymus keičiant vietoje telefonu viskas taip pat.