

Notification connection of manufacturing Type A

- attached registration

Preregistration applies to production Type A, which must meet all requirements of the EU Regulation 2016/631 "Fixing network codes with requirements for the power generators", and the Swedish regulation EIFS 2018: 2 "Fixing generally applicable requirements of connecting generators". There are plant owner's responsibility to ensure that the production facility meets these requirements. A production of type Type A refers to a generator in the range of 0.8 kW to 1500 kW. The network operator has the right to require the owner of the production Type A carries out compliance tests and simulations, both recurring such as a plane or after a general scheme and also after each failure, change or replacement of any equipment that may affect the production plant with the requirements of the Regulation. The facility owner is entitled to rely equipment certificates issued by recognized certification to demonstrate compliance with the requirements described below.

Attached pages of questions need to be filled in and signed by the responsible qualified installer and included in the notification.

Power Protection Settings (Found inverter typprovningsprotokoll)	set value		Rec. values	
	Time	Level	Time	Level
Surge (step 2)	60S	255.3V	60 s	255.3 V
Surge (step 1)	0.2S	264.5V	0.2 s	264.5 V
Undervoltage	0.2S	195.5V	0.2 s	195.5 V
Protection against unwanted island operation	0.15S		0.15 s	-


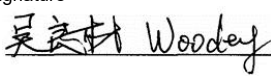
<u>Elkvalitetsuppgifter</u>		Value	Rec. Limit	
Flicker Values max 16 A 3-10KTL3-S	P _{st}	0.1S	0.35	Flicker calculated according to EN 61000-3-3
	P _{LT}	0.1S	0.25	
Flicker Values max >16 A 11-50KTL3-S	P _{st}	0.1S	0.35	Flicker calculated as <input type="checkbox"/> EN 61000-3-3 <input checked="" type="checkbox"/> EN 61000-3-11
	P _{LT}	0.1S	0.25	

Frequency Response Settings

The requirements for the configuration of the frequency response settings below are taken from the Energy Market Supervisory Authority EIFS 2018: 2 (current fr.om 2019-04-27), EU Commission Regulation 2016/631 (RFG) and applicable Swedish electrical standards SS-EN 50549-1 (applicable fr.om 2019-05-16, replaces EN 50438 2014 ed. 2). All requirements are required to comply, unless otherwise indicated.

Question	Yes No	Reference
The plant can remain connected within the following frequency ranges:	Yes	EIFS 2018 2:03 a.m. Chapter §1
At least 30 minutes in the frequency range from 47.5 to 48.5 Hz? At least 30 minutes	Yes	
in the frequency range from 48.5 to 49.0 Hz? Unlimited within the frequency range from	Yes	
49.0 to 51.0 Hz? At least 30 minutes in the frequency range from 51.0 to 51.5 Hz?	Yes	
Meets the system requirements to remain connected to the network and operate at the frequency change speeds up to 2.0 Hz / sec? frequency change speeds up to 2.0 Hz / sec? 1	Yes	
	Yes	EIFS 2018 2:03 a.m. chapter §2
The plant can reduce its active output when the frequency exceeds 50.5 Hz?	40%Pn/Hz	EIFS 2018 2:03 a.m. Chapter §3
Meets the system requirements for statikfaktor \geq 8%?	Yes	EIFS 2018 2:03 a.m. Chapter §4
Reduced output active power from the plant with maximum 3.0 percent per Hz for frequencies below 49.0 Hz?	Yes	EIFS 2018 2:03 a.m. Chapter §7
Automatic reconnection of establishment is within the frequency range of 47.5 to 50.1 Hz	Yes	EIFS 2018 2:03 a.m. Chapter Section 8
If yes to the above, certify that the connection takes place only when the mains frequency has been within this range contiguous for at least 3 minutes?	Yes	EIFS 2018 2:03 a.m. Chapter Section 8
Conforms plant requirements increase of output active power in automatic connection of:	Yes	EIFS 2018 2:03 a.m. chapter § 9
<49,9 Hz - Increase Rate of output of active power is not limited	Yes	
49.9 to 50.1 Hz - Increase Rate of output of active power is 10 percent of the rated output per minute	Yes	
> 50.1 Hz, - increasing the active power output does not occur	Yes	
	Value	
Enter the lowest active power (kW) that the plant can be regulated down to the frequency of	10%Pn	EIFS 2018 2:03 a.m. Chapter §5

I certify that the above information is correct:

Signature	Printed name	
		

Place:Shenzhen

Date:2019.12.16

¹ The value of the frequency rate of change should be measured at the connection point and is calculated over a period of 0.5 s.

² Statikfaktor is the ratio of a frequency change and the change of output expressed as a percentage. The change in frequency is expressed as a ratio between the current rate and the nominal frequency.

The output power expressed as a ratio between the rated power and the output power at the frequency of the network. When controlling the output power because of the frequency is calculated statikfaktorn outside the plant's installed capacity. Under Section 6 § of EIFS 2018 2nd

Recognition of harmonic currents

8000TL3-S									
order	Output Power kW	Harmonic current			order	Output Power kW	Harmonic current		
		%Of In					%Of In		
		R	S	T			R	S	T
\	\	\			21	8000	0.015	0.017	0.008
2	8000	0.025	0.048	0.061	22	8000	0.079	0.076	0.079
3	8000	0.02	0.035	0.024	23	8000	0.015	0.017	0.008
4	8000	0.064	0.088	0.053	24	8000	0.079	0.076	0.079
5	8000	0.251	0.27	0.269	25	8000	0.015	0.017	0.008
6	8000	0.015	0.017	0.022	26	8000	0.079	0.076	0.079
7	8000	0.238	0.226	0.23	27	8000	0.015	0.017	0.008
8	8000	0.079	0.076	0.079	28	8000	0.079	0.076	0.079
9	8000	0.012	0.018	0.01	29	8000	0.015	0.017	0.008
10	8000	0.079	0.076	0.079	30	8000	0.079	0.076	0.079
11	8000	0.134	0.128	0.129	31	8000	0.015	0.017	0.008
12	8000	0.079	0.076	0.079	32	8000	0.079	0.076	0.079
13	8000	0.118	0.115	0.108	33	8000	0.015	0.017	0.008
14	8000	0.079	0.076	0.079	34	8000	0.079	0.076	0.079
15	8000	0.015	0.017	0.008	35	8000	0.015	0.017	0.008
16	8000	0.079	0.076	0.079	36	8000	0.079	0.076	0.079
17	8000	0.015	0.017	0.008	37	8000	0.015	0.017	0.008
18	8000	0.079	0.076	0.079	38	8000	0.079	0.076	0.079
19	8000	0.015	0.017	0.008	39	8000	0.015	0.017	0.008
20	8000	0.079	0.076	0.079	40	8000	0.079	0.076	0.079
Maximum effective value of total harmonic current given as the% of In							0.012	0.017	0.008
Output power (kW) at the maximum effective value of total harmonic current maximum effective value							8000		
between discrete harmonic current given as the% of In							0.012	0.017	0.008
Output power (kW) at the maximum effective value of between discrete harmonic current							8000		