ttf transformatoren technologie friesland

ORION PLUS

three-phase
30-1250kVA

Orion Plus stabilizers are available for different ranges of input voltage fluctuation. In the ±15%/ ±20% and ±25%/ ±30% types, the change of input range is obtained through different internal connections.
The Orion Plus voltage stabilizers regulate the output voltage independently on each phase.
Similarly to the Orion stabilizers, they can supply any single-phase, bi-phase and three-phase load
even in case of and up to 100% unbalanced load current and asymmetrical mains distribution.
In this configuration, the presence of the neutral wire is required. The stabilizer can also operate without neutral wire by adding a device able to generate it (D/zn or D /yn isolating transformer or neutral point reactor).
The stabilizers are cooled via natural air ventilation, assisted by extracting fans when the cabinet internal temperature exceeds 35°C).

The instrumentation consists of two multi-task digital line analyzers which are able to provide with information regarding the status of the lines upstream and downstream the voltage stabilizer (phase and linked voltages, current, power factor, active power, apparent power, reactive power, etc.)
The operating status of the stabilizer can be monitored by means of the LEDs on the front panel displaying all the information regarding each phase operating mode ('power on'; reaching of voltage regulation limits; increase/decrease of voltage regulation) and the possible alarms (minimum and maximum voltage, maximum current: over temperature; ventilation failure). The alarm indicators are accompanied by an acoustic alarm.

– Up to 250kVA ±15%, the regulation circuit is protected against overload and short circuit on the voltage regulator by an automatic circuit breaker.

– From 300kVA ±15%, an electronic voltage regulator protection system activates in case of overload on the voltage regulator. In such condition, the load supply is not interrupted, but the stabilizer output voltage is automatically set to the lower between the mains voltage and the pre-set output voltage. The service continuity is guaranteed, although the voltage is not stabilized. When the overload condition ceases to exist, the stabilizer switches automatically back to regular functioning.

The auxiliary circuits are protected by fuses.
The control logic, performed on the true RMS value, is based on DSP microprocessors.
The unit parameters and the output voltage reference can be set by using a personal computer, thus allowing for dealing directly in the field with any problems related to voltage stability.

All Orion Plus stabilisers are provided with Class II SPD surge arrestors.

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Voltage stabilisation	Independent phase control
PC selectable output voltage*	from 210 to 255V (L-N) from 360 to 440V (L-L)
Frequency	50/60Hz ±5%
Admitted load variation	Up to 100%
Admitted load imbalance	100%
Cooling	Natural air ventilation. Up to 35°C aided with fans
Ambient temperature	-25/+45°C
Storage temperature	-25/+60°C
Max relative humidity	95%
Admitted overload	200% 2 min.
Harmonic distortion	None introduced
Colour	RAL 7035
Protection degree	IP21
Instrumentation	Input & output digital multimetre
Installation	Indoor
Overvoltage protection	– Class II output surge arrestor – Optimal voltage return through supercapacitors – in case of blackout

* The output voltage can be adjusted by choosing **one** of the indicated values.
Such choice sets the new nominal value as a reference for all the stabilizer parameters.

Accessories - available on request

Interrupting devices
Load protection against over/undervoltage
Manual by-pass line
Total protection kit
Input isolating transformer
Integrated automatic power factor correction system
SPD surge arrestor
EMI/RFI filters
Neutral point reactor
IP54 protection degree for indoor and outdoor installation

All the stabilizers are designed and built in compliance with the Low Voltage and Electromagnetic Compatibility European Directives with regard to the CE marking requirements. The products are built with suitable quality components and that the manufacturing process is constantly verified in accordance with the Quality Control Plans which the manufacturer applies in compliance with the ISO 9001:2008 Standards. The commitment towards environmental issues and safety at work maters is guaranteed by the certification of the Management System according to the ISO14001:2004 and OHSAS18001:2007 Standards. In order to obtain better performance, the products described in the present document can be altered by the manufacturer at any date and without prior notice. Technical data and descriptions do hold therefore any contractual value.

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Input voltage variation ±20% or ±15%, Rated power 60 to 1250 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V ± 0,5%)							
Rated Power [kVA]	Type	Input Variation	Max. Input Current [A]	Output Current [A]	Adjust. Speed [ms/V]	Dimension WxDxH [mm]	Weight [kg]
60	60-20	± 20 %	109	86	12	600x800x1800	430
80	80-15	± 15 %	136	116	16		
80	80-20	± 20 %	145	116	12	600x800x1800	490
105	105-15	± 15 %	179	152	16		
105	105-20	± 20 %	190	152	12	600x800x1800	580
135	135-15	± 15 %	229	195	16		
120	120-20	± 20 %	216	173	14	1200x800x1800	710
150	150-15	± 15 %	255	217	18		
135	135-20	± 20 %	244	195	14	1200x800x1800	760
175	175-15	± 15 %	298	253	18		
150	150-20	± 20 %	271	217	14	1200x800x1800	850
200	200-15	± 15 %	340	289	18		
175	175-20	± 20 %	316	253	14	1200x800x1800	950
250	250-15	± 15 %	425	361	18		
250	250-20	± 20 %	446	361	15	1200x800x1800	850
320	320-15	± 15 %	544	462	20		
300	300-20	± 20 %	543	434	15	1200x800x1800	1100
400	400-15	± 15 %	680	578	20		
400	400-20	± 20 %	723	578	15	1200x800x2000	1400
500	500-15	± 15 %	851	723	20		
500	500-20	± 20 %	904	723	15	1200x1000x2000	1600
630	630-15	± 15 %	1071	910	20		
630	630-20	± 20 %	1138	910	18	1800x1000x2000	2000
800	800-15	± 15 %	1360	1156	24		
800	800-20	± 20 %	1445	1156	18	1800x1000x2000	2200
1000	1000-15	± 15 %	1700	1445	24		
1000	1000-20	± 20 %	1806	1445	18	2400x1000x2000	2400
1250	1250-15	± 15 %	2125	1806	24		

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Input voltage variation ±30% or ±25%, Rated power 30 to 800 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V ± 0,5%)							
Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
30	30-30	± 30 %	61	43	8	600x800x1800	430
45	45-25	± 25 %	86	65	10		
45	45-30	± 30 %	93	65	8	600x800x1800	490
60	60-25	± 25 %	116	87	10		
60	60-30	± 30 %	124	87	8	600x800x1800	580
80	80-25	± 25 %	156	116	10		
80	80-30	± 30 %	166	116	9	1200x800x1800	710
90	90-25	± 25 %	173	130	11		
90	90-30	± 30 %	185	130	9	1200x800x1800	760
105	105-25	± 25 %	203	152	11		
105	105-30	± 30 %	217	152	9	1200x800x1800	850
120	120-25	± 25 %	231	173	11		
120	120-30	± 30 %	247	173	9	1200x800x1800	950
135	135-25	± 25 %	260	195	11		
150	150-30	± 30 %	310	217	10	1200x800x1800	1200
200	200-25	± 25 %	385	289	12		
200	200-30	± 30 %	413	289	10	1200x800x1800	1300
250	250-25	± 25 %	481	361	12		
250	250-30	± 30 %	515	361	10	1200x800x2000	1400
300	300-25	± 25 %	579	434	12		
300	300-30	± 30 %	620	434	10	1200x1000x2000	1600
400	400-25	± 25 %	771	578	12		
400	400-30	± 30 %	826	578	12	1800x1000x2000	2000
500	500-25	± 25 %	963	723	15		
500	500-30	± 30 %	1032	723	12	1800x1000x2000	2200
630	630-25	± 25 %	1214	910	15		
630	630-30	± 30 %	1300	910	12	2400x1000x2000	2400
800	800-25	± 25 %	1541	1156	15		

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Input voltage variation +15% to -35%,Rated power 45 to 800 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V ± 0,5%)							
Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
45	45-15/35	+15% -35%	100	65	10	600x800x1800	470
60	60-15/35	+15% -35%	134	87	10	600x800x1800	550
80	80-15/35	+15% -35%	178	116	10	600x800x1800	600
90	90-15/35	+15% -35%	200	130	11	1200x800x1800	850
105	105-15/35	+15% -35%	234	152	11	1200x800x1800	950
120	120-15/35	+15% -35%	266	173	11	1200x800x1800	1050
135	135-15/35	+15% -35%	300	195	11	1200x800x1800	1200
200	200-15/35	+15% -35%	445	289	12	1200x800x1800	1500
250	250-15/35	+15% -35%	511	332	12	1800x800x2000	1650
300	300-15/35	+15% -35%	668	434	12	1800x800x2000	1750
400	400-15/35	+15% -35%	889	578	12	1800x1000x2000	2100
500	500-15/35	+15% -35%	1111	723	15	2400x1000x2000	2900
630	630-15/35	+15% -35%	1400	910	15	2400x1000x2000	3050
800	800-15/36	+15% -35%	1778	1156	15	3000x1000x2000	3800

Input voltage variation +15% to -45%, Rated power 30 to 630 kVA

The values listed in the table are referred to 400V nominal voltage (Output voltage 400 V ± 0,5%)							
Rated Power	Type	Input Variation	Max. Input Current	Output Current	Adjust. Speed	Dimension WxDxH	Weight
[kVA]			[A]	[A]	[ms/V]	[mm]	[kg]
30	30-15/45	+15% -45%	78	43	8	600x800x1800	470
45	45-15/45	+15% -45%	118	65	8	600x800x1800	550
60	60-15/45	+15% -45%	158	87	8	600x800x1800	600
80	80-15/45	+15% -45%	211	116	9	1200x800x1800	850
90	90-15/45	+15% -45%	236	130	9	1200x800x1800	950
105	105-15/45	+15% -45%	276	152	9	1200x800x1800	1050
120	120-15/45	+15% -45%	315	173	9	1200x800x1800	1250
150	150-15/45	+15% -45%	395	217	10	1200x800x1800	1450
200	200-15/45	+15% -45%	525	289	10	1800x800x2000	1650
250	250-15/45	+15% -45%	656	361	10	1800x800x2000	1800
300	300-15/45	+15% -45%	789	434	10	1800x1000x2000	2200
400	400-15/45	+15% -45%	1051	578	12	2400x1000x2000	3000
500	500-15/45	+15% -45%	1315	723	12	2400x1000x2000	3200
630	630-15/45	+15% -45%	1655	910	12	3000x1000x2000	4000

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