uviterno
efficient curing

UV Curing Systems for Inks, Varnishes, and Adhesives

PHASER EVO

Electronic ballast for UV lamps and UV systems

Devices from the **PHASER EVO** product line are compact, high-power electronic ballasts to operate UV lamps.

Development focused specially on cost-optimized and energy-efficient operation. The devices are suitable for all UV radiation curing applications. The well-conceived connectivity concept permits easy conventional operation by analog signal (current or voltage), or potentiometer. The optional CANopen interface facilitates the implementation of modern, digitally networked operating concepts.

Features
- Sizes from 5 to 9 kW
- Resonance ignition process to reliably ignite any lamp
- True active power control
- Stepless active power control from 10 to 100%
- Constant power and cyclic control mode possible
- High electrical efficiency > 97%
- Constant output power, despite power line fluctuations
- No power factor correction required

Features
- Sizes from 9 to 40 kW

Optional field bus interface

CANopen

PHASER_EVO_121018_EN_V4

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Data_Sheet _Phaser_EVO_Series

	kW	5,0	6,0	7,5	9,0	12,0	18,0	24,0	32,0	36,0	
	V	450	450	450	450	2000	2000	3000	3000	3000	
Spezifikation	**Unit**	**Value**	**Value**	**Value**	**Value**	**Value**	**Value**	**Value**	**Value**	**Value**	**Notes**
Mains input											
Mains voltage U_N	V_{eff}	3 x 400-480									+6/-10% without neutral conductor
Mains frequency	Hz	48 - 62									
Maximal input current at 360V	A_{eff}	11,0	13,2	15,5	18,6	25,1	37,6	50,1	66,8	75,2	External protection. Recommendation: Value + 10 %
Maximal input power	kW	5,2	6,2	7,7	9,3	12,5	18,8	25,0	33,3	37,5	
Efficiency (approx.)	%	97	97	97	97	95	95	95	95	95	For broad range of performance
Power factor:		depends on power									
Cos φ:		> 0,95									No reaction compensation necessary
Max. inrush current	A	100	100	100	100	100	200	200	200	200	50µs half sine
	A	10	10	10	10	10	20	20	20	20	50ms (internal pre-charge resistor)
Automatic shut-off at phase loss	ms	<1									Maximal phase loss duration without shut-off
Automatic shut-off at mains over voltage	V_{pk}	>800									Peak voltage between two phases
Automatic shut-off at Mains under-voltage	V_{AC}	<300									
Lamp output: Ignition											
Ignition voltage	V_{pk}	4000	4000	4000	4000	6000	6000	6000	6000	6000	
Ignition frequency (approx.)	kHz	20									Sine wave
Maximal ignition time	ms	350									Automatic Ignition sequence (20 seconds)
Maximal cable length	m	50									Shielding recommended
Lamp output: operation											
Output power P_{act}	%	10% to 100%									
Accuracy of output power P_{act}:	%	+/- 3 %									Maximum deviation from the command value P_{com}
Response time of power command to output power	ms	<3									
Output frequency	Hz	50	50	50	50	250	250	250	250	250	
Max. output voltage U_{act}	V	450	450	450	450	2000	2000	3000	3000	3000	Symmetrical rectangular AC voltage
U_{act} short circuit voltage limit for warm up	V	< 20					dependent on V-ratio				During 2 minutes
U_{act} short circuit voltage limit for operation	V	< 50					dependent on V-ratio				During 1 second
Output current	A	22,0					tailored				Symmetrical rectangular AC current
Max. DC offset current	mA	100	100	100	100	0	0	0	0	0	
Ground fault trigger level	A_{eff}	2	2	2	2	4	4	4	4	4	At 50Hz, no operator protection
Ground fault delay time	µs	< 50									Shut off after lamp short circuit to earth
Control signal / IO											
Safety: electrically insulatet from mains:	Norm	ja									
Safety: short circuit protection:	Norm	ja									
Safety: unearthed ground	Norm	ja									
Control signal/ IO		variabel									PLC, Poti or Field bus
Construction / Environment											
Connections	pieces	3x1									Seperately for mains, lamp and control
Fan module		integriert									Integrated
Size LxWxH	mm	480x180x80	480x180x80	480x180x80	480x180x80	550x225x350	550x225x350	590x270x350	590x270x350	590x270x350	
Weight	kg	4	4	4	4	25	37	45	50	55	
Operating temperature range	°C	0 bis +40									100% continous power
Storage temperature range	°C	-10 bis +55									
Transporation temperature range	°C	-50 bis +95									
MTBF (Meam time between failure)	h	60'000									Maintenance-free
Protection grade		IP20									
Conformity		CE/UL									CE standard, UL on demand
Emissions/noise	dBa	≤ 70									From 1m distance
Norms/EMC		DIN EN 55011:2007, Gruppe 1, Klasse A									
		DIN EN 61000-6-4:2001									
		DIN EN 61000-6-2:2001									
		DIN EN 50178:1998									

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