

ALP-3G

Solid State Power Supply for UV lamps

Step less adjustable from 600...6,000 W / 800...8,000 W

These fully electronic power supply units are the newest generation of EPS, offering a huge advantage due to their compact size. High lamp power as well as an optimal cooling by water, a CAN-open bus interface and an optional UV-control are the outstanding features of this unit.

They are designed to drive uv-lamps in a wide range of applications, e.g. label printing (narrow web), container printing, CD/DVD production i.e. in any application which uses uv-lamps up to 8,000 W nominal power.



Special advantages:

- Universal use in the nominal power class of **3,000 to 8,000 W**, this means ONE power supply drives different types of uv-lamps in the above named power class
- UV-control for the control of a uv-lamp head without additional programming of a PLC (option)
- Step less and quick adjustment of uv-lamp power, e.g. for step less adjustment of uv-power relative to the speed of a printing machine; or with interrupted processes (e.g. quick power pulsing); or to adjust uv-power relative to lamp ageing
- To be placed in a cabinet, in the machine or near to the uv-lamp head
- Constant wattage uv-lamp output according to power level set
- Not influenced by mains voltage fluctuation
- Wide range of 3-phase mains voltages from 376 to 509 V, 50 and 60 Hz,
- PF about 0.9
- missing phase detection,
- Output is protected against ground faults, overload and short circuits, additionally open circuit causes no problems
- Patented high frequency lamp ignition by high energy and electrode saving “pulses packets”, the lamps are ignited quickly but gently
- Controlled by DC 0...10 V
- CANopen interface, networking with up to 32x ALP-3G is possible
- Can be mounted in any position; easy to install and less wiring needed
- Lighter and smaller than any other power supply
- In accordance to EN 50178 / VDE 0160 and other European and world wide standards (IEC)
- CE sign, EMC according to EN 55011, group I, class A (industrial areas)

Main technical data:

ALP-3G	
Output power	6,000 and 8,000 Watt, step less adjustable down to 10%
variants	ALP-3G 6,000 Watt / ALP-3G 8,000 Watt (UV control LHC optional)
Mains voltage	376 to 509 V
Mains current (at 8000W)	3 x 11A to 3 x 15A (PF = 0,9), depending from mains voltage
Mains frequency	50 / 60 Hz
Mains connection	L1, L2, L3, PE
Typical lamp arc length	~ 15 to 70 cm (6" to 27") Hg lamps ~ 15 to 60 cm (6" to 24"), doped lamps
Lamp operating voltage	100 to 450 V (nominal value)
Lamp operating current	approx. 1.8 to 18 A
Duty frequency	approx. 255 Hz
Power loss	5%
Dimensions	113 x 45 x 482 mm
Weight	8 kg
Cooling of the unit	external, by water (20...40°C, max. 4 bar), 1/4 inch, 8,0mm
Ambient temperature	0° to 55° C
Protection degree	IP 30

Connections of the different versions:

The new ALP-3G is compatible to the control of the known EPS series of BLP-59 and BLP-75.

The ALP-3G has the following terminals:

Interface	ALP-3G with analogue interface and CANopen	ALP 3G with UV-control (LHC) and CANopen
Mains	3x 400 to 480V \pm 6% at 50 / 60Hz L1, L2, L3 and PE	3x 400 to 480V \pm 6% at 50 / 60Hz L1, L2, L3 and PE
External supply for the ALP-3G	+24V DC / GND	+24V DC / GND
Lamp output	100 to 450V / 1,5 to 18 A	100 to 450V / 1,5 to 18 A
analogue power control input	DC 0...10V	LHC, see below
analogue output for lamp voltage	DC 0...10V (DC8V = AC500V)	LHC, see below
digital for fault monitoring	+24V DC (transistor output)	LHC, see below
CANopen	✓	✓

Via the CANopen interface up to 32 ALP-3G's could be connect to a network. Using an additional USB interface box single units can be parameterized by a e.g. notebook, together with an appropriate additional software (UV monitor)

UV control LHC (additional option):

As an alternative integrated module a micro processor controlled UV-control (LHC = Lamp Head Control) is available. This module controls all functions of a lamp head, as e.g. shutter control, temperature measurement, over temperature monitoring, control of stand by and process power, together with the shutter etc. This relieves the machine control and programming and so saves cost and offers more experience in the lamp head behavior. Decades of experience form the base of this "intelligent" integrated software solution. As an example: the software includes a "self learning" temperature control of the lamp head.

UV-control (LHC)	
analogue input	"power control" DC 0 to 10 V PT100 4 wire temperature measurement of e.g. reflector or air exhaust
analogue output	DC 0...10V interface to frequency fan control or throttle motor
LHC-inputs	Emergency OFF-monitoring (24 V: emergency inactive; 0 V: emergency active)* Temperature switch (24 V: temperature OK (wire break safe)) "UV power" (DC 24 V: turning from standby to adjusted power) "Shutter open" (DC 24 V: position shutter OPEN) "Shutter closed" (DC 24 V: position shutter CLOSED) "ALP enable" (DC 24 V: UV lamp ON)
LHC-outputs	DC 24 V open shutter DC 24 V close shutter shutter is open (monitoring) UV lamp is on (monitoring) UV active (shutter is open, UV-lamp is on adjusted full power) Fault monitoring output Bit 0 Fault monitoring output Bit 1 Fault monitoring output Bit 2 } for monitoring up to 8 different faults

* this is not for a safe Emergency OFF ! The EPS just go to standby and closes the shutter. If the uv lamp has to be included into the Emergency OFF circuits, this have to be done by an external mains contactor or switch.

- Additional accessories:**
- Mounting set (for single unit mounting)
 - Mounting rack for cabinets, fits to up to 4 ALP-3G, water cooled versions.
 - UV-monitor software (to parameterize ALP-3G via e.g. a notebook and USB interface.
 - USB / CANopen interface box