

SCHIEDERWERK

**Electronic Power Supply
for metal halide lamps**

PVG 10-n AC

Technical Specifications



CHARACTERISTICS

- With POWER FACTOR CORRECTOR (PF >0,95) in compliance with DIN EN 61 000 - 3 – 2, Class C
- μ P control for various parameter
- Flicker-free operation
- Longer lamp service time
- Constant light output during lamp service time
- by power regulation
- Higher light intensity than conventional ballasts
- Compact shape, low weight
- Mains input 100 – 240V
- Additional output for 400V/240W
- power supply without PFC
- Dim function
- Lamp On / Off via opto coupler

ORDER NUMBERS

Type	Order No.	Output / W	Remarks	Lamps
PVG 10-70 AC	32 740 1000	700	Auto restrike	MSR 700/2, MSR 700 SA/DE, MSR GOLD 700/2 FastFit, HTI 700W/DE
PVG 10-70 AC	32 740 1011	700	with coated PCBs Auto restrike	MSR 700/2, MSR 700 SA/DE, MSR GOLD 700/2 FastFit, HTI 700W/DE
PVG 10-80 AC	32 740 1800	800	Auto restrike	HMI 800
PVG 10-10 AC	32 743 1000	1000	Auto restrike	HTI 1000
PVG 10-10 AC	32 743 1010	1000	Auto restrike, remote on/off: 0V=ON, Dimmer input: 0V = Pmax,	HTI 1000

LIMITS

Generally all discharge lamps and power supply units can be supplied within following limits:

PVG10-70 AC

Lamp output:	ILmax=13A	ULmax=90V	Pmax=700W
PSU (DC) output:	IDCmax=1A	UDCmax=400V	Pmax=300W

PVG10-80 AC

Lamp output:	ILmax=10A	ULmax=150V	Pmax=800W
PSU (DC) output:	IDCmax=1A	UDCmax=400V	Pmax=200W

PVG10-10 AC

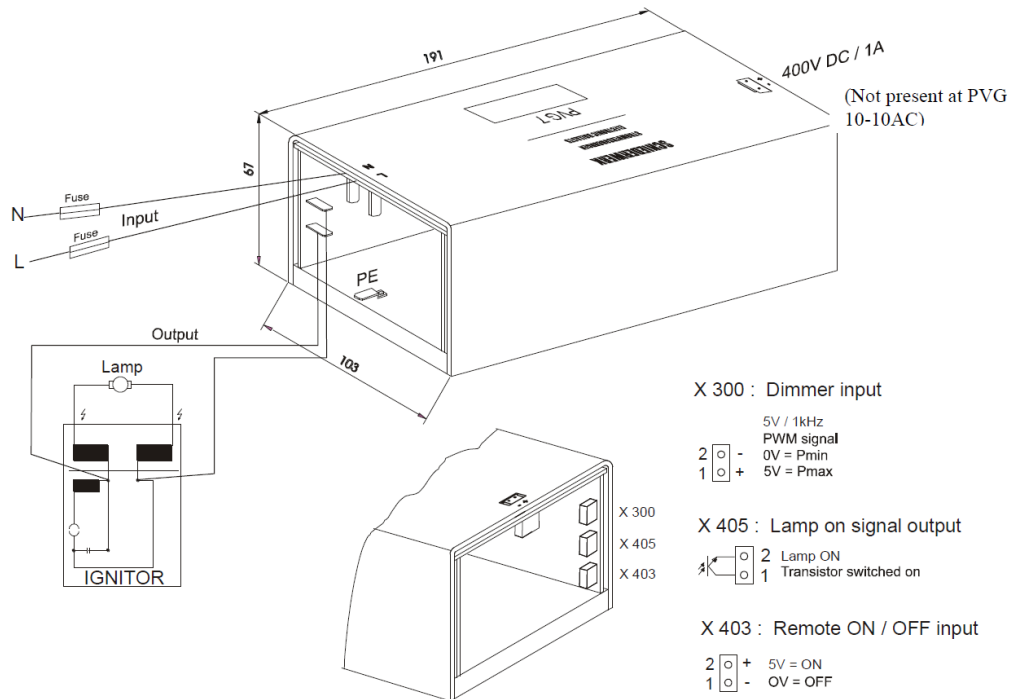
Lamp output:	ILmax=14.5A	ULmax=100V	Pmax=1000W
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TECHNICAL DATA

Mains voltage function range	90 – 145V, 180 – 264V AC
Line frequency	47 – 63Hz
Power factor	>0.95 at 230V, >0.97 at 115V
Max input current 115 / 230V	9,6A / 4,8A
Earth leakage current 230V, 50-60Hz	< 0,7mA
Lamp voltage range	
PVG 10 - 70 AC	60 – 90V
PVG 10 - 80 AC	80 – 150V
PVG 10 - 10 AC	70 – 120V
Output frequency (igniton mode/normal operation mode)	
PVG 10 - 70 AC	3Hz/100 Hz square wave
PVG 10 - 80 AC	3Hz/100 Hz square wave
PVG 10 - 10 AC	250Hz/250 Hz square wave
Max. open circuit voltage	
PVG 10 - 70 AC	300 V
PVG 10 - 80 AC	400 V
PVG 10 - 10 AC	400 V
Dimming range	
PVG 10 - 70 AC	50 – 100%
PVG 10 - 80 AC	50 – 100%
PVG 10 - 10 AC	70 – 100%
Efficiency	0,89 at 230V / 0,85 at 115V typ.
Current ripple	≤ 3%
DC output	
PVG 10 – 70AC	400V DC / 1A / 300W
PVG 10 – 80AC	400V DC / 1A / 200W
Ambient temperature	Max. 40°C, forced cooling necessary
Output power tolerance	± 5%
Protection	°Thermal cut off at 100°C heat sink temperature, restart at 60°C °Short circuit protected °Open circuit protection °Ignition time limitation
EMI	By external noise filter
Maximum dimensions	LWH 191 x 103 x 67 (external heat sink required)
Approvals (PVG 10-70 AC)	UL 1029 Fifth-Edition, UL 935 Tenth-Edition and CSA-C22.2 No. 74

Subject to changes without notice

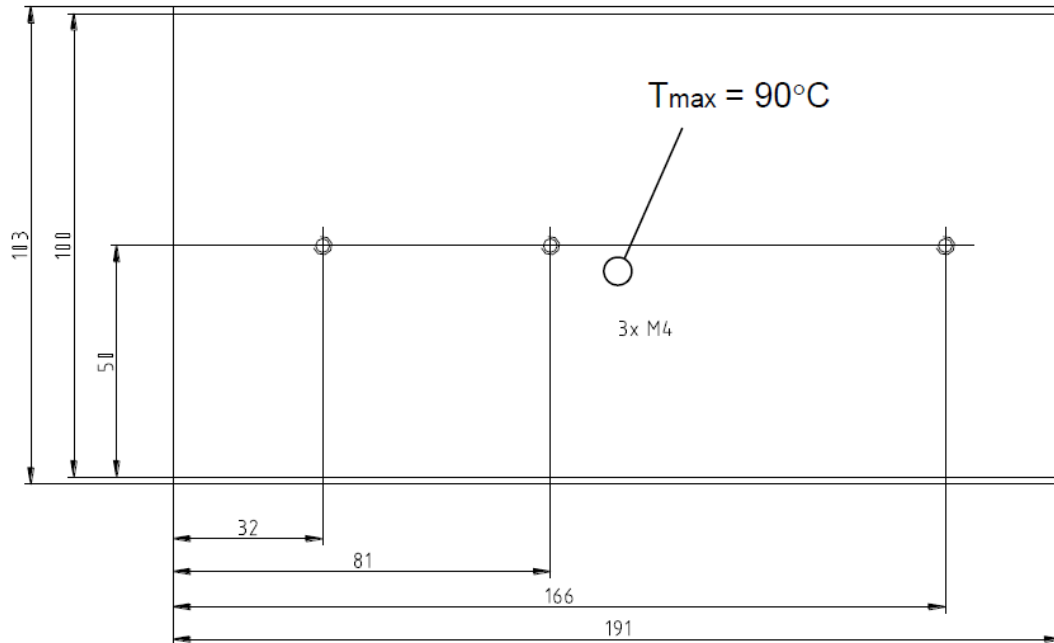
Connector wiring



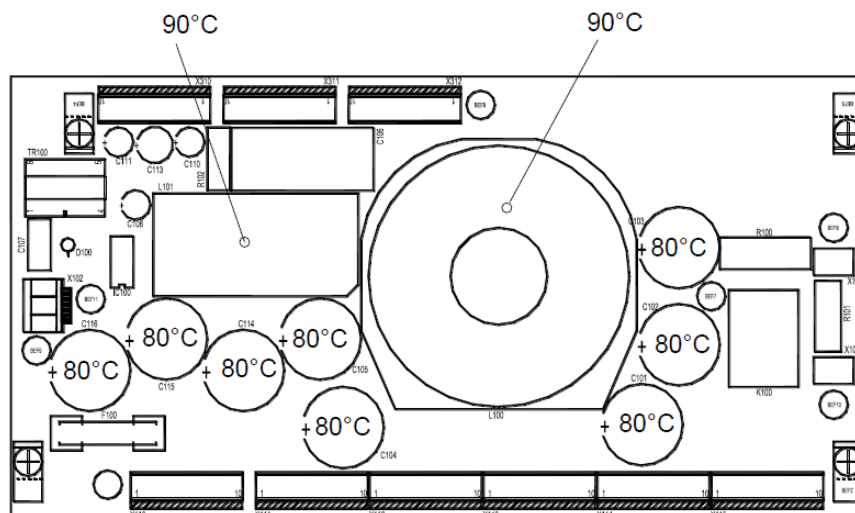
Accessories

JST B2B-EH connectors with wires 340mm long	order no. 32 039 6060, black order no. 32 090 6250, red/blue
JST VA B2P3-VH connectors with wires	220mm long with core: order no. 32 454 6050, red/blue 440mm long: order no. 32 260 6640, red/black
Ignitors	HZG 10-25, order no. 31 020 1000 for hot restrike KZG 8-4, order no. 32 058 1060 for cold start KZG 10-4, order no. 32 575 1000 for cold start KZG 12-4, order no. 32 458 1020 for cold start KZG 12-6, order no. 32 458 1060 for cold start PVG 10-10 AC: KZG 17-5 order no. 32 468 1100 for cold start
EMI filter	13A, order no. 32 313 1010 recommended, dependent on wiring
PSU 240W 28V DC	order no. 32 456 1010 with approvals: UL 60950-1 2 nd Edition CSA C22.2 No.60950-1-07 2 nd Edition

Mounting details, bottom view



Permitted maximal operation temperatures on component surfaces



Connectors

Mains input	AMP Faston 6,3 x 0,8
To ignitor	AMP Faston 6,3 x 0,8
DC output	JST VA B2P3-VH
Lamp on signal output	JST B2B-EH
Dimmer	JST B2B-EH
Lamp ON/OFF	JST B2B-EH

WARNING NOTICE

Do not attempt to handle or operate an electronic power supply (EPS) and ignitor before completely reading and understanding this notice. Contact Schiederwerk if you are uncertain of hazards associated with these devices.

The ignitor produces starting voltages of up to 60 kV and electromagnetic radiation interference which are hazardous to personnel and sensitive instrumentation. Exercise appropriate care in the handling of high voltages. Do not touch any conductive parts during operation.

Ensure the units are disconnected from the mains before exchanging the lamp connected to the PSU / ignitor resp. to the end application. The residual charge left on the capacitors is a danger to life if the units are still connected to mains!

Caution: The residual charge on the capacitors can be a danger to life even if the units are disconnected from the mains. Please handle with care!

Both electronic lamp ballast and ignitor must never be installed or operated in an explosive or volatile atmosphere. Never use the ballast or ignitor near flammable gases or liquids. See that there will be no moisture, dust or similar which could lead to short circuits or fire.

Before using the ballast or ignitor in any kind of outdoor application you have to take additional measures and observe special requirements. If you are uncertain, contact Schiederwerk.

No potential isolation is provided between line input and output. Accidentally grounding of an output terminal by direct contact or arcing to GND can damage the unit (no warranty replacement).

The unit is designed for case mounting. Due observation of electrical safety and RFI suppression code requirements is mandatory in all applications. See that sufficient cooling of EPS and ignitor is provided.

All installation and repair work on this unit is only permitted by qualified personnel. Always comply with local safety requirements when operating the unit uncased.

Extreme care must be taken when testing the unit live. The use of an isolating transformer is mandatory. On no account may grounded test instruments / meters be used for this purpose!

Schiederwerk does not assume liability for disregarding of this notice, incorrect use of the EPS and ignitor or dis-regarding of any legal requirements. This product is subject to technical changes without prior notice.

CAUTION:

Mains supply must be fused according to local safety regulations. Schiederwerk recommends 2 pole fuse (L+N). The appropriate fuse value can be calculated as:

PVG 10-70 AC

$I_{Fuse} > (P_{Lamp} + 300W) * 1,3 / U_{Line}$

PVG 10-80 AC

$I_{Fuse} > (P_{Lamp} + 200W) * 1,3 / U_{Line}$

PVG 10-10 AC

$I_{Fuse} > P_{Lamp} * 1,3 / U_{Line}$

Last Update: 13.06.2018