

COMPACT FLASH CONTROLLER FOR PRECISE CONTROL OF XENON LAMPS

ampyr® XE FLASH



AI-generated product visualization

Front view of the AMPYR XE FLASH as a built-in module (left) and as a DIN rail-mounted device for installation in a control cabinet (right).

Device types	Energy per flash
-1000	490 - 1000 mJ
-750	367 - 750 mJ
-500	245 - 500 mJ
-250	123 - 250 mJ
-150	73,5 - 150 mJ
-100	49 - 100 mJ
-50	24,5 - 50 mJ

Flash energy as a function of the main discharge capacitance

Our new xenon flash controller enables precise and flexible control of xenon flash lamps. With trigger frequencies of up to 1 kHz, configurable flash energy, and integrated monitoring that detects misfires, among other things, it can be tailored to the specific application.

The controller is compatible with common Hamamatsu and Excelitas xenon lamps rated from 10 to 60 W. It is available in two versions: as a built-in module and as a DIN rail-mounted device for installation in a control cabinet. The controller can also be customized for specific applications on request.

PRODUCT HIGHLIGHTS

- Compact design for flexible integration
- Configurable flash energy
- Compatible with common Hamamatsu and Excelitas xenon lamps rated from 10 to 60 W
- Trigger frequency of up to 1 kHz
- Extensive integrated monitoring

APPLICATIONS

- Machine vision
- Inspection and testing systems
- Semiconductor and wafer inspection
- Optical analysis and measurement technology

Input parameters

Supply voltage	24 V _{DC} (±10 %)
Trigger input (active)	Integrated pull-up resistor to 5 V (can be driven by an open-collector output)
Trigger input (passive)	Available
Analog discharge voltage control	2.5 V to 9.5 V (sets the main discharge voltage from 300 V to 1,000 V)

Output parameters (power supply)

Maximum pulse frequency	1 kHz
Efficiency (P _{out} / P _{in})	Up to 80% at P _{out, max} = 60 W and f _{trigger} = 100 Hz
Main discharge voltage (output)	300 V to 1,000 V
Trigger output voltage	140 V, 180 V
Maximum total power dissipation	12 W

Software-adjustable parameters

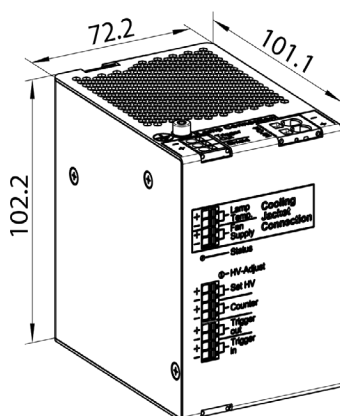
Main discharge voltage range	300 V to 1,000 V
Trigger voltage selection	140 V, 180 V
Trigger mode	Internal / external
Internal oscillator frequency	0.1 Hz to 1 kHz

Design

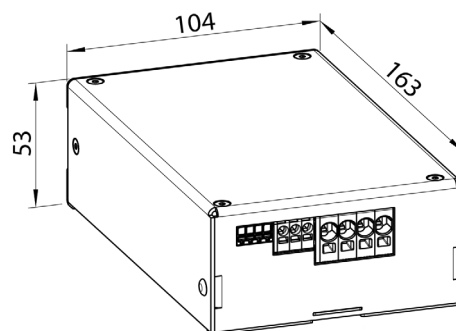
Weight	Approx. 0.5 kg
Dimensions	See figure
Interfaces	USB or Ethernet
Ambient temperature	0 to 50 °C
Mounting	Built-in module or DIN rail mounting for installation in a control cabinet

Monitoring

Lamp monitoring	Misfire detection; output voltage short-circuit monitoring; power consumption monitoring depending on lamp type
Device protection	Input and output voltage monitoring, undervoltage protection (UVP), overvoltage protection (OVP), and overtemperature protection (OTP)



Drawing of the AMPYR XE FLASH with DIN rail mounting
Dimensions in mm



Drawing of the AMPYR XE FLASH built-in module
Dimensions in mm

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