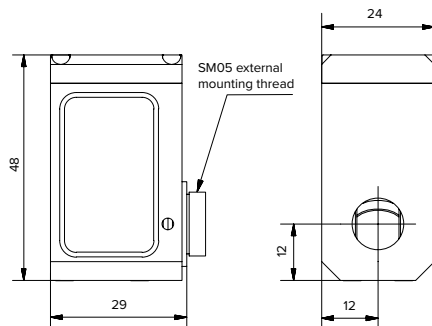


Pulse energy monitors



Pulse energy monitor EM and attenuator AT



Outline drawings of EM pulse energy monitor (dimensions in mm)

FEATURES

- Drop-in laser pulse energy or power monitoring (up to **100 samples/second**)
- Less than **2 %** insertion losses
- **12-bit** resolution
- Average pulse energy and pulse-to-pulse stability calculation
- Sample&Hold analog output from BNC socket on the rear panel of laser controller
- Digital readout through laser **Ethernet** interface

OPTIONAL EXTENSIONS

- Broadband version for 210 – 2600 nm range

Pulse energy monitors of EM series allow conveniently measure pulse energy of our lasers. Detector can be attached to any component that has internal SM05 thread. Photodetector cable with BNC plug should be connected to the laser controller.

Monitor consists from beam splitter that splits approx 2 % from total pulse energy and photodetector. Colored and/or neutral density filters are used to cut unwanted wavelengths and calibrate photodetector readings.

Measured pulse energy can be presented to the user in digital or analog form. Analog DC voltage, proportional to the last pulse energy is provided from BNC socket on the rear panel of laser controller. Digital value can be retrieved through laser Ethernet interface.

Each monitor is factory calibrated at specified wavelength. Broadband version is available, in this case calibration is performed at 1053 or 1064 nm wavelength.

SPECIFICATIONS ¹⁾

Model	Pulse energy monitor					
	EM1	EM2	EM3	EM4	EM5	EM/BB
Design wavelength	1064 nm	532 nm	355 nm	266 nm	213 nm	210 – 2600 nm
Insertion loss	<2 %					
Detector type	photodiode					pyroelectric
Resolution	12 bit					
Accuracy	±3 %					
Clear aperture	6 mm					
Dimensions (W×L×H)	48 × 29 × 24 mm ³					
Weight	< 0.1 kg					

1. Due to continuous improvements all specifications are subject to change. The parameters marked typical are not specifications. They are indications of typical performance and will vary with each unit we manufacture.



Q-SPARK with AT motorized attenuator and EM pulse energy monitor attached