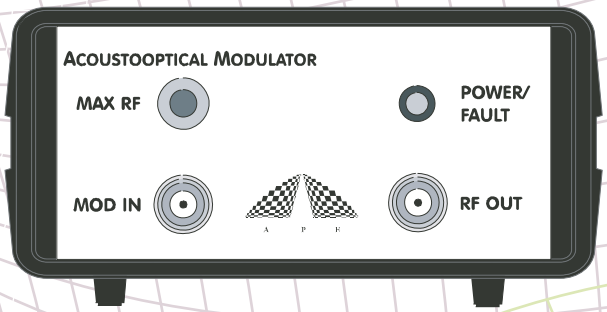
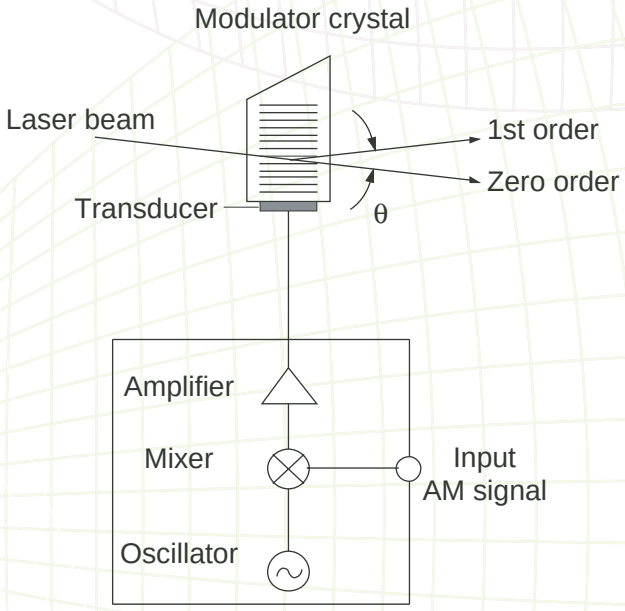
AOM

APE

ACOUSTOOPTICAL MODULATOR





The acoustooptical intensity modulator consists of an AO modulator element and a driver electronics unit.

The modulator element consists of an optical crystal with a piezo transducer at one side.
By applying an RF signal generated by the driver electronics to the piezo transducer ultrasonic waves are induced in the crystal. These waves form an optical grating inside the crystal due to modulations of density and refractive index which deflects a portion of an incident laser beam.

The intensity of the deflected part beam is dependent on the field intensity and thus on the RF drive power. It can be controlled with a voltage at the analog modulation input.
In the case of the digital modulation version a TTL signal at the modulation input switches the RF driver output on and off.

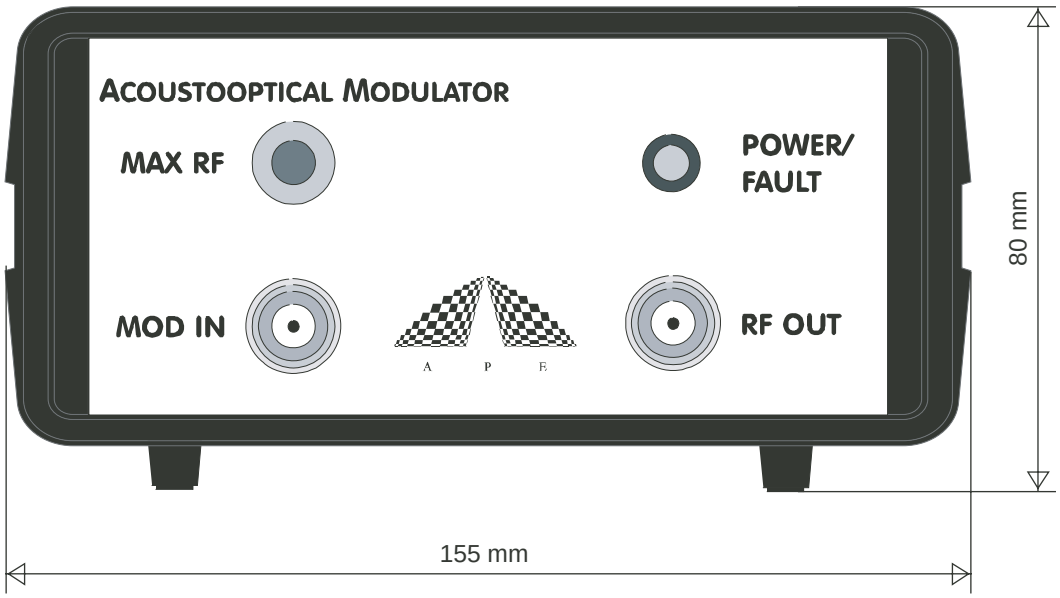
- Complete and tested systems
- Quartz stable oscillator
- Analog or digital modulation input
- Overload safety circuit to avoid damage to AO modulator element

APE offer a series of standard AOM driver models. Other systems can be configured on request.
The AO modulator elements are selected according to the application.

SPECIFICATIONS

Analog Modulator Drivers				
Carrier Frequency	40 MHz	80 MHz	110 MHz	200 MHz
Modulation Bandwidth	10 MHz	20 MHz	27,5 MHz	50 MHz
Modulation Input (50 Ω)	0 … 5 V	0 … 5 V	0 … 5 V	0 … 5 V
Max. RF Output Power	1 W	1 W	1 W	1 W
Contrast Ratio	1000: 1	1000 : 1	1000 : 1	1000 : 1
Digital Modulator Drivers				
Carrier Frequency	40 MHz	80 MHz	110 MHz	200 MHz
Rise Time	< 50 ns	< 25 ns	< 20 ns	< 10 ns
Modulation Input (50 Ω)	TTL	TTL	TTL	TTL
Max. RF Output Power	1 W	1 W	1 W	1 W
AO modulator elements	Various modulators can be offered according to the particular application.			

DIMENSIONS



APE follows a policy of continued product improvement. Therefore, specifications are subject to change without notice.