

Autofocus AF910

The Quantum Composers Autofocus AF910 combines a proprietary optical configuration with flexible interface architecture to provide a robust autofocus for OEM applications utilizing infinity corrected objectives.

The AF910 can be used on most surfaces:

- Low and high reflectivity
- Specular and diffuse
- Transparent and opaque

Includes patterned surfaces such as TFT arrays, semiconductors and PCBs.

The AF910 provides various interface options:

- RS 232
- Analog output
- Step/ Direction motor drive control
- In focus, in range status, edge detect status

An optional interface adapter may be included which allows for custom electrical interfaces. The sensor I/O signals can be broken out into separate connectors, allowing for integration into existing systems.

Serial communications provides configuration, status and control of the sensor. The sensor can store up to 7 configurations, each optimized for a different objective.



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TECHNICAL SPECIFICATIONS

Objective	2x	5x	10x	20x	50x	100x
Focus Repeatability (um)	+/- 6.0	+/- 2.5	+/- 0.5	+/- 0.4	+/- 0.3	+/- 0.2
Focus Accuracy (um)	+/- 20.0	+/- 5.0	+/- 1.0	+/- 0.8	+/- 0.5	+/- 0.3
Resolution (um)	2.00	1.00	0.50	0.20	0.10	0.06
Linear Range (um)	+/- 500	+/- 500	+/- 250	+/- 100	+/- 40	+/- 15
Capture Range (um)	+/- 5000	+/- 3000	+/- 1500	+/- 600	+/- 240	+/- 40

*Preliminary Specifications

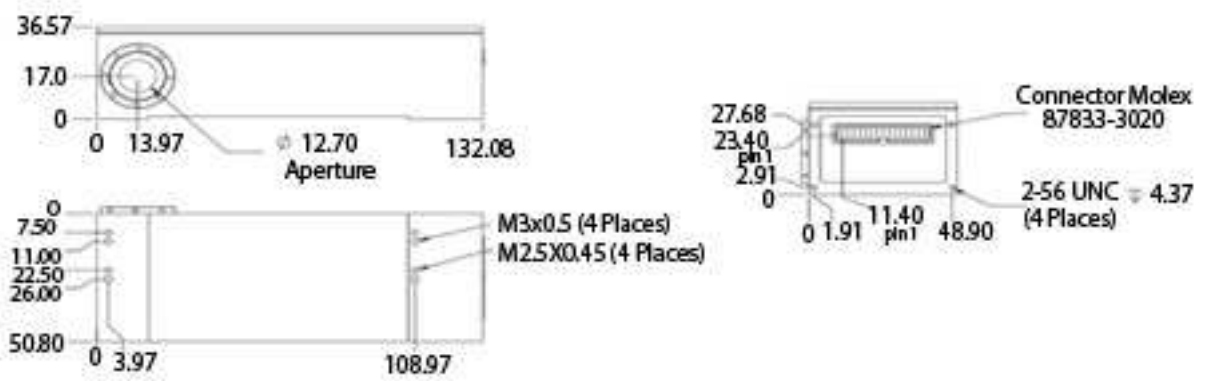
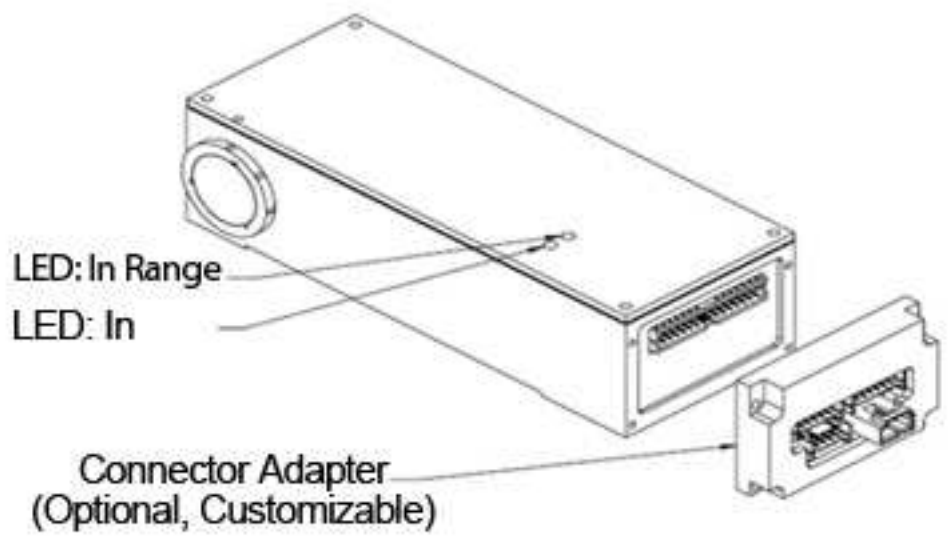
Inputs	
Synch	TTL
EMO	TTL
Laser Disable	TTL
Limit A	TTL
Limit B	TTL
Autofocus Control Outputs	
Analog Output	+/- 10 V
Analog Update Rate	1.2 kHz
In Range	Open Collector
In Focus	Open Collector
AF Status	TTL
Motor Control Outputs	
Direction	TTL
Step	TTL
Control Update Rate	1.2 kHz
Max Step Rate	50 kHz
Sensor Unit	
Wavelength	685 nm
Power	+12 VDC 500 mA
Size	51 mm X 37 mm X 132 mm
Communications	
RS-232	Standard



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Pin	Definition	Pin	Definition
1	+12VDC	16	GND
2	GND	17	SPARE
3	+12VDC	18	SPARE
4	GND	19	SPARE
5	PH/B	20	+5VDC Ref
6	PHB	21	/LASER_DIS
7	PH/A	22	SYNCH
8	PHA	23	AF_STATUS
9	GND	24	EMO
10	LIMITB	25	GND
11	LIMITA	26	IN RANGE
12	SPARE	27	IN FOCUS
13	SPARE	28	ANALOG OUT
14	RX	29	STEP
15	TX	30	DIR



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