

DSP Lock-in Amplifier Comparison

Parameter	OL 730D	OL4000 / OL4000-100	SR 830 / SR 552	EG&G 7260	Unit/ Conditions
Voltage Input					
Input Noise	TBD	10	1.4	4	nV Hz ^{-0.5} @ 1kHz
Input Impedance	10	10	0.1	10	MΩ
Common Mode Rejection	NA	90	110	100	dB @ 100 Hz
Max Full Scale Sensitivity	200	2	2	2	nV
Min Full Scale Sensitivity	2	2	1	1	V
Current Input					
Input Noise	TBD	48	130	127	fA Hz ^{-0.5} @ 1kHz
Input Impedance	<0.5	<0.5	1000	25	Ω
Max Full Scale Sensitivity	20	2	2	2	fA
Min Full Scale Sensitivity	2000	2000	2	2	μA
Auto Modes					
Auto Sensitivity	Yes	Yes	Yes	Yes	
Auto Offset	Yes	Yes	Yes	Yes	
Lock-in Detection					
Frequency Range	10 - 10k	5 - 100k	1m -102k	1m - 250k	Hz
Dynamic Reserve	>100	>100	>100	>100	dB
General					
Photodetector Input	Yes	Yes	No	No	
DC Operation	Yes	Yes	No	No	
AC peak-peak Format	Yes	Yes	No	No	
TTL I/O	2 in, 8 out	2 in, 2 out	1 in	None	
Aux. Analog I/O	1 in, 2 out	2 in, 2 out	4 in, 4out	2 in, 2out	
Graphical Display	No	Yes	Yes	No	
Digital Output Filtering	Yes	Yes	Yes	Yes	
Internal Ref. Generator	Yes	TBI	Yes	Yes	
Harmonic Detection	No	TBI	No	Yes	
Computer Interface	RS232/422, GPIB	ISA	RS232, GPIB	RS232, GPIB	
Chopper Controller	Yes	No	No	No	
PMT HV Supply	Yes	No	No	No	
PC software (included as standard)	Yes	Yes	No	No	

TBD = to be determined

TBI = scheduled to be introduced in the near future



OPTRONIC LABORATORIES

A Gooch & Housego Company

Optronics Laboratories, Inc. 4632 36th Street, Orlando, FL 32811
Tel: 1 407 422 3171 Fax: 1 407 648 5412 Email: info@olinet.com

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