

# iSA25xB-4 (x = 1 or 4)

## RF Synthesizer/Amplifier



0313

The iSA25xB-4 series programmable drivers are designed for controlling the Isomet DBM series Dual Beam Acousto-optic Modulators. This driver includes a micro-controller and high speed multi-output synthesizer. Initial set-up and diagnostics are made via a USB interface. Once programmed, the driver operates from non-volatile memory and the outputs are controlled from dedicated external inputs.

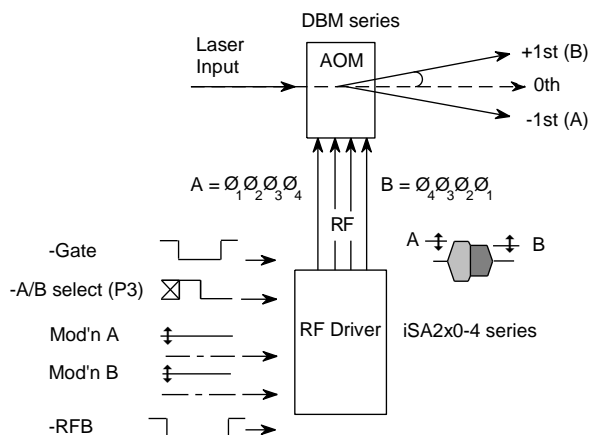
A digital input selects the required +1<sup>st</sup> or -1<sup>st</sup> modulator output beam by switching the relative phase of the driver outputs. The power level for each AOM output can be set either by two external independent analog input signals or an internal digital pots. Separate Gate and RF blanking inputs provide global On:Off control.

### Diagnostics include:

- RF power level indication
- AOM and driver temperature
- DC supply voltage and current

### Protection includes:

- Over temperature shut down
- DC supply over-voltage clamp
- External thermal interlock.



The iSA25xB-4 will operate from a +24V to +28Vdc supply. LED's indicate the status of the thermal interlocks, DC supply and RF output activity.

### SPECIFICATION

Maximum RF Power Output (Total)	:	> 200 Watts CW (28V supply) > 180 Watts CW (24V supply)
Load Impedance	:	50Ω
RF Outputs	:	BNC (4 off)
Harmonic Distortion	:	>20dB below fundamental
Center Frequency (wavelength specific)	:	50.9 MHz (x=1) or 54.0 MHz (x=4)
Frequency stability	:	± 0.003%
Frequency accuracy	:	± 0.003%
Analog Modulation Control	:	0.0V OFF to 10.0V fully ON
-Gate Control	:	LVTTL Compatible (0<V< 3v3)
-A/B Select	:	LVTTL Compatible (0<V< 3v3)
Gate ON to OFF RF contrast ratio	:	>37dB below full power
RF blanking ratio	:	>60dB below full power
Output Switching Speed	:	< 0.25μs Rise/Fall, 0 to 50 Watts per output
Power Supply	:	+24V to +28Vdc, 0.25% regulation, < 20A
Power Input	:	Feed through filter solder tag
Temperature Range	:	0° to 60°C, Thermal Shutdown Interlock Integral water-cooled heatsink

### ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

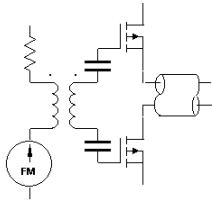
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### Quality Assured.

In-house: RF & Digital design  
Software Development  
OEM manufacture



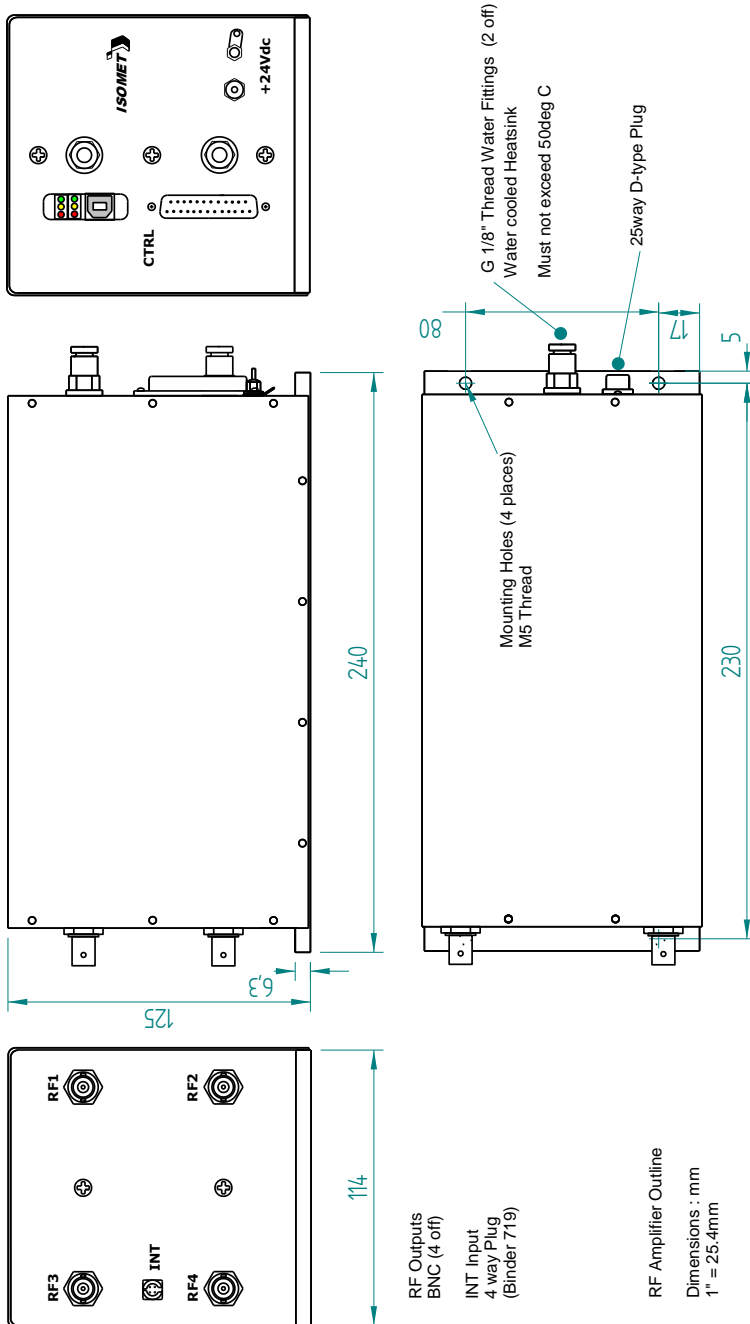
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### OUTLINE DRAWING



Control signals 25 pin 'D' type Male

Function		Sig Pin	Rtn Pin
-A/B Select (P3)	In	1	14
Reserved		2	15
-RF_Blank, Low = RF on (-RFB)	In	3	16
Reserved		4	17
Mod'n level B	In	5	18
Mod'n level A	In	6	19
-Gate On:Off (-OHL)	In	7	20
STATUS	Out	8	21
Reserved		9	22
Reserved		10	23
Reserved		11	24
Test Point	Out	12	25
- RESET	In	13	25

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