

## iMSA4-70-4-90



# Programmable Synthesizer with Quad Output Power Amplifier

2726

This AO deflector driver unit integrates the Isomet iMS4-P programmable synthesizer with our RFA1170-4 class AB power amplifier. It is specifically designed for the D1011/D1459- series high power Germanium deflectors.

The iMSP enables 'on-the-fly' phase and amplitude compensation to be applied to each of the RF outputs depending on the programmed frequency. Phase shifting is the basis of the acoustic beam-steering technique used in Isomet wideband AO deflectors. The result is a highly uniform and rapid laser beam scanning at reduced average RF drive powers.

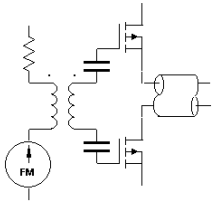
This driver also offers additional features to aid diagnostics and control. These include monitoring of the load VSWR, DC current and temperature. Refer to the iMS4-P synthesizer data sheet for features and capability.

### SPECIFICATIONS

Power out max:	90 Watts max. CW into 50 $\Omega$ per output
Power out typical:	70 Watts max. CW into 50 $\Omega$ per output
Frequency response:	45 - 95 MHz
Flatness:	+/- 1dB
Gain Input to Each Output:	50dB nominal
Output impedance:	50 $\Omega$ nominal
2 <sup>nd</sup> Harmonic Distortion:	> 20 dB below fundamental at 60W output
3 <sup>rd</sup> Harmonic Distortion:	> 15 dB below fundamental at 60W output
RF rise/fall time	< 20nsec for 0 – 50W
RF gate	Software and hardware controlled.
Thermal interlocks	Compatible with D1011 or D1459 series AOD.
Power Supply Requirement:	28A (total) at +24Vdc
Water Cooling:	Maintain water flow at > 1litre/min / <25°C (Corrosion inhibitor recommended see AN1906)

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**  
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**Quality Assured.**  
**In-house: RF & Digital design**  
**Software Development**  
**OEM manufacture**



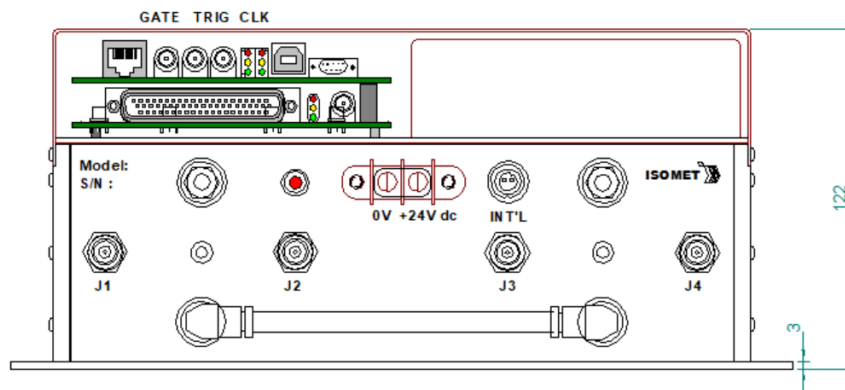
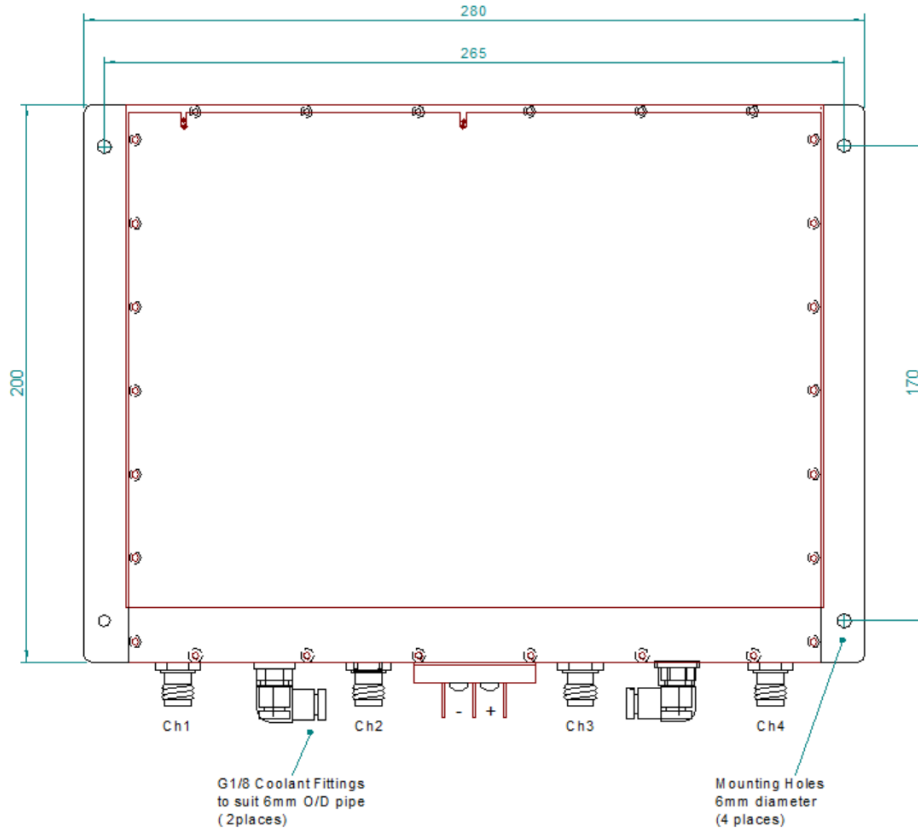
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### OUTLINE DRAWING



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**Quality Assured.**  
 In-house: RF & Digital design  
 Software Development  
 OEM manufacture