

RN2(BR)-3050-2-90 **RN3(BR)-3050-2-90** **RF Driver/Amplifier**



0424

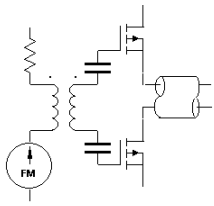
The RNxBR-3050-2 is a combined 30/50 MHz oscillator and power amplifier suitable for driving the Isomet High Power Acousto-optic "beam steered" Modulator/Deflector series D600. This driver features digital or analog inputs for the control of the RF amplitude and a digital input to select the carrier frequency. The drive frequency can be rapidly switched between 30 and 50MHz for dual spot applications. Protection includes an internal over temperature switch, and a 'TranZorb' over voltage diode on the DC supply input. An external interlock (or RF enable) input is provided. The amplifier includes an integral water-cooled heatsink (Brass). The driver operates from a +24V to +28Vdc supply. An LED indicates when the RF outputs are 'live'. The maximum RF output power for each frequency can be adjusted independently by means of pre-set potentiometers.

SPECIFICATION

| | | |
|---|---|--|
| Power Output | : | > 190 Watts max CW (28V supply) > 180 Watts max CW (24V supply) |
| Load Impedance | : | 50Ω |
| Harmonic Distortion | : | >20dB below fundamental |
| Mismatch Tolerance | : | Driver will not oscillate. |
| Center Frequency | : | 30MHz / 50MHz |
| Differential output phase | : | Frequency defined for acoustic beam steering |
| Frequency Select | : | TTL compatible, L=30MHz, H=50MHz |
| Frequency stability | : | ± 25ppm |
| Frequency accuracy | : | ± 25ppm |
| Modulation Control Voltage | | |
| Digital RN2BR-4060-2 | : | TTL compatible (> 2.7V, RF O/P=on) |
| Analog RN3BR-4060-2 | : | 0.0 to 10.0V, 3Kohm i/p impedance (nominal) |
| RF ON to OFF Ratio | : | 40dB below full power |
| Output Switching Speed | : | < 0.4 / 0.1μs Rise/Fall, 0 to 70 Watts |
| Power Supply | : | +24V to +28Vdc, 0.25% regulation, < 16A |
| Temperature Range | : | 0° to 60°C, Thermal Shutdown Interlock |
| RF Output | : | BNC (2 off) |
| Power Input | : | Filtered screw terminal, 6/32 UNC |
| Control signals: | | |
| Connector | : | <u>15 pin 'D' type Male</u> |
| Frequency select, TTL | : | +sig pn8, -rtn pn15 (High=40MHz, Low=60MHz) |
| Modulation control, (0-10V or On:Off) | : | +sig pn7, -rtn pn14 (common to both frequencies) |
| Over temp fault, voltage free | : | +sig pn2, -rtn pn10 (Closed = OK) |
| High reflected RF power (HRP), voltage free | : | +sig pn6, -rtn pn13 (Closed = OK) |
| HRP fault reset | : | +sig pn3, -rtn pn11 (Momentary close) |
| Connector | : | <u>Binder 719 3pin Male</u> |
| Interlock enable, (connect to AO) | : | +sig pn1, -sig pn2 (Closed = on) |

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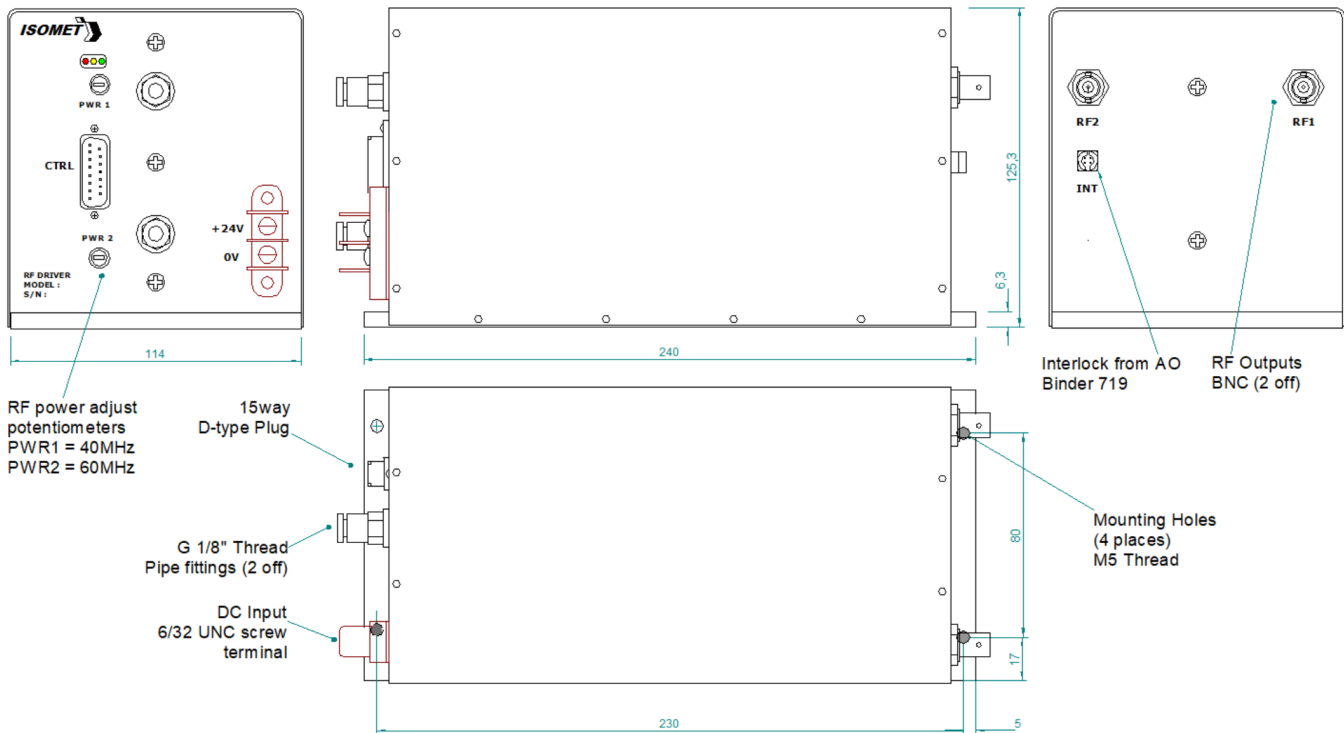
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OUTLINE DRAWING

Dim's = mm



Heatsink in contact with coolant water. Default aluminium. See BR option.
Water-coolant fittings supplied are suitable for 8mm OD / 6mm ID pipe.

Options –x, multiple combinations possible:

(BR) : Brass water cooled heatsink

Refer application note AN1906 regarding Coolant Specification

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