

RV2(3)(5)-z-40-1-180 RF Driver/Amplifier



1125

The RVx-40-1-180 drivers are combined 40 MHz oscillator and RF power amplifiers. The -BR option is recommended for brass and copper cased acousto-optic modulators such as M700C- and M1419C-. The standard configuration features both digital gate and analog modulation inputs for the control of the RF amplitude. Protection includes an internal over-temperature sensor, and a 'Tranzorb' over-voltage diode on the DC supply input. An external interlock input is provided for connection to the AO device thermal interlock sensor.

Active modulation	Model	Modulation Input
Digital only	RA2-	5V logic compatible
Analog only	RA3-	0 - 10V *
Dual	RA5-	both, as above

This driver will operate from a +24V to +28Vdc supply. LEDs indicate the status of the thermal interlocks, DC supply and RF power activity. The RF output power limit is adjusted by means of a pre-set potentiometer. Two inputs can directly control modulation of the RF output. Protection includes an internal over temperature sensor, and a 'Tranzorb' over voltage diode on the DC supply input. An external interlock input is provided. The amplifier includes an integral water-cooled heatsink. Available options (-z) are listed below.

SPECIFICATION

Power Output, max CW.	:	>180W @ 24Vdc >200W @ 28Vdc
Load Impedance	:	50Ω
Harmonic Distortion	:	>20dB below fundamental
Mismatch Tolerance	:	Driver will not oscillate.
Center Frequency	:	40.0MHz
Frequency stability	:	± 25ppm
Frequency accuracy	:	± 25ppm
Control Signals		
RA2- and RA5- Digital Mod'n	:	TTL compatible (>2.7V, RF active. <2.2V = Off)
RA3- and RA5- Analog Mod'n	:	0.0 to 10.0V, ~1Kohm i/p impedance*
RF ON to OFF Ratio	:	40dB below full power
Output Switching Speed	:	< 400/100nsec Rise/Fall, 0 to 150 Watts
Power Supply	:	+24V, 0.25% regulation, <18A
Temperature Range	:	0° to 60°C, Thermal Shutdown Interlock
RF Output	:	TNC Connector
Control signals: Connector	:	<u>15 pin 'D' type Male</u>
Digital Mod, TTL (On:Off)	:	+sig pn8, -rtn pn15
Analog Mod, (0-10V)	:	+sig pn7, -rtn pn14
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)
DC Power Input	:	Feed through filter, screw terminal

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

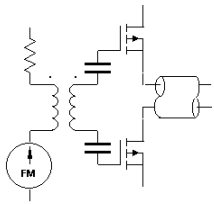
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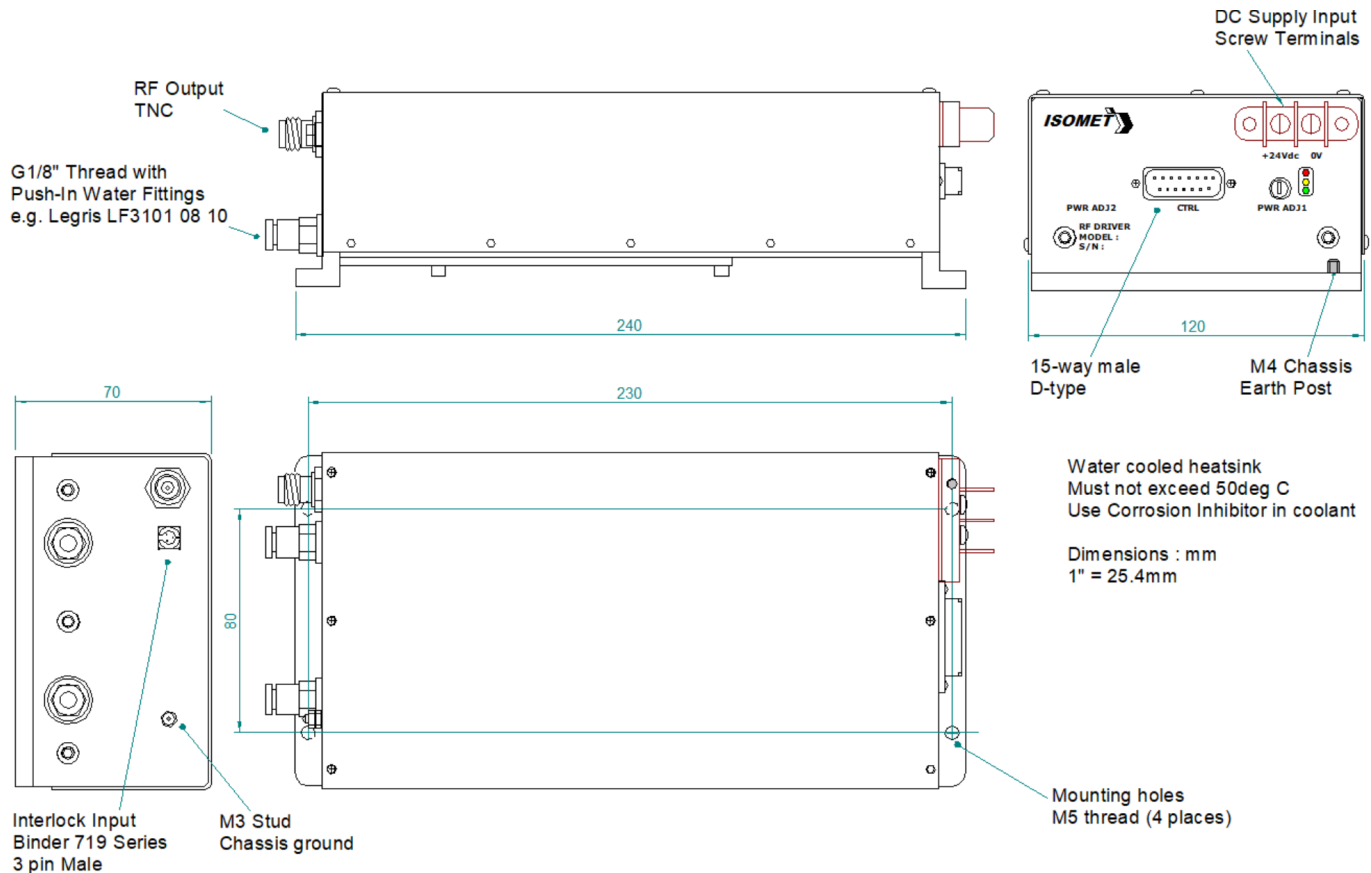


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OUTLINE DRAWING



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

Options -z, multiple combinations possible:

BR : Brass heatsink e.g. RV3-BR-40-1-180

Refer application note AN1906 regarding Coolant Specification

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