

## RESOLVER, BRUSHLESS

The Kearfott size 11 brushless frameless resolver is designed to provide high accuracy analog position feedback signals over a wide temperature range. The frameless design allows the sensor to be mounted directly to a motor shaft without additional bearings or couplings for use in commutating brushless motors. These sensors provide increased reliability, accuracy, temperature range and environmental stability when compared to typical commutation devices.

### ELECTRICAL DATA

CHARACTERISTICS	UNIT	SYMBOL	VALUE
PRIMARY	–	–	ROTOR
RATED VOLTAGE	VOLTS rms	$E_{IN}$	4.0
RATE FREQUENCY	HERTZ	$f$	4740
PRIMARY CURRENT (MAX)	MILLIAMPS	$I$	17.5
PRIMARY POWER (NOM)	MILLIWATTS	$P_i$	21
ROTOR IMPEDANCE (STATOR OPEN CIRCUIT) (REF)	OHMS	$Z_{RO}$	$90 + j249$
ROTOR IMPEDANCE (STATOR SHORT CIRCUIT) (REF)	OHMS	$Z_{RS}$	N/A
STATOR IMPEDANCE (ROTOR OPEN CIRCUIT) (REF)	OHMS	$Z_{SO}$	$169 + j244$
STATOR IMPEDANCE (ROTOR SHORT CIRCUIT) (REF)	OHMS	$Z_{SS}$	$167 + j181$
OUTPUT VOLTAGE ( $\pm 5\%$ )	VOLTS rms	$E_{OUT}$	2.0
TRANSFORMATION RATIO	–	$\alpha$	0.5
PHASE SHIFT INPUT TO INPUT	DEGREES	$\phi$	$9.5^\circ \pm 3^\circ$
TOTAL NULL VOLTAGE (MAX)	MILLIVOLTS	$E_{NULL}$	15
ERROR AT $15^\circ$ INTERVALS (MAX)	MINUTES	–	$\pm 10$
STATOR DC RESISTANCE ( $\pm 10\%$ )	OHMS	$S_{DC}$	91
ROTOR DC RESISTANCE ( $\pm 10\%$ )	OHMS	$R_{DC}$	15.8
HIGH POTENTIAL TO CASE	VOLTS	–	500
HIGH POTENTIAL INTERPHASE	VOLTS	–	250

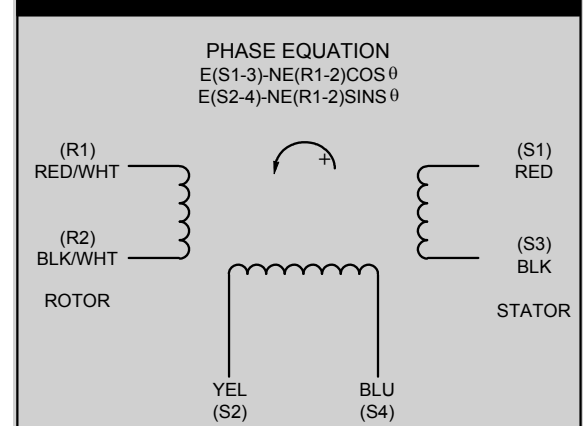


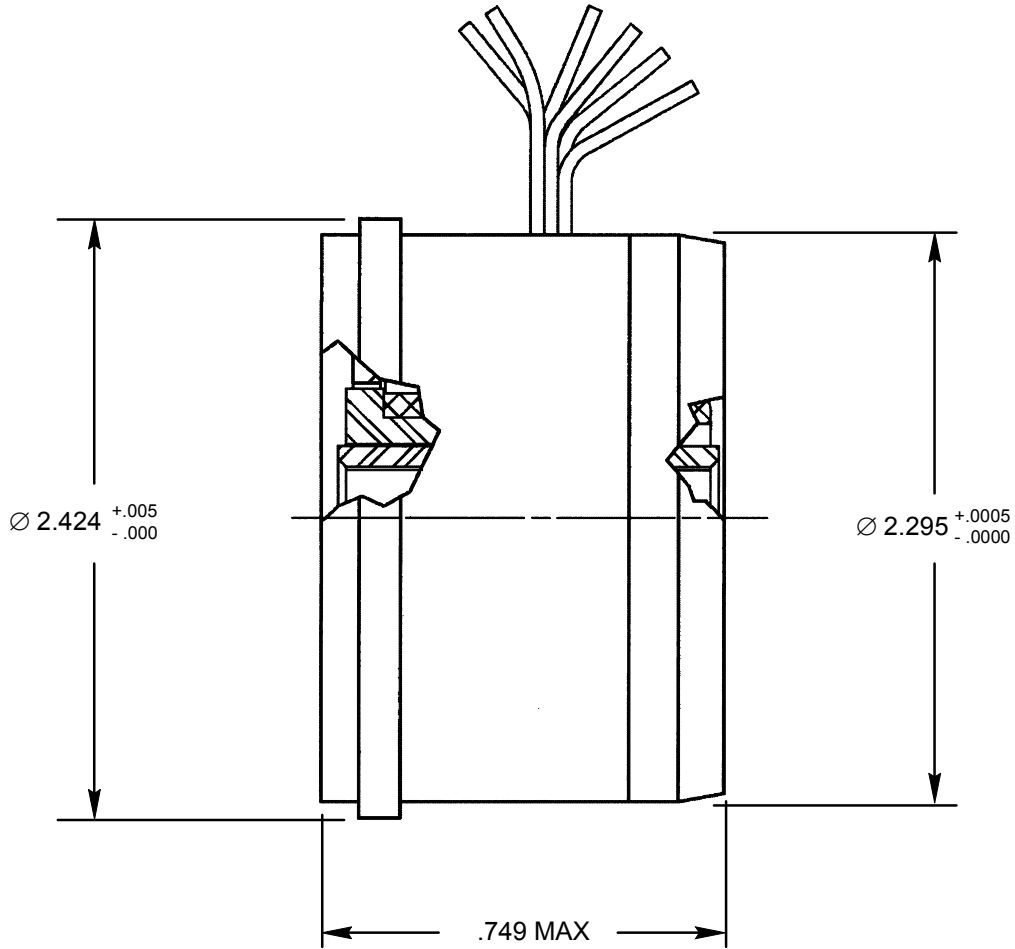
OPERATING TEMPERATURE RANGE	DEGREES F	$^\circ F$	-65 TO 300
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### MECHANICAL DATA

CHARACTERISTICS	UNITS	SYMBOL	VALUE
WEIGHT (MAX)	GRAM	$W$	65
ROTOR MOMENT OF INERTIA (MAX)	GRAM-CENTIMETER	$J$	TBD
FRICTION (MAX)	GRAM-CENTIMETER	$T_f$	N/A

### WIRING DIAGRAM





### ASHEVILLE PRODUCT LIST

#### SENSORS

LVDT  
RVDT  
Synchros  
Resolvers

#### ELECTRONICS

PWM Amps  
Servo Amps  
Converters  
Power Supplies

#### MOTORS

AC  
DC  
Brush/Brushless  
Induction/Synchronous

#### ACTUATORS

Linear  
Rotary

#### OTHER

Motor Gearheads  
Servo Systems  
Dampers  
Angle Sensors  
Torquers  
Tachometers  
Generators  
Alternators  
PC Boards  
Harnesses

For additional information on this product or any other product listed above please contact Kearfott's Marketing Department at:

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